Xerox ViewPoint

Information Management Reference

Volume 8

XEROX

Xerox ViewPoint

Information Management Reference

VP List Manager

VP Series Reference Library
Version 2.0

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Introduction

This volume is part of the *VP Series Reference Library*, which is the encyclopedia for ViewPoint software. This library provides the most complete source of information on ViewPoint and VP Series applications for your 6085 Professional Computer System or 8010 Information System.

Before you use this volume

Several separate volumes make up the *VP Series Reference Library*. Each volume provides information about a general category of applications, such as graphics, terminal emulation, or file conversions.

Before you refer to any VP Series reference application volume, you should become familiar with the following "core" documentation:

- *ViewPoint QuickStart Training.* Provides training and exercises for basic workstation operations as well as for creating, editing, printing, mailing, and filing documents.

- *General User Reference.* Describes the basic operations common to all ViewPoint and VP Series application software.

- *Document Editor Reference* volume 3. Provides complete information on creating and editing a document.

By mastering the ViewPoint and Document Editor basics, you will soon be able to use other VP Series applications to perform important tasks quickly and confidently.

In addition, you must be familiar with fields and tables in order to use *VP List Manager,* the software application described in this volume. Refer to the materials listed below in the "Related documentation" section.

About this volume

This volume describes the *VP List Manager* application, which enables you to produce many different documents from one set of data.

Each major List Manager operation is described in a separate chapter of this volume. Appendix A is a usage guide, and Appendix B is a quick reference for field properties.

How chapters are organized

Reference material is rarely read through from cover to cover. Instead, you use it to look up specific information from time to time, much as you would use an encyclopedia.

To help you locate information, the major topics of most chapters are organized as follows:

• A key concepts section describes the principal elements of the application or feature. The key graphic illustrated at the left marks the beginning of such sections.

• A description of property sheets, option sheets, and windows provides detailed information about the properties and options related to the application.
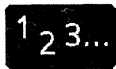
• A procedures section provides step-by-step information on how to use the application. The 1-2-3 graphic illustrated at the left marks the beginning of such sections.

Documentation conventions

The *VP Series Reference Library* uses the following conventions:

- Square brackets. Names of commands and property and option choices that you select with the mouse appear enclosed within brackets; for example, the [Close] command.

- Angle brackets. The names of workstation keys and alternate function keys are enclosed within angle brackets; for example, the <OPEN> key and the <PROP'S> key. This convention applies to alphabetic and numeric keys. It does not apply to words used to describe keys marked with arrow symbols, such as the tab key.

- Italic. Glossary words, VP application names, volume names, and the library name appear in *italics*.

- Bold. Names of properties, options, selections in the User Profile, information you must type, notes, and warnings appear in **bold**.

As often as possible, graphic images (such as pointer arrows) are printed in the text as they appear on the screen or on the keyboard.

Hardware and software requirements

VP List Manager runs on the 6085 Professional Computer System and the 8010 Information System.

The following 2.0 software must be installed, enabled, and running on the workstation:

- *Xerox ViewPoint*

- *VP NetCom, VP RemoteCom,* or *VP Standalone*

- *VP Document Editor*

- *VP List Manager*

Requirement for pre-ViewPoint 1.0 files

If you have record files created with software prior to *ViewPoint 1.0* and never upgraded to ViewPoint, you must also install, enable, and run:

VP List Manager Upgrade Tool 2.0.

The upgrade tool automatically converts such record files to *VP List Manager 2.0* format when the record files are first accessed. You can delete the tool from the Loader after all record files have been upgraded.

If you have documents created in OS5 inside the Forms Folder, the documents are upgraded at the time the record file is upgraded if you have installed, enabled, and run:

Document Upgrader (OS5 to VP2.0)

Such documents must be upgraded in order to appear as Display Form choices for views.

If you have documents created prior to OS5 in the Forms Folder, such documents will not be upgraded.

Although no problems have been encountered in upgrading a record file, it is good practice to upgrade a copy of the record file. (If problems were encountered, you would not be able to reverse the upgrade procedure.) After you have examined views to verify the contents of the

upgraded record file, you can delete the old record file.

Related documentation

A knowledge of fields and tables is required for some List Manager operations (creating a new file and creating output forms). The following materials supply the training you need:

- *VP Document Editor: Tables Training*
- *VP Document Editor: Forms Training*
- *VP List Manager Training*

To create certain output forms, you also need to know how to write fill-in rules. Training on fill-in rules is provided in *VP Document Editor: Fill-in Rules Training*.

The reference material you need for tables, fields, and fill-in rules is contained in these chapters of *Document Editor Reference* volume 4:

- "Tables"
- "Fields"
- "Fill-in rules for fields"
- "Fill-in rules and pathnames for tables"
- "Fill-in rule access to other documents"

Information for VP CUSP Button programmers

If you are writing a CUSP program and want the program to refer to List Manager icons, use the following as the icon types (case does not matter):

- RecordFile
- View
- BaseView
- ErrorFolder
- FormsFolder

1.   Overview of VP List Manager

With *VP List Manager,* you can use information in a list in many different ways. For example, you can:

- Sort the list alphabetically, numerically, or by date.

- Filter the list to show only certain items, and/or display only certain portions of items.

- Incorporate all or some of the list data into documents such as in the following diagram.

Letters	Memos	Engineering forms
Status reports	Action items	Graphic certificates
Financial forms	Personnel forms	Invoices
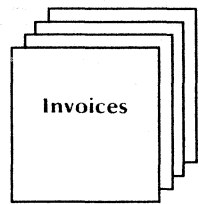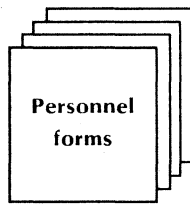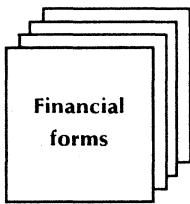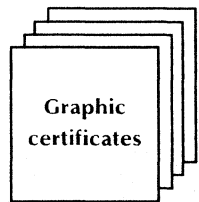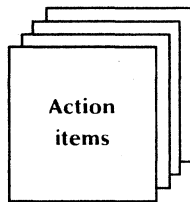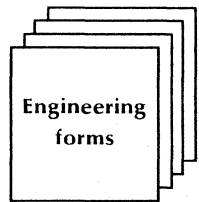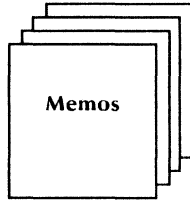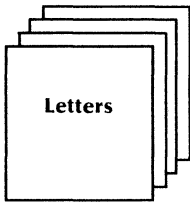
To give you an idea of the ways you might use List Manager, here are short descriptions of five users' files:

*   **Change orders.** For each change order, contains the order number, machine code, part number, and reason for the change to the part. The list is sorted by machine number and by part number.

*   **Sales contact list.** Contains personal first and last names, company, street address, city, state, zip code, telephone number, follow-up date, and reason for contact. Printed reports list the clients to call during the coming week.

*   **Project task list.** Contains each project name, task name, person responsible, expected completion date, and task description. Reports are printed by project and by person responsible for tasks.

*   **Supplier list.** Contains supplier names and addresses, and parts supplied. When a part is to be purchased, the user searches the list to find the preferred supplier.

*   **Inventory of art collection.** For each work of art, contains the title, artist name, price, medium, and notes on artistic merit. The list is sorted by artist. Periodic reports show the current value of the collection.

Key concepts of List Manager

The key elements of List Manager include the record file, the relationship of List Manager to other ViewPoint applications, and the prerequisites for using List Manager effectively.

The record file

In List Manager, you create a *record file* (a container icon with special contents) for each list, and you determine the type of data that can be entered for each item. The type of data can vary from one record file to another, as you have seen in the file descriptions above.

Fields

When you create a new record file, you establish a *field* (a structure that reserves a position) for each data type. For example, you might have fields for last name, first name, address, and reminder date in a record file.

Records

All the field data for one item is called a *record*. In a record file with names and addresses, all the information about one person is a record.

Views

There is always just one set of records in a record file. However, you can use icons inside the record file to create many *views* (icons for displaying records in different ways). In a view you can:

- Display records in a table format (a *tabular view*, Figure 1-1) or through the fields of a document (a *document view*, Figure 1-2).

- Display all fields or only certain fields.

- Display all records or only certain records.

- Sort the records, based on any field(s).

- Add, edit, or delete records.

You print records by printing a view and generate documents by making a document of a view.

Figure 1-1 Tabular view (sorted on LastName)

Fields

LastName	FirstName	Address	Telephone
Adamson	George	2153 Alpine Road San Diego, CA 91255	(619) 783-3949
Brown	Linda	350 Divisadero San Francisco, CA 99922	(415) 823-0402
Johnson	Barbara	2900 Embarcadero San Francisco, CA 99922	(415) 382-6766
Johnson	Peter	6929 Santa Maria Avenue Dallas, Texas 34219	(212) 739-0371
Michaels	Joan	35 First Street San Francisco, CA 99913	(415) 732-3214
Williams	Richard	499 Fifth Avenue New York, NY 21345	(214) 821-3946

Records

Figure 1-2 One record in a document view

Sample Record File☐Letter

Evergreen
Philanthropies

FirstName field ➡ ⌈Joan⌋ ⌈Michaels⌋ ◄ ― ― ― ― LastName field
⌈35 First Street
San Francisco, CA 99913⌋ ◄—Address field

Dear ⌈Joan⌋,

We have received your request for flyers describing our upcoming fund-raising event. They are enclosed with this letter.

Thank you for participating. Your efforts will help make this the most successful campaign ever.

Sincerely

Interaction with VP applications

List Manager operates on a personal data base, in the sense that the record file icon must be on the desktop when you add, delete, or edit records. However, you can mail or file the record file icon, as well as any documents you generate from it.

You can copy documents that contain a table or fields to the record file. Each row of the table becomes a record, or the fields in each document become the entries for one record. (The table column names or field names must match record field names.)

The table that you copy to the record file could have been created by you or forwarded to you by other users. The text in the table could have originated in an emulation application and have been converted to a table in *VP Data Capture*. The table also could have been produced in *VP Spreadsheets*.

The documents that you generate contain record data in a table or in fields. In the generated document you can write fill-in rules to manipulate the data. You can use a generated table as the data source to drive bar, line, or pie charts.

Prerequisites

You can sort, filter, print records, and generate documents from an existing record file without a knowledge of fields and tables.

However, you must have a working knowledge of fields and tables to create a new record file and to create output forms. To create certain output forms you also need to know how to write fill-in rules.

If you are unfamiliar with fields, tables, or fill-in rules, see the references listed under "Related documentation" in the Introduction chapter.

2.   Creating the defining form

You use a document with fields or a table to define the fields in a new record file. The document is referred to as the *defining form*.

Properties of the fields or table columns in the defining form become the properties of the record fields. The name properties appear as the column headings in tabular views.

The first section of this chapter gives suggestions for determining the fields and field properties you need for your record file. The section uses the following terms:

- *Sort*: Automatically arrange the records in ascending or descending alphabetic, numeric, or date order.

- *Filter*: Automatically sift the records so that only those with specified data in specified field(s) are displayed in a view.

- *Output forms*: Documents that you create, such as form letters or reports, with fields for record data or with a table that is to be filled with record data. You can use the forms for displaying records in a view, printing records, or generating documents that contain record data.

Fields for the defining form

It is wise to make the number of record fields the minimum number that is practical. This allows maximum performance and maximum number of records. However, in your defining form, you should include all the fields you need for the ways you intend to use the record file.

Output form analysis

To plan your record file, you should start by studying all the output forms you might use. For each form, you can make a note of the data that is to come from the record file, such as first name, last name, anniversary date, balance due, or other information.

From your notes, you can make a single list of the fields you need, dropping out duplicate entries.

Separate fields for sorting or filtering

As a general rule, if certain data is to be sorted or filtered, you need to establish a separate field for it. For example, if you want to sort records by last names, you need a separate field for last names (or each record must begin that field's data with last name). You cannot sort on last name if field data is entered in the form, "Mr. John J. Doe" or "Mrs. Mary Roe."

You sometimes can filter successfully on data that is surrounded by various other data. For example, if you have all address data in one field, you can filter for all persons in the same company, or at the same street address, or city, or state, or with the same zip code.

However, be aware that the same text can appear in different parts of such field, and records you do not want may pass the filter. "Virginia," for example, can be a first name, a state name, part

of a state name, a street name, or part of a company name.

You may need to make a separate field for certain data in order to filter it accurately.

Record fields for individual output fields

If you will use pieces of data in individual fields of output forms, you need separate record fields for each piece. If a first name is to be part of the inside address in form letters and also used alone in salutations or in other documents, such as memos, you need a separate field for first name.

You may even want to make a separate field for salutations if you address recipients by their first names. For example, "William" may be greeted as "Bill," and "Robert" as "Bob." You may want to address others by titles, such as "Doctor" or "Captain."

Depending on the uses of the data, you may need only one field for the entire name, or you may need all the following fields:

Courtesy Address (Mr., Ms., Honorable)
First Name (John)
Initial (J.)
Last Name (Doe)
Salutation (Jack, Cathy, Judge)

Also, depending on the uses of your data, an address field may contain all pieces of the address, or you may want all the following individual fields:

Company Name
Street Address
City
State
Zip Code

Field types

When determining field types, consider how you will use the field data. It usually is better to be too general than too restrictive. (If in doubt, choose Text for field type, and make no format or range restrictions.)

However, a field must be of type Date if you want to assure that only valid dates are entered in it; or you want List Manager to put the data into a standard date format; or you want to sort it in chronological order.

Similarly, a field must be of type Amount if you want to assure that only valid numbers are entered into it; or you want List Manager to put the data into a specified amount format; or you want to sort it in numerical order.

A common error is to place numerals in a Text field and expect it to be sorted numerically. When Text data is sorted, 10 appears before 2 because the character 1 comes before the character 2. When Amount data is sorted, 2 appears before 10 because the value 2 comes before the value 10. If you want to sort a field numerically, the field must be of type Amount.

Properties that define record fields

Record fields are defined by the properties of the table columns or fields in your defining form.

When defining a record file, List Manager ignores any data in column headings or inside rows or document fields, as well as any text or graphics in the document. Only certain property sheet entries are used, as noted in the "Table column properties" and "Field properties" sections.

It is a good idea to make field names one word, so that later you can reference them easily in fill-in rules in your output forms. (Spaces in names require special treatment in fill-in rules.)

Figure 2-1 shows different defining forms that can define a record file with four fields. In this example, the only requirement is that the fields or table columns have the following properties:

LastName (field type Text or Any)
FirstName (field type Text or Any)
Fee (type Amount, format [Z][Z][9][.][9][9])
DateDue (type Date, format mm/dd/yy)

You could use any one of the four documents in Figure 2-1 to define a record file with the fields illustrated in Figure 2-2.

Figure 2-1   Four defining forms
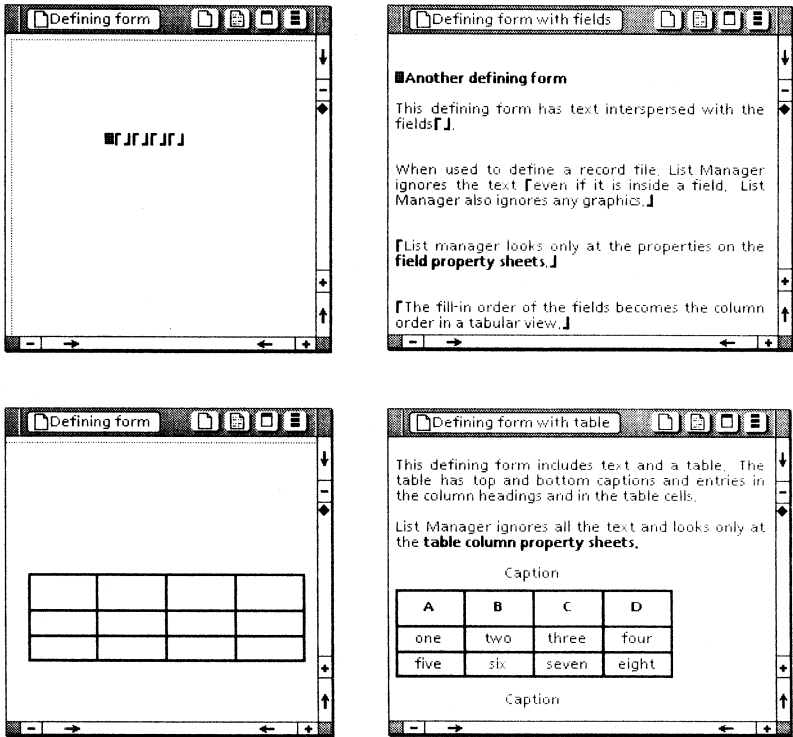
Figure 2-2   Tabular view in the record file defined by any form in Figure 2-1
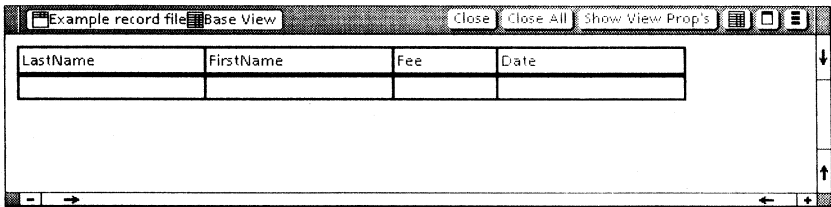
Table column properties

The Table Column properties sheet (Figure 2-3) displays when you select in one row of the column with the left mouse button and in another row of the same column with the right mouse button, and press < PROP'S > .

Figure 2-3   **Table Column properties sheet**

The properties from the [Column] display that are used to define a record file are as follows:

Name
Becomes the name of a record field and the title of its column in tabular views. Change the default name (Column1 in the illustration) to make it meaningful for your purposes.

Description
Optional; can be left blank. If you enter a descriptive or explanatory note, it displays on a summary sheet; it has no effect on the record field itself. Typically, this space is used

for notes on how data should be entered, such as a note for "Two-letter State abbreviation (space) Zip Code: CA 90066."

Structure

Do not select [Divided]. A table that is used for a defining form can have no divided columns. In the default setting, [Divided] is not selected.

Units

Determines the measurement units for the width of the column. Select [Inches], [Millimeters], [Centimeters], [Points], or [Spaces] from the auxiliary menu for this property. The default is [Inches].

Width

Determines the width of the column in the *Base View* (a tabular view that always displays all fields of all records).

Type

The default is [Any], which becomes [Text] in the record file.

If you intend to sort a field numerically, select [Amount]; if you intend to sort a field chronologically, select [Date].

[Required]

If this property is selected, the field cannot be empty when you add a record. If you add records by copying documents or another record file, then the corresponding field or column also must have data in it; otherwise, an error results. In the default setting, **[Required]** is not selected.

Language

Determines default format of entries in fields of type Amount or Date, corresponding with language custom. An example is the format of 10/14/88 for [US English], or 14/10/88 for [UK English], each representing the 14th day October, 1988.

Language choice also determines the sort order for fields of type Text. For example, in English, "ch" appears before "ci," but in Spanish, it appears as a two-character letter after "cz."

Language choices are provided in the auxiliary menu below the **Type** choices. The default is [US English].

Format and **Range**
Both are optional. You can restrict record field content to a certain text, date, or amount format, or to a certain range of text, dates, or amounts, in the same way that you can restrict document fields. (Appendix B repeats information on Format and Range from the "Fields" chapter of *Document Editor Reference* volume 4, for your reference.)

The remaining properties are ignored by List Manager. They have no effect in the record file.

Field properties

The Field properties sheet (Figure 2-4) displays when you click twice on a field bounding character and press < PROP'S >.

Figure 2-4   **Field properties sheet**

The properties in the [Field] display that used by List Manager to define record fields are: **Name, Description, Type, [Required], Language, Format,** and **Range.** Set these properties for fields the same way you would set them for a table column (described above).

The remaining properties are ignored by List Manager. They have no effect in the record file.

A field has no **Width** property. When you use fields in a defining form, List Manager uses the default widths for columns in the Base View. The defaults are based on field **Type** (1.87 inches for Text, 1 inch for Amount, or 1.47 inches for Date).

Creating a table to define structure

When you use a table as the defining form, each column in the Base View has the same width as the table column that defines it.

If you have an existing table you want to use as a defining form, start with Step 4 in the procedure below.

Note: Your document can contain graphics and text, including text inside the table. However, the table must have no divided columns, and the document must contain no other tables and no document fields.

1. Copy a Blank Document icon, rename the copy, open it, and select [Edit] if necessary.

2. Insert a table.

3. On the Table property sheet, in the **Number of Columns** property, enter a number that is the same as the number of fields you want in your record file, and select [Done].

4. Display the property sheet for the first column.

5. Set the properties for the first column (refer to "Properties that define record fields" in this chapter), and select [Done].

6. Set properties for each remaining column.

7. Select [Close] in the document window header.

Creating document fields to define structure

1 2 3...

When you use fields for the defining form, each column in the Base View has the default width for its type. Note, however, you can easily reset the column widths in your own tabular views.

If you have an existing document with fields that you want to use as a defining form, start with Step 3 in the procedure below.

Note: Your document can contain graphics and text, including text inside the fields, but it must not contain a table. List Manager will define a record field for every field in the document.

1. Copy a Blank Document icon, rename the copy, open it, select [Edit] if necessary, and select [Show Structure].

2. Insert one field for each field you require in the record file.

3. Display the properties of the first field.

4. Set the properties for the first field (refer to "Properties that define record fields" in this chapter).

5. In the **Display** option at the top of the property sheet, select [Summary].

6. Select [Properties] for each remaining field, in turn, and set its properties.

7. Select [Done].

8. Set the fill-in order. The fill-in order determines the column order in tabular views.

9. Select [Close] in the document window header.

3. Defining the record file

You must define your record file (establish the names and properties of its fields) before you can add records.

Key concepts for defining record files

A record file can be defined only once. You cannot add a field or edit any field properties after you have defined the file.

After using a record file, you may discover that it should have a different structure. In that case, you can refer to Appendix A, "Usage guide," for ways to create a new record file from an existing record file. However, it is more convenient to define the file adequately in the first place.

When defining the record file, you use your defining form, described in the previous chapter, and a copy of the Blank Record File icon. The icon (Figure 3-1) is located in the Basic Icons divider in the Workstation divider of the Directory icon.

Figure 3-1 **Blank Record File icon**

Record file properties and windows

A record file icon has properties similar to those for other icons. For example, it has a name field you can edit.

The icon properties are grouped in two display choices:

- [Status and Statistics] displays properties such as the name of the record file and the number of records in it (Figure 3-2).

- [Field Summary] shows the properties of each field in the record file (Figure 3-3).

Status and Statistics properties

Figure 3-2   **Record File properties sheet:
Status and Statistics**
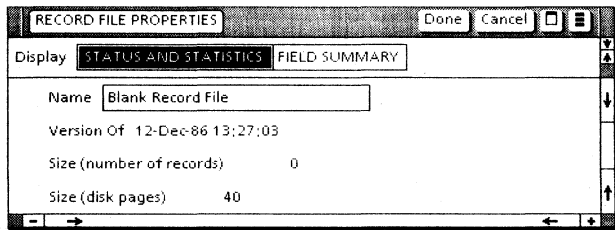
Name
Name of the record file. To rename the file, edit the name.

Version Of
The date you last edited the file.

The version date changes whenever you perform one of the following actions:

- Add, delete, or edit a record.
- Edit a sort field or sort order.

- Edit a View Filter.
- Edit the coversheet properties.

The version date does not change when you perform the following actions:

- Edit the Transient property sheet.
- Add or delete views.
- Rename a view.
- Rename the record file.
- Show or do not show the coversheet.

Size (number of records)
The total number of records in the file.

Size (disk pages)
The total number of disk pages occupied by the file.

The number of disk pages is not reduced when records are deleted. However, the space they occupied is reused when new records are added.

Field Summary properties

Figure 3-3 shows the Field Summary properties for a defined record file, listing the names of the fields in the file. It is similar to the Field Summary for document fields.

You can select [Properties] adjacent to a field name to see its properties in read-only form. You cannot change any field properties after the record file has been defined. You select [Properties] again to close the properties display for a field.

The summary information is useful when you are creating input or output forms and need to match field properties in the form to those in the record file.

Figure 3-3 **Record File properties sheet:**
Field Summary
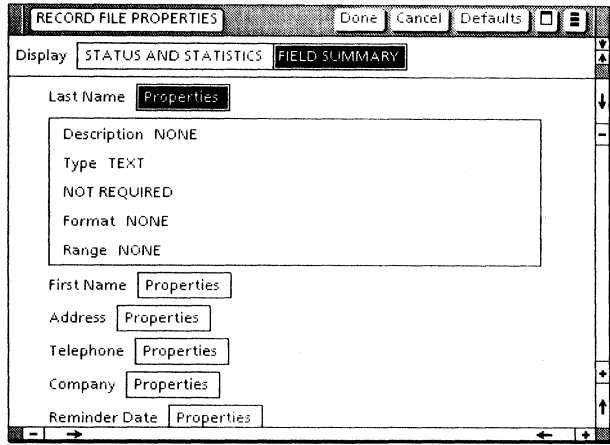
Blank Record File window

The open window of a Blank Record File icon
(Figure 3-4) differs from that of a defined record
file in that it has a [Define Structure] command in
its window header. After the structure has been
defined, the command no longer appears.

The window is similar to a folder window, with a
directory of the icons it contains.

Figure 3-4 **Blank Record File window**
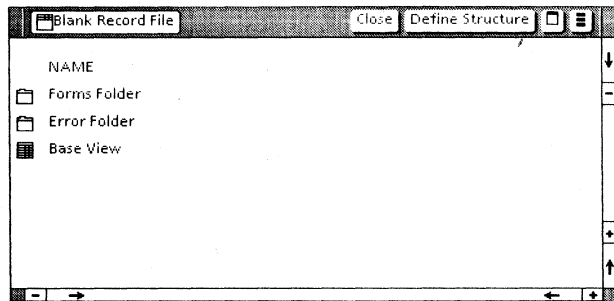
[Define Structure]
> Window header command used to define the field names and properties in a new record file. The command uses the names and properties of the fields or columns in the selected defining form icon. The defining form icon must be on the desktop or in a container on the desktop, not inside a file drawer. You must select the defining form icon before you select [Define Structure].

Forms Folder
> Container for your display and output forms.
>
> Names of forms in the folder appear in view properties as choices for displaying record data. You can move or copy documents to and from the Forms Folder. You can open a document inside the Forms Folder and edit it if necessary.
>
> The Forms Folder is a permanent object in the record file and cannot be moved or deleted.

Error Folder
> Container for objects (documents, tables, or records) that cannot be copied to the record file as records.
>
> When data from outside sources cannot be added because their fields do not match record fields, List Manager places copies of such objects (contained in documents or record files) in the Error Folder. You can examine, edit, move, reuse, and delete the contents of the Error Folder.
>
> The Error Folder is a permanent object in the record file and cannot be moved or deleted.

Base View
> Icon for displaying all fields of all records, in an order most convenient for List Manager.
>
> You can open the Base View after you have defined the record file, but not before.

The property sheet for the Base View displays only the Field Summary. This is the same summary that is displayed for the record file icon (Figure 3-3).

The Base View is a permanent object in the record file. You cannot sort, filter, move, or delete the Base View. However, to create other views you can copy the Base View icon to any position below itself in the record file.

Defined record file window

Figure 3-5   Window of a defined record file
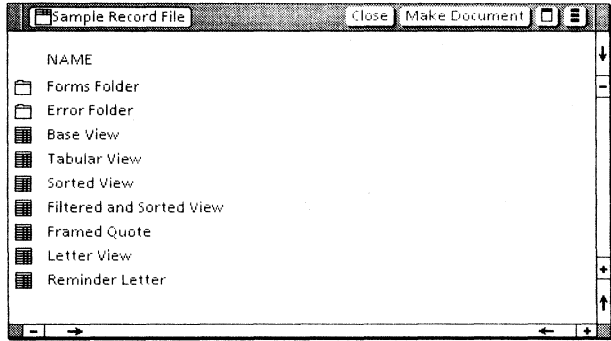
[Make Document]
> Window header command that makes a document of the selected view.

Forms Folder, Error Folder, and **Base View**
> Permanent objects, as described above for Figure 3-4.

The icons below the Base View are user-created views, which can be moved or copied anywhere within the area below the Base View, or deleted. You can copy a view icon outside the record file window only if the destination is a printer icon or another record file.

The defining procedure

The procedure for defining a record file is illustrated in Figure 3-6. The steps are as follows:

1. Copy the Blank Record File icon, rename the copy, and open it.

2. Select your <u>closed</u> defining form icon.

   The icon must be on the desktop or in a container, such as a folder or book, on the desktop (not in a file drawer). ⅎ

3. Select [Define Structure] in the record file window header.

   The [Define Structure] command disappears as soon as the record file structure has been defined. The structure cannot be re-defined.

4. Open the Base View and examine the field names and properties to be sure they are as you intended.

   If the properties are not what you intended, close the record file and delete it. Edit your defining form as necessary, and repeat steps 1 though 3 to define a new record file.

It is a good idea to move your defining form to the Forms Folder in the record file, so you will have it available for later use as an input or output form or for defining a similar record file.

After defining your record file, you can add records by typing information directly into the Base View. However, you may find it more convenient to use another method, such as typing the information in a sorted view. All the ways to add records are described in the chapter titled "Adding, deleting, and editing records."

Figure 3-6   Defining procedure (using a table)

Create a table and set column properties. Close the table document.

Select [Define Structure].
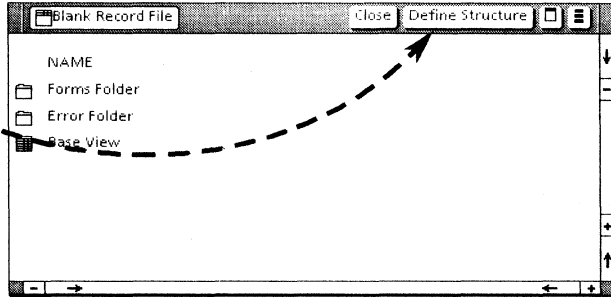
Table column properties become record field properties.
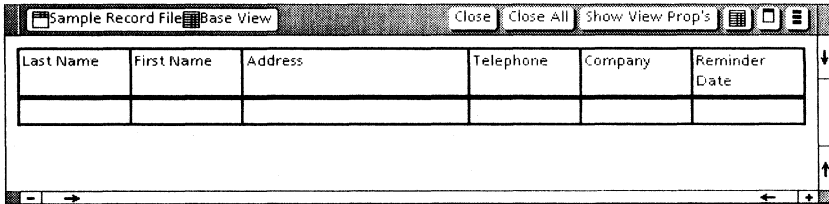
4.   Creating views

Before using the record file for the first time, you probably will want to create at least one new view. To create the first new view, you copy the Base View. Thereafter, you can copy any view to create another one.

Key concepts for views

It may appear to you that all the records in a view are copied when you make another, but that is not the case.   Only the view properties are copied; <u>there is always just one set of records</u>. If you open a new view before changing its properties, you see the same records because the new view still has the same properties as the original.

Record data is copied only when you copy a view to a printer or another record file or when you generate documents from a view.

When you delete a view, no records are deleted. You simply delete one way to look at the records. The records themselves are still intact.

You control the way records display by setting properties for a view. You can set properties to:

- Sort records.

- Filter records.

- Display records in either tabular or document format.

- Display only certain columns in a tabular view.

View properties

Each copy of the Base View has a property sheet that displays the Field Summary. This is the same summary shown for the record file icon and for the Base View, illustrated in Figure 3-3. The property sheet for the copied icon has two additional sets of properties, grouped on the Stable and Transient property sheets.

The Stable properties include the View Filter, which you can set permanently. Your filter settings remain in force until you change them.

The Transient properties include the Retrieval Filter, which acts on a view only until you access a different view. The Retrieval Filter settings are "transient," but the other properties grouped with it are not. The other properties remain set until you change them.

You can display properties for a view in the same way you display them for other icons, by selecting the view icon and pressing <PROP'S>. You also can display them from inside the open view window, by selecting a header command.

Figures 4-1 and 4-2 show Stable and Transient property sheets as they appear after selecting a closed view icon and pressing <PROP'S>.

Stable property sheet

Figure 4-1 Stable property sheet
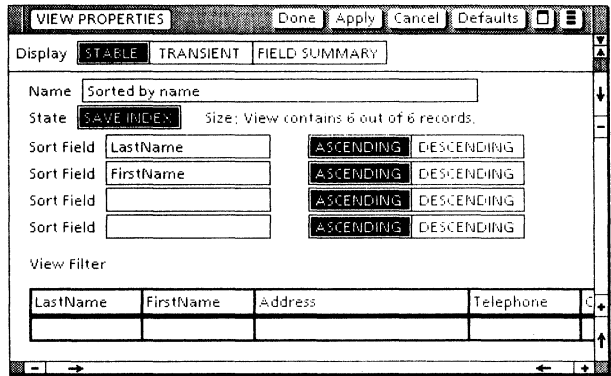
Display

[Stable] is selected in the illustration. You can display other properties by selecting [Transient] or [Field Summary].

Name

Name of the view. Edit the name as desired. In the illustration, the name was changed from "Base View" to "Sorted by name." (This property can be edited only if you display properties for a closed view icon.)

State

The state of the view (whether an internal index has been saved or not).

[Save Index] is the default. Under most circumstances, you should save the index. Refer to Appendix A, "Usage guide," for exceptions.

Size

The number of records in the view as filtered through the View Filter. The number is never reduced by any additional filtering performed

through the Retrieval Filter on the Transient property sheet.

Note: You can use the **Size** information whenever you simply want to know how many records have a certain entry in a certain field. Use the View Filter to filter for that entry and then check the number in the **Size** property.

Sort Field

In the first box, enter the name of the field to be sorted. Select either [Ascending] or [Descending], to sort from the lowest value to the highest or vice versa. The field type, established when the record file was defined, and the ASCII rules for sorting determine the sort order.

You can type the field name or copy it from a column heading in the View Filter at the bottom of the property sheet, which assures that the name is spelled correctly.

To sort at additional levels, enter field names for the second, third, and fourth **Sort Field**. In the illustration, if several records have the same entry for LastName, they are arranged within the larger sort order by FirstName. For example:

Smith, Adam
Smith, Gerard
Smith, Patricia

View Filter

Structure for entering criteria that a record must meet in order to be displayed in the view. Filtering is described in the "Filtering records" chapter.

Transient property sheet

Figure 4-2 Transient property sheet
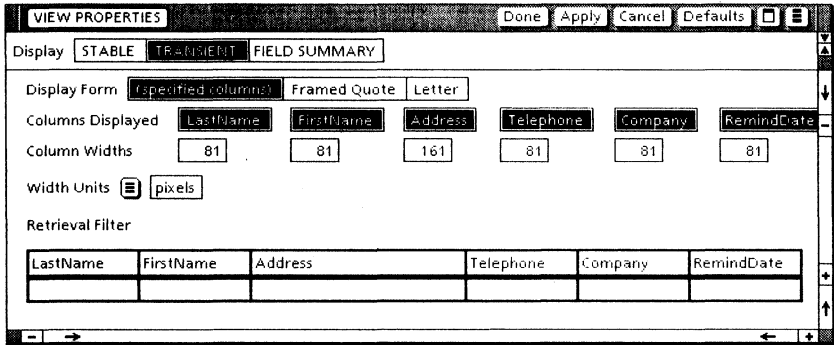
Display
[Transient] is selected in the illustration. You can display other properties by selecting [Stable] or [Field Summary].

Display Form
Choices for displaying record data in a tabular layout or through the fields of a document you have placed in the Forms Folder. For a tabular view, select [Specified Columns]; for a document view, select the name of the document you want.

The only choices that appear for document views are names of documents with fields (not tables) that are currently in the Forms Folder.

Columns Displayed
Displays each column whose name is highlighted. Select a column name to remove the highlighting, or select the name again to restore the highlighting.

Column Widths
Determines width of each column, based on the number below it and the units of

measurement selected for **Width Units**. To
change the width of a column, edit the
number below it.

Width Units
Determines the units of measurement for
Column Widths.

The **Width Units** auxiliary menu choices are:
[Pixels], [Inches], [Millimeters], [Centimeters],
[Spaces], and [Points]. [Pixels] is the default.

A *pixel* is one screen bit. There are approxi-
mately 75 pixels to the inch, with very slight
variations for different display sizes. The
following are each equal to one inch: 25.4
millimeters, 2.54 centimeters, 12 spaces, and
72 points.

When you change the **Width Units** selection,
the number of units for each column changes
to reflect the different measurement unit. (A
1-inch column shows [2.54] if you change the
units from inches to centimeters.) The actual
widths remain unchanged until you enter
different numbers below the columns.

Retrieval Filter
Structure for entering criteria that a record
must meet in order to be displayed in the
view. Applies a layer of filtering in addition to
any settings you make in the View Filter on
the Stable property sheet. The Retrieval
Filter is cleared whenever a different view is
accessed. Refer to the "Filtering records"
chapter.

View windows

The windows for tabular views and document
views are different. A tabular view window
resembles a table. A document view window is
more like an open document inside a folder.

Tabular view window

Figure 4-3   Window of a tabular view

LastName	FirstName	Address	Telephone	Company	RemindDate
Adamson	George	2153 Alpine Road San Diego, CA 91255	(619) 783-3945	AllSet	04/15/88
Brown	Linda	350 Divisadero San Francisco, CA 99922	(415) 823-0402	Sailforth	06/30/88
Johnson	Barbara	2900 Embarcadero San Francisco, CA 99922	(415) 382-6766	Printfine	05/15/88
Johnson	Peter	6929 Santa Maria Avenue Dallas, Texas 34219	(212) 739-0371	Gearcog	04/30/88
Michaels	Joan	35 First Street San Francisco, CA 99913	(415) 732-3214	Sanders	05/30/88
Williams	Richard	499 Fifth Avenue New York, NY 21345	(214) 821-3946	Hytext	04/15/88

Window header: Sample Record File Sorted View   Close   Close All   Show View Prop's

[Show View Prop's]
Displays the same Stable and Transient property sheets that are displayed for the view icon. However, the contents of the **Name** field in the Stable property sheet, and the **Display Form** field in the Transient property sheet, are read-only when displayed from inside a view.
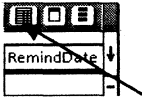
View menu
The view menu for a tabular view appears as a small record file symbol in the window header. It contains the following commands:

[Make Document]
Makes a document of the tabular view. The icon for the new document appears in the first available position on the desktop.

[Remove Entry Row]
Removes the blank row at the top of the view used for adding a new record. You can restore the row by selecting the toggled command, [Show Entry Row].

Document view window

A window of a document view is illustrated in Figure 4-4.

Figure 4-4   Window of a document view
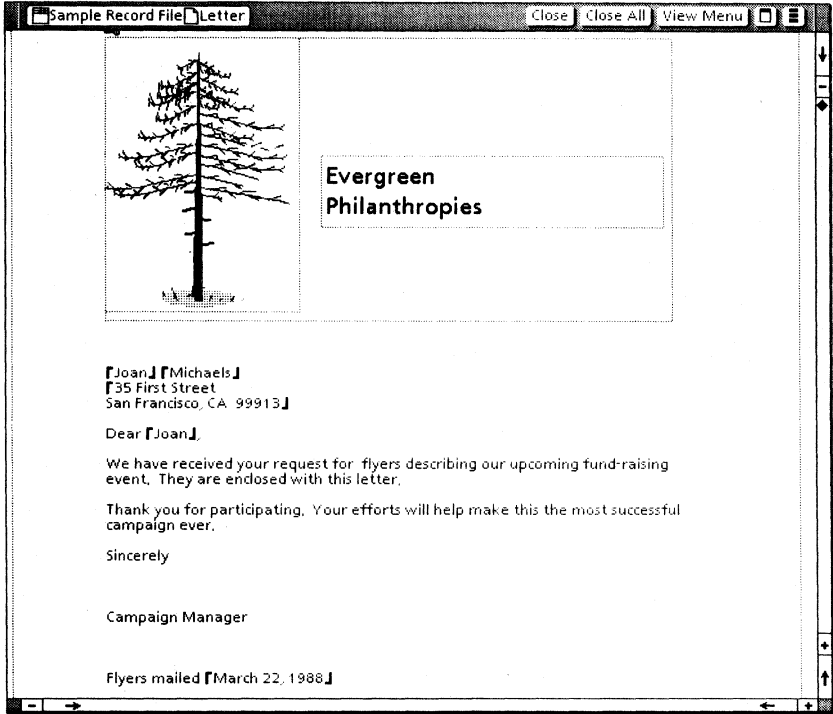
The commands in the [View Menu] in the window header are shown in Figure 4-5, and they are described below the illustration.

Figure 4-5   **View menu**

View Menu
Next
Prev
Add
Delete
Show View Prop's
Make Document
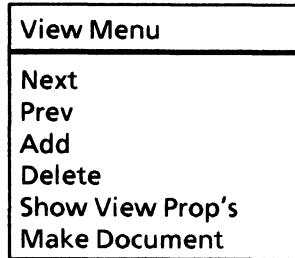
[Next]
> Displays the next record.

[Prev]
> Displays the previous record.

[Add]
> Displays the view's display form with blank fields for entering the data for a new record.

> When this command is chosen, the additional commands [Confirm] and [Cancel] appear in the window header. Select [Confirm] after you have completed the entries for the new record. Select [Cancel] if you want to clear partially completed entries and begin again.

[Delete]
> Deletes the displayed record, with no request for confirmation.

[Show View Prop's]
> Displays the same Stable and Transient property sheets that are displayed for the view icon.

> However, the **Name** and **Display Form** properties are read-only when displayed from inside the view.

[Make Document]
> Makes a document of the displayed record. The icon for the new document appears in the first available position on the desktop.

Procedure for creating a view

1 2 3...

To create a new view, use the following procedure:

1. Select the Base View icon or any other view icon and press <COPY>.

2. For the destination, select in the area below the Base View.

   To arrange your views in the order you want, copy or move them to any position in the area below the Base View.

3. Press <PROP'S> to display the properties of the new view icon.

   • On the Stable property sheet, edit the **Name** property.

   • On the Transient property sheet, select the name of the **Display Form** for a document view, or leave [Specified Columns] selected for a tabular view.

     You can edit the remaining properties (for sorting, filtering, or changing column widths) in the property sheets you have displayed for the view icon.

     Alternatively, you can select [Done], open the view, and edit the properties displayed from the view menu. In that case you can select [Apply] to see the effects of your settings while the property sheets remain open.

4. Select [Done].

5.   Filtering records

Filters are view properties. You set a filter when you want to require that a record must have certain contents in one or more fields in order to be displayed in the view.

When you apply the filter, List Manager sifts the records so the view displays only those that meet your specifications.

Key concepts of filtering

A view has a View Filter and a Retrieval Filter. Their structure is identical, and you enter specifications in them in the same way. However, certain other characteristics are different.

View Filter and Retrieval Filter

The **View Filter** on the Stable property sheet is a permanent, primary filter. If you set a View Filter, it is preserved no matter how many times you open and close the view. The settings you make stay in place until you change them.

The **Retrieval Filter** on the Transient property sheet is a temporary, secondary filter; it adds another layer of filtering to that performed by the View Filter.

There can be only one Retrieval Filter operating on the record file at any one time. Therefore, when you close one view and access a different

view, the settings in the first Retrieval Filter are cleared.

The Retrieval Filter is best for filters you use only once. For filters you want to re-use many times, you should make your settings in the View Filter.

When you first set a View Filter, List Manager creates an internal index. The index makes re-use of a View Filter significantly faster than a Retrieval Filter. As a general rule, you should save the index. See "Usage guide," Appendix A, for exceptions to the rule.

Filter structure

The filters are table structures with column names that correspond to record field names, and rows that correspond to different conditions you place on display of records. You enter your requirement for a field's content in the Entry Row at the top of the filter, in the column labeled with that field's name.

In Figure 5-1, for example, if you want to display only records for a certain company, you type that company's name in the Company column.

Figure 5-1   **Retrieval Filter**

VIEW PROPERTIES					Done	Apply	Cancel	Defaults	
Display	STABLE	TRANSIENT	FIELD SUMMARY						
Retrieval Filter									
LastName	FirstName	Address		Telephone	Company	RemindDate			
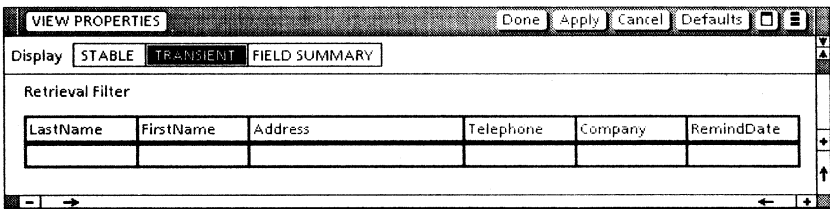
When you press < NEXT > in the last field, List Manager validates your entries (checks that they conform to field properties), moves the row down, and clears the Entry Row so you can add another row if you want. A row also is validated if you edit it and then select in another filter row.

Specifications in filters

You can specify that a field must (or must not) contain an exact value, fall within a certain range of values, or be empty. The only records that display are those that pass your specification.

When the caret is in a filter row, you can enter four symbols from the List Manager Special keyboard (Figure 5-2). The keys for the symbols are in the <1>, <2>, <Q>, and <W> positions.

Figure 5-2 List Manager Special keyboard
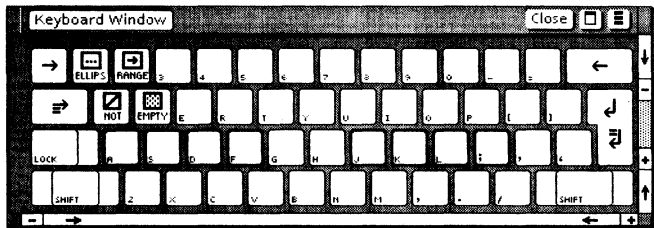
The symbols and their meanings are as follows:

[...]   The Ellipsis (or "wild card") stands for any number of characters or no character.

[→]   The Range Arrow specifies alphabetical, numerical, or date order, standing for:

- "Between" if it separates two text or numeric values

- "Before" if it precedes a value

- "At or after" if it follows a value

[/]   The Not symbol excludes the value it precedes.

[::]   The Empty symbol specifies that the field must have no characters in it (be empty).

Exact value

To pass only those records that contain a particular value in a field, you simply enter that value in the corresponding filter column.

For a field of type Text, records must have the exact text characters (except for case) in that field in order to pass the filter. The filter matches space characters as well as other characters. For example, if you filter for "yes," then a record will not pass if it contains "yes" followed by a space, tab, new-line, or new-paragraph character.

For fields of type Date or Amount, records may have different formats as long as they correspond to the same date or amount value.

The following are examples of filters for an exact value in a record file that has Text, Amount, and Date fields with the names LastName, Quantity, and DueDate:

If **Jones** is entered in the LastName filter column, the view displays only the records with those exact characters in the record field.

If **10** is entered in the Quantity filter column, the view displays only records with a value of 10 in the Quantity record field. If the record field has a format such as [+][Z][9][.][9] or [9][9][9], then records with entries of + 10.0 or 010 pass the filter, as well as entries of 10.

If **January 10, 1988** or **1/10/88** is entered in the DueDate filter column, the view displays only the records that have that date value in that field.

Range of Data

To specify a range, you enter enter the range values with the Range Arrow symbol at the appropriate position. For example:

For a Text field, **Jones[→]Smith** specifies text whose alphabetical order is between Jones and Smith, inclusive.

For an Amount field, **[→]55** specifies any number less than or equal to 55.

For a Date field, **1/1/87[→]** specifies January 1, 1987 or any date after January 1, 1987.

For additional examples of ranges, including examples of the Ellipsis symbol in ranges, refer to Appendix B.

Empty specification

To specify that a certain field must have no data in it, you simply enter the Empty symbol (<W> position on the List Manager Special keyboard):

[::]

Negative requirement

To specify that a field not contain certain data, you enter the Not symbol (<Q> position on the List Manager Special keyboard), followed by the value you want to exclude.

Examples:

[/]Jones passes only records that do <u>not</u> have the characters "J, o, n, e, s" as the <u>only</u> characters in the field.

[/]10[→]90 passes only records with values that are less than 10 or greater than 90 in the filtered field.

[/][::] passes only records that have at least one character in the filtered field (the field is not empty).

Additional symbol examples

<u>Empty and Not Empty symbols</u>. For different records, you may have various entries in a Completion field, such as "Done," "X," or a date, to indicate that an item is complete; and the field may be blank for items that are incomplete. You can filter on such a field as follows:

To filter for items not completed, use the Empty symbol:

[::]

To filter for fields that have an entry of any kind, use the Not Empty symbols:

[/][::]

<u>Ellipsis for present or absent space</u>. You may have an entry, such as "Manager," in a certain field, but for different records it might or might not have a space after the entry. You can use the Ellipsis to assure that all fields with "Manager" are displayed, as follows:

Manager[...]

<u>Ellipsis for difficult spellings</u>. You may need to filter on an entry that is easily misspelled, such as "Avitaminosis." You can use the Ellipsis to filter as follows:

Avit[...]

If a record contains the word, the record passes the filter even if the last syllables are misspelled. You can examine the filtered records and correct them if necessary.

AND or OR specification

AND specification: To require that several fields must meet particular specifications, you enter the specification for each field in respective columns of the <u>same filter row</u>. A record must have the specified content in each filtered field. List Manager interprets your specifications as if you had written the word AND between each one.

OR specification: If you want a record to pass if it meets one set of specifications OR another, you enter your specifications in <u>separate rows</u> of the filter. A record passes if it meets the specifications in any row.

Caution for negative filters

Be careful when using the Not symbol. You may get results you did not intend. Whenever possible, you should state your requirements in positive ways.

Example 1: If you want to exclude records with either 10 or 20 in an Amount field, and you specify "Not 10" in row one of the filter, and "Not 20" in the same field in row two, <u>all records pass</u>. List Manager reads your instructions as "Not 10 OR Not 20". The result is that 10 passes because it is not 20; and 20 passes because it is not 10.

To exclude 10 and 20, you can enter filters in three rows: (a) for all values through 9, (b) for all values from 11 through 19, and (c) for all values of 21 or more. The filters are:

[→]9
11[→]19
21[→]

Example 2: If you want to exclude records that have either Blue or Green in a field named Color, and you specify "Not Blue" in row one of the filter, and "Not Green" for the same field in row

two, <u>all records pass the filter</u>. Blue passes because it is not Green, and Green passes because it is not Blue.

If entries in the record field can be Red, Yellow, Orange, Blue, Green, there are two alternative, positive ways to exclude Blue and Green:

Method 1: In separate rows of the filter, make the following entries:

Red
Yellow
Orange
[::]

A record thus must have Red, Yellow, or Orange in the field, or nothing; neither Blue nor Green passes the filter.

Method 2: Use ranges in different filter rows, as follows:

[→]Blud[...]
Bluea[→]Greem[...]
Greena[→]

Neither Blue nor Green falls in any of the three ranges, so a record with Blue or Green does not pass the filter.

Note: In the examples above, you could achieve the desired result as follows:

* Use the View Filter to filter for one of the negative conditions.

* Use the Retrieval Filter to apply further filtering for the other negative condition.

However, if you use this method be sure to limit the filtering to two negative conditions. Also, be aware that the result is only temporary since the Retrieval Filter is cleared when another view is accessed.

Procedure for setting filters

1. If you want to set a View Filter, display the Stable property sheet. If you want to set a Retrieval (temporary) Filter, display the Transient property sheet.

2. In the Entry Row at the top of the filter, enter specifications in the column for each field you want to filter. Use < NEXT > to move from field to field.

   Note: In your filter entries, you can use uppercase or lowercase characters, or any combination of case, regardless of the case used in record fields.

3. Press < NEXT > in the last field of the row, or select in the filter header, to have your entries confirmed.

   Your entries move to a lower row of the filter, and the Entry Row is cleared for new entries.

4. If you want to filter for some conditions OR others, type the other conditions in the new Entry Row.

   When you confirm the row of "other conditions," they appear as a lower row in the filter, and the Entry Row again is cleared for new entries. You can continue adding rows to filter for more sets of OR conditions.

   To delete a filter row, delete each entry in it.

5. Select [Done]. Alternatively, if you have set the filter in an open view and want to see the effect of your filter before closing the property sheet, you can select [Apply].

   The [Done] or [Apply] command validates all properties in the filter, refilters the view, and redisplays the view contents.

Notes: The Retrieval Filter applies a layer of filtering in addition to any filtering applied by the View Filter.

The Retrieval Filter is temporary. It is cleared whenever you close the current view and access (open, print, make document of) a different view.

The **Size** property on the Stable property sheet does not account for the number of records filtered through the Retrieval Filter. The number is based only on records displayed through the View Filter.

6.

Displaying specific records

If you have a large record file and want to display one specific record or a small block of sequential records, you can display them easily by setting a filter for them. For example:

Set a filter for "Smyser" in a last name field to display the record for Smyser, or

Set a filter for R[→]S[...] if you want all records that have entries beginning with R through S in that field.

You also can scroll through tabular views or advance and reverse in document views in order to display particular records. See the following sections of this chapter.

Scrolling records in a tabular view

1 2 3...

Displaying records in a tabular view (Figure 6-1) is like scrolling in a long table.

Figure 6-1   A tabular view

LastName	FirstName	Address	Telephone	Company	RemindDate
Adamson	George	2153 Alpine Road San Diego, CA 91255	(619) 783-3945	AllSet	04/15/88
Brown	Linda	350 Divisadero San Francisco, CA 99922	(415) 823-0402	Sailforth	06/30/88
Johnson	Barbara	2900 Embarcadero San Francisco, CA 99922	(415) 382-6766	Printfine	05/15/88
Johnson	Peter	6929 Santa Maria Avenue Dallas, Texas 34219	(212) 739-0371	Gearcog	04/30/88
Michaels	Joan	35 First Street San Francisco, CA 99913	(415) 732-3214	Sanders	05/30/88
Williams	Richard	499 Fifth Avenue New York, NY 21345	(214) 821-3946	Hytext	04/15/88

(Window title bar: Sample Record File / Sorted View   Close   Close All   Show View Prop's)

To scroll forward or backward through the records, use the left mouse button to select the symbols in the vertical scroll bar at the right of the window, as follows:

[↑]   to advance one record; or to advance continuously, hold the button down on the symbol.

[↓]   to reverse one record; or to advance continuously, hold the button down on the symbol.

[+]   to advance one screenful

[−]   to reverse one screenful

To "thumb" (advance through a percentage of the view), select with either button in the area of the vertical scroll bar between [+] and [−].

Example: selecting at the midpoint scrolls through 50 percent of the records.

Note: Thumbing is based on the view defined on the Stable property sheet, and you may get unexpected results if you have reduced the number of records by applying a Retrieval Filter.

For example, if the Retrieval Filter passes only the first half of the view contents, then thumbing to the midpoint displays the end of the visible records. (That would be the midpoint of the total records in the view defined on the Stable property sheet.)

To scroll horizontally, select the symbols in the horizontal scroll bar at the bottom of the window, as follows:

[+] to scroll to the far right
[−] to scroll back to the far left
[←] to scroll to the right in increments
[→] to scroll to the left in increments

Displaying records in a document view

Displaying different records in a document view (Figure 6-2) is similar to opening different icons inside a folder using [Next] and [Previous]. The view menu in the window header includes [Next] and [Prev] commands.

To advance to the next record, select [Next] in the view menu.

To reverse to the previous record, select [Prev] in the view menu.

Scroll operations for a record in a document view are the same as those for a ViewPoint document. For example, if a single record is more than one page, use [+] to advance to the next page.

Figure 6-2   A document view
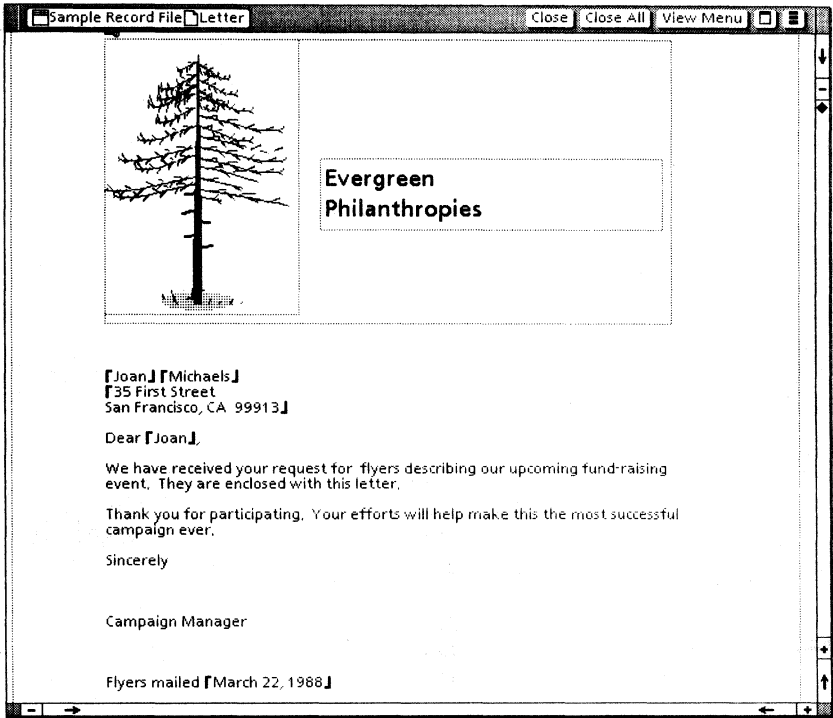
7. Adding, deleting, and editing records

You can add records in any open view (either the Base View or one you have created), or you can add them by copying data from sources outside the record file. You edit and delete records in any open view.

Key concepts for adding, deleting, and editing records

It is wise to establish conventions for the text and space characters in your record fields. You then can rely on consistent appearance of the data in your output forms.

When you add, delete, or edit a record, List Manager makes the change in the one set of records. The change is immediately visible in any view that displays the changed record.

Data entry conventions

You should follow a pattern when entering data in your record fields. Establish conventions for the appearance of your data, such as for capitalization and spacing.

In your defining forms, use the **Description** property of a field to note any conventions for entering data in it. Later, you can refer to the notes by way of the Field Summary sheet.

Make format and data consistent

Whatever your choice is for the format of your data, you should establish it and <u>be consistent when entering data in the record fields</u>.

In some cases, both the format and the text must be identical. The following is an example of problems that are created when text that should be identical is not:

To indicate that something was finished, "Done," "Yes," or "X" was entered in a record field. For the unfinished items, the field was either blank or had an entry of "No."

How can you filter for the finished items?

If the filter is "Done," records that have "Yes" or "X" in the field do not pass the filter. If the filter is Not Empty, all the finished items <u>plus</u> all the records with an entry of "No" pass the filter.

There are workarounds, such as using three filter rows in the example cited, but it is much safer to be consistent (you might not remember that different text had been used to mean the same thing).

In the example, the particular text used does not matter, but it should be the same for every record. The convention could be "Done" for finished items and nothing (blank) for the unfinished ones.

Exclude space characters

When combining record fields in an output form, you may require a space or new line only when a certain field has data in it. Otherwise, there should be no space or new line since it would create unwanted white space in your output form.

The space before or after a middle initial in a personal name is an example. There should be a

space before and after the initial if data from an initial field is included in a full name in an output form, but some names do not have a middle initial.

Although you can set up a pattern for including spaces and new lines in your record file (such as starting middle initial data with a space), it is recommended that you <u>not</u> include any extra space characters. Instead, set up fields in your output forms that enter such characters when needed and do not add extra white space when they are not needed.

It is easier to remember a data entry pattern that does not include special space characters, and you will be able to use the "clean" data in a greater variety of output forms. See the chapter titled, "Designing forms."

Adding records

You can add records to a record file by typing directly in a view, or by copying document icons to the record file icon, or by copying one record file to another.

Adding records directly in a view

For adding records directly, you usually will want to use a view that displays all fields so entries can be made in each field of a new record.

The Base View displays all fields and can be used for adding records. However, since you cannot predict where the system may place an added record in that view, you might want to enter new records in a tabular view that you have sorted. You then can easily locate the new record if you want to proofread it or make a change after it has been entered.

Also, consider whether you have data for all the fields. You may have fields for updates,

promotions, or completion dates that will be filled in at a later date. Columns for these fields can be "turned off" for your original data entry in the records.

If your record file has many fields, you may find it convenient to add records through a document view that displays all fields on a single page. This eliminates the horizontal scrolling necessary in a tabular view with many fields.

Record entries must be text. They cannot contain graphics.

Adding records in a tabular view

Adding a record with essentially unique data

1. Open the tabular view.

2. In the Entry Row at the top of the view, type the data for a new record. Use <NEXT> to move from field to field.

   You also can copy text from other sources into a field of the Entry Row.

3. Confirm or cancel the new record.

   To clear erroneous data and start over, select [Cancel] in the window header.

   To confirm (have the record added to the record file after List Manager verifies that the entries conform to field properties), either press <NEXT> when the cursor is in the last field of the Entry Row or select [Confirm] in the window header.

   When confirmed, a record is moved to its correct position in the view, according to the view's sort order or according to internal storage availability if the view is unsorted. A new blank Entry Row appears, so you can add another record.

Adding a record with data similar to that of an existing record

1. Select the existing record as you would select a table row. (Select in one field with the left mouse button and in a second field with the right mouse button.)

2. Press <COPY>, and for the destination, select anywhere within the tabular view window.

    Your selection for the destination need not be precise since the location of the copied row is totally controlled by the sort order of the view.

3. Edit the new record as appropriate, and confirm it as in Step 3 for adding a record with unique data, above.

    Note: Be aware that when you copy a row, all fields are copied whether they are displayed or not. Be sure you want <u>all</u> the row data before you copy the row.

    Refer to "Adding records efficiently" in Appendix A for an example of a situation where you would want to copy a record with undisplayed fields.

Adding records in a document view

1. Open the document view.

2. Select [Add] in the window header's view menu. A display form with blank fields appears.

3. Type an entry in each field (or copy text from another source if appropriate). Use <NEXT> to move from field to field.

4. Confirm or cancel the new record by selecting the appropriate command in the window header.

    When a record is confirmed:

    If its content meets the view's filter, the record remains displayed. The [Next] and [Prev] commands display the records that surround it in the sort order.

    If its content does not meet the view's filter, the record that displays is the one that follows the one displayed when [Add] was invoked.

    When a record is canceled, the record that displays is the one that was displayed when [Add] was invoked.

To obtain another blank form, select [Add] in the view menu.

In a document view, there is no direct way to copy an existing record to create another record.

Adding records through documents

If you have existing documents that contain either fields or a table, with one or more field or column names that match record field names, you can copy them to the record file. List Manager creates a new record for each document with fields, or for each table row, and fills the new record with data from fields or columns with matching names.

Notes: The property sheet name for a field or column must be identical to a record field name. List Manager ignores names in column headings. If necessary, rename columns on the column property sheets (or rename document or graphics fields on the field property sheets) to match the respective field names in the record file.

Tables cannot have divided columns.

A document that is copied can contain either fields or one or more tables, but not both fields and a table.

Copying a single document

To copy a single document, copy the document icon to the record file icon. Both the document and the record file must be closed.

One record is added if you copied a document with fields. Multiple records are added if you copied a document with a table (one for each row of the table). Data from fields or columns with identical names are entered into the record. If there is no entry in a matching field or table column, that field of the record is blank.

Copying multiple documents

To copy a number of documents at one time, place the documents in a folder and copy the folder icon to the record file icon, or make an extended selection of document icons and copy them to the record file icon.

Handling errors

If error messages are posted, examine the contents of the Error Folder. The folder contains a copy of any document or table row whose data cannot be included in a new record. You can make the necessary revisions and copy the revised document to the closed record file icon, or you can add the record by typing directly in a view.

Errors that can occur during the copy process are the same as those that can occur when you personally enter data in a record. For example, an error occurs if you attempt one of the operations in the following list.

- Place the wrong kind of data in a field, such as numerical data in a field whose type is Date.

- Violate a field's Format or Range properties.

- Leave a Required field empty.

- Try to add a totally blank record.

Adding records from another record file

To add records from one record file to another (from Source to Destination), use one of the following procedures:

- Select the desired view icon in Source, or make an extended selection of several views, press <COPY>, and select the closed icon for Destination.

  CAUTION: If a record is included in several views of an extended selection in Source, you will have multiple copies of the record in Destination.

- Alternatively, you can select the closed icon for Source, press <COPY>, and then select the closed icon for Destination.

New records are added to Destination, with data in each field that matches a field in Source.

If a view is copied, only the records in that view (as filtered through the View Filter and/or the Retrieval Filter) are added to Destination. If the record file icon is copied, all records are added.

If error messages are posted, examine the contents of the Error Folder and take any necessary action. (For details, refer to the preceding section, "Adding records through documents.")

Deleting records

1 2 3...

Records can be deleted only from an open view. (If you delete a view icon, no records are deleted from the single set of records in the file; only the view icon is deleted.)

The disk size of a record file is not reduced when a record is deleted; its disk page size remains the same. List Manager internally frees the space for re-use when a new record is added. This behavior makes for fast performance and is acceptable for most situations.

If you delete a large number of records with no intention of adding a comparable number, you can recover disk pages by adding the remaining records to a newly created file with the same structure and then deleting the original file. (Refer to the "Usage guide," Appendix A.)

Deleting records in a tabular view

1. Open any tabular view that displays the record(s) you want to delete.

   The view need not display all fields of the record(s).

2. Select in one field of the record with the left mouse button, then select in another field of the record with the right mouse button.

   If you want to delete a block of sequential records, extend the selection upward and/or downward by selecting with the right mouse button in a field of the first and/or last record you want in the block.

3. Press < DELETE >.

   No confirmation is requested for the delete action. The record or block of records is deleted and no longer appears in any view.

Deleting records in a document view

1. Open any document view that displays the record(s) you want to delete.

    The view need not display all fields of the record(s).

2. If necessary, use [Next] or [Prev] in the view menu to display the record you want to delete.

3. In the view menu, select [Delete].

    No confirmation is requested for the delete action. The record is deleted and no longer appears in any view. The record that had followed the deleted record is now displayed.

    If you want to delete another record, repeat steps 2 and 3.

Editing records

You edit text inside a record field the same way you edit text in a document, except that you cannot change the font or other text properties.

When editing in a tabular view, you can use < UNDO > to reverse a delete action if you have not performed another subsequent action.

To edit a record:

1. Open any view that displays the record(s) you want to edit.

2. Select in the field to be edited, and add or delete text.

    You can copy text from another record in a tabular view or from another window, just as you do when editing a document.

Two records cannot be edited at the same time, so you cannot move text from one record to another. However, in a tabular view you can copy text from a source record to a destination record, confirm the edit, and then delete the text from the source record.

3. When all edits to a record have been made, select [Confirm] in the window header.

   To cancel incomplete edits, select [Cancel]. The record redisplays in its original, unedited state.

8.   Printing records

You print records by copying a view icon to a printer icon. Tabular views print in a table format, and document views print in the format of their display forms.

Printing a tabular view

Tabular views print in table form to a maximum width of 14 inches. If you have a view that exceeds that width, you can reduce the width of certain columns or create a view with specified columns that fit on the maximum paper size.

If you copy a record file icon to a printer icon, the result is the same as copying the Base View. The printing options are as shown in Figure 8-1, for a tabular view, and the data in the printed document is the same as that in the Base View.

For tabular views, you have all the printing options that you have for other icons. You also have options for orientation, page margins, appearance of the table, and appearance of table contents (including font) in the printed document (see Figure 8-1).

Notes: In order for line breaks to be correctly determined in the printed documents, you must have the screen font loaded for the font you choose. For Titan, the Printwheel Fonts must be loaded at your workstation.

The unique tabular view printing options do not appear when you copy the following icons to a printer icon:

- **A folder** that contains a record file

- An extended selection of icons, either in a folder or on the desktop, if the first icon selected is not a record file

In those cases, the printed document uses the default printing options for tabular views.

Figure 8-1 **Printing options, tabular view**
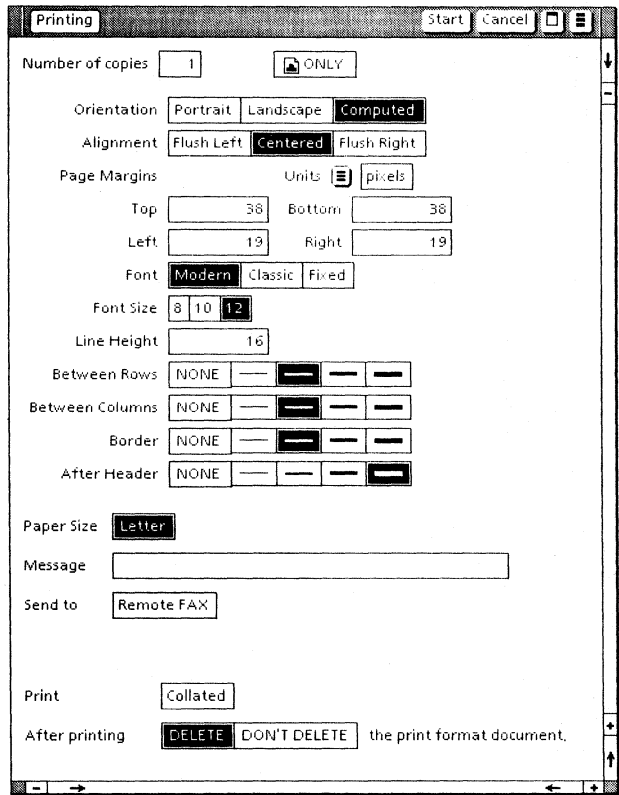
The unique printing options for tabular views are as follows:

Orientation

[Portrait]
> Causes the document to print in a vertical orientation ($8\frac{1}{2}$ by 11, for example, where the page height is greater than the width).

[Landscape]
> Causes the document to print in a horizontal orientation (11 by $8\frac{1}{2}$, for example, where the page width is greater than the height).

[Computed]
> Results in either portrait or landscape orientation, based on the computed width of the table. The orientation used is the one that prints the entire table with the least amount of white space on either side of the table.

The default is [Computed].

Alignment

Aligns the table in the printout according to your choice of [Flush Left], [Centered], or [Flush Right]. The default is [Centered].

Page Margins

Determines the page margins for the printed document.

For page margins different from the defaults, specify **Units** by selecting [Pixels], [Inches], [Millimeters], [Centimeters], [Spaces], or [Points] from the **Units** auxiliary menu. The default is [Pixels].

In the respective boxes, enter numbers for the **Page Margins** in the boxes for **Top**, **Bottom**, **Left**, and **Right**. The defaults are [38], [38], [19], and [19] pixels, respectively.

Font
> Prints the text in the table cells in [Modern], [Classic], or [Fixed] font. The [Fixed] choice (all characters have the same width) prints the view in Terminal for 8 and 12-point **Font Size** and in Titan for 10-point **Font Size**. The default is [Modern].

Font Size
> Determines point size of the text in the table cells, based on your selection of [8], [10], or [12] points. The default is [12].

Line Height
> Determines the line height of the text in the table cells. It is based on the **Units** you selected for **Page Margins**. You can change the units at any time. The default is 14 pixels.

Between Rows
> Determines the line width of the horizontal lines between rows of the table. The default is the second line width.

Between Columns
> Determines the line width of the vertical lines between table columns. The default is the second line width.
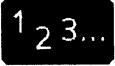
Border
> Determines the line width of the table border. The default is the second line width.

After Header
> Determines the line width of the line between the column headings and the first row of the table. The default is the fourth line width.

Procedure for printing a tabular view

1 2 3...

1. Select the view icon and press <COPY>.

2. Select a printer icon.

3. Make any changes you want on the Printing option sheet.

   [Legal] must be selected if your view is more than 11 inches wide, and in that case your printer must have legal size paper loaded, also.

4. Select [Start] on the option sheet.

   The view prints as a table, using the options you have specified, with sequential page numbering at the bottom right of each page.

Printing a document view

The options for printing a document view, shown in Figure 8-2, are the same as those for printing any other icon, except there is no option for repaginating before printing.

If the display form for your view is more than one page long and requires pagination, you should make a document (or folder of documents, as the case may be), paginate, and print it. Refer to the "Making documents" chapter.

Figure 8-2 **Printing options, document view**
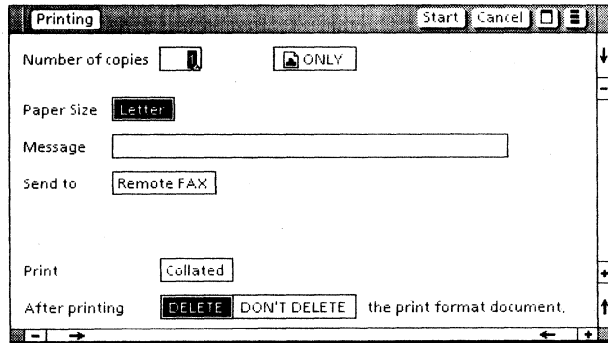
Procedure for printing a document view
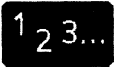
1. Select the view icon and press <COPY>.

2. Select a printer icon.

3. Make any changes you want on the Printing option sheet.

4. Select [Start] on the option sheet.

One document is printed for each record in the view, using the fonts and other properties of the view's display form.

9.   Making documents

You can generate documents with tables or fields that contain data copied from your record file. The documents can be printed, filed, mailed, or edited like any other document.

Make Document options

The [Make Document] command is available in the window header of the record file and in the view menu of an open view. When you select a tabular view icon and then select the command (or select the command in an open tabular view), an option sheet appears that is similar to the one in Figure 9-1.

Figure 9-1   **Make Document option sheet**
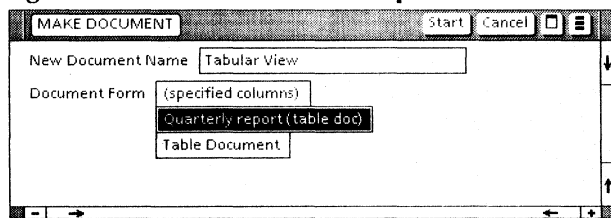
New Document Name
Determines the icon name of the generated document(s). Edit the name as you wish.

Document Form
Determines the format of the generated document(s). [Specified Columns] produces a table in default format. Any other selection produces documents in the format of the

form whose name you selected. The choices that appear are names of documents in the Forms Folder that contain exactly one table with no subdivided columns.

[Start]
Window header command that starts generation of the documents. When all documents have been generated, a message is posted in the message area.

Note: After you have selected [Start], you can press <STOP> to stop the operation.

Making a table document

1 2 3...

You can generate a table in default format, using the [Specified Columns] option. You also can generate a table with unique properties if you have a document with a table in your Forms Folder.

Using the Specified Columns option

1. Select a tabular view icon.

2. Select [Make Document] in the record file window header.

    Note: Alternatively, you can select [Make Document] in the view menu of an open tabular view, and proceed with Steps 3 and 4 below.

3. On the Make Document option sheet:

    •   Select [Specified Columns] as the choice for the **Document Form** option.

    •   If you wish, replace the text in the **New Document Name** option.

4. Select [Start].

A document icon, named as you specified, appears in the first open position on the desktop. The document has default page properties and a table in default format, with the same columns as the view you selected.

A folder icon, containing a series of table documents, appears if the view data exceeds the maximum size of a ViewPoint table (approximately 3,300 cells).

The folder has the name specified in the **New Document Name** option, and each document has the same name plus an appended number as in this example:

Address View: 1 of 6
Address View: 2 of 6
. . .
Address View: 6 of 6

5. Open the new document(s). If the entire table does not display because it is too wide for the page width or page margins, follow this procedure to display it properly:

    •   Select the Page Format character, and display the Page Layout property sheet. Revise the page width and/or page margins to accommodate the table.

    •   Paginate the document.

    •   Select the table, display its property sheet, and select [Frame] as the **Display** choice. Toggle the **Width** property (apply [Fixed], then apply [Varying]).

    •   Select [Done].

    The table is displayed in its full width.

Using a prepared table

Although you can display a tabular view only in default form, you can generate a document that contains your record data in a table with any combination of properties.

The table in the document you generate can have captions, unique ruling lines and column properties, and unique text properties for the data copied from the view. The document also can contain other text as well as graphics and fields. (Refer to "Creating a form with a table" in the "Designing output forms" chapter.)
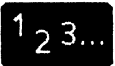
The procedure for generating the document is as follows:

1. Select the desired tabular view icon.

2. Select [Make Document] in the record file auxiliary menu.

3. On the Make Document option sheet:

    •   Select the name of your prepared document for the **Document Form** option.

    •   If you wish, replace the text in the **New Document Name** box.

4. Select [Start].

    A document is generated, and its icon is placed in the first available position on the desktop. It includes the contents of your document form plus data copied from the record file into your table (one row for each record).

    If your document contains fields or table columns with fill-in rules you would like to execute, open the document and select [Update Fields].

Making document(s) with fields

1 **2** **3**...

If you open a document view, you can generate a single document with the same content as the displayed record. If you select the icon for a document view, you can generate a folder of documents, one for each record in the view.

Making a single document

1. Open the desired document view and display the desired record.

2. Select [Make Document] in the view menu.

   A single document is generated, with the same content as the displayed record. Its icon, which has the same name as the selected view, appears in the first open position on the desktop.

Making multiple documents

1. Select the desired document view icon.

2. Select [Make Document] in the auxiliary menu of the record file.

   A folder is generated, containing one document for each record in the view.

   The folder icon, which has the same name as the selected view, appears in the first open position on the desktop. Each document in the folder has the same name as the view plus an appended number, as in this example:

   Letter View: 1 of 39
   Letter View: 2 of 39

   . . .

   Letter View: 39 of 39

10.   Designing forms

List Manager is of most benefit to you when you have useful, appropriate forms in your Forms Folder. Using such forms, you can look at, print, or make documents of record data in a variety of ways.

Key concepts of forms design

The key to designing forms is your knowledge of fields, tables, and fill-in rules (described in *Document Editor Reference* volume 4). If you want to include graphics in your forms, you also should be familiar with the graphics capabilities of ViewPoint (described in the *Graphics Reference* volume).

Wherever record data should appear in a form, you must have a field or a table column with the same name as a record field.

You can use a record field name only once as a field name in your form. If you have subsequent fields that should use the same record data, you use the record field name as the fill-in rule for the subsequent fields.
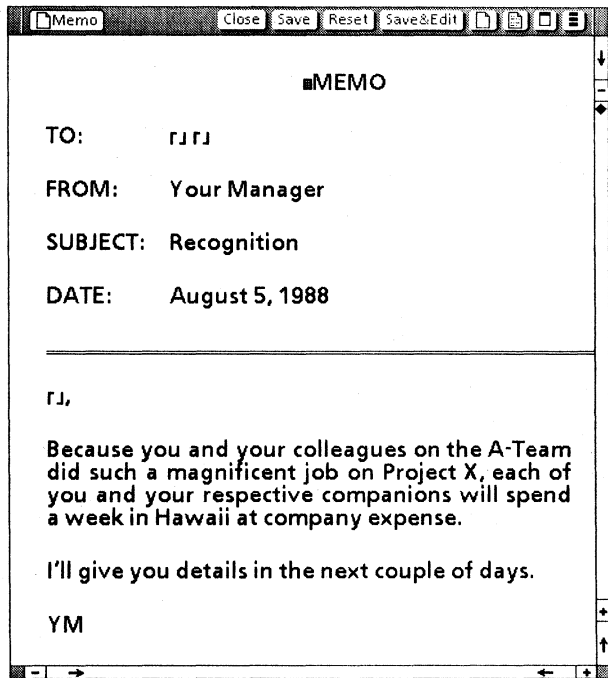
Figures 10-1, 10-2, and 10-3 are examples of forms created for particular record files. You can duplicate features of these forms in similar forms for your record files.

Memo example

The two fields in the "TO" line of the memo (Figure 10-1) are FirstName and LastName, which correspond to fields in the record file. When Memo is used as the display form for a view, those fields are filled with record data.

The third field, named FName, does not have a matching field in the record file. However, it has a fill-in rule of FirstName, so it repeats the data that appears in the FirstName field of the form after it has been filled from the record file.

Figure 10-1 Memo with FirstName, LastName, and FName fields

```
┌──────────────────────────────────────────────────────────┐
│ ▢Memo            Close  Save  Reset  Save&Edit  ▢ ▢ ▢ ▢  │
├──────────────────────────────────────────────────────────┤
│                          ▪MEMO                             │
│                                                            │
│   TO:        ⌐⌐  ⌐⌐                                        │
│                                                            │
│   FROM:      Your Manager                                  │
│                                                            │
│   SUBJECT:   Recognition                                   │
│                                                            │
│   DATE:      August 5, 1988                                │
│                                                            │
│   ────────────────────────────────────────────────        │
│                                                            │
│   ⌐⌐,                                                      │
│                                                            │
│   Because you and your colleagues on the A-Team            │
│   did such a magnificent job on Project X, each of         │
│   you and your respective companions will spend            │
│   a week in Hawaii at company expense.                     │
│                                                            │
│   I'll give you details in the next couple of days.        │
│                                                            │
│   YM                                                       │
└──────────────────────────────────────────────────────────┘
```

Graphics certificate example

The FirstName and LastName fields in the certificate (Figure 10-2) have corresponding fields in the record file. When the certificate is used as the display form for a view, those fields are filled with record data.

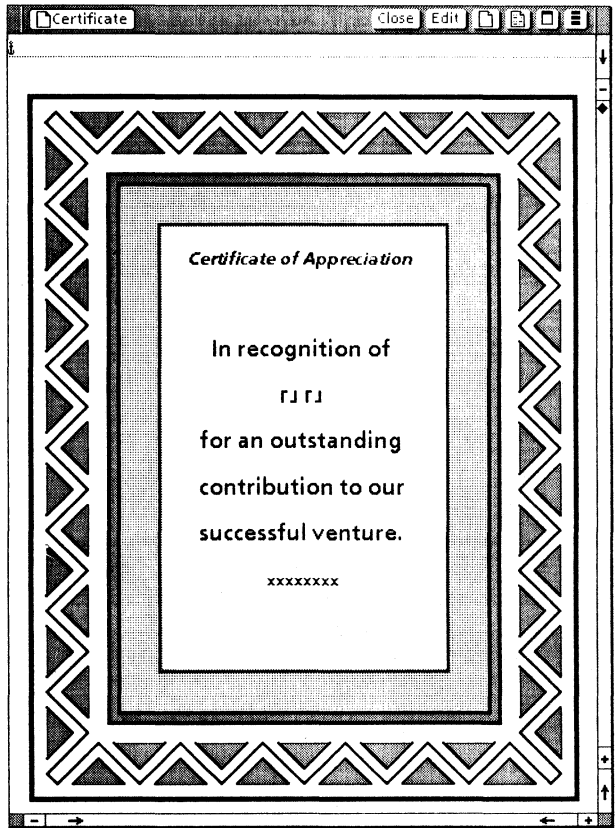### Figure 10-2 Certificate with FirstName and LastName fields

Table example

The table in the appraisal document (Figure 10-3) is named Table1, and the column property sheet names match record field names (the fourth column is named "Value").

This form can be used with [Make Document] to generate a table filled with rows of record data. In the generated document, selecting [Update Fields] produces the following results:

• The current date appears in the field next to "Date" because it has a fill-in rule of CurrentDate.

• The total value appears in the field next to "Total value of collection" because it has a fill-in rule of SUM[Table1.Value].

Figure 10-3   **Appraisal with field fill-in rules: CurrentDate; SUM[Table1.Value]**

Creating a form with fields

1 2 3...

To create a form with fields:

1. Copy the Blank Document icon, rename the copy, open it, and select [Edit] if necessary.

2. Select [Show Structure].

3. Enter text and/or graphics, using page layout and text properties that are appropriate for the form.

4. Enter a document field (or a graphics field, if appropriate) at each position where you want record data to appear.

   You also can enter other fields with fill-in rules such as CurrentDate or CurrentUser or fill-in rules that use data from other fields.

5. On the property sheet for each field that is to be filled from the record file, edit the **Name** property to match the name of the record field that will supply the data.

   Edit any other properties as necessary to make the field compatible with the corresponding record field.

6. If a record field name has been used once as the name of a field in your form, and you want to use the same record field again, enter the record field name in the **Fill-in Rule** box of the subsequent field(s). (The latter fields must have unique names, not the same name as the record field.)

7. Paginate and close the document.

8. Move or copy the form to the Forms Folder of your record file.

Creating a form with a table

1 2 3...

Using [Make Document] with a tabular view, you can generate a document that contains record data in a table in default form. However, you also can create a form that produces a table with unique properties, such as captions, different ruling lines, and a smaller or larger font for the table text.

Your table can have any number of columns, any or all of which are to be filled from the record file. You can include any text, graphics, or fields in the document that contains the table. For the fields, or for columns that are not filled from the record file, you can write fill-in rules. For example, you might write a rule to sum a certain column.

The procedure for creating the table form is as follows:

1. Copy the Blank Document icon, rename the copy, open it, and select [Edit] if necessary.

2. Enter text and/or graphics, as well as any fields you want to include, using page layout and text properties that are appropriate for the form.

3. Insert a table, add the number of columns you want, and set all the caption, ruling line, column, and other table properties as you want them.

4. On the property sheet for each column that is to be filled from the record file, edit the **Name** property to match the name of the record field that will supply the data.

   Edit any other properties as necessary to make the column compatible with the corresponding record field.

5. Set any particular text properties you want for the text that will fill the columns. The text properties of the first new-paragraph character in each column govern the appearance of text in all rows of the column.

   There are many ways to set text properties for column text. For example, you can select the new-paragraph character in the column's first row and set properties on its Text property sheet; or use the top row of function keys; or use the Text display in a Column property sheet; or use an extended column selection to set properties for several columns at once. Refer to the "Tables" chapter in *Document Editor Reference* volume 4.

6. Delete all rows of the table, to create a one-row table.

7. Paginate and close the document.

8. Move or copy the form to the Forms Folder of your record file.

Creating "optional" fields

In a record file you may have a field for company name, and some records may have no entry in that field. If an output form for letters includes new-line characters before and after the company field, records without a company entry have an extra line between the name line and the address line. If your form has just one new-line character, the name and address run together on one line.

In such forms, you can include "optional" fields that enter certain characters or text only when appropriate. In addition to fields for characters such as space or new-line, you can have optional fields for singular or plural noun forms or for whole text paragraphs.

In the **Fill-in Rule** property for the optional fields, you use a Choose expression to state the conditions for entering the characters. List Manager first uses record data to fill all fields whose names match record fields and thereafter acts on your fill-in rules. (This applies to document views only; List Manager does not act on fill-in rules in a document with a table used to generate a document from a tabular view.)

Refer to Figure 10-4, and the discussion following it, for examples of optional fields. You can duplicate the fill-in rules in your own forms, substituting names for your record fields.

Figure 10-4 **Optional fields in output form**

```
                        [DateToday*]



        [FirstName] [Initial][OpSpace][LastName]
        [Company][OpNewLine][Address]

        Dear [FNamet]:

        xxxxx xxxx xxxxx xxxxx xxx xxx.  xxxx xxxxx xxx xxxx
        xxxxx xxxxx xxx [Quantity] [OpNoun] xxxxx xxx
        xxxxx.

        [OpParagraph]xxxx xxxxx xxxxx xxx xxx xxxx xxxx
        xxx xxxx xxxxx xxxxx.  xxx xxxxx xxx xxxxx  xxx xxxx
        xxxxx xxx xxxx.  xxxxx xxxxx xxx xxxxx xxx xxxxx xxxx
        xxxxx xxxxx xxx

        Yours truly



        xxxxx x xxxxxxx
```

*Fill-in rule is Current Date
†Fill-in rule is FirstName

All the fields in the example are filled by record fields with the same name, except for the "Op" fields and the two footnoted fields.

The fill-in rules for the "Op" fields are as follows:

OpSpace

CHOOSE
    Initial = "" -> "";
    OTHERWISE -> " "

The quotation marks on the Initial line contain nothing, whereas those on the OTHERWISE line contain a space character. The form will include a space if the Initial field contains data; otherwise, it will not.

Use the same fill-in rule for an optional space preceding an Initial field when name fields are combined as follows:

[LastName], [FirstName]**[OpSpace]**[Initial]

OpNewLine

CHOOSE
    Company = "" -> "";
    OTHERWISE -> "
"

The quotation marks on the Company line contain nothing, whereas those on the OTHERWISE line contain a new-line character. The form will include a new line if the Company field contains data; otherwise, it will not.

OpNoun

CHOOSE
    Quantity = 1 -> "box";
    OTHERWISE -> "boxes"

If the value in the Quantity field is 1, then the singular form, "box," is entered in this field. Otherwise, the plural form of the noun is entered.

OpParagraph

CHOOSE
Quantity >10 -> "You are entitled to a quantity discount of 10%, on your order, and you will see an entry to that effect on the invoice when the equipment is delivered.
";
OTHERWISE -> ""

If the value in the Quantity field is greater than 10, the text that begins on the Quantity line is entered in the field, including the new-paragraph character that follows it (in other words, all the characters between the quotation marks).

If the value is 10 or less, the field remains empty, and there is no unwanted extra space between paragraphs.

Using Mail Merge for labels

Using record files, you can print multiple records as rows of a single table. However, you cannot print multiple record fields in one document field. For example, you cannot print data from name and address record fields in one field of a label template.

For operations such as creating labels, you can use record data with Mail Merge, as follows:.

1. Make a table document from your record file, using a view that displays the appropriate columns.

2. Use Mail Merge to merge the table data into a label template, such as a 33-to-a-page label template.

You also can use Mail Merge to convert table data into document text. Refer to "Mail Merge" in *Document Editor Reference* volume 4.

A.   Usage guide

This appendix contains information that will be valuable to you as your record files grow or as you use your record files for more purposes.

Adding records efficiently

- **Adding a single record**: It usually is most efficient to enter data for a single new record in the Entry Row of an open *full tabular view* (a tabular view with all columns displayed) and press <NEXT> when data has been entered in the last field.

- **Adding a single record with constant data:** If several fields of a record you want to add should have the same data as an existing record, you can copy the existing record and edit the remaining fields. For example:

  A library record file has a number of fields, including fields for Publisher, Artist, and Format. When a new Dover book by Tom Tierney is received, the user opens a tabular view that has been filtered for Publisher, "Dover"; Artist, "Tom Tierney"; and Format, "Book." All three columns are undisplayed, so the remaining columns fit in the normal window width.

  The user selects a row that has a title most similar to the title of the new book, copies that row, and edits the displayed fields in the new row.

Using this method, the user never needs to rekey the values "Dover," "Tom Tierney," or "Book."

• **Adding batches of records:** It is most efficient to enter data for batches of records in a table (if you do not have a table form, create one from a tabular view), proofread your entries, then copy the table to the closed record file icon.

With this method, you can type the data for all the records at one time, without having to wait for confirmation of each record as it is entered.

Remember that source field data and destination field type must be compatible when you add records through field or table documents, as well as when you output record data to such documents. Refer to the chart in Figure A-1.

Figure A-1 **Compatibility chart for source data and destination type**

Source field data	Destination field type			
	ANY	TEXT	AMOUNT	DATE
TEXT	Yes	Yes	*	No
AMOUNT	Yes	Yes	Yes	No
DATE	Yes	Yes	No	Yes

*Compatible if text characters are appropriate for representing an amount.

Applying practical limits

The following information is supplied to help you apply practical limits to your record files:

List Manager imposes no limits on the number of fields or number of records in a record file. The only actual limit is the disk space at the workstation.

As a record file increases in size, however, it takes more time and more disk pages to open views or change their properties. A practical limit is perhaps a record file of from 10 to 20 fields, with 5 to 50 characters per field, and 1,000 records. Record files with fewer fields or fewer characters per field can have more records and still be practical in terms of your time and disk space.

When opened, a record file consumes approximately twice as much space as it does when it is closed. It takes approximately the same amount of time to open a record file as it takes to copy it. The extra time and space is used in creating an invisible backup copy that protects you against data loss. (It is a good idea, nonetheless, to back up your record files to a file server or floppy disks, as you do with documents.)

The maximum width of an open tabular view is 400 inches.

A real limit for the content of individual fields is approximately 8,000 characters. The actual number will be slightly reduced by variations in the disk size of non-printing characters and characters from different keyboards.

Saving the Index

Under most circumstances, you should select (or leave selected) the [Save Index] choice on the Stable property sheet. The Index is an internal cross-reference (invisible to you) that enables List Manager to access the records for a view as quickly as possible.

If you turn off [Save Index] for a view, then when the view is opened, <u>it may require up to twice again as much space as the record file, as well as a long time, to create the unsaved index</u>. (The disk space is reclaimed when the record file is closed.)

Turning off [Save Index] does reduce the disk size of the record file, and the following are three situations where you might find it beneficial:

• **Backing up a record file.** When backing up a record file by copying it to a file drawer or floppy disk, turn off [Save Index] to reduce the storage required. When you use the record file again, turn on [Save Index] the first time you open a view.

• **Using many permanent views.** If you have a record file with many permanent views (perhaps 30 or more), some of which are not opened often, and you have noticed a slowness when inserting or updating records: Turn off [Save Index] for the views you open infrequently.

The time it takes to insert a record into <u>any</u> view is proportional to the number of indexes in which it must be included.

• **Copying a large record file to a small record file.** When copying a large batch of records from record files or tables to an empty or small record file, you should turn off [Save Index] in the destination record file

views. After copying the batch, turn on [Save Index].

It does take time to create an Index, but it takes even longer if the Index is created bit by bit during the copy process. Your decision to turn off [Save Index] should be based on the original size of the destination record file (small) compared to the number of input records (large).

Making a new record file from another

You may have occasion to create a new record file and transfer records to it from an existing record file, for the following reasons:

- To add other fields

- To change the names or types of certain fields

- To split a record file that has grown too large to be accessed efficiently

- To archive certain records

- To reclaim disk space after deleting a number of records (if new records will not be added)

To add fields

1. Add columns for the new fields to a copy of the table that defined your record file (or to a table that you make by performing [Make Document] on a tabular view that displays all columns but no records).

   Position the added columns as you want them to appear in the new record file.

2. Set the desired properties on the added columns.

3. Make a new record file, using the table with the added columns as the defining form. Copy your defining form to the Forms Folder of the new file, for future use as an input or output form.

Alternative A: Use Steps A4 and A5 if the added fields will remain mostly blank in the new record file.

A4. Copy the old record file icon, or any view that passes all the records, to the new record file icon.

All the old records are copied to the new record file, so you can delete the old file after verifying that there are no documents in the new file's Error Folder.

A5. Make appropriate entries in the new fields.

Alternative B: Use Steps B4 through B8 if you want to enter data immediately into the new fields for most of the records. With this method, you avoid waiting for confirmation as the new data is entered for each record.

B4. Delete any rows that have data from the table created in Step 1.

B5. Use the table (B4) as the Display Form to generate a table from the old record file, using a full tabular view that passes all records.

B6. Enter the appropriate data in the new columns of the generated table.

B7. Copy the generated table to the new record file.

B8. Delete the old record file.

To change field names or types

1. Make a table from a full tabular view that displays all records of your existing record file.

2. Revise the names or other properties of the table columns.

3. Use the revised table as the defining form for a new record file.

4. Copy the revised table to the new record file icon.

   All the data from the old record file is thus transferred to the new one, by way of the table.

To split a large record file

Refer to "Saving the Index" when splitting a large record file.

1. Create two (or more) new record files, using the same defining form as your existing record file.

   Note: In some cases, you may want to delete a certain column before defining the new record file. For example, if it is convenient to split an employee record file into separate files for "Union" and "Non-Union," then the status will become implicit in the new Union and Non-Union record files, and a status field would be of no value.

2. Filter a view so that it contains half (or other desired portion) of the old records. The view need not display all fields of the records; all fields that match fields in another record file, whether displayed or not, are copied when you copy to a record file. Since the view will be used just once, use a Retrieval Filter to produce it.

3. Copy the filtered view to one of the new record files.

4. Repeat Steps 2 and 3 for the other half (or other remaining portions) of the old record file.

5. After checking the Error Folders in the new record files, delete the old record file.

To archive certain records

Refer to "Saving the Index" when creating a file to archive and when storing such record file.

1. Create a new record file that uses the same defining form as your existing record file.

2. Set a Retrieval Filter (since the view will be used just once) so that it displays all the records you want to archive. The filter may require that a certain field have a certain date in it, or certain text, or a range of data (such as "January 1, 1988[→]December 31, 1988").

3. Copy the filtered view to the new record file.

   Delete the records inside the filtered view after they have been transferred. The disk size of the record file will not be reduced, but the space will be reused for new records as they are added.

Alternatively: Consider making a table from the records you wish to archive. It requires fewer steps, and if you need the data again in List Manager form, you can copy the table to the record file or use the table as the defining form for a new record file.

To reclaim disk space

If you have deleted a large number of records and have no intention of adding new ones, you

may want to reclaim the disk space that was occupied by the deleted records. To do this:

1. Create a new record file that uses the same defining form as your existing record file.

2. Copy the old record file icon to the new record file icon.

The new file occupies fewer disk pages; and the old record file can be deleted after you have verified that all records were transferred.

Interacting with other applications

*   **Use tables created in other applications.** The tables you use to add records to your record file can originate in applications other than *VP Document Editor*. For example, they can have been created through:

    VP Integrated Financial Management

    VP Data Capture
    (via one of the Emulation applications)

    VP Spreadsheets

    Verify the column properties in such tables, and edit them if necessary to match your record fields.

*   **Supply colleagues with copies of your defining form table.** If other people forward information for your record file, furnish them a copy of your defining form table. Give them a sample of how the table should be completed. Then you can copy their tables directly to the record file, with no rekeying of the information.

*   **Use CUSP to automate actions involving record files.** Refer to *VP CUSP Buttons Reference*.

- **Refer to the Help documents** for refreshers on fields, tables, fill-in rules, on other applications, or on List Manager.

  The Help documents are supplied on floppy disk and also may be in your network drawer for VP applications. There is one document for each application, and you can copy the documents you want to use to the Help icon at the top right of your workstation.

Internal record file structure

Occasionally, users with programming experience have asked how List Manager organizes record data internally. The answer: Data is organized in a "hierarchical" data base.

This information is of no significance for the ways you can use record files. It is included here simply to answer the question about the internal structure of the data.

B. Field Name, Type, Format, and Range

For your convenient reference, this appendix repeats certain information from chapters in this volume, as well as portions of the "Fields" chapter of *Document Editor Reference* volume 4.

The information is pertinent for the following record file purposes:

- Setting properties for fields or table columns in defining forms

- Setting properties for fields or table columns in output forms

- Setting filters in record files

When entering format or range properties for fields or columns, you can access the Field special keyboard (Figure B-1).

Figure B-1   Field Special keyboard
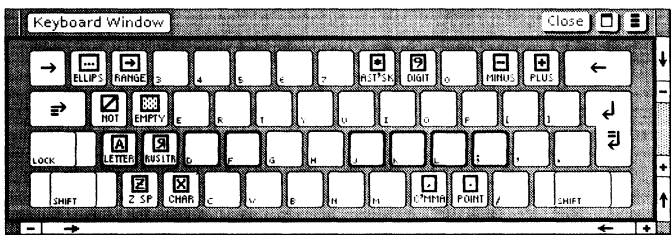
When entering filter specifications for a view, you can access the List Manager special keyboard. It supplies the same symbols as the Field special keyboard for Ellipsis, Range, Not, and Empty (in the <1>, <2>, <Q> and <W> positions).

The Field properties sheet (Figure B-2) defines the name of a field, defines its data type, and restricts its use. The particular field properties described below (**Name**, **Type**, **Format**, and **Range**) have counterparts for table columns. The **Range** description also applies to filters for record file views.

Figure B-2 **Field properties sheet**

Name

Names the field automatically by appending an integer to the word "Field." Fields are numbered sequentially; the first field you insert is Field1, the fifth is Field5.

You can change the automatic field name, but the new field name must be unique within the document. If you plan to use the field name in fill-in rules or CUSP Button programs, it must follow these guidelines:

- It should not contain spaces or punctuation characters.

- It should not begin with a numeral.

- It cannot be a reserved word of the CUSP language.

Notes: You can work around the above restrictions by including one or more apostrophes in the field name when it is used in a fill-in rule or CUSP Button program. (Refer to the appendices in *Document Editor Reference* volume 4). However, to preserve readability, follow the guidelines above whenever possible.

When filling in fields, if you select [Prompt for Fields] from the document auxiliary menu, the field name appears as the prompt if the **Description** property is blank.

When used in a defining form, the field name becomes a record field name.

Type

Specifies the acceptable data type for the field. The choices are:

[Any]

Specifies that entries may contain any characters with any associated properties. (In List Manager, fields of type Any in the defining form become type Text in the record file.)

[Text]

Specifies that entries may contain only letters, numerals, and symbols. Numerals of type [Text] are recognized as text, not as numeric values.

[Amount]

Specifies that entries may consist only numerals, a plus sign (+) or minus sign (-), and a decimal point (or a comma, depending on the **Language** property). Other characters are allowable if they are specified within the **Format** property.

[Date]

Specifies that entries must be dates. Entries can use the format Month Day, Year (for example, October 29, 1989) or MM/DD/YY (for example, 4/8/89 or

10/29/89). You can specify a default date format in the **Format** property.

The default data type is [Any].

Format
Used in combination with field types [Text], [Amount], and [Date], enables you to control the format in which information appears. Leave this property blank if the field has no format restrictions.

When you use a format with field type [Text], it defines the order and type of characters to be entered. When you use a format for field type [Amount] or [Date], it defines the format in which the field contents are displayed.

You enter format characters from the Field Special keyboard into the **Format** box. Format characters are listed below for each field type.

Type [Text]
format character   Position limit

[X]	Any character
[A]	A letter or a space
[9]	A digit
[Z]	A digit or a space

You also can specify required punctuation in the format by entering it from the standard keyboard.

For example, if you want a field to contain a Social Security number, you enter the format:

[9][9][9]-[9][9]-[9][9][9][9]

You enter the hyphens from the standard keyboard.

If the person filling in the field uses letters instead of numbers, or forgets to enter hyphens, an error message appears when <NEXT> or <SKIP> is pressed or when

[Update Fields] is selected from the content auxiliary menu. (In a record file, the message appears when you try to confirm the record.)

Type [Amount]

format character	Position limit
[+]	A plus sign (+) or a minus sign (−)
[−]	A minus sign (−) or no character
[9]	A digit
[Z]	A digit or a space
[,]	A comma or a space
[.]	A decimal point (period)
[*]	Asterisk (must be in the first position

Type [Date]

format	Entry limit
MM/DD/YY	An abbreviated date
Month Day,Year	A spelled-out date

You type the date format exactly as shown above, using any combination of uppercase and lowercase characters.

The Document Editor automatically converts dates entered in other formats to the specified format. For example, if the date format is MM/DD/YY, and you type January 1, 1988 when you fill in the field, the date appears in the field as 1/01/88. (It also appears as 1/1/88 if you enter 01/01/88.)

If you do not specify a format, the field accepts your keyboard entries in either format and leaves them unchanged. If the field is filled in by a fill-in rule and no format is specified, the form used is Month Day, Year.

The date format also is affected by the **Language** setting.

Range

Defines the range of acceptable entries. Leave this property blank if the field has no range restrictions.

If you specify a range and the person filling in the field enters data that is not in the range, an error message appears when < NEXT > or < SKIP > is pressed or when [Update Fields] is selected from the content auxiliary menu. (In a record file, the message appears when an attempt is made to confirm the record.)

To specify a range, you enter symbols from the Field Special keyboard (or from the List Manager Special keyboard), and you enter text and numbers from the standard keyboard. The symbols you can use are described in the following list.

Symbol   Description

[...]   The Ellipsis (or "wild card") stands for any number of characters or for no character.

[→]   The Range Arrow specifies either alphabetical, numerical, or date order, standing for:

- "Between" if it separates two text, two numeric, or two date values

- "Before" if it precedes a value

- "At or after" if it follows a value

[/]   The Not symbol excludes the value range it precedes.

Figures B-3 and B-4 demonstrate some examples of ranges.

Figure B-3 **Examples of text ranges**

Range	Acceptable entries
Smith	Smith
Smith[...]	Any text that begins with Smith
[...]Smith	Any text that ends with Smith
[...]Smith[...]	Any text that contains Smith
[...]Jones[...]Smith[...]	Any text that contains Jones followed somewhere by Smith
Jones[→]Smith	Any text whose alphabetical order is between Jones and Smith, inclusive
Smith[→]	Any text whose alphabetical order is at or after Smith
[→]Smith	Any text whose alphabetical order is before or at Smith (order includes Smith)
[/][...]Smith[...]	Any text not containing Smith

Figure B-4   **Examples of amount and date
ranges**

Range	Acceptable entries
100	100
100[→]	Any number greater than or equal to 100
[→]100	Any number less than or equal to 100
1[→]100	Any number between 1 and 100, inclusive
1/24/88[→]	Any date equal to or after 1/24/88
1/1/88[→]12/31/88	Any date in 1988
[/]0[→]9.99	Any number outside the range 0 through 9.99

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