VA FileMan 22.2

User Manual

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Revision History

Date	Revision	Description	Author
10/15/2018	1.3	Tech Edits: • Updated styles and formatting throughout. • Made format and content updates throughout this document related to HTML and Word document synchronization project. • Changed all references from "OI&T" to "OIT" throughout. • Updated all references throughout to Kernel manuals to the current, correct title: o *Kernel 8.0 & Kernel Toolkit 7.3 Systems Management Guide* o *Kernel 8.0 & Kernel Toolkit 7.3 Developer's Guide* • Reformatted display of file and field names throughout; moved file/field number immediataly following the file/field name.	VA Technical Writer: T.B.
01/17/2017	1.2	Changes for patch DI*22.2*2: • Updated Section 7, adding eight field types to the list. • Added Sections 7.10 – 7.17.	VA FileMan 23 Development Team Contract Tech Writer: T.K.
11/30/2016	1.1	Updates for Patch DI*22.2*4: • Updated Section 4.3.3 (Internal vs. External Field Values for Search Conditions) for the search conditions for a COMPUTED type fields that evaluate to a date. • Added line to Table 3 for :B Print Qualifier. • Updated Table 31 to revise wording about exiting Screen Editor.	VA FileMan 23 Development Team Contract Tech Writer: T.K.
08/03/2016	1.0	Initial release of VA FileMan 22.2 User Manual.	VA FileMan 22.2 Development Team

REF: For the current patch history related to this software, see the Patch Module (i.e., Patch User Menu [A1AE USER]) on FORUM.

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What is VA FileMan?

VA FileMan is the database management system for the Veterans Health Information Systems and Technology Architecture user (VistA) environment. VA FileMan creates and maintains a database management system that includes features such as:

- A report writer

- A data dictionary manager

- Scrolling and screen-oriented data entry

- Text editors

- Programming utilities

- Tools for sending data to other systems

- File archiving

VA FileMan can be used as a:

- Standalone database

- Set of interactive or "silent" routines

- Set of application utilities

In all modes, it is used to define, enter, and retrieve information from a set of computer-stored files, each of which is described by a data dictionary.

VA FileMan is a public domain software package that is developed and maintained by the Department of Veterans Affairs (VA). It is widely used by VA medical centers and in clinical, administrative, and business settings in this country and abroad.

CAUTION: Programmer access in VistA is defined as DUZ(0)="@". It grants the privilege to become a developer in VistA. Programmer access allows you to work outside many of the security controls enforced by VA FileMan, enables access to all VA FileMan files, access to modify data dictionaries, etc. It is important to proceed with caution when having access to the system in this way.

How to Use this Manual

The VA FileMan User Manual is comprised of two separate documents that describe the VA FileMan functionality of VistA's database management system:

- The *VA FileMan User Manual* (this manual) introduces basic VA FileMan concepts, and shows you how to use VA FileMan's basic tools for displaying and editing data. It shows you how to use VA FileMan features that are used throughout most VistA applications and used by *all* VistA users.

- The *VA FileMan Advanced User Manual* shows how to use the features of VA FileMan that are likely to be used by experienced VistA users. It introduces advanced VA FileMan concepts, and shows you how to use VA FileMan's advanced tools. It describes features that are more likely to be used by:

  o Automated Data Processing Application Coordinators (ADPACs)

  o System Administrators

  o Other technical users

NOTE: These documents are available in Microsoft Word (.docx), Adobe Acrobat Portable Document Format (PDF), and Hypertext Markup Language (HTML) format (see the "HTML Manuals" section).

In this manual, the following major features of VA FileMan are introduced along with a description on how to use them:

- Inquire

- Print

- Search

- Browser

- VA FileMan Prompts

- Field Types

- Adding and Deleting Records

- ScreenMan

- Word-Processing Fields

- Screen Editor

- Line Editor

REF: For VA FileMan installation instructions in the VistA environment see the *VA FileMan Installation Guide* and any national patch description of the patch being released.

HTML Manuals

Why produce an HTML (Hypertext Markup Language) edition of the VA FileMan manuals?

- The HTML versions of the VA FileMan manuals are useful as online documentation support as you use VA FileMan. HTML manuals allow you to instantly jump (link) to specific sections, other documents, or references online.

- The VA FileMan HTML manuals are "living" documents that are continuously updated with the most current VA FileMan information (unlike paper or printed documentation). They are updated based on new versions, patches, or enhancements to VA FileMan.

- Presenting manuals in an HTML format online also gives new opportunities, such as accessing embedded multimedia training material (e.g., movies, audio recordings, etc.) directly in the manuals.

- Manuals are accessible over the VA Intranet network.

Intended Audience

The intended audience of this manual is all key stakeholders. The stakeholders include the following:

- General users of the VA FileMan database.

- Automated Data Processing Application Coordinators (ADPACs)

- System Administrators—Personnel at Department of Veterans Affairs (VA) sites who are responsible for computer management and system security on the VistA M Servers.

- Enterprise Program Management Office (EPMO)—VistA legacy development teams.

- Product Support (PS).

Disclaimers

Software Disclaimer

This software was developed at the Department of Veterans Affairs (VA) by employees of the Federal Government in the course of their official duties. Pursuant to title 17 Section 105 of the United States Code this software is *not* subject to copyright protection and is in the public domain. VA assumes no responsibility whatsoever for its use by other parties, and makes no guarantees, expressed or implied, about its quality, reliability, or any other characteristic. We would appreciate acknowledgement if the software is used. This software can be redistributed and/or modified freely provided that any derivative works bear some notice that they are derived from it, and any modified versions bear some notice that they have been modified.

CAUTION: To protect the security of VistA systems, distribution of this software for use on any other computer system by VistA sites is prohibited. All requests for copies of Kernel for *non*-VistA use should be referred to the VistA site's local Office of Information Field Office (OIFO).

Documentation Disclaimer

This manual provides an overall explanation of VA FileMan and the functionality contained in VA FileMan 22.2; however, no attempt is made to explain how the overall VistA programming system is integrated and maintained. Such methods and procedures are documented elsewhere. We suggest you look at the various VA Internet and Intranet Websites for a general orientation to VistA. For example, visit the Office of Information and Technology (OIT) VistA Development Intranet website.

DISCLAIMER: The appearance of any external hyperlink references in this manual does *not* constitute endorsement by the Department of Veterans Affairs (VA) of this Website or the information, products, or services contained therein. The VA does *not* exercise any editorial control over the information you find at these locations. Such links are provided and are consistent with the stated purpose of this VA Intranet Service.

Documentation Conventions

This manual uses several methods to highlight different aspects of the material:

- Various symbols are used throughout the documentation to alert the reader to special information. Table 1 gives a description of each of these symbols:

Table 1: Documentation Symbol Descriptions

Symbol	Description
	NOTE / REF: Used to inform the reader of general information including references to additional reading material.
	CAUTION / RECOMMENDATION / DISCLAIMER: Used to caution the reader to take special notice of critical information.
	TIP: Used to inform the reader of helpful tips or tricks they can use when working with VA FileMan.

- Descriptive text is presented in a proportional font (as represented by this font).

- Conventions for displaying TEST data in this document are as follows:

  o The first three digits (prefix) of any Social Security Numbers (SSN) begin with either "**000**" or "**666**".

  o Patient and user names are formatted as follows: *<Application Name/Abbreviation/Namespace>*PATIENT,[*N*] and *<Application Name/Abbreviation/Namespace>*USER,[*N*] respectively, where "*<Application Name/Abbreviation/Namespace>*" is defined in the Approved Application Abbreviations document and "*N*" represents the first name as a number spelled out

and incremented with each new entry. For example, in VA FileMan (FM) test patient and user names would be documented as follows: FMPATIENT,ONE; FMPATIENT,TWO; FMPATIENT,THREE; FMUSER,14, etc.

- "Snapshots" of computer online displays (i.e., screen captures/dialogues) and computer source code, if any, are shown in a *non*-proportional font and usually enclosed within a box:

  o User's responses to online prompts are **bold** typeface and highlighted in yellow (e.g., **<Enter>**).

  o Emphasis within a dialogue box is **bold** typeface and highlighted in blue (e.g., STANDARD LISTENER: RUNNING).

  o Some software code reserved/key words are **bold** typeface with alternate color font.

  o References to "**<Enter>**" within these snapshots indicate that the user should press the **Enter** key on the keyboard. Other special keys are represented within **< >** angle brackets. For example, pressing the **PF1** key can be represented as pressing **<PF1>**.

  o Author's comments are displayed in italics or as "callout" boxes.

  NOTE: Callout boxes refer to labels or descriptions usually enclosed within a box, which point to specific areas of a displayed image.

- All uppercase is reserved for the representation of M code, variable names, or the formal name of options, field/file names, and security keys (e.g., DIEXTRACT).

  NOTE: Other software code (e.g., Delphi/Pascal and Java) variable names and file/folder names can be written in lower or mixed case (e.g., CamelCase).

Documentation Navigation

This document uses Microsoft® Word's built-in navigation for internal hyperlinks. To add **Back** and **Forward** navigation buttons to your toolbar, do the following:

1. Right-click anywhere on the customizable Toolbar in Word (*not* the Ribbon section).

2. Select **Customize Quick Access Toolbar** from the secondary menu.

3. Select the drop-down arrow in the "Choose commands from:" box.

4. Select **All Commands** from the displayed list.

5. Scroll through the command list in the left column until you see the **Back** command (green circle with arrow pointing left).

6. Select/Highlight the **Back** command and select **Add** to add it to your customized toolbar.

7. Scroll through the command list in the left column until you see the **Forward** command (green circle with arrow pointing right).

8. Select/Highlight the Forward command and select **Add** to add it to your customized toolbar.

9. Select **OK**.

You can now use these **Back** and **Forward** command buttons in your Toolbar to navigate back and forth in your Word document when selecting hyperlinks within the document.

> **NOTE:** This is a one-time setup and is automatically available in any other Word document once you install it on the Toolbar.

How to Obtain Technical Information Online

Exported VistA M Server-based software file, routine, and global documentation can be generated through the use of Kernel, MailMan, and VA FileMan utilities.

> **NOTE:** Methods of obtaining specific technical information online is indicated where applicable under the appropriate section.
>
> **REF:** For further information, see the *VA FileMan Technical Manual*.

Help at Prompts

VistA M Server-based software provides online help and commonly used system default prompts. Users are encouraged to enter question marks at any response prompt. At the end of the help display, you are immediately returned to the point from which you started. This is an easy way to learn about any aspect of the software.

Obtaining Data Dictionary Listings

Technical information about VistA M Server-based files and the fields in files is stored in data dictionaries (DD). You can use the **List File Attributes** [DILIST] option on the **Data Dictionary Utilities** [DI DDU] menu in VA FileMan to print formatted data dictionaries.

> **REF:** For details about obtaining data dictionaries and about the formats available, see the "List File Attributes" section in the "File Management" section in the *VA FileMan Advanced User Manual*.

Assumptions

This manual is written with the assumption that the reader is familiar with the following:

- VistA computing environment:
  - Kernel—VistA M Server software
  - VA FileMan data structures and terminology—VistA M Server software
- Microsoft® Windows environment
- M programming language

Reference Materials

Readers who wish to learn more about VA FileMan should consult the following:

- *VA FileMan Release Notes*

- *VA FileMan Installation Guide*

- *VA FileMan Technical Manual*

- *VA FileMan User Manual* (this manual; PDF and HTML format)

- *VA FileMan Advanced User Manual* (PDF and HTML format)

- *VA FileMan Developer's Guide* (PDF and HTML format)

REF: Zip files of the VA FileMan documentation in HTML format are located on the VA FileMan Intranet product website and VDL at: http://www.va.gov/vdl/application.asp?appid=5.

Using a web browser, open the **HTML** documents "table of contents" page (i.e., index.html). The *VA FileMan User Manual*, *VA FileMan Advanced User Manual*, and *VA FileMan Developer's Guide* are all linked together.

VistA documentation is made available online in Microsoft® Word format and in Adobe® Acrobat Portable Document Format (PDF). The PDF documents *must* be read using the Adobe® Acrobat Reader, which is freely distributed by Adobe® Systems Incorporated at: http://www.adobe.com/

VistA software documentation can be downloaded from the VA Software Document Library (VDL) at: http://www.va.gov/vdl/

REF: VA FileMan manuals are located on the VDL at: http://www.va.gov/vdl/application.asp?appid=5

VistA documentation and software can also be downloaded from the Product Support (PS) Anonymous Directories.

1   Introduction

1.1   Fields, Records, and Files

A computer database, such as VA FileMan, organizes your data, storing it in fields, records, and files, much as you might arrange and preserve information on paper.

A *record* is a group of fields of data. Each record has a name (e.g., a patient name for a patient record). You can use the record name to recall the record for editing or for printing out. Records are also known as file *entries*.

For example, a record for a patient might have various fields (e.g., NAME, AGE, ADMISSION DATE, etc.) for a single patient. Each record for a patient would contain the same set of fields (places to fill in information):

Figure 1: Example Showing Several Patient Records
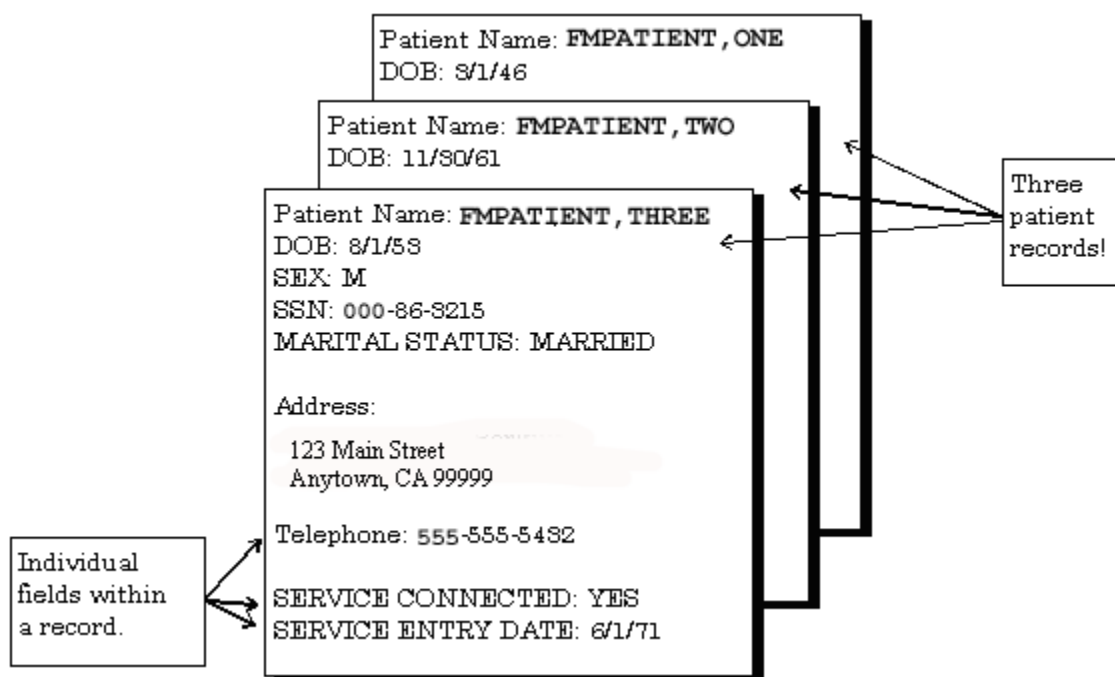
Each *field* in a record functions just like a blank on a form. When you are editing a record on a terminal, for each field, you get a prompt that tells you what type of data to enter.

VA FileMan uses **16** basic field types. These fields allow you to enter only certain kinds of information, just as a blank on a form might require you to enter only numbers. For example:

- A DATE OF BIRTH field could be set up to record dates/times.

- A SOCIAL SECURITY NUMBER field could be set up to record a **nine**-digit number.

- An ADDRESS field could be set up to hold the text of an address.

These three fields are different from one another because of the type of data they store.

All of the records that contain like data are collected and stored in the same *file*. For example, all patient records are stored in the PATIENT (#2) file and all computer user records are stored in the NEW PERSON (#200) file. This way, to look up a patient, you know that the file to go to is the PATIENT (#2) file. Also, to do a report on all patients, you would generate the report from the PATIENT (#2) file.

1.2   Files and the Database

The *database* contains all the data files on your computer system:

Figure 2: Representation of a Database
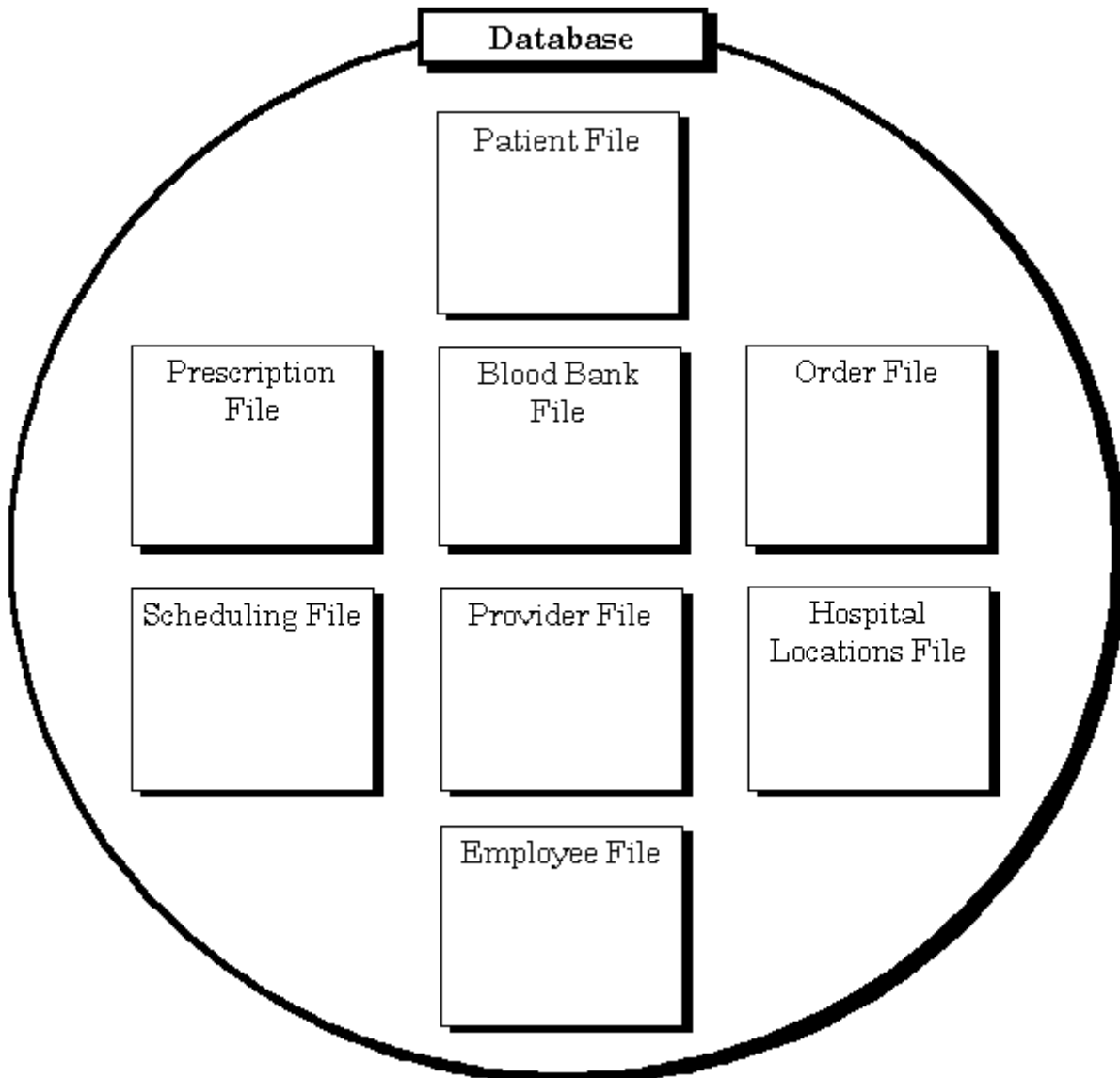
ℹ️   **NOTE:** There are many more files than this in VistA databases!

1.3   Printing Records from Files

One way of getting at the information stored in a database is to generate reports that print out selected records. You do *not* have to print *every* field in a record; you can just choose a subset of fields to print out. Nor do you have to print *every* record in a file; there are ways to limit and select what records to print out.

The report in Figure 3 displays four records, with one line of output per record, from the HOSPITAL LOCATION (#44) file:

Figure 3: Example of a Printed Report

```
Internal Entry
Number          Name        Title
-------------   ----------  -------------------
1               ICU         Intensive Care Unit
2               CCU         Critical Care Unit
5               OR          Operating Room
25              1EAST       Ward on 1 East
```

Most applications that use VA FileMan provide a number of already-set-up reports you can quickly choose and print out. In addition, there are options in VA FileMan that allow you to generate your own reports.

This manual contains the following sections on print records from the database:

- Inquire
- Print
- Search
- Browser

1.4   Adding and Editing Records

As well as printing records from the database, you can *add* new records and *edit* existing records. When you work on the computer system with VistA applications (e.g., Laboratory) most of what you are doing is adding new records and editing existing ones. For example, each new lab result would get stored in a new record; when you make a status change it would be an edit to a field or fields in a patient's existing record.

Since the bulk of the work you do on the computer system involves working with records, the more you know about using the underlying database system (VA FileMan), the easier it is to do all of your work on the computer system.

This manual contains the following sections on how to edit information in records:

- VA FileMan Prompts
- Field Types
- Adding and Deleting Records
- ScreenMan (editing via forms)

- [Word-Processing Fields](#)

- [Screen Editor](#) (WORD-PROCESSING fields)

- [Line Editor](#) (WORD-PROCESSING fields)

1.5 LAYGO File Access

In VistA applications, you *not* only display and edit existing records, but also add and delete records from files. For example, you might need to add a new patient to the PATIENT (#2) file. The access to add and delete records can be controlled; however, each VA FileMan file can be set to either allow or *not* allow adding and deleting of new records.

If a file allows records to be added or deleted, it is said to have **Learn-As-You-Go** (**LAYGO**) access. To add or delete records, your user account *must* also be set to allow **LAYGO** access to the file in question. For example, there are certain conditions when you need to specify a particular physician. At that point, you can enter a new physician name, rather than choosing one that already is on file. If you are allowed to add new entries to the file (i.e., you have **LAYGO** access), the new entry is added to a file of physicians.

1.6 Scrolling Mode vs. Screen Mode

Many VA VistA application packages have a *Scrolling Mode* interface. Scrolling Mode works as follows:

1. Computer puts a prompt on the screen.

2. Users enter a response to the prompt.

3. Computer places another prompt on the screen, scrolling down one line. Previous prompts move up and eventually off of the screen.

In Scrolling Mode, prompting occurs in the same predetermined order, in a sequence designed by the developer of the application. The user enters, and the computer stores, the responses one at a time. Unless the user is familiar with a few timesaving Scrolling Mode techniques, the user has to step through each prompt in a record before he/she can finish editing the record.

REF: For more information on editing records in Scrolling Mode, see the "[VA FileMan Prompts](#)" section.

Recently developed VistA applications, on the other hand, often use a *Screen Mode* interface for editing data. In the Screen Mode approach, each field occupies a fixed position on the screen. The user can see many data fields at once and use simple key combinations to edit data and move from field to field on a screen. The user can also move from one screen to another like turning through the pages of a book. VA FileMan's screen-oriented data entry tool is called [ScreenMan](#).

In comparing Scrolling Mode with Screen Mode, an area in particular where Screen Mode is much more convenient than Scrolling Mode is text editing. VA FileMan's Scrolling Mode text editor is the [Line Editor](#). A better choice for editing text is VA FileMan's Screen Mode editor, the [Screen Editor](#).

REF: For more information on the Line Editor, see the "Line Editor" section. For more information on the Screen Editor, see the "Screen Editor" section.

2 Inquire

2.1 Overview

Many reports that you print from applications are pre-designed (i.e., the selection of records) and the fields that print for each record are pre-determined by the application developer. You simply choose the report you would like to print from a menu option, choose an output device, and the selected report prints.

You can also create your own reports, however, if you have either VA FileMan's print options, or custom-designed application options that take advantage of the same VA FileMan features. This section introduces one of VA FileMan's print options, **Inquire to File Entries** [DIINQUIRE] option.

There are two ways you have an opportunity to use VA FileMan's inquiry capabilities:

- An option that has been set up already to allow you to inquire to entries from a particular file.

- VA FileMan's **Inquire to File Entries** [DIINQUIRE] option, which lets you inquire to any file to which you have access.

In either case, use of VA FileMan's inquire feature is very similar. In most cases, the only difference is that with the **Inquire to File Entries** [DIINQUIRE] option, you have to choose which file to inquire.

2.2   Inquire to File Entries Option

The quickest way to display the data for one file entry or for a small number of entries is to use the **Inquire to File Entries** [DIINQUIRE] option. This option lets you choose a set of entries to display, and choose the fields that you want to see for each entry. For example:

Figure 4: Inquire—Dialogue Using the Inquire to File Entries Option: Sample User Entries at Prompts and Sample Report

```
Select VA FileMan Option: INQ <Enter> uire to File Entries


┌─────────────────────────────────────┐
│  1. Choose the file.                 │
└─────────────────────────────────────┘
OUTPUT FROM WHAT FILE: PATIENT// <Enter>
┌──────────────────────────────────────────┐
│  2. Choose entries to display from the file.│
└──────────────────────────────────────────┘

Select PATIENT NAME: FMPATIENT, ONE
ANOTHER ONE: FMPATIENT, TWO
ANOTHER ONE: FMPATIENT, THREE
ANOTHER ONE: <Enter>


┌────────────────────────────────────────────────┐
│  3. Choose output fields. Captioned Output is the│
│  easiest (displays all fields that contain data for each│
│  entry).                                        │
└────────────────────────────────────────────────┘



STANDARD CAPTIONED OUTPUT? Yes// <Enter> (Yes)
Include COMPUTED fields:  (N/Y/R/B): NO// ?
┌────────────────────────────────────────────────┐
│  4. For Captioned Output, choose whether to display record│
│  numbers and computed fields.                   │
└────────────────────────────────────────────────┘



Enter a code from the list.
     Select one of the following:

          N         NO – No record number (IEN), no Computed Fields
          Y         Computed Fields
          R         Record Number (IEN)
          B         BOTH Computed Fields and Record Number (IEN)


Include COMPUTED fields:  (N/Y/R/B): NO// B <Enter> OTH Computed Fields and Record
Number (IEN)
DISPLAY AUDIT TRAIL? No// <Enter> NO




```

```
┌─────────────────────────────────────────┐
│  5. Review the selected entries that are displayed
│     on the report (sample list abbreviated).
└─────────────────────────────────────────┘

NUMBER: 180                          NAME: FMPATIENT, ONE
  SEX: MALE                          DATE OF BIRTH: 04/04/1944
                                         .
                                         .
                                         .
NUMBER: 229                          NAME: FMPATIENT, TWO
  SEX: MALE                          DATE OF BIRTH: 01/01/1962
                                         .
                                         .
                                         .
NUMBER: 229                          NAME: FMPATIENT, THREE
  SEX: FEMALE                        DATE OF BIRTH: 01/25/1952
                                         .
                                         .
                                         .
```

2.2.1   Standard Caption Output

Choosing Standard Captioned Output can be very useful; it prints out *all* fields (that contain data) for each entry in the report. Use it is a quick way to select all the fields for each entry in the report. Otherwise, you need to select each field to print individually, from the list of fields available to print in the file. Answering **YES** to use STANDARD CAPTIONED OUTPUT is the fastest way to choose what fields to print.

2.2.1.1   Computed Fields

When using Standard Captioned Output, you can choose from the following at the "Include COMPUTED Fields: (N/Y/R/B): NO//" prompt:

- **N (default)**—NO - No record number (IEN), no Computed Fields
- **Y**—Computed Fields
- **R**—Record Number (IEN)
- **B**—BOTH Computed Fields and Record Number (IEN)

The default is to display neither. Enter two question marks (**??**) for detailed help about responding to this prompt.

2.2.1.2   Audit Trails

If one or more of the fields have been audited, the system displays the "DISPLAY AUDIT TRAIL?" prompt. If you answer **YES**, then you see the changes that have been recorded for the various fields in the AUDIT (#1.1) file, along with the current values of the fields.

2.3 SORT Templates

When you choose several entries to display, you are prompted with the following:

Figure 5: Inquire—Prompt to Store Entries into a Template

```
STORE THESE ENTRY ID's IN A TEMPLATE:
```

You can *save* your list of selected entries in a SORT template by entering a template name at this prompt. Your list of entries is then saved in a SORT template. You can then *reuse* the list of selected entries in the template when you do additional printing from this file in the future.

REF: For more information on using SORT templates, see the "Saving Sort Criteria (SORT Templates)" section.

2.4 Choose Your Own Print Fields

⚠️ **CAUTION: Do *not* use STANDARD CAPTIONED OUTPUT.**

To choose your own fields to output for each entry, answer **NO** to the "STANDARD CAPTIONED OUTPUT?" prompt. You can then choose your own output fields. For example, if you only need NAME, DATE OF BIRTH, and PROVIDER information about a selected patient, you could request it, as shown in Figure 6:

Figure 6: Inquire—Dialogue for Choosing Your Own Print Fields: Sample User Entries at Prompts

```
Select VA FileMan Option: INQ <Enter> uire to File Entries

OUTPUT FROM WHAT FILE: PATIENT// <Enter>
Select PATIENT NAME: FMPATIENT, ONE
ANOTHER ONE: <Enter>

        ┌─────────────────────────┐
        │  1. Answer NO here.     │
        └─────────────────────────┘

STANDARD CAPTIONED OUTPUT? Yes// NO <Enter> (No)

      ┌─────────────────────────┐
      │  2. Choose output fields.│
      └─────────────────────────┘

FIRST PRINT FIELD: NAME
     1    NAME
     2    NAME COMPONENTS
     3    NAME ORDER
CHOOSE 1-3: 1 <Enter> NAME
THEN PRINT FIELD: DATE OF BIRTH
THEN PRINT FIELD: PROVIDER
THEN PRINT FIELD: <Enter>
Heading (S/C): PATIENT LIST// <Enter>

    ┌─────────────────────────────┐
    │  3. Choose an output device.│
    └─────────────────────────────┘

DEVICE: <Enter> SSH VIRTUAL TERMINAL Right Margin: 80// <Enter>

PATIENT LIST                                FEB 12,2013  18:41    PAGE 1
NAME                            DATE OF BIRTH
  PROVIDER
--------------------------------------------------------------------------------

FMPATIENT,ONE                   11/20/1950
```

ℹ️ **REF:** For more information on customizing output print fields, see the "Print" section. It provides detailed information about the different choices you can make at the "PRINT FIELD:" prompt to display your information in different ways.

2.5 Choose Your Own Device

! **CAUTION: Do *not* use STANDARD CAPTIONED OUTPUT.**

If you enter **YES** at the "STANDARD CAPTIONED OUTPUT?" prompt, output is sent to the **HOME** device, which ordinarily is the terminal you are using. To send output to a printer, you need to answer **NO** at the "STANDARD CAPTIONED OUTPUT?" prompt. This means you *must* choose your own print fields, as described in Section 2.4, "Choose Your Own Print Fields." Doing this allows you to select the output device, however.

If you answer **NO** to the "STANDARD CAPTIONED OUTPUT?" prompt, you can still get CAPTIONED output, however. To do this, choose the CAPTIONED PRINT template at the first "PRINT FIELD:" prompt, as shown in Figure 7.

Enter a left bracket "[" and the word **CAPTIONED**. CAPTIONED OUTPUT from the template works exactly as if you had answered **YES** at the "STANDARD CAPTIONED OUTPUT?" prompt to request CAPTIONED OUTPUT.

Figure 7: Inquire—Dialogue for Choosing a Device *and* Getting STANDARD CAPTIONED OUTPUT: Sample User Entries at Prompts

```
STANDARD CAPTIONED OUTPUT? Yes// N <Enter> (No)
FIRST PRINT FIELD: [CAPTIONED
```

> **Even though you do *not* choose "Standard Caption Output," you can still use the CAPTIONED Print Template for the same effect.**

```
Include COMPUTED fields:  (N/Y/R/B): NO// <Enter> - No record number (IEN), no
Computed Fields
DISPLAY AUDIT TRAIL? No// <Enter> NO
Heading (S/C): PATIENT LIST// <Enter>
```

> **By not choosing "Standard Caption Output," you can then choose the output device.**

```
DEVICE:
```

3 Print

3.1 How to Print Reports from Files

With the **Inquire to File Entries** [DIINQUIRE] option, you can:

1. Select entries from a file, one by one.

2. Choose a format for displaying the selected entries.

3. Output the selected entries.

VA FileMan's print capabilities, on the other hand, allow you to select entries, *not* one by one, but instead by choosing a range of entries based on the sorting order. You can choose all entries in a file, for example, and sort them in alphabetical order for the printout. Alternatively, you can choose all entries sorting between **E** and **F** and sort them in alphabetical order for the printout.

3.2 VA FileMan's Print Capabilities

There are two ways in which you have an opportunity to use VA FileMan's print capabilities:

- An option that has been set up already to allow you to print from a particular file.

- VA FileMan's **Print File Entries** [DIPRINT] option, which lets you print from any file to which you have access.

In either case, use of VA FileMan's print features is very similar. In most cases, the only difference is that with the **Print File Entries** [DIPRINT], you have to choose from which file to print.

Unlike the **Inquire to File Entries** [DIINQUIRE] option, which displays individual records, VA FileMan's print can list all records in a file. Thus, the focus of the **Inquire to File Entries** [DIINQUIRE] option is a single or small group of entries while VA FileMan's prints are concerned with the entire file.

VA FileMan's print features allow considerable flexibility in:

- Selecting entries.

- Ordering (or sorting) the entries selected.

- Choosing which fields to display.

- Formatting the output.

The following two basic components can be used to create a report:

- "SORT BY:" dialogue. Used to sort (and sometimes narrow down) the entries that you want displayed.

- "PRINT FIELD:" dialogue. Used to choose the fields you want and the format of their display.

The choices you can make at these two prompts are discussed in detail later in this section.

3.3 Standard Column Format for VA FileMan Prints

VA FileMan has a standard, columnar format for print output. The file name, current date/time, and page number appear at the top of each report page, followed by column headings that correspond to the labels of selected fields. There are many ways to customize the format, as shown in Figure 8:

Figure 8: Print—Example of a Standard Printout

```
    PATIENT LIST                         NOV 28, 1996   11:32   PAGE 1
    NAME                    SEX
    ----------------------------------------------------------------
    FMPATIENT,SEVEN         MALE
    FMPATIENT,EIGHT         MALE
    FMPATIENT,NINE          MALE
    FMPATIENT,10            FEMALE
```

This simple example of a report (Figure 8) is generated by the dialogue in Figure 9. It prints information from all the entries in the PATIENT (#2) file, ordered by NAME (#.01) field. Only data from the NAME and SEX fields are printed, as requested at the "PRINT FIELD:" prompts:

Figure 9: Print—Dialogue for Creating a Printed Report: Sample User Entries at Prompts

```
Select VA FileMan Option: PRINT <Enter> File Entries

OUTPUT FROM WHAT FILE: PATIENT// <Enter>

    Sort output by record name.


SORT BY: NAME// <Enter>
START WITH NAME: FIRST// <Enter>

    Choose print fields.


FIRST PRINT FIELD: NAME
     1    NAME
     2    NAME COMPONENTS
     3    NAME ORDER
CHOOSE 1-3: 1 <Enter> NAME
THEN PRINT FIELD: SEX
THEN PRINT FIELD:
Heading (S/C): PATIENT LIST// <Enter>
DEVICE:
```

NOTE: You would have received information about every patient in the file, *not* just these four. You could have asked for several more fields to be printed. They would appear as columns of output, left to right, in the order specified.

3.4 Sorting

3.4.1 Specifying SORT BY Fields

Sorting determines the *order* that records are printed in your reports. You can accept the default order (by the **.01** field), or you can specify your own sorting order. The sort can be a simple sort, based on only one field, or you can sort based on the values of several fields.

For example, if you want to print the entries in order from oldest to youngest patient, you could sort the report by date of birth (the DATE OF BIRTH field in the PATIENT [#2] file), as shown in Figure 10:

Figure 10: Print—Dialogue for Specifying a Sort Order for a Printed Report: Sample User Entries at Prompts

```
Select VA FileMan Option: PRINT <Enter> File Entries

OUTPUT FROM WHAT FILE: PATIENT// <Enter>

    ┌──────────────────────────────┐
    │  Sort by DATE OF BIRTH.      │
    └──────────────────────────────┘
                 ╲╱
SORT BY: NAME// DATE OF BIRTH
START WITH DATE OF BIRTH: FIRST// <Enter>
  WITHIN DATE OF BIRTH, SORT BY: <Enter>
FIRST PRINT FIELD: NAME
      1    NAME
      2    NAME COMPONENTS
      3    NAME ORDER
CHOOSE 1-3: 1 <Enter> NAME
THEN PRINT FIELD: SEX
THEN PRINT FIELD: <Enter>
             ╱
   ┌──────────────────────────────────────┐
   │  NOTE: DATE OF BIRTH is not a print field. │
   └──────────────────────────────────────┘
Heading (S/C): PATIENT LIST// <Enter>
DEVICE: <Enter> SSH VIRTUAL TERMINAL Right Margin: 80// <Enter>
```

The output then prints in the following order (by DATE OF BIRTH), as shown in Figure 11:

Figure 11: Print—Example of a Printed Report in a Specific Order

```
PATIENT LIST                               FEB 12, 2013   19:11        PAGE 1
NAME                          SEX
--------------------------------------------------------------------------------

        DATE OF BIRTH: OCT 14, 1877
FMPATIENT,12                   FEMALE
        DATE OF BIRTH: NOV 3, 1922
FMPATIENT,13                   MALE
        DATE OF BIRTH: APR 4, 1933
FMPATIENT,NINE                 MALE
```

If you sort by a field that is *not* a print field, then it is displayed as a subheader. In Figure 11, the sort criterion (DATE OF BIRTH) is printed as a subheader with every change in sort value.

To suppress the printing of sort values (subheaders) in the body of your report, you can either:

- Add the field you are sorting by to the print field list.

- Place an at-sign (@) in front of the field label at the "SORT BY:" prompt. In the previous example (Figure 11), you would sort by **@DATE OF BIRTH** instead of **DATE OF BIRTH**.

3.4.2   Sorting Order

The ordering of entries within a sort is generally from low value to high value. Some special cases for specific data type field values include:

- **SET OF CODES**—Field values are sorted by the internally stored code, *not* the value that is output.

- **FREE TEXT**—Field values usually sort from lowest value to highest value following the ASCII sorting sequence. Digits sort before uppercase letters, which sort before lowercase letters (e.g., **M1** sorts before **MC** which sorts before **Mc**).

3.4.2.1   Sorting Canonic Numbers and *Non*-Canonic Strings, and the ;TXT Sort Qualifier

Canonic numbers are pure numbers that do *not* have leading **zeroes** before or trailing **zeroes** after a decimal point. Thus, **1.1** is a canonic number but **01.1** and **1.10** are *not*. A *non*-canonic string is everything else. For example, **"8C"** is a *non*-canonic string.

This distinction is important when sorting, because in all VA FileMan sorting, *canonic numbers sort first*, and everything else sorts second. Usually, this works very well. But in a few cases where sort fields contain a mix of canonic numbers and *non*-canonic strings, unexpected sort orders result. Classic cases include sorting on Social Security Numbers and on ward locations.

Consider Social Security Numbers (SSNs). The SSNs **666333333** and **666999900** are canonic numbers. But the SSN **000769000** is *not* a canonic number, because of its leading **zeroes**. When you use the default sort based on SSN, you get output that looks like Figure 12:

Figure 12: Print—Sorting Canonic and Non-Canonic Numbers

```
PATIENT LIST                                JUL 19,1996   11:36       PAGE 1
SSN              NAME
-------------------------------------------------------------------------------

666333333        FMPATIENT,13
666999900        FMPATIENT,14
000769000        FMPATIENT,15
```

In this example (Figure 12), you see that SSN **000769000** is *non*-canonic due to its leading **zeroes**, so it sorts *after* SSN **666999900**, which is canonic.

A similar situation occurs when you sort on ward locations. Suppose you have wards **8**, **8C**, and **9**. Wards **8** and **9** are canonic numbers, while ward **8C** is a *non*-canonic string. Thus, if you sort on ward location, your output comes out in this order: **8**, **9**, **8C**.

To avoid this problem, use the sort qualifier ";**TXT**" on your sort field. This forces all field values to be *non*-canonic, with the result that a group of strings like **8**, **8C**, and **9** sort in the expected order.

> **REF:** For more information on the ";**TXT**" sort qualifier, see the list of Sort Qualifiers in <u>Table 2</u>.

3.4.2.2   Sorting to Select Entries for Printing

Besides using sorting to determine the *order* of entries printed, you can also use the "START WITH ...:" prompt to restrict what entries are printed to a range. For example, if you accept the default sort range (from first to last), you can get a report with every item in the file listed. You can cut this list down to a subset of the entries in the file by how you sort (e.g., entries that sort from **FMPATIENT**,A to **FMPATIENT**,Z only).

To specify a sort range, enter the range starting point at the "START WITH...:" prompt, and the range end point at the "GO TO...:" prompt. For example:

Figure 13: Print—Specifying a Sort Range

```
SORT BY: NAME// <Enter>
   START WITH NAME: FIRST// FMPATIENT,A
   GO TO NAME:  LAST// FMPATIENT,Z
```

3.4.2.3   Selecting All Entries with the Same Value for One Field

A simple kind of selecting can be done to choose only those entries that have a particular value for a field. For example, to list only those patients who have a DIAGNOSIS equal to **CANCER**, you can sort as in the example in <u>Figure 14</u>:

Figure 14: Print—Choosing Entries with a Specific Value

```
START WITH DIAGNOSIS: FIRST// CANCER
GO TO DIAGNOSIS: LAST// CANCER
```

3.4.2.4   Other Ways of Selecting Entries

The "START WITH ... GO TO ..." dialogue can be used to do sophisticated selecting from a file. Computed expressions can be entered at the prompts to filter the entries to be printed.

> **REF:** These powerful techniques are discussed in the "Computed Expressions" section in the *VA FileMan Advanced User Manual*.

You can also use VA FileMan's search functions to select entries for printing.

> **REF:** For more information on VA FileMan's search functions, see the "<u>Search</u>" section.

3.4.2.5 Including Entries with NULL Fields in Your Sort (Start with @)

When you sort a report on a particular field, if any record in the file has *no value* in that field (i.e., **NULL**) that record is *skipped* and *not printed*, if you accept the default sort start value (FIRST). In other words, in a print from the PATIENT (#2) file, if you sort on the PROVIDER field, start sorting from the default of FIRST, and there are some patients with nothing in their PROVIDER field (i.e., **NULL**), those patients are *left off of the report entirely*.

If you want to include records in your report, even if they have no value in the field on which you are sorting (i.e., **NULL**), sort from @ instead of accepting the default of FIRST. As in Figure 15, enter an at-sign (@) at the "START WITH:" prompt:

Figure 15: Print—Dialogue to Include Records with NULL Values: Sample User Entries at Prompts

```
Select VA FileMan Option: PRINT <Enter> File Entries

OUTPUT FROM WHAT FILE: PATIENT// <Enter>
SORT BY: NAME// PROVIDER
```

> **Start with an at-sign (@) instead of FIRST to force inclusion of all entries in the printout, even those whose value for this field is NULL.**

```
START WITH PROVIDER: FIRST// @
GO TO PROVIDER: LAST// <Enter>
  WITHIN PROVIDER, SORT BY: <Enter>
FIRST PRINT FIELD: NAME
     1    NAME
     2    NAME COMPONENTS
     3    NAME ORDER
CHOOSE 1-3: 1 <Enter> NAME
THEN PRINT FIELD: DATE OF BIRTH
THEN PRINT FIELD: <Enter>
Heading (S/C): PATIENT LIST// <Enter>
```

> **Whenever you specify any sort criteria at the "SORT BY:" prompt, you are prompted for what page to start at.**

```
START AT PAGE: 1// <Enter>

...SORRY, THIS MAY TAKE A FEW MOMENTS...
```

The output of this sort would then include all records, even those with no value in their PROVIDER fields:

Figure 16: Print—Sample Report Displaying Fields with NULL Values

```
PATIENT LIST                              FEB 13,2013  16:22    PAGE 1
NAME                             DATE OF BIRTH
-----------------------------------------------------------------------
```

> FMPATIENT,ONE does *not* have a provider. If the @ had *not* been entered at the "START WITH PROVIDER:" prompt, the entry would *not* have been printed.

```
        PROVIDER:    EMPTY
FMPATIENT,ONE                    03/01/1940
        PROVIDER:    FMPROVIDER,2
FMPATIENT,TWO                    03/04/1933
        PROVIDER:    FMPROVIDER,2
FMPATIENT,THREE                  09/25/1949
        PROVIDER:    FMPROVIDER,2
FMPATIENT,FOUR                   01/31/1921
        PROVIDER:    FMPROVIDER,3
FMPATIENT,FIVE                   05/24/1931
        PROVIDER:    FMPROVIDER,3
FMPATIENT,SIX                    04/03/1935
        PROVIDER:    FMPROVIDER,3
FMPATIENT,SEVEN                  10/22/1925
```

3.4.2.6   Sort Qualifier Reference

As well as entering fields to sort by, you can also enter formatting controls in the "SORT BY:" dialogue. Add these qualifiers to the field label or to the computed expression you are entering at the "SORT BY:" prompt.

3.4.2.6.1 Sort Qualifiers to Use at "SORT BY:" Prompts

Table 2 lists the sort qualifiers you can use at the "SORT BY:" prompts:

Table 2: Print—Sort Qualifiers

Qualifier	Action	Discussion
!field	Number entries by sort value	Entries having the same value for the SORT BY field are numbered sequentially starting at one.
#field	Page break when sort value changes	Starts a new page every time the value of the sorted field changes.
'field	Specify a range for output without sorting	This lets you *select* entries based on this field in the "START WITH . . . GO TO . . ." dialogue, but *not sort* based on the field. 🛈 **NOTE:** Since sorting requires substantial system resources, do *not* sort entries unnecessarily.

+field	Subtotal within a SORT BY field	When subtotaling, you indicate in the "PRINT FIELD" dialogue the fields to be enumerated. All requested numeric operations (sum, count, etc.) are done as a subtotal when the SORT BY field changes in addition to the grand totals at the end.
		
		 You can sub-subtotal by adding a prefix of **+** to **two** fields in the "SORT BY:" dialogue. For example:
		
		 ```SORT BY: +REGION```
		```WITHIN REGION, SORT BY: +STORE```
		
		 This produces subtotals for each STORE within the subtotals for each REGION.

-field	Reverse sort order	Only effective for NUMERIC and DATE/TIME valued fields: • DATE/TIME values—Prints from most recent to earliest. • NUMERIC values—Prints from largest to smallest.
@field	Suppress the printing of subheader	Normally, a subheader with the value of the SORT BY field name is printed for SORT BY fields, if the field is *not* also specified as a print field. Using an at-sign (**@**) suppresses those subheaders.
field**;C***n*	Set column of	The number (***n***) indicates the column to begin the subheader.

Qualifier	Action	Discussion
	subheader	
field;**L***n*	Use less than the entire sort field for sorting	The **;L** suffix lets you specify that only the first "*n*" characters of the field used to sort. Thus, if you specify: SORT BY: **NAME;L2** Only the first **two** letters of the name field are used for sorting: the order of "**FMEMPLOYEE,TWENTY**" and "**FMEMPLOYEE,ONE**", for example, is unpredictable in your output.

field;**P***a-b*	Store sort range for display	The **;P** suffix saves the "START WITH" and "GO TO" sort range for *one* level of sort fields, for later reference at a "PRINT FIELD" prompt. You can substitute any string (up to **60** characters in length) for "*a*" and "*b*" in "**;P***a-b*". Whatever strings you use as "*a*" and "*b*" (e.g., FROM and TO) become subscripts of the PARAM() array:
		
		    SORT BY: **NAME;PFROM-TO**
		    START WITH NAME: FIRST// **C**
		    GO TO NAME: LAST// **Dzzzzz**
		
		Then at a "PRINT FIELD" prompt, you can reference the saved values by using **PARAM("***a-string***")** and **PARAM("***b-string***")**. Thus, in this case:
		
		    THEN PRINT FIELD: **PARAM("FROM")**
		    THEN PRINT FIELD: **PARAM("TO")**
		
		The sort-from and sort-to values of "**C**" and "**Dzzzzz**" in the report would then print in the appropriate location. The typical reason to save sort values, and then retrieve them from the **PARAM** array in a print field, is for custom report headers (which are created as PRINT templates). It is one method to print sort criteria in the report header.
		
		If you need to sort on *two or more* fields, you need to use a different string for "*a*" and "*b*" at each level, or else the values overwrite each other.
		
		ℹ️ **NOTE:** No value is saved in the **PARAM** array if the user accepts "FIRST" or "LAST" as the "START WITH" or "GO TO" sort values; the PARAM array is **NULL**.

field;**S***n*	Skip lines when sort value changes	The **;S** suffix skips one line between sort field values, if no number is added. If you specify a number ("*n*"), *n*-lines are skipped. You can use this qualifier to skip lines after subtotals

Qualifier	Action	Discussion

		are printed by inserting the following after the last subtotaled field:
		
		`    WITHIN X, SORT BY: @";S`
		`    START WITH "": FIRST// @`
		`    GO TO "": LAST// @`

field;**TXT**	Sort numbers as text	The **;TXT** sort qualifier forces digits to be sorted as alphanumeric strings, *not* as numbers ("**22**" sorts before "**3**"). Use this to correctly sort mixed canonic and *non*-canonic numbers.

field;**"xxx"**	Replace caption in subheader and sort dialogue	The default subheader is the field label or expression entered at the "SORT BY:" prompt. The same string is used within the sort dialogue. You can substitute a string of your choosing by adding a semicolon (**;**) and text enclosed in quotation marks. For example:
		
		`    SORT BY: DATE OF BIRTH;"Birthdate: "`
		
		To suppress the caption in the subheader, enter **two** double quotes after the semicolon:
		
		`    SORT BY: DATE OF BIRTH;""`
		
		The specified caption is also used in the subsequent sort dialogue. This is useful in simplifying the sort dialogue when a field label is confusing, is concatenated, or is an extended pointer. For example:
		
		`    SORT BY: `**`STORE:REGION;"Location:"`**
		`    START WITH Location: FIRST// `**`<Enter>`**
		`    WITHIN Location, SORT BY: `**`<Enter>`**
		`    PRINT FIELD: `**`STORE`**
		`    THEN PRINT FIELD: `**`<Enter>`**
		
		"**Location:**" is substituted for "**STORE:REGION**".

3.4.2.7 Saving Sort Criteria (SORT Templates)

You can save your sort criteria in a SORT template. This lets you reuse the same sorting instructions in future prints from the current file. SORT templates are stored in the SORT TEMPLATE (#.401) file. If you sort by more than **three** fields, you are asked whether you want to store your sort criteria in a SORT template, as shown in Figure 17.

Figure 17: Print—Dialogue to Create a Sort Template: Sample User Entries at Prompts

```
Select VA FileMan Option: PRINT <Enter> File Entries

OUTPUT FROM WHAT FILE: PATIENT// <Enter>
```

    ┌─────────────────────────────────┐
    │ Sort by at least three fields. │
    └──────────┬──────────────────────┘

```
SORT BY: NAME// ZIP CODE
START WITH ZIP CODE: FIRST// <Enter>
  WITHIN ZIP CODE, SORT BY: CITY
     1   CITY
     2   CITY (CIVIL)
     3   CITY (VA)
CHOOSE 1-3: 1 <Enter> CITY
  START WITH CITY: FIRST// <Enter>
    WITHIN CITY, SORT BY: NAME
     1   NAME
     2   NAME COMPONENTS
     3   NAME ORDER
CHOOSE 1-3: 1 <Enter>  NAME
    START WITH NAME: FIRST// <Enter>
      WITHIN NAME, SORT BY: <Enter>
```

    ┌──┐
    │ To save the sort criteria for a future use, enter a SORT   │
    │ template name.   │
    └──────────────────────┬───┘

```
STORE IN 'SORT' TEMPLATE: ADDRESS LIST
  Are you adding 'ADDRESS LIST' as a new SORT TEMPLATE? No// Y <Enter> (Yes)
DESCRIPTION:
  No existing text
  Edit? NO// YES
```

    ┌──┐
    │ Optionally, enter a description for the SORT template. │
    └──────────────┬───┘

```
==[ WRAP ]==[ INSERT ]=============< DESCRIPTION >===========[ <PF1>H=Help ]====
Template for address listing.


<=======T=======T=======T=======T=======T=======T=======T=======T=======T>======


FIRST PRINT FIELD:
```

3.4.2.7.1 Forcing Creation of a SORT Template

Ordinarily, you are only asked whether to save your sort criteria in a SORT template if you enter
three or more fields at the "SORT BY:" prompts. However, to force this question to be asked,
enter a right bracket (**]**) by itself at one "SORT BY:" prompt. No matter how few fields you sort
by, you are still prompted to save your sort criteria in a SORT template.

Figure 18: Print—Forcing the Creation of a Sort Template

```
    SORT BY: NAME// ]
    SORT BY: NAME//
```

3.4.2.7.2 Reusing Sort Criteria in New Reports

The reason to save sort criteria in a SORT template is so that you can *reuse* your sort criteria in a
new report from the same file.

To reuse a SORT template as the sort criteria in a new report, at the "SORT BY:" prompt in the
new report, enter a left bracket (**[**) plus the template name:

Figure 19: Print—Reusing a Sort Template

```
    OUTPUT FROM WHAT FILE: NEW PERSON// <Enter>
    SORT BY: NAME// [ADDRESS LIST <Enter>
                                (Dec 08, 1995@07:53) User #34 File #200
    WANT TO EDIT 'ADDRESS LIST' TEMPLATE? NO// <Enter>
    FIRST PRINT FIELD:
```

3.4.3   Choosing Print Fields

3.4.3.1   Specifying Fields to Print

After you have specified the order in which the output should occur, you are asked to list the
fields you want displayed for each file entry. In the simplest case, fields are identified by their
label. If you enter a single question mark (**?**) at the prompt, a list of all the fields in the file is
displayed. If you enter the name of a Multiple, you are asked for the subfields you want printed.
A subfield *must* be specified even if the Multiple has only one subfield.

To print all fields in the file, enter **ALL** (uppercase) at the "FIRST PRINT FIELD:" prompt. You
are then prompted:

Figure 20: Print—Confirmation Message to Print All Fields

```
    Do you mean ALL the fields in the file? NO//
```

Enter **YES** to indicate all fields; otherwise, the file is searched for field labels beginning with the
letters "**ALL**".

> **NOTE:** Fields from other files can also be printed using extended pointers. This technique is described in the "Using Computed Expressions in COMPUTED Fields" section in the "Computed Expressions" section in the *VA FileMan Advanced User Manual*. You can also enter other computed expressions, which are also described in that section.

3.4.3.2   Print Qualifier Reference

VA FileMan's print capabilities provide many ways to format a report. If you do *not* specify any formatting controls, a format is constructed automatically. The width of each field's print area is computed using information from the field's definition. The default width is the larger of the following in the print dialogue:

- Maximum number of characters allowed for the field.

- Length of the longest word of the field's label (or other specification).

Two inter-column spaces are added to separate fields.

By using print qualifiers at the "PRINT FIELD:" prompt, for each field, you can indicate:

- How long the field's print area should be.

- Where it should start.

- How many lines to skip before printing the field.

- Column title for the field.

- Insert literal strings within the output.

For fields that have numeric values, you can call for several arithmetic calculations and indicate the number of decimal digits of accuracy. If you have requested subtotals in the sort dialogue (by preceding the field with a +), calculations are done at the subtotal level as well.

3.4.3.2.1 Print Qualifiers to use at "PRINT FIELD:" Prompts

Table 3 lists the print qualifiers you can use at the "PRINT FIELD:" prompts:

Table 3: Print—Print Qualifiers

Qualifier	Action	Discussion
!field	Count	The number of entries with *non*-**NULL** values in this field is counted.
#field	All statistics	Use with NUMERIC fields only. **Six** lines of statistical output are generated for the selected field: • Total • Count • Mean

Qualifier	Action	Discussion
		• Maximum • Minimum • Standard Deviation
&field	Total	Use for NUMERIC fields only. The values of all occurrences of this field are summed.
+field	Total, count and mean	Use for NUMERIC fields only. The sum, count of *non-* **NULL** values, and the arithmetic mean of the *non-* **NULL** values are printed.
field;**B**	Multiples in sorted order	Typically, entries in a Multiple are printed in order by Internal Entry Number (IEN). The ;**B** print specifier ensures that subentries are displayed in order by the value of the **.01** field.
field;**C***n*	Set start column position	You can specify the starting column of a field's display. If the number (***n***) is a positive number, the field prints in that column counting from the left margin. If it is negative, the field starts in that column as subtracted from the right margin. If there is *not* enough room on a line for the field to display properly, it is moved to the line below. Adding ;**C1** always starts a field's display at the beginning of a line.
field;**D***n*	Round decimal fractions	Specify the number of decimal digits of accuracy with a number, "***n***". If ***n*=0**, the number is rounded to a whole number. The number (***n***) *must be* **> 0** *or* **= 0**.
field;**L***n*	Left justify and truncate	To left justify within a field width of "***n***" characters, follow the ;**L** with the number of column positions you want the field to occupy. If necessary, the data is truncated to fit into this length. Since *non*-numeric fields are left justified by default, the only effect of ;**L** on those fields is truncation. This qualifier does *not* affect DATE/TIME-valued fields.
field;**N**	Suppress consecutive duplicate values	If you do *not* want the same value for a field printed on consecutive rows of a report, add ;**N** to the field specification.
field;**R***n*	Right justify text	To right justify within a field of "***n***" characters, follow the ;**R** with that number. Right-justified data is *not* truncated; if "***n***" is *not* large enough; data spills into the next field's area causing confusing output. DATA TYPE field values of NUMERIC are right justified by default. However, COMPUTED expressions with numeric results are *not* right justified automatically.
field;**S***n*	Skip lines between	You can indicate a number of lines to skip before printing a field by using ;**S***n*. Without a number, ;**S** skips a single line. If your

Qualifier	Action	Discussion
	fields	field has a **NULL** value, "***n***" lines are skipped anyway. You *cannot* use **;S** with a WORD-PROCESSING-type field. To skip one line before a WORD-PROCESSING field, precede the field with an additional print specification like this: THEN PRINT FIELD: **"";S**
field**;T**	Use field TITLE as header	If you want to use the field's TITLE, as defined in the data dictionary, instead of its LABEL in the header, add **;T**.
field**;W***n*	Wrap text	The **;W** suffix splits a field that is too long for its field column width at word boundaries (spaces) and prints it out fully on **two** or more rows. You can optionally follow the **;W** with the number of column positions to be occupied by each line of output. If the field's data dictionary definition says to always print in word-wrap mode, DATA TYPE field values of WORD-PROCESSING are automatically wrapped. The **;W** suffix overrides the **;R** or **;L** suffixes; *do not use them together*.
field**;X**	Suppress header and inter-column spaces	Follow the field specification with **;X** to suppress the **two spaces** normally inserted before a field and the column header for the field. The result is concatenation of the field with the field that came before it. The **;X** suffix is often used to add a literal caption to a field.

field**;"***xxx***"**	Customize header	The default header for columns of a report is the field label (for fields) or a COMPUTED expression (for "on-the-fly" COMPUTED expressions). To change the header, follow the field label with a semicolon (**;**) and the column header you want. Enclose the header in quotes. When possible, spaces wrap the substitute header within a print width obtained from the field's data definition. For example:
		
		    THEN PRINT FIELD: **DOB;"Date of Birth"**
		    THEN PRINT FIELD: **DOB;"Date_of_Birth"**
		
		The first specification prints the header on **two** lines; the second prints it on **one** line (with underscores). To suppress the header, add **; ""** to the field.
		
		🛈 **NOTE:** The tilde (**~**) character should *never* be used within a customized header, because this character has a special meaning to VA FileMan.

field**;Y***n*	Set start row position	You can start printing a field on any line on the page. If "***n***" is: **Positive**—The field is printed on that line as counted from the top of the page.

Qualifier	Action	Discussion
		• **Negative**—The field is printed on that line as counted from the bottom. When specifying **;Y***n*, you *must* account for any page header that is displayed.
"xxx"	Insert a literal	At the "PRINT FIELD:" prompt enclose a FREE TEXT literal in quotes. The literal is inserted into the body of the report. For example, the following specifications begin each entry's display with a caption and NAME: `FIRST PRINT FIELD: `**`"Patient's name:"`** `THEN PRINT FIELD: `**`NAME;""`** **Or** `FIRST PRINT FIELD: `**`"Patient's name:"`** `THEN PRINT FIELD: `**`NAME;X`** **NOTE:** The header for the NAME field is suppressed in both examples.

You can string together several of these print qualifiers at the "PRINT FIELD:" prompt. For example:

Figure 21: Print—Stringing Several Print Qualifiers Together

```
    THEN PRINT FIELD: +WEIGHT;S1;C3;L6;"Patient Weight"
```

These specifications translate to: total, count, and give the mean for all values of the WEIGHT field, which *must* be a NUMERIC valued field. Skip one line before printing the values. Start the output in column three, left justify and truncate it to **six** character positions, and print the column heading "Patient Weight" on **two** lines.

3.4.3.3   Saving Print Criteria (PRINT Templates)

PRINT templates let you store your print field specifications for use at a later time. You can retrieve the template at a later time by using the template name surrounded by square brackets (**[ ]**). Template names *must* be unique with respect to any other PRINT template created for the same file. VA FileMan notifies you if you try to create a template with a template name that already exists for a file. PRINT templates are stored in the PRINT TEMPLATE (#.4) file.

To see a list of all existing templates that pertain to the file you are dealing with, enter a left bracket and a question mark (**[?**) at the prompt where you can retrieve templates. For example:

Figure 22: Print—Obtaining a List of All Print Templates for a File

```
   FIRST PRINT FIELD: [?
```

This gives you a list of the PRINT templates available for your use with the file.

You are automatically prompted for a template name when it is determined that a considerable amount of information has been specified. If you choose **five** or more print fields, or if some of your print fields have special formatting specifications, you are prompted to store your print field specification in a PRINT template, as follows:

Figure 23: Print—Creating a Print Template

```
   STORE PRINT LOGIC IN TEMPLATE:
```

If you do *not* want to store your specifications in a template, simply press the **Enter** key. If you do want to save these print specifications for future reuse, however, respond to this prompt with the name of a template (either new or existing). Do *not* enclose the name in brackets; use brackets only to invoke a template, *not* to name one.

3.4.3.3.1 Forcing Creation of a PRINT Template

Ordinarily, you are only asked whether you want to save your PRINT template if you enter **five** or more fields at the "PRINT FIELD:" prompt, or enter complex print specifications. However, by entering a right bracket (**]**) by itself at one of your field prompts, you can force the prompt that asks you for a template name, no matter how few fields you specify. You *must* designate at least one field to be printed to receive the template prompt, though.

For example:

Figure 24: Print—Forcing the Creation of a Print Template

```
   PRINT FIELD: ] <Enter>
   PRINT FIELD: NAME
   THEN PRINT FIELD: <Enter>
   HEADING: <Enter>
   STORE PRINT LOGIC IN TEMPLATE: ID PRINT
```

3.4.3.3.2 Using and Editing PRINT Templates

If a PRINT template has already been defined for a file, you can answer the "FIRST PRINT FIELD:" prompt with the template name, enclosed within square brackets (**[ ]**). For example:

Figure 25: Print—Reusing a Print Template

```
    FIRST PRINT FIELD: [PATIENT DATA]
    WANT TO EDIT 'PATIENT DATA' TEMPLATE? NO// Y <Enter> (YES)
    NAME: PATIENT DATA// <Enter>
    READ ACCESS: <Enter>
    WRITE ACCESS: <Enter>
```

After you retrieve a template, you are asked if you want to edit the template. If you answer **YES** (as shown in Figure 25), you are allowed to edit the template name. To delete the template, enter an at-sign (@). After the "NAME:" prompt, you can edit the template security codes for **READ** and **WRITE** access.

Next, you are prompted to edit each "PRINT FIELD:" value, containing each print field stored in the template. You can leave each print field as is, edit it, or delete it with the at-sign character (@).

To insert a new print field ahead of the print field being displayed in your template, precede the print field you want to insert with a caret (**^**). See the example in Figure 26 of adding to a PRINT template (INPUT and SORT templates have this feature also):

Figure 26: Print—Inserting a New Print Field

```
    FIRST PRINT FIELD: FIELD1// <Enter>
    THEN PRINT FIELD: FIELD2// <Enter>
    THEN PRINT FIELD: FIELD4// ^FIELD3
    THEN PRINT FIELD: FIELD4// <Enter>
```

To insert a Multiple field and its subfields ahead of the field currently displayed in the template, do the following:

1. Enter a caret (**^**) followed by the name of the Multiple field.

2. Ignore the default presented at the "THEN PRINT FIELD:" prompt and insert each subfield by entering a caret (**^**) followed by the name of that subfield.

3. After all subfields have been added, enter a caret (**^**) and a right bracket (**^]**).

For example:

Figure 27: Print—Inserting a Multiple Print Field

```
FIRST PRINT FIELD: FIELD1// <Enter>
    THEN PRINT FIELD: FIELD2// <Enter>
    THEN PRINT FIELD: FIELD3// ^MultField <Enter> (multiple)
    THEN PRINT MultField SUB-FIELD: FIELD3// ^SubField1
    THEN PRINT MultField SUB-FIELD: FIELD3// ^SubField2
    THEN PRINT MultField SUB-FIELD: FIELD3// ^]
    THEN PRINT FIELD: FIELD3//
```

3.4.3.4 CAPTIONED PRINT Template: [CAPTIONED

Every file has a pre-defined CAPTIONED PRINT template that you can select at the "PRINT FIELD:" prompt. The CAPTIONED PRINT template can be very useful; it prints out all fields for each entry in your report. Use it is a quick way to get all the fields for each entry in your report (much quicker than entering each field individually)!

Use it as follows:

Figure 28: Print—Choosing a Captioned Print Template

```
    FIRST PRINT FIELD: [CAPTIONED
```

3.4.3.4.1 COMPUTED Fields and Record Numbers in CAPTIONED OUTPUT

When you choose the CAPTIONED PRINT template, you are prompted with "Include COMPUTED fields". At this prompt, you can decide whether to include COMPUTED-type fields in the output for each record, as well as record numbers.

REF: For more information on COMPUTED fields, see the "COMPUTED Data Type" section in the *VA FileMan Advanced User Manual*.

Figure 29: Print—Dialogue Encountered when Creating a Captioned Print Report

```
    FIRST PRINT FIELD: [CAPTIONED

    Include COMPUTED fields: (N/Y/R/B): NO// ?

    Enter a code from the list.
        Select one of the following:

            N          NO - No record number (IEN), no Computed Fields
            Y          Computed Fields
            R          Record Number (IEN)
            B          BOTH Computed Fields and Record Number (IEN)


    Include COMPUTED fields:  (N/Y/R/B): NO// BOTH <Enter> Computed Fields and
Record Number (IEN)

    *************************
    Heading (S/C): NEW PERSON LIST// <Enter>
    DEVICE: <Enter>
```

3.4.3.5   Printing Statistics Only (Totals, Counts, etc.)

If you precede *all* of the fields that you choose for printing at the "PRINT FIELD:" prompts with a **+**, **&**, **!**, or **#**, the individual field values are *not* printed in your report. Instead, you only get the requested statistics, which (depending on the print qualifiers and fields used) can be the total, count, mean, maximum, minimum, and/or standard deviation.

ℹ️   REF: For more information about print qualifiers, see the "Print Qualifier Reference" section.

3.4.4   Other Print Features

- Multiple Copies of a Print
- Report Headings
- Suppressing Report Headings (and Page Feeds)
- Custom Headings and Footers
- Printing Sort Criteria in Header or Footer

3.4.4.1   Multiple Copies of a Print

To generate more than one copy of a report, you *must* have an output device on your system (e.g., a spool device or a sequential disk processor [SDP]), which stores data in a linear format. If you choose to send the output to such a device at the "DEVICE:" prompt, the system prompts you as shown in Figure 30:

<p align="center">Figure 30: Print—Generating Multiple Copies of a Report</p>

```
    ENTER NUMBER OF COPIES: 4
    OUTPUT COPIES TO DEVICE: PRINTER
```

In this example (Figure 30), you are asking to print **four** copies to the device called **PRINTER**.

You *must* be using VA FileMan with Kernel or with a device handler similar to Kernel's to produce multiple copies. If you exceed the maximum spool lines allowed, as defined in the KERNEL SYSTEM PARAMETERS (#8989.3) file, your report is stopped.

3.4.4.2   Report Headings

The heading in a report is what is printed at the top of each report page. Ordinarily, it includes the following, as shown in Figure 31:

- Heading (report title)
- Date of report
- Time of report
- Page number

- Column headers (field titles for fields in the output)

Figure 31: Print—Example of a Report Heading

```
    PATIENT LIST                         JUL 19,1996  14:49    PAGE 1
    SSN        NAME
    ----------------------------------------------------------------
```

You can customize the report heading when you print. If you ask for help at the "Heading (S/C):..." prompt, VA FileMan displays the instructions shown in <u>Figure 32</u>:

Figure 32: Print—Dialogue to Customize Report Headings: Sample User Entries at Prompts

```
Heading (S/C): PATIENT LIST// ?

There are two different options:

1) Accept the default heading or enter a custom heading.
 For no heading at all, type @.
 To use a Print Template for the heading, type [TEMPLATE NAME].

2) Replace the default heading with:
 S  to Suppress the heading when there are no records to print, and/or
 C  to print sort Criteria in the heading.

If S and/or C is entered, the heading prompt will re-appear.
```

Default heading for the report.

```
Heading (S/C): PATIENT LIST// CS
```

"C" prints sort criteria on the heading of the first page.

"S" tells VA FileMan *not* to print anything if there are no records to print.

```
  ** Suppress the heading when there are no records to print.
  ** print sort Criteria in heading.


Heading: PATIENT LIST//
```

Thus, at the "Heading (S/C):" prompt, you can:

- Enter **S** to *not* print the heading (i.e., *not* print anything), if no records are found to print.

- Enter **C** to print sort criteria in the report heading on the first page.

- Enter a new heading to replace the default heading or press the **Enter** key to accept the default heading.

3.4.4.3   Suppressing Report Headings (and Page Feeds)

If you do *not* want headings to be printed in your output, enter an at-sign (@) at the "HEADING:" prompt:

Figure 33: Print—Suppressing Headings on a Report

```
    HEADING: PATIENT LIST// @
```

If you want neither headings nor page feeds in your output, enter **two** at-signs (@@) at the "HEADING:" prompt.

If you suppress the headings in your output and also save your print criteria in a PRINT template, you are asked:

Figure 34: Print—Confirming the Suppression of Headings in a Print Template

```
    DO YOU ALWAYS WANT TO SUPPRESS SUBHEADERS WHEN PRINTING TEMPLATE?
```

Subheaders are the names of SORT BY fields you see in the body of your report, when you do *not* include those SORT BY fields as print fields. To automatically suppress all subheaders, answer **YES** at this prompt.

NOTE: When you are sorting, you can suppress subheaders individually at each sort level by entering an at-sign (@) in front of the field on which you are sorting.

REF: For more information, see the "Sorting" section.

3.4.4.4   Custom Headings and Footers

You can print complex, multi-line headings by using a PRINT template to hold your heading format. For example, suppose that you want the patient's name and date of birth to appear as the heading at every page break. You could first create a PATIENT HEADER template as follows:

Figure 35: Print—Creating a Print Template with a Custom Header

```
    SORT BY: NAME
    START WITH NAME:  FIRST// <Enter>
    FIRST PRINT FIELD: "PATIENT NAME:   "
    THEN PRINT FIELD: NAME
    THEN PRINT FIELD: "DATE OF BIRTH:   ";C50
    THEN PRINT FIELD: DATE OF BIRTH
    THEN PRINT FIELD: <Enter>
       ************************
    Heading (S/C): PATIENT LIST// <Enter>
    STORE PRINT LOGIC IN TEMPLATE: PATIENT HEADER
      Are you adding 'PATIENT HEADER' as a new PRINT TEMPLATE?  No// YES <Enter>
(Yes)
    DEVICE:
```

Then, at a later time, when you do another print, at the heading prompt, enter the template name:

Figure 36: Print—Selecting an Existing Print Template with a Custom Header

```
     Heading (S/C): PATIENT LIST// [PATIENT HEADER]
```

When you enter a PRINT template name such as PATIENT HEADER at the "Heading (S/C):..." prompt, the format of the template is used as a replacement for the full normal report heading on each page of your report. It replaces the full default heading, including:

- Title
- Time
- Date
- Page number
- Field names
- Separator line

Thus, the header, as defined above, would contain *no* column headings and would *not* be separated from the body of the report by a horizontal line or even a blank line. You can add these in yourself as print fields in the template, if you so desire.

3.4.4.4.1 Custom Footers

You can also add custom footers to the bottom of each page of a report. First, save the contents of the footer in a template as you do to create a custom heading. Then, use the template at the "HEADING:" prompt with a dash (-) before the first square bracket, as shown in Figure 37:

Figure 37: Print—Including a Custom Footer in a Print Template

```
Heading (S/C): PATIENT LIST// -[PATIENT FOOTER]
```

You can specify both a heading and footer like this:

Figure 38: Print—Including a Custom Header and Footer in a Print Template

```
     Heading (S/C): PATIENT LIST// [PATIENT HEADER]-[PATIENT FOOTER]
```

NOTE: Specifying only a footer at the "Heading (S/C):" prompt suppresses the default heading. If you need a header as well as footer, you *must* use custom templates for both.

3.4.4.5 Printing Sort Criteria in the Heading or the Footer

You can print the sort criteria (values used to sort the report) in the header in two different ways:

- At the "Heading (S/C):" prompt, entering **C** prints the sort criteria in the automatically generated report heading.

- Use the sort qualifier **;P***a-b* to save the FROM and TO values used to sort a report. Then, in a customized header or footer (stored in SORT templates), you can retrieve the sort values with **PARAM("***a-string***")**.

REF: For more information, see the description of the **;Pa-b** sort qualifier.

4   Search

When you print reports, you can print a subset of the total number of file entries, if you sort your output. For example, by sorting on a file's DATE field, you could sort for entries from October 1st to October 15th, and only print entries whose DATE field falls in that sort range.

Selecting a subset of entries by sorting works well if the subset of entries you would like to print can be isolated based on a contiguous sort range. However, what if you would like a different set of entries (e.g., only entries whose DATE field is equal to September 1st, October 1st, or November 1st)? You *cannot* do this with a sort range, because the sort range that includes September 1st and November 1st would include every entry between the two dates.

When you use VA FileMan's search capabilities, you have much more control over what entries you select from a file for printing.

4.1   How to Search

As with VA FileMan's print capabilities, there are two methods in which you can use VA FileMan's search features:

- An option that has been set up already to allow you to search a particular file.

- VA FileMan's **Search File Entries** [DISEARCH] option, which lets you perform a search on any file to which you have access.

In either case, use of VA FileMan's search features is very similar. In most cases, the only difference is that with the **Search File Entries** [DISEARCH] option, you have to choose which file to search.

The steps in searching are:

1. Enter the search conditions (truth tests) to perform on each entry.

2. Specify how the search conditions should be combined (link them together with logical **AND**s & **OR**s) to select records.

3. Format your output (i.e., choose the sort order and print fields).

4.2   Search Steps

4.2.1   Enter Conditions

First, you *must* enter **one** or more search conditions to test each entry. For each condition you choose a field in the entry and a condition to compare the field against.

For example, you could check if an entry's DATE field is **NULL**, **GREATER THAN** 10/1/96, or **EQUALS** 10/1/96.

4.2.1.1 Search Condition Tests

Table 4 lists the **six** possible search conditions against which you can test entries. It also includes:

- The symbol that represents the condition (if any).

- For what field types the condition can be used.

- The description/arguments of each condition.

Table 4: Search—Condition Tests

Condition	Symbol	For Field Types	Description/Arguments
NULL	(none)	All data field types except WORD-PROCESSING.	**NULL** returns true if the field in question is empty (**NULL**). No argument is required.
CONTAINS	**[**	The following data field types: • NUMERIC • FREE TEXT • WORD-PROCESSING • MUMPS • SET OF CODES • COMPUTED	Enter a character string that should be contained in matching entry fields.
MATCHES	(none)	The following data field types: • NUMERIC • FREE TEXT • MUMPS • COMPUTED • DATE/TIME	Enter a MUMPS pattern match. The pattern *must* be valid for the MUMPS pattern match operator.
LESS THAN	**<**	The following data field types: • NUMERIC • COMPUTED • SET OF CODES • FREE TEXT • DATE/TIME	Enter a value that a matching entry field should be less than. *Non*-NUMERIC fields are evaluated as if they were numbers. Thus, strings beginning with alpha characters are evaluated as **zero**.
EQUALS	**=**	All data field types except WORD-	Enter a value to which a matching entry

Condition	Symbol	For Field Types	Description/Arguments
		PROCESSING.	field should be equal.
GREATER THAN	**>**	The following data field types: • NUMERIC • COMPUTED • SET OF CODES • FREE TEXT • DATE/TIME	Enter a value to which a matching entry field should be less than. *Non*-NUMERIC fields are evaluated as if they were numbers. Thus, strings beginning with alpha characters are evaluated as **zero**.

When you start your search, VA FileMan asks you to enter a:

1. Field.

2. Condition.

3. Value to which the field is compared.

For example, to create a search condition that would find all entries whose DATE ACCESS CODE LAST CHANGED field contains a date older than **120** days in the past, you would enter the following:

Figure 39: Search—Example of a Search Condition

```
-A- SEARCH FOR FIELD: DATE ACCESS CODE LAST CHANGED
-A- CONDITION: LESS THAN
-A- GREATER THAN: T-120 <Enter> (Jun 20, 1995)
```

NOTE: Each prompt above begins with "**-A-**"; what you have entered becomes search condition **A**.

Once you enter your first search condition, you can enter additional search conditions, if you wish. VA FileMan assigns the letter **A** to the first search condition, **B** to the second search condition (if any), **C** to the third, and so on.

Figure 40 is an example of entering two truth tests:

Figure 40: Search—Example of Two Truth Tests

```
   -A- SEARCH FOR FIELD: DATE ACCESS CODE LAST CHANGED
   -A- CONDITION: LESS THAN
   -A- GREATER THAN: T-120 <Enter> (Jun 20, 1995)

   -B- SEARCH FOR FIELD: ACCESS CODE
   -B- CONDITION: 'NULL

   -C- SEARCH FOR FIELD: <Enter>
```

4.2.2   Combine Conditions

After defining a series of conditions (**A**, **B**, etc.), you combine the conditions to yield the complete test that an entry *must* satisfy to be selected in the search. The complete test is a logical combination of tests **A**, **B**, etc., using **AND**, **OR**, and **NOT**.

4.2.2.1   Operators for Combining Search Conditions

Table 5 lists the possible operators to combine search conditions:

Table 5: Search—Condition Operators

Condition	Symbol	Description	Example
AND	**&**	For truth test to be **true**, the conditions on both sides of the **AND** operator *must* be **true**. The **&** symbol can be omitted (i.e., **AB** is the same as **A&B**).	**A&B**
NOT	**'** or **-**	For truth test to be **true**, the condition following **NOT** (i.e., single quote **'** or dash **-**) *must* be **false**. If **A** is **false**, **'A** evaluates to **true**.	**'A**
OR	Enter on new line.	For truth test to be **true**, only one of the conditions that are combined with **OR** needs to be **true**. If **A** is **true** and **B** is **false**, **A OR B** evaluates to **true**.	IF: **A <Enter>** OR: **B <Enter>**

For example, if you just want to find all entries for which search condition **A** is **true**, you would enter:

Figure 41: Search—Example of a Single Search Condition Using a Truth Test

```
 -B- SEARCH FOR FIELD: <Enter>
  IF: A
  OR: <Enter>
```

A more complicated search might have a number of search conditions (e.g., **A**, **B**, **C**, and **D**). Thus, for example, to find all entries which do either of the following:

- Satisfy both truth tests **A** and **B**.

- Do *not* satisfy truth test **C**, but satisfy truth test **D**.

You could combine search conditions, as shown in Figure 42:

Figure 42: Search—Example of a Multiple Search Condition Using Truth Tests

```
 -E- SEARCH FOR FIELD: <Enter>
  IF: A&B
  OR: 'C&D
  OR: <Enter>
```

In the example above, the logic says "if **A** and **B**, or if *not* **C** (but **D**)".

4.2.3 Format Output

The remaining steps to finish your search are to choose your sorting criteria (same as with printing) and to choose the fields to print for each matched entry (also the same as with the printing).

A complete search (entering search conditions, combining search conditions, and finishing the search) is shown in Figure 43:

Figure 43. Search—Dialogue to a Completed Search: Sample User Entries at Prompts and Sample Report

```
Select VA FileMan Option: SEARCH <Enter> File Entries

OUTPUT FROM WHAT FILE: PATIENT// NEW PERSON <Enter> (88362 entries)

  ┌─────────────────────────────────┐
  │ 1. Enter search conditions.     │
  └─────────────────────────────────┘


  -A- SEARCH FOR NEW PERSON FIELD: DATE ACCESS <Enter> CODE LAST CHANGED
  -A- CONDITION: > <Enter> GREATER THAN
  -A- GREATER THAN DATE: T-50 <Enter> (DEC 25, 2012)

  -B- SEARCH FOR NEW PERSON FIELD: ACCESS CODE
     1    ACCESS CODE
     2    ACCESS CODE   Want to edit ACCESS CODE (Y/N)
CHOOSE 1-2: 1 <Enter> ACCESS CODE
  -B- CONDITION: 'NULL

  -C- SEARCH FOR NEW PERSON FIELD: <Enter>

  ┌─────────────────────────────────┐
  │ 2. Combine search conditions.   │
  └─────────────────────────────────┘


IF: AB
        DATE ACCESS CODE LAST CHANGED GREATER THAN the entire day DEC 25,2012 (T-50)
and ACCESS CODE NOT NULL
OR: <Enter>

STORE RESULTS OF SEARCH IN TEMPLATE: ACCESS CODE SEARCH
  Are you adding 'ACCESS CODE SEARCH' as a new SORT TEMPLATE? No// Y <Enter> (Yes)
DESCRIPTION:
  No existing text
  Edit? NO// <Enter>
  ┌─────────────────────────────────┐
  │ 3. Choose sort order.           │
  └─────────────────────────────────┘


SORT BY: NAME// <Enter>
START WITH NAME: FIRST// <Enter>
  ┌─────────────────────────────────┐
  │ 4. Choose print fields.         │
  └─────────────────────────────────┘


FIRST PRINT FIELD: NAME
     1    NAME
     2    NAME COMPONENTS
CHOOSE 1-2: 1 <Enter> NAME
THEN PRINT FIELD: DATE ACCESS CODE <Enter> LAST CHANGED
THEN PRINT FIELD: <Enter>
```

```
Heading (S/C): NEW PERSON SEARCH// <Enter>
DEVICE: <Enter> SSH VIRTUAL TERMINAL    Right Margin: 80// <Enter>
```

> **5. Search results are printed.**

```
NEW PERSON SEARCH                           FEB 13,2013  17:17   PAGE 1
                                    DATE ACCESS
                                    CODE LAST
NAME                                CHANGED
--------------------------------------------------------------------------------

FMPERSON,ONE                        FEB 13,2013
FMPERSON,TWO                        JAN 16,2013


                    2 MATCHES FOUND.

Press RETURN to continue...
```

The previous search ([Figure 43](#)) found **two** entries that matched the search conditions
(i.e., DATE ACCESS CODE LAST CHANGED greater than **2/2/99** and ACCESS CODE *not*
NULL).

4.3 Details and Features

4.3.1 Sorting and Searching

As you recall from the "[Print](#)" section, you can print a subset of entries from a file by sorting
(i.e., printing only those entries that fall between a sort-from value and a sort-to value). Searches
also select a subset of entries from a file, although with more flexibility than with sorting.

When you print your output from a search, you are also given a chance to sort the output. This
means that while searching selects a subset of entries to print, through sorting you can further
restrict that subset of entries that is going to print. How does sorting affect the output of the
searches?

The answer is that VA FileMan uses *both* your search and sort order to select entries. You enter
the search criteria *before* you enter the sort order. However, the selection of entries indicated in
the sort ("START WITH … GO TO" dialogue) sorting is done first, after which the search
conditions are applied to all remaining entries to determine the final set of matching entries.

4.3.2 SEARCH Templates

You can save the results of your search in a SEARCH template. Doing this allows you to:

- Reuse your search criteria to perform another search.

- Reuse your search results (the list of entries selected as a result of both the search and the
  sort order).

This is because SEARCH templates store both your search criteria and also the list of entries that
is found in your search. SEARCH templates are stored in the SORT TEMPLATE (#.401) file.

4.3.2.1 Creating SEARCH Templates

The place to save your search criteria and results in a SEARCH template is right after you specify your search conditions. At this point, you are prompted:

Figure 44: Search—Creating a Search Template

```
STORE RESULTS OF SEARCH IN TEMPLATE:
```

You can create a template at this prompt. Because SEARCH templates are stored in the same file as SORT templates (SORT TEMPLATE [#.401]), you *cannot* give a SEARCH template the same name as a SORT template. To avoid creating a SEARCH template, just press the **Enter** key at this prompt. Usually, only the creator of a SEARCH template can use it.

4.3.2.2 Reusing Search Criteria Stored in a SEARCH Template

Whenever you do a search, you can reuse the search criteria (i.e., your combined search conditions) stored in a SEARCH template. To do this, enter the bracketed SEARCH template name at the first "SEARCH FOR FIELD:" prompt:

Figure 45: Search—Reusing a Search Template at the "SEARCH FOR FIELD" Prompt

```
-A- SEARCH FOR FIELD: [RESEARCH 1]
```

A new search is performed with the recalled search criteria.

4.3.2.3 Reusing Search Results in another Search

Whenever you do a search, you can recall the results of a previous search (the list of entries found in the search) at the "SORT BY:" prompt. In this case, the new search is done against the entries in the SEARCH template, rather than the entire file. Answer the "SORT BY:" prompt with the bracketed SEARCH template name:

Figure 46: Search—Reusing a Search Template at the "SORT BY" Prompt

```
SORT BY:  NAME// [RESEARCH 1]
```

4.3.2.4 Reusing Search Results in a Print

When doing VA FileMan prints, you can also recall the results of a previous search at the "SORT BY:" prompt. In this case, the entries saved in the SEARCH template are the ones printed in the report. This is handy if you do a search, collect a group of entries, and then want to print several different reports based on the same set of entries.

4.3.3   Internal vs. External Field Values for Search Conditions

The following are search conditions for specific DATA TYPE fields:

- **SET OF CODES**—You *must* use external values for the search conditions.

- **DATE/TIME** and **COMPUTED** (that evaluate to **DATE/TIME**)—You can enter internal or external values for the search conditions.

- **NUMERIC**, **COMPUTED** (that do *not* evaluate to **DATE/TIME**), and **FREE TEXT**—There is no difference between internal and external value.

- **POINTER TO A FILE** or **VARIABLE-POINTER**—The sort is based on the field type of the **.01** field of the pointed-to file.

4.3.4   Print Number of Matches Found

If you only want to print the number of matches found, *without* printing any of the matched entries, answer the "FIRST PRINT FIELD:" prompt by simply pressing the **Enter** key.

4.3.5   Searching Multiples

Searching on Multiple-valued fields, like the DIAGNOSIS field in the PATIENT (#2) file, is a special situation. You *must* specify whether a truth test is to be considered met if *at least one* of the subentries for an entry passes the test or if *all* the subentries *must* pass the test.

When truth tests contain a negative (contains a single quote), you can even specify that an entry with *no* subentries should automatically pass the test.

For example, suppose that you want to search for all patients who were born before **1920** and who *do not* have a DIAGNOSIS containing the word ANGINA, as shown in Figure 47:

Figure 47: Search—Dialogue of a Search on a Multiple Field: Sample User Entries at Prompts

```
Select VA FileMan Option: SEARCH <Enter> File Entries

OUTPUT FROM WHAT FILE: PATIENT// <Enter>

  -A- SEARCH FOR PATIENT FIELD: DATE OF BIRTH
  -A- CONDITION: < <Enter> LESS THAN
  -A- LESS THAN DATE: 1920 <Enter> (1920)

  -B- SEARCH FOR PATIENT FIELD: SERVICE CONNECTED
    1    SERVICE CONNECTED CONDITIONS      (multiple)
    2    SERVICE CONNECTED PERCENTAGE
    3    SERVICE CONNECTED?
CHOOSE 1-3: 1 <Enter> SERVICE CONNECTED CONDITIONS (multiple)

    -B- SEARCH FOR PATIENT SERVICE CONNECTED CONDITIONS SUB-FIELD: SERVICE
CONNECTED CONDITIONS
    -B- CONDITION: [ <Enter> CONTAINS
    -B- CONTAINS: ANGINA

    -C- SEARCH FOR PATIENT SERVICE CONNECTED CONDITIONS SUB-FIELD: <Enter>

  -C- SEARCH FOR PATIENT FIELD: <Enter>

IF: A&'B <Enter>    DATE OF BIRTH LESS THAN 1920 (1920)
                and not PATIENT SERVICE CONNECTED CONDITIONS CONTAINS (case-
insensitive) "ANGINA"

DO YOU WANT THIS SEARCH SPECIFICATION TO BE CONSIDERED TRUE FOR CONDITION -B-
        1) WHEN AT LEAST ONE OF THE 'SERVICE CONNECTED CONDITIONS' MULTIPLES
SATISFIES IT
        2) WHEN ALL OF THE 'SERVICE CONNECTED CONDITIONS' MULTIPLES SATISFY IT
        3) WHEN ALL OF THE 'SERVICE CONNECTED CONDITIONS' MULTIPLES SATISFY IT,
              OR WHEN THERE ARE NO 'SERVICE CONNECTED CONDITIONS' MULTIPLES

    CHOOSE 1-3: 1// 3


OR:

STORE RESULTS OF SEARCH IN TEMPLATE:
```

For this example, choosing the following number means:

- **1** = Find people born before **1920** who have *at least one* SERVICE CONNECTED CONDITION that does *not* contain "ANGINA."

- **2** = Find people born before **1920** who have *at least one* SERVICE CONNECTED CONDITION and *none* containing "ANGINA."

- **3** = Find people born before **1920** who either have no SERVICE CONNECTED CONDITION at all or whose SERVICE CONNECTED CONDITIONs do *not* contain "ANGINA."

Another ambiguity about searches of multiple fields is how to interpret two separate truth tests on the same subfield.

For example, if you are searching for DIAGNOSIS containing **ANGINA** and also for DIAGNOSIS containing **PECTORIS**, do you want to find:

- Only those patients who have **ANGINA** *and* **PECTORIS** in the *same* diagnosis name?

- Patients who might have one diagnosis containing **ANGINA** and a *different* diagnosis containing **PECTORIS**?

Whenever you combine two truth tests (e.g., **A** and **B**) pertaining to the same Multiple-valued field, you are prompted with the following:

Figure 48: Search—Prompts Encountered when Searching on a Multiple Field

```
CONDITION -A- WILL APPLY TO THE SAME MULTIPLE AS CONDITION -B-
OK? YES//
```

In this example (Figure 47 and Figure 48), a **YES** answer means that **ANGINA** and **PECTORIS** *must* be found in the *same* DIAGNOSIS. If you answer **NO**, you can specify how **A** and **B** apply:

Figure 49: Search—Additional Prompts Encountered when Searching on a Multiple Field

```
DO YOU WANT THIS SEARCH SPECIFICATION TO BE CONSIDERED TRUE FOR CONDITION -A-

        1) WHEN AT LEAST ONE OF THE 'DIAGNOSIS' MULTIPLES SATISFIES IT

        2) WHEN ALL OF THE 'DIAGNOSIS' MULTIPLES SATISFY IT

    CHOOSE 1-2: 1// 2

DO YOU WANT THIS SEARCH SPECIFICATION TO BE CONSIDERED TRUE FOR CONDITION -B-

        1) WHEN AT LEAST ONE OF THE 'DIAGNOSIS' MULTIPLES SATISFIES IT

        2) WHEN ALL OF THE 'DIAGNOSIS' MULTIPLES SATISFY IT

    CHOOSE 1-2: 1// <Enter>
```

In this case, all the diagnoses would need to satisfy the **A** condition, but only **one** (or more) would need to satisfy the **B** condition.

NOTE: Applying search tests to fields in a Multiple selects entries at the top-level of the file. VA FileMan's searching features *cannot* be used to select specific subentries.

5 Browser

If your site is using Kernel, your site manager may have set up an output device called **BROWSER**. If so, you can view any report *on the screen* instead of *on paper*. Do this by printing your report to the **BROWSER** device instead of the **HOME** device or a printer.

The Browser makes it very easy to view reports on screen. Its main features are:

- Scroll forwards *and backwards* through a report. This means you do *not* lose reports "off the top" of the screen, like you do when you print to the **HOME** device.

- Use the Search feature to find and immediately jump to any text in a report.

- Copy text from the report to the VA FileMan clipboard; later, if you are editing a mail message or other WORD-PROCESSING-type field with the Screen Editor, you can paste from the clipboard.

    🛈   **REF:** For more information on the Screen Editor, see the "Screen Editor" section.

As you become accustomed to using the **BROWSER** device, you may find that you start to save paper by viewing reports that otherwise you would end up printing.

The **Browser [DDBROWSER]** option lets you browse the contents of any WORD-PROCESSING-type field to which you have access.

5.1 Browser Screen

Figure 50 illustrates the Browser screen:

Figure 50: Browser—Sample Screen Component Parts

```
                                    EXAMPLE

      ┌─────────────────────────────────────────────────────┐
      │ Header Line: Shows the name of the current document. │
      └─────────────────────────────────────────────────────┘
THIS IS LINE 1
THIS IS LINE 2
THIS IS LINE 3
THIS IS LINE 4
THIS IS LINE 5
THIS IS LINE 6
THIS IS LINE 7
THIS IS LINE 8
THIS IS LINE 9
THIS IS LINE 10
THIS IS LINE 11
THIS IS LINE 12
THIS IS LINE 13
THIS IS LINE 14
THIS IS LINE 15
THIS IS LINE 16
THIS IS LINE 17
THIS IS LINE 18
THIS IS LINE 19
THIS IS LINE 20
THIS IS LINE 21
THIS IS LINE 22



                                              ┌──────────┐
                                              │ Total    │
                                              │ number   │
                           ┌────────────┐     │ of lines.│          ┌───────────┐
                           │ Keystroke  │     └──────────┘          │ Total     │
                           │ reminder for│                          │ number of │
              ┌──────────┐ │ accessing help│        ┌──────────┐    │ screens.  │
              │ Leftmost │ │ and exiting.│          │ Current  │    └───────────┘
              │ column.  │ └────────────┘ ┌───────┐ │ screen.  │
              └──────────┘                │Current│ └──────────┘
                                          │ line. │
                                          └───────┘

Col>   1 |<PF1>H=Help <PF1>E=Exit| Line>    22 of 300   Screen>    1 of 14
```

5.2 Browser Features

The following Browser features are described below:

- Navigation Keystrokes
- Clipboard
- Search
- Online Help
- Other Features
- Browser as an Option

5.2.1 Navigation Keystrokes

Table 6 lists the keystrokes you use to navigate while in the Browser (i.e., cursor movement):

Table 6: Browser—Navigation Keystrokes

To	Press
Scroll Up or Down One Line at a Time	**<ArrowUp>** and **<ArrowDown>**
Scroll Right **22** columns	**<ArrowRight>**
Scroll to Rightmost Edge	**<PF1><ArrowRight>**
Scroll Left **22** Columns	**<ArrowLeft>**
Scroll to Leftmost Edge	**<PF1><ArrowLeft>**
Page Down	**<PF1><ArrowDown>**, **<NextScreen>**, or **<PageDown>**
Page Up	**<PF1><ArrowUp>**, **<PrevScreen>**, or **<PageUp>**
Go to Top	**<PF1>T**
Go to Bottom	**<PF1>B**

To	Press
Go to Specific Line, Screen, or Column	**<PF1>G** At prompt, enter a number, which you can precede with any of the following: • **S—**Screen • **L—**Line • **C—**Column The cursor is re-positioned at the corresponding screen, line, or column. If you enter a number only, screen is assumed.
Exit	**<PF1>E** or **<PF1>Q** or **CTRL - E**
Print	**<PF1><PF1>P**

5.2.2 Clipboard

Table 7 lists the keystrokes you use to work with the Browser's clipboard:

Table 7: Browser—Using the Browser Clipboard

To	Press
Copy Text to the VA FileMan Clipboard	**<PF1>C** At the "Copy Text Line(s) to Paste Buffer >" prompt, specify the lines in the document to copy. You can enter: • **#:#—**For example, **3:10** would copy text from line **3** to line **10** in the document, and make that the contents of the clipboard. • **#:#A—**The **A** means append. For example, **3:10A** would copy text from line **3** to line **10** in the document and append it to any existing text in the clipboard. • ***—**Entering ***** copies all text in the document to the clipboard. • ***A—**The **A** means append. Entering ***A** appends all text in the document to any existing text in the clipboard.
View Contents of the Clipboard	**<PF1>V** This lets you view the current contents of the VA FileMan clipboard. To switch back to your document, enter **<PF1>E**.
Paste Text from the Clipboard	In VA FileMan's Screen Editor, you can paste the contents of the VA FileMan clipboard by entering **<PF1>V**. **REF:** For more information on the Screen Editor, see the "Screen Editor" section.

5.2.3 Search

Table 8 lists the keystrokes you use to search for text in the Browser:

Table 8: Browser—Searching in the Browser

To	Press
Find a String or Characters	**<PF1>F** or **<FIND>** At the prompt, enter the string to find. You can specify the direction of the search by ending your **FIND** string with the **<ArrowUp>** or **<ArrowDown>**. If you just press the **Enter** key after the find string, the search direction is down.
Next Find	**<PF1>N** Finds the next occurrence of the search string from a previous **FIND** request.

5.2.4 Online Help

Table 9 lists the keystrokes you use to display and print help information in the Browser:

Table 9: Browser—Online Help

To	Press
Get Help	**<PF1>H** for Help Summary. **<PF1><PF1>H** for more help.
Print Help	**<PF1><PF1><PF1>H** This prints the online help text.

5.2.5 Other Features

lists the keystrokes you use to perform miscellaneous tasks in the Browser:

Table 10: Browser—Other Features

To	Press
Repaint the Screen	**<PF1>P**
Print the Document	**<PF1><PF1>P** This feature allows you to print the document currently being displayed in the Browser. You can choose to print a header on each page, which includes: • Document title • Current date and time • Page number You can also choose whether to print the document in word wrap mode and whether to have word-processing windows (|) interpreted. ⓘ **NOTE:** This feature was released with Patch DI*22.0*169.
Change the Document Title in the Browser Header Line	**<PF1><PF1><ArrowDown>** or **<PF1><PF1><ArrowUp>** This feature lets you change the text in the Browser's header to some line in your report. Each time you press **<PF1><PF1><ArrowDown>** you set the Browser header line to the text of the next line down in your document (and vice-versa for **<PF1><PF1><ArrowUp>**). Typically, you might want to set the Browser's header line to the text in your report's header that contains field names for your report's data. You might need to press **<PF1><PF1><ArrowDown>** four or five times to get to your report's field header line. Then, as you scroll through your report, the Browser header line contains the field names that match and help identify the data through which you are scrolling.
Switch to another Document	**<PF1>S** Adds another document to the active list of documents and switches to it. Choose another VA FileMan file, field, and entry for the document to switch to.
Return to Previous Document (after having switched at least once)	Press **R** Pressed repeatedly, **R** returns you all the way back to your first document.
Split Screen (while in Full Screen Mode)	**<PF2>S** Screen splits into **two** separate scroll regions.

To	Press
Move Cursor to Lower Screen (in Split Screen Mode)	**<PF2> <ArrowDown>**
Move Cursor to Upper Screen (in Split Screen Mode)	**<PF2><ArrowUp>**
Resize screens (in Split Screen Mode)	**<PF2><PF2><ArrowUp>** and **<PF2><PF2><ArrowDown>**
Return to Full Screen from Split Screen Mode	**<PF2>F**

5.2.6 Browser as an Option

As well as being able send output to the **BROWSER** device, you can use the VA FileMan **Browser** [DDBROWSER] option, located under the **Other Options** [DIOTHER] menu on the **VA FileMan** [DIUSER] main menu, to view the contents of any WORD-PROCESSING-type field that you have access to in the database. When you use the **Browser** [DDBROWSER] option, you are prompted for the following:

- File

- WORD-PROCESSING field

- Entry to view

By answering these prompts, you can view the contents of any accessible WORD-PROCESSING field in the Browser.

6 VA FileMan Prompts

Many VA VistA application packages have a *Scrolling Mode* interface. Scrolling Mode works as follows:

1. Computer puts a prompt on the screen.

2. User enters a response to the prompt.

3. Computer places another prompt on the screen, scrolling down one line. Previous prompts move up and eventually off of the screen.

In Scrolling Mode, prompting occurs in the same predetermined order, in a sequence designed by the application developer. You enter a value and the computer stores your responses one at a

time. And, unless you are familiar with a few timesaving scrolling mode techniques, you have to step through each prompt in a record before you can finish editing the record.

Recently developed VistA applications often use a *screen-oriented* interface (i.e., Screen Mode) for editing data. However, scrolling mode interfaces are still used quite heavily in VistA applications.

ℹ️   **REF:** For more information on Screen Mode, see the "[ScreenMan](#)" section.

After reading about a few of the Scrolling Mode operations discussed in this section, you should be able to enter and edit data in Scrolling Mode with a minimum number of keystrokes.

ℹ️   **NOTE:** VA FileMan is in the process of converting all *non*-developer dialogues to use VA FileMan (FM) dialogues framework, so that translations can be table-driven.

6.1 The <Enter> Key

To enter data in scrolling mode, you primarily enter data or commands at a prompt on your terminal screen. After typing a command or data at your terminal keyboard, you *must* send your response from your terminal to the computer. Pressing the **Enter** key on your keyboard (abbreviated as **<Enter>** in examples) sends all of your typed input to the computer for action or storage.

ℹ️   **NOTE:** Some older documentation examples still refer to it as the **Return** key (shown as **<RET>** in examples).

If you type a response but fail to press the **Enter** key, the computer waits; it does *not* do anything until you indicate that you have finished entering your response. Pressing the **Enter** key also indicates to the computer when you have decided to "enter" nothing at all. Whenever you press the **Enter** key without first entering data or a command, you indicate to the computer either to avoid taking action or to take the default action at the current prompt. The computer then moves on to the next prompt.
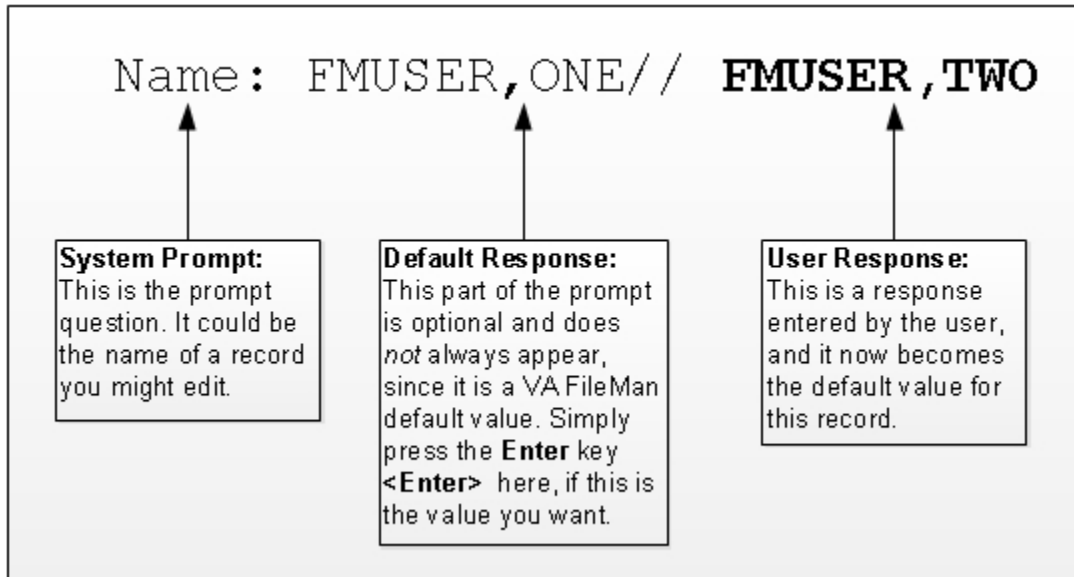
ℹ️   **NOTE:** Some prompts require a user response; so, if you only press the **Enter** key *without* a valid response, the system continues to repeat the prompt until you respond with a valid value.

6.2 Standard Prompt Structure

The standard VA FileMan prompt consists of three parts:

Figure 51: VA FileMan Prompts—Sample Component Parts of a Prompt

Name: FMUSER,ONE// **FMUSER,TWO**

System Prompt: This is the prompt question. It could be the name of a record you might edit.

Default Response: This part of the prompt is optional and does *not* always appear, since it is a VA FileMan default value. Simply press the **Enter** key **<Enter>** here, if this is the value you want.

User Response: This is a response entered by the user, and it now becomes the default value for this record.

6.3 Responding to Prompts

When VA FileMan prompts you for a response, typically, a colon (**:**) is used at the end of the prompt; the computer waits for a response. Prompts are often asking for the value of a field in a file, like the one shown in Figure 52:

Figure 52: VA FileMan Prompts—Asking for a Response

```
DATE OF BIRTH:
```

This type of prompt is waiting for you to enter a value (e.g., **3 OCT 49**). Do *not* forget to press the **Enter** key (**<Enter>**) to complete your interaction.

If the answer to the prompt question is a choice of several things, the prompt often starts with the word "**Select**", as in Figure 53:

Figure 53: VA FileMan Prompts—"Select-type" Prompts, Offering a Choice

```
Select PATIENT NAME:
```

If the question requires either a **YES** or **NO** response (in which case simply entering **Y** or **N**, upper- or lowercase, is acceptable), the prompt can end with a question mark, rather than by a colon, as shown in Figure 54:

Figure 54: VA FileMan Prompts—"Yes/No-type" Prompts

```
ARE YOU SURE?
```

REF: For more information on the specific types of fields (DATE/TIME, NUMERIC, WORD-PROCESSING, FREE TEXT, etc.) and how to edit them, see the "Field Types" section.

6.4 Getting Online Help at Any Prompt (Enter ? or ??)

If you are *not* sure how to answer a prompt, help is always available. Just enter one question mark (**?**) to get brief help, or two question marks (**??**) to get more detailed online help:

Table 11: VA FileMan Prompts—Getting Online Help at any Prompts Using Question Marks

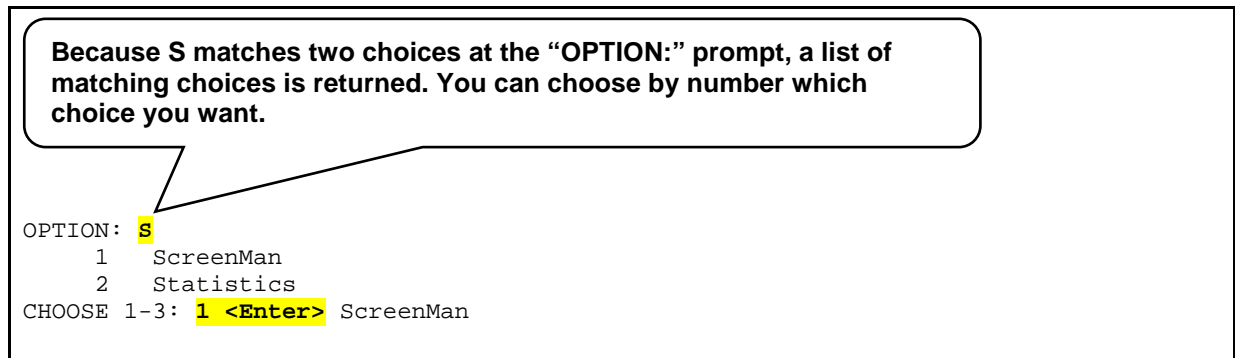| Help Value	Description
?	Entering **one** question mark at a prompt gets a single line of help.
??	Entering **two** question marks at a prompt gets more detailed help: a description of what values are acceptable, and/or a list of choices appropriate to the prompt where you entered the question marks.

6.5 Incorrect Responses

VA FileMan checks each answer to a prompt immediately after you enter it. If you answer a prompt incorrectly, VA FileMan "beeps," and displays **two** spaces and **two** question marks. You may be given an explanation of what was incorrect. Then, you are given a chance to respond to the prompt again.

6.6 Partial Responses

When you are choosing one of a set of responses, you can save keystrokes by *not* typing the full response. Type in only the first letter of first few letters representing the response that you desire. If the characters you enter uniquely identify one of the possible acceptable responses, VA FileMan "echoes back" the remaining characters and uses the matching choice as your response.

If more than one possible answer begins with the characters that you typed, VA FileMan displays the possible choices in a list, and asks you to choose which choice you want by number:

Figure 55: VA FileMan Prompts—Dialogue to Choose from a List in VA FileMan: Sample User Entries at Prompts

```
Because S matches two choices at the "OPTION:" prompt, a list of
matching choices is returned. You can choose by number which
choice you want.

OPTION: S
     1   ScreenMan
     2   Statistics
CHOOSE 1-3: 1 <Enter> ScreenMan
```
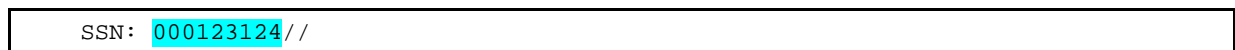
6.7 Default Responses

When working in VistA applications, the computer frequently presents a *default* answer along with a prompt. This answer is built into the application program and represents the most probable response to the prompt that is being asked. These default answers are clearly identified by the double slash marks that follow them (**//**). If the default answer that is provided is correct, you need only press the **Enter** key to accept it.

For example:

Figure 56: VA FileMan Prompts—Prompts with Default Responses

```
   SSN: 000123124//
```

In this case, if you press the **Enter** key, **000123124** is posted as your response to this prompt.

If, on the other hand, the default answer is *not* what you need, enter the correct information at the prompt. For example:

Figure 57: VA FileMan Prompts—Overriding the Default Response to a Prompt

```
   SSN: 000123124// 000234563 <Enter>
```
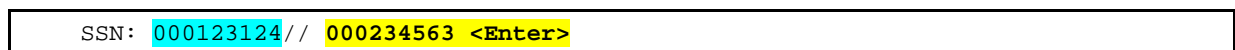
When editing data stored in fields, defaults are used to present the current value of the field. As with any default prompt, if you just press the **Enter** key, the current value of the field is left unchanged. To change the value of the field, enter a new value and press the **Enter** key.

6.8 Longer Default Responses and the "Replace…With" Editor

When a default is **20** or more characters in length, it is *not* followed by double slashes (*//*). Instead, it is presented with a "Replace" prompt:

Figure 58: VA FileMan Prompts—Long Responses Employing the "Replace...With" Editor

```
    ADDRESS 1: 1 Main Street  Replace
```

The "Replace" prompt employs the "Replace...With" Editor. At the "Replace" prompt, you can revise some or all of the existing default answer. To revise only a piece of the existing default response, type in any series of letters that are part of the existing default answer that you want to change and then press the **Enter** key. At the "With" prompt, enter the series of characters to replace the original series, and press the **Enter** key. At this point, the "Replace" prompt is presented again, so that you can enter additional corrections. If you are all done, however, just press the **Enter** key to finish working in the field and move on to the next prompt.

For example:

Figure 59: VA FileMan Prompts—Changing a Long Response Using the "Replace...With" Editor

```
    ADDRESS 1: 1 Main Street  Replace Main <Enter> With North <Enter>
Replace <Enter>
    1 North Street
ADDRESS 2:
```

To replace the entire default answer at a "Replace...With" prompt, simply enter **three** periods (**…**), called an ellipsis, at the "Replace" prompt. You are then able to replace the entire default with what you enter at the "With" prompt:

Figure 60: VA FileMan Prompts—Replacing an Entire Entry Using the Ellipsis (...)

```
    ADDRESS 1: 1 Main Street  Replace ... <Enter> With 1 North Street <Enter>
    Replace <Enter>
     1 North Street
ADDRESS 2:
```

If you want to delete the entire text, enter the at-sign (@) at the "Replace" prompt:

Figure 61: VA FileMan Prompts—Deleting an Entire Entry Using the At-Sign (@)

```
    ADDRESS 1: 1 Main Street  Replace @ <Enter>
      SURE YOU WANT TO DELETE? Y <Enter> (Yes)
    ADDRESS 2:
```

NOTE: The at-sign (@) is the command in many places to signal deletion.

6.8.1 "Replace..." Prompt Shortcuts

Table 12 lists shortcut responses when entering data at the "Replace" prompt:

Table 12: VA FileMan Prompts—"Replace" Prompt Shortcuts

Shortcut	Action
...	Replaces everything.
xxx...	Replaces everything starting from the characters *xxx* to the end.
...xxx	Replaces everything from the beginning up to and including the characters *xxx*.
xxx...yyy	Replaces everything starting from *xxx* up to and including *yyy*.
end or **END**	Appends what you enter at the "With" prompt to the end of the value.

6.9 Prompts with a List of Choices

If the acceptable answer to a field prompt is one of a set of choices, you can display the list of choices by entering **one** or **two** question marks. If that set of choices is short enough to be displayed on five or six lines, the choices are listed when you enter **one** question mark.

Here is an example:

Figure 62: VA FileMan Prompts—Displaying a List of Choices

```
    Select PATIENT NAME: ?
    ANSWER WITH PATIENT NAME
    CHOOSE FROM:
     FMPATIENT,SEVEN
     FMPATIENT,EIGHTEEN
     FMPATIENT,NINETEEN
    Answer must be 3-30 characters in length.

    Select PATIENT NAME:
```

When you enter **one** question mark (**?**) and the entry list is long, you are asked if you want to see all the entries. Besides a **YES** or **NO** response, you can enter a caret (**^**) followed by a string of characters to see a list of all entries beginning with the one that starts with those characters.

Figure 63 shows selection of an entry starting with an alpha character:

Figure 63: VA FileMan Prompts—Displaying a Subset of Choices from a List

```
   Select PATIENT NAME: ?
   ANSWER WITH PATIENT NAME, OR SSN
   DO YOU WANT THE ENTIRE 1890-ENTRY PATIENT LIST? ^F
   CHOOSE FROM:
    FMPATIENT,20
    FMPATIENT,21
    FMPATIENT,22
    FMPATIENT,23
     '^' TO STOP   ^

     YOU MAY ENTER A NEW PATIENT, IF YOU WISH
    Enter patient name in "Last, First Middle" format [3-30 characters].

   Select PATIENT NAME:
```

If you know the list is long and still want it to be displayed, you can enter **two** question marks (**??**) to force the display of the entire list.

6.10 Key Fields

During a data entry session, VA FileMan checks that the combination of fields that make up a key for a record is unique for all records in the file. If a single field makes up a key, VA FileMan checks for uniqueness as soon as that field is edited. If more than one field makes up a key (i.e., compound key), VA FileMan checks that the combination of new key field values is unique only at the end of the data entry session (unless otherwise instructed in the software code by the developer). If a compound key is *not* unique, VA FileMan restores the fields that make up the key to their pre-edited values, and prints a message.

For example:

Figure 64: VA FileMan Prompts—Entering a Duplicate Compound Key

```
Select ZZTEST NAME: `16 <Enter> FMPATIENT,THREE  9900  SEP 03, 1932
ID NUMBER: 9900// 9800
DATE: SEP 3,1932// 1/21/1932 <Enter> (JAN 21, 1932)

*****  NOTE  *****

Some of the previous edits are not valid because they create one or more
duplicate keys.  Some fields have been restored to their pre-edited
values.

Do you want to see a list of those fields? YES// <Enter>

The following field(s) have been restored to their pre-edited values:

File: ZZTEST File (#16999)
  Key: A
    Record: 'FMPATIENT,THREE' (#16)

            Field: ID NUMBER(#1)
      Invalid value: 9800
        Restored to: 9900

            Field: DATE (#2)
      Invalid value: JAN 21, 1932
        Restored to: SEP 03, 1932
```

6.11 Special Responses to Field Prompts

6.11.1 Deleting a Field's Value (@)

When you want to delete an answer previously entered, without substituting any other answer, enter an at-sign (@) as a response to that prompt:

Figure 65: VA FileMan Prompts—Deleting a Field Entry

```
    DATE OF BIRTH:  May 21, 1946// @
SURE YOU WANT TO DELETE? YES
```

In this example, the date on file would be erased: there is no answer to the DATE OF BIRTH question; its value is now **NULL**. You are asked to confirm the deletion; this gives you a chance to change your mind before deleting the field.

6.11.2 Jumping to another Field with the Caret (^)

If you fail to notice a typing error until after you pressed the **Enter** key and stored a field, you can still correct this error. What you need to do is go back to the field where the error occurred. You can usually accomplish this by using the *jump* command. This command requires entering a caret (**^**) along with the name, or first few letters, of the field to which you wish to jump. Instead of moving to the next prompt, you jump to the prompt you identified, as shown in Figure 66:

Figure 66: VA FileMan Prompts—Using the Caret (^) Key to "Jump" to a Specific Field

```
SSN:  000123123// ^DATE OF BIRTH
DATE OF BIRTH:
```

To get a list of the fields to which you can jump, enter a caret and a question mark (**^?**) at any field prompt.

You can use the caret to jump both forward and backward in a sequence of fields.

TIP: Sometimes, you may only need to update one field in a record. You can jump directly to that field once you start to edit that record. This can save time; you do not need to go through every field and prompt that precedes the one you want!

NOTE: The caret (**^**) is sometimes referred to as the *up-arrow* in some legacy documentation.

6.11.3 Exiting with the Single Caret (^)

To exit or opt out of answering any question or prompt, enter the caret (**^**) by itself at the field prompt, as in Figure 67:

Figure 67: VA FileMan Prompts—Using the Caret (^) Key to Exit a Prompt

```
SSN: 000123123// ^
Select PATIENT NAME:
```

In the previous example, the field value **000123123** remains unchanged, but you skip the rest of the questions for this record and return to the "Select..." prompt. If you enter a caret (**^**) at the "Select..." prompt, you return to the previous prompt, and so on.

Entering the caret (**^**) by itself to exit a given function is a convention used throughout VistA applications.

6.11.4 Exiting with the Double Caret (^^)

When the user is doing a lookup to the file, VA FileMan may search many indexes looking for a value that matches the users input. This can be time consuming. If the user wants to get out of the lookup before VA FileMan has completed the search, the user can enter two carets (^^) at any prompt.

6.11.5 Mandatory (Required) Fields

In some cases a field is *mandatory*, and you *must* enter a value, if one is *not* already there; in other words, a **NULL** response (i.e., pressing the **Enter** key *without* making an entry) is *not* valid. When you use the caret (^) or press the **Enter** key *without* entering data in one or more fields in the entry, your terminal "beeps" and prompts you again to enter information.

If you do *not* fill in all required fields in a record, it is considered incomplete, and is *not* stored unless you fill in the required fields. This protects the database from records containing so little information that they are useless. Enter the requested information.

If you still need to exit before you can provide all required information, you should abort your edit and start over later. You can usually exit out of the data editing sequence by answering any of the prompts with a caret (^).

6.11.6 Spacebar Recall

VA FileMan can recall your most recent response to a prompt. This feature is called **Spacebar Recall** and employs the **Spacebar** and **Enter** keys. For example, if you are editing a particular patient in a Nursing application and then switch to the Order/Entry application to work with the same patient, you can usually retrieve the same patient by pressing the **Spacebar** *and* **Enter** keys (**<Spacebar><Enter>**) at the second application's (Order/Entry) "Select PATIENT NAME:" prompt.

For example:

Figure 68: VA FileMan Prompts—Using the "Spacebar Recall" Functionality

```
Select PATIENT NAME: <Spacebar><Enter>
   FMPATIENT,24
NAME: FMPATIENT,24//
```

TIP: *You can use **Spacebar Recall** throughout VA FileMan and the Kernel. Experiment with this feature as a quick way to recall your last response to most prompts.*

6.11.7 Typical Data Entry Session

Figure 69 is an example of a typical data entry session. This example is characteristic of editing data in many VistA applications:

Figure 69: VA FileMan Prompts—Example of a Typical Data Entry Session

```
    Select Patient (Name or SSN): FMPATIENT, <Enter>  25        01-12-41
    000456789    COLLATERAL

    Height: 5' 4"// <Enter>
    Weight: 150#
    Date Weight Taken: TODAY// <Enter> (MAY 17, 1995)
    Usual Weight: 145#
    Wrist Circumference (cm): <Enter>
    Frame Size (SMALL,MEDIUM,LARGE) MED// <Enter>

    Calculation of Ideal Body Weight
            H Hamwi
            M Metropolitan 83
            S Spinal Cord Injury
            E Enter Manually

    Method: S

    Extent of Injury:
          P Paraplegic
          Q Quadriplegic

    Select: P

    Select Ideal Weight (109-118) 114 lb // <Enter>
    Does Patient have an Amputation? NO// <Enter>
    Do you wish Anthropometric Assessment? NO// <Enter>

    Collecting laboratory data ...

    Calculate Energy Requirements Based On:

      1 Actual Body Weight
      2 Ideal Body Weight
      3 Obese Calculation

    Choose: 1

    Comments:
      No existing text
      Edit? NO// <Enter>

    Do you wish to FILE this Assessment Y// <Enter>
```

NOTE: The fields in the session listed in Figure 69 take many different responses. Some accept FREE TEXT values, some accept only DATE/TIME, and some accept only NUMERIC input.

REF: For more information on the specific types of fields (DATE/TIME, NUMERIC, WORD-PROCESSING, FREE TEXT, etc.) and how to edit them, see the "Field Types" section.

7 Field Types

7.1 Introduction

This document describes several fundamental VA FileMan conventions, including:

- When the cursor comes to rest in a field, the computer expects you to respond.

- A field serves much the same purpose as a blank on a form.

- Each field has a prompt that identifies your response's subject matter.

- You have a number of tools available to you at field prompts, including the:

  o Caret (**^**) jump.

  o Default response.

  o "Replace...With" editor.

  o Spacebar Recall (**<Spacebar><Enter>**).

  o At-sign (**@**) deletion.

- Some fields have additional restrictions, such as your response's length or format. Enter **one** or **two** question marks (**?** or **??**) to retrieve help on what is an acceptable entry for a particular field.

When you are editing a field, entering **one** question mark (**?**) at the field prompt usually provides enough help to infer what kind of field you have reached and to predict what kind of data is acceptable in this field (i.e., DATA TYPE field value).

You do *not* need to know a lot about these DATA TYPE field values, but a little information can be helpful. In the sections that follow, you will find examples and brief explanations about each field type (i.e., DATA TYPE field value). In VA FileMan, you will work with many, if not all, of the following DATA TYPE field values:

- DATE/TIME

- NUMERIC

- SET OF CODES

- FREE TEXT

- WORD-PROCESSING

- COMPUTED

- POINTER TO A FILE

- VARIABLE-POINTER
- BOOLEAN
- LABEL REFERENCE
- TIME
- YEAR
- UNIVERSAL TIME
- FT POINTER
- FT DATE
- RATIO

In addition, Subfiles (Multiples) are introduced at the end of this section.

7.2   DATE/TIME Fields

You can use a variety of formats when entering dates. For example, a DATA TYPE field value of DATE/TIME would probably be used to hold a patient's birthdate:

Figure 70: Field Types—Entering a Date at a DATE/TIME Field

```
    DATE OF BIRTH: MAR 3, 1955
```

With a DATE/TIME field type, as with all field types, entering a question mark retrieves help on acceptable responses. Enter **one** question mark (**?**) at a DATE/TIME field prompt and you are given help about what dates are acceptable for the particular field and what precision of date is needed (e.g., year, month, day, or time).

7.2.1   Acceptable Formats for Entering Dates

The following are acceptable formats for entering dates:

- JULY 20, 1999 *or* July 20, 1999
- 7/20/99
- 20 JUL 99
- 10jul99
- 10 jul 99
- 072099

To simplify entering dates, you can use shortcuts such as:

- **T** for today
- **T-1** for yesterday
- **T+1** for tomorrow

You can also combine **T** with other shortcuts:

- **D** for day. For example, **T-2D** means **two** days ago.

- **W** for week. For example, **T+1W** means today plus **one** week.

- **M** for month. For example, **T+4M** means **four** months from today.

The year portion of the date can be left off. Normally, VA FileMan assumes the current year. Sometimes, you can input imprecise dates such as "**JUL 99**" or "**1999**".

NOTE: VA FileMan is Year 2000 (Y2K) compliant.

7.2.2   Abbreviations for Dates

Table 13 lists acceptable abbreviations when entering dates:

Table 13: Field Types—Abbreviations for Dates

Abbreviation	Meaning
TODAY or **Today** or **T** or **t**	Today.
TODAY+1 or **T+1** or **t+1**	Tomorrow.
TODAY-7 or **T-7** or **t-7**	One week ago.
TODAY+3W or **T+3W** or **t+3w**	Three weeks hence.

7.2.3   Times in DATE/TIME Fields

In some DATE/TIME fields, you can enter a time-of-day along with the date. For example, to indicate **4:00 PM on July 20, 1999**, enter the date in one of the formats shown in Section 7.2.1, "Acceptable Formats for Entering Dates," followed by an at-sign (@), and then followed by the time.

For example, you might enter:

Figure 71: Field Types—Entering a Date and Time

```
    APPOINTMENT: 20 JUL 99@4PM
```

To be totally unambiguous, you can enter time in any of the following formats:

- Military time (**four** or **six** digits, no colon)

- hour AM/PM, hour:minute AM/PM

- hour:minute:second AM/PM

If you do omit an AM/PM notation, the following assumptions are made:

- If you enter **one** digit for the hour, a time between **6AM** and **6PM** is used. Thus, **T@330** (or **T@3:30**) means **today at 3:30 PM** and **T@945** (or **T@9:45**) means **today at 9:45 AM**.

- If you enter **two** digits for the hour, the actual hour entered is used (as if military time were being used). Thus, **T@0330** (or **T@03:30**) means **today at 3:30 AM**.

As with dates, there are supported abbreviations you can use when entering times in DATE/TIME fields. For example:

- To enter the present moment, you can enter the word **NOW**.

- To enter an hour from the present moment, enter **NOW+1H**.

- To enter an hour ago from the present moment, enter **NOW-1H**.

- You can combine **NOW** with **D** for day and **M** for month and **'** (apostrophe) for minute.

- You can enter **MID** for **12 a.m.** and **NOON** for **12 p.m.**

7.2.4   Abbreviations for Times

Table 14 lists acceptable abbreviations when entering time:

Table 14: Field Types—Abbreviations for Times

Abbreviation	Meaning
NOW+3'	Present time plus **three** minutes.
NOW+1H	Present time plus **one** hour.
NOW+3D	Present time plus **three** days.
NOW+4M	Present time plus **four** months.
NOON	Today at **12:00 noon**.
MID	Today at **24:00 midnight**.

7.3   NUMERIC Fields

DATA TYPE field values of NUMERIC work very much like FREE TEXT fields, except that input is restricted to valid numbers. There can also be restrictions as to how small or large a number is allowed, and how many decimal places are allowed. Entering **one** question mark retrieves help that tells you what responses are acceptable.

For example, a NUMERIC field type would probably be used to store the height of a patient:

Figure 72: Field Types—Example of a NUMERIC Field

```
    HEIGHT (cm): 196
```

7.4   SET OF CODES Fields

DATA TYPE field values of SET OF CODES (sometimes referred to as a SET) are preset to accept coded information. The codes are usually only **one** or **two** characters long. Each code in a SET represents a word or a series of words. For example, the codes **Y** and **N** often represent the words **YES** and **NO**. You can enter the code at this prompt instead of the entire word. If, however, you enter anything other than an acceptable code (or the word it represents), the computer rejects your response.

To see a list of acceptable codes, simply enter **one** question mark (**?**) in response to the prompt.

Figure 73 shows how a SET OF CODES field type is used to store whether or not a patient is a smoker:

Figure 73: Field Types—Example of a SET OF CODES Field

```
     Select PATIENT NAME: FMPATIENT,NINE
     SMOKER: ?
          Choose from:
            S      SMOKER
            N      NON-SMOKER
     SMOKER: N <Enter> NON-SMOKER
```

In the example in Figure 73, there were two choices for the user to select for the "SMOKER" field.

7.4.1   Internal vs. External Values for SET OF CODES Fields

In Figure 73, the value of the SMOKER field is set to **N**, which is the code for **NON-SMOKER**. In this case:

- **N**—Internal value of the field (the form in which it is stored in the database).

- **NON-SMOKER**—External value of the field (the form in which it is displayed on screen and in reports).

Every DATA TYPE field value has an internal and external value; in most cases, however, the internal and external values are the same. SET OF CODES field types are an exception.

NOTE: Probably, the only place you need to know the distinction between internal and external values is when you print a report and *sort* on a SET OF CODES-valued field. The sort order is based on the internal values (codes) if you sort on a SET OF CODES-valued field.

REF: For more information on printing and sorting, see the "Print" section.

7.5 FREE TEXT Fields

You can enter almost any character from your keyboard in a DATA TYPE field value of FREE TEXT. The computer accepts numbers, letters, and most of the symbols that can be entered. The FREE TEXT field type places a restriction on the number of characters that you can enter. If you enter **one** question mark (**?**) in response to the prompt for a FREE TEXT-valued field, you learn how many characters you are allowed to enter.

For example, a FREE TEXT field type would probably be used to hold a patient's street address:

Figure 74: Field Types—Example of a FREE TEXT Field

```
     ADDRESS: 123 Main Street
```

In some places, even though the field is FREE TEXT, checks are applied to make sure what is entered matches a certain format. For example, if you are entering a Social Security Number, which is stored as a DATA TYPE field value of FREE TEXT, *not* NUMERIC, your input would typically be checked to make sure it is **nine** characters in length and contains all digits:

Figure 75: Field Types—Example of a FREE TEXT Field with Validation

```
     SSN: abcde <Enter> ??
      ANSWER MUST BE 9 CHARACTERS IN LENGTH
     SSN: 99999 <Enter> ??
       ANSWER MUST BE 9 CHARACTERS IN LENGTH
     SSN: 33233290 <Enter> ??
       ANSWER MUST BE 9 CHARACTERS IN LENGTH
     SSN: 000232343
     DATE:
```

7.6 WORD-PROCESSING Fields

DATA TYPE field values of WORD-PROCESSING can contain unlimited amounts of text data, and are suitable for things like mail messages, physician notes, and descriptions. Because of their special nature, VA FileMan provides special tools for entering and editing data into this kind of a field.

Two editors for editing WORD-PROCESSING field types are provided with VA FileMan (and described in their own section):

- Screen Editor
- Line Editor

REF: To set your default editor, see the "Word-Processing Fields" section. This section also explains how you can switch your current editor on-the-fly. For most people, the Screen Editor should be your Preferred Editor for WORD-PROCESSING fields.

When you encounter a WORD-PROCESSING field type, if your default editor is the Screen Editor, a portion of any existing text is displayed, and you are prompted "Edit? NO//":

Figure 76: Field Types—Example of a WORD-PROCESSING Field, Using the Screen Editor

```
Select PATIENT NAME: FMPATIENT,22
NAME: FMPATIENT,22// <Enter>
SEX: MALE// <Enter>
DATE OF BIRTH: AUG 22,1948// <Enter>
HISTORY:
Owing to poverty in early youth, patient seems not to
have had proper diet. Since achieving economic success,
his diet has been adequate, but traces of original
deficiency remain.

  Edit? NO//
```

REF: For more information on the Screen Editor, see the "Screen Editor" section.

When you encounter a WORD-PROCESSING field type, if your default editor is the Line Editor on the other hand, a portion of the text is displayed, and you are prompted with "Edit Option:"

Figure 77: Field Types—Example of a WORD-PROCESSING Field, Using the Line Editor

```
Select PATIENT NAME: FMPATIENT,22
NAME: FMPATIENT,22// <Enter>
SEX: MALE// <Enter>
DATE OF BIRTH: AUG 22,1948// <Enter>
HISTORY:
  1>Owing to poverty in early youth, patient seems not to
  2>have had proper diet. Since achieving economic success,
  3>his diet has been adequate, but traces of original
  4>deficiency remain.

EDIT OPTION:
```

REF: For more information on the Line Editor, see the "Line Editor" section.
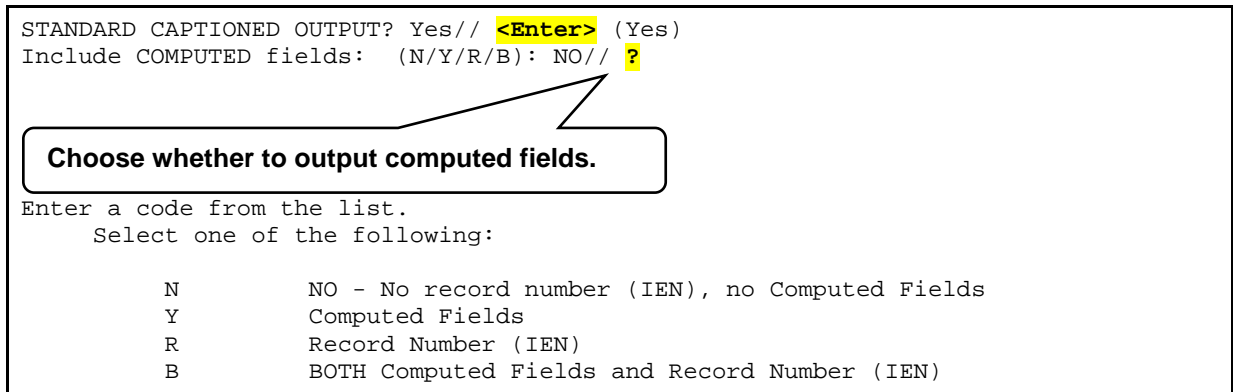
7.7 COMPUTED Fields

DATA TYPE field values of COMPUTED are typically used to output a value computed at run-time in a report. You *cannot* edit the value of a COMPUTED field type.

An example of a COMPUTED field type would be a field that calculated age based on today's date and a patient's DATE OF BIRTH field. Because the field is a COMPUTED field type, it can output a patient's current age based on whatever today's date is. You *cannot* edit the AGE field, but you can use it to print out the current age of the patient.

You are most likely to come across COMPUTED field types when printing with the CAPTIONED PRINT template. Choosing the CAPTIONED OUTPUT template automatically outputs all normal fields containing data for each entry in a report. However, you *must* choose whether you want COMPUTED fields included in the output as well, as shown in Figure 78:

Figure 78: Field Types—Dialogue to Choose a COMPUTED Field: Sample User Entries at Prompts

```
STANDARD CAPTIONED OUTPUT? Yes// <Enter>  (Yes)
Include COMPUTED fields:  (N/Y/R/B): NO// ?


     Choose whether to output computed fields.

Enter a code from the list.
     Select one of the following:

          N          NO - No record number (IEN), no Computed Fields
          Y          Computed Fields
          R          Record Number (IEN)
          B          BOTH Computed Fields and Record Number (IEN)
```

At the "Include COMPUTED fields: (N/Y/R/B): NO//" prompt, you choose whether to output COMPUTED fields.

REF: For more information on CAPTIONED OUTPUT, see the "Inquire" and "Print" sections.

7.8 POINTER TO A FILE Fields

A DATA TYPE field value of POINTER TO A FILE is a field that directs the computer to another file for information. If you are working in the PATIENT (#2) file, for example, and you have reached a field that asks for the patient's STATE, the field is probably a POINTER TO A FILE field that "points" to the STATE (#5) file. Because of pointers, such commonly used information as states can be stored in a single STATE (#5) file. Then, every file (e.g., PATIENT, VENDOR, INSURANCE, etc.) that needs to record a value for STATE can use a POINTER TO A FILE field to the STATE (#5) file to store that information.

For example:

Figure 79: Field Types—Sample of a POINTER TO A FILE Field (1 of 2)
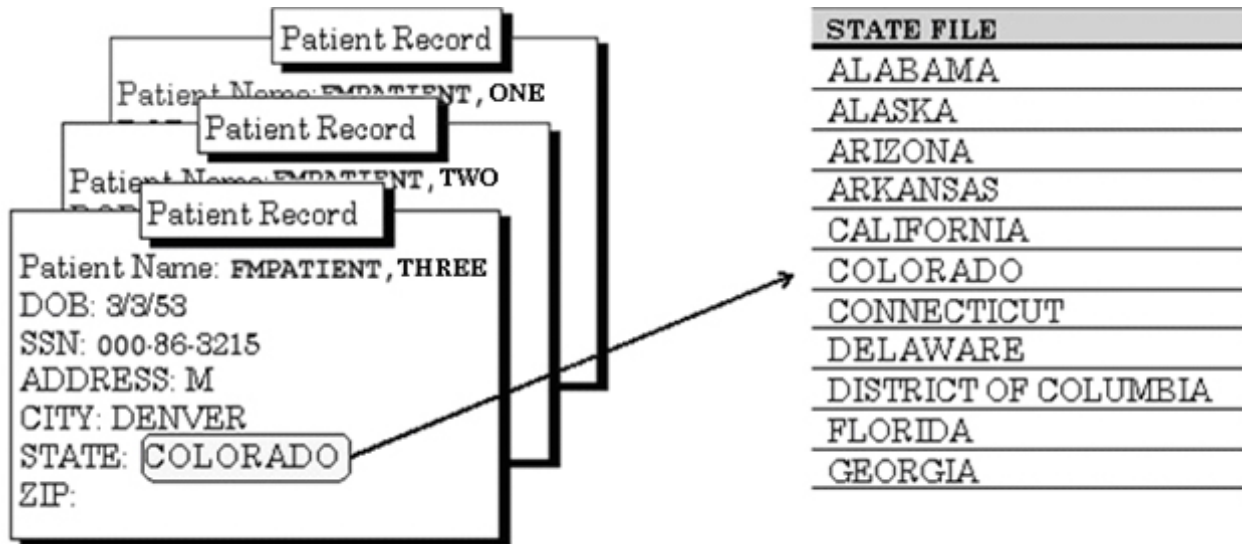
Figure 80. Field Types—Sample of a POINTER TO A FILE Field (2 of 2)

```
INPUT TO WHAT FILE: PATIENT// <Enter> (1890 entries)
EDIT WHICH FIELD: ALL// STATE
THEN EDIT FIELD: <Enter>

Select PATIENT NAME: FMPATIENT,THREE
```

Enter two question marks at this prompt to list available choices.

```
STATE: ??
CHOOSE FROM:
  ALABAMA
  ALASKA
  ARIZONA
  .
  .
  .
STATE: COLORADO
```

Enter **two** question marks at the "STATE:" prompt to list available choices. If the choice you need is *not* listed, you can add that choice by typing it in (provided you have **LAYGO** access to add the entry). If the entry you enter is *not* matched, you are asked if you want to add a new entry. If you answer **YES**, VA FileMan adds the new entry. For example, if there was a state that did *not* have an entry in the STATE (#5) file, you could add it by entering it at the "STATE:" prompt.

7.9 VARIABLE-POINTER Fields

A DATA TYPE field value of VARIABLE-POINTER is like the regular POINTER TO A FILE field type, with one difference:

The VARIABLE-POINTER DATA TYPE can point to a single record in one of *several* files; whereas the regular POINTER TO A FILE DATA TYPE can point to a single record in only *one* file.

The PATIENT (#2) file, for example, might use a VARIABLE-POINTER field type to identify a provider; the provider might be a Staff Provider, stored in the (fictitious) PROVIDER file, or an outside provider, stored in another file.

For example, if you are working in a PATIENT (#2) file entry, and you need information that explains how to look up a name listed in one of several files. To get help, simply enter a single question mark (**?**) at the "PROVIDER" prompt. The system then displays instructions that explain how to choose a provider from either of the two files being pointed to, as shown in Figure 81.

Figure 81: Field Types—Dialogue Showing Help for Entries in a VARIABLE-POINTER Field: Sample User Entries at Prompts

```
  Online help (single question mark) shows what prefixes are
  used to refer to entries in each pointed to file.


PROVIDER: ?

  Enter one of the following:
   S.EntryName to select a Staff Provider
   O.EntryName to select an Outside Provider

     To see the entries in any particular file, type <Prefix.?>
```
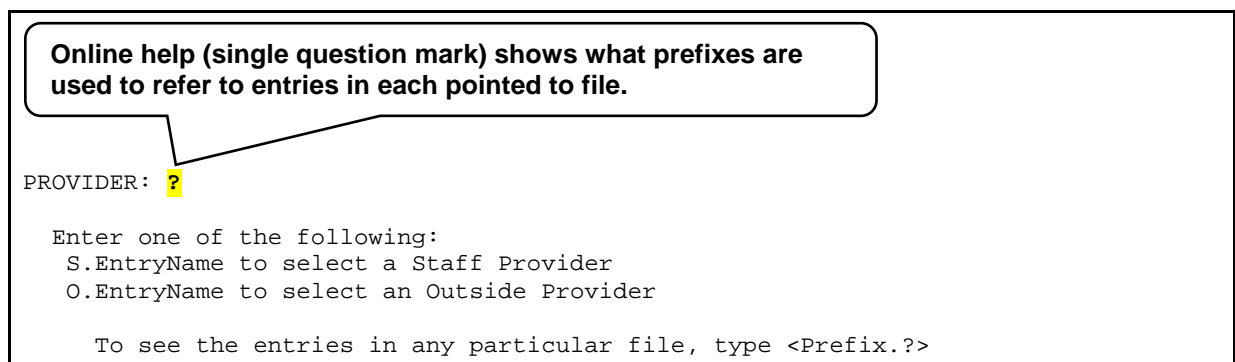
Entering one question mark at the "PROVIDER:" prompt displays online help that shows what prefixes are used to refer to entries in each pointed to file.

With VARIABLE-POINTER field types, you need to use a PREFIX in addition to an entry name to select an entry. In this example, the online help tells you that:

- To select a Staff Provider, prefix the provider's name with "**S.**".

- To select an Outside Provider, prefix the provider's name with "**O.**".

You can enter a PREFIX and **one** question mark to get a list of entries in a particular pointed-to file. For example, if you enter "**S.?**" you can get a list of all Staff Providers. Likewise, you can enter "**S.FMPROVIDER**" to get a list of all Staff Providers whose last names are **FMPROVIDER**. You can also enter "**S.FMPROVIDER,ONE**" to select a Staff Provider named **One Fmprovider**.

For example:

Figure 82: Field Types—Using the PREFIX and a Question Mark to Get a List of Entries in a Pointed-To File

```
    PROVIDER: S.?
     CHOOSE FROM:
        FMPROVIDER,ONE
        FMPROVIDER,TWO
          :
```

You can also select an entry in a VARIABLE-POINTER field by just entering a name *without* the PREFIX. In this case, VA FileMan searches each pointed-to file in succession until a match is found.

NOTE: This method requires more processing time, since VA FileMan needs to search the various pointed-to files.

For example, to choose a provider *without* specifying in which file the provider can be found, enter the provider name only:

Figure 83: Field Types—Searching for an Entry in a Pointed-To File

```
    PROVIDER: FMPROVIDER,EIGHT M

    Searching for a Staff Provider

    Searching for a Outside Provider FMPROVIDER,EIGHT M
          ...OK?  YES// <Enter> (YES)
```

You can add an entry to one of the files that is being pointed to by a VARIABLE-POINTER field. To do this, enter the appropriate PREFIX and the new name to add at the field prompt.

For example, to add "**FMPROVIDER,EIGHT M**" as an Outside Provider (*not* a Staff Provider), use the appropriate PREFIX when adding the new entry (in this case, "**O.**"). When the requested name is *not* found, you are asked if you want to add the provider as a new entry. To add the entry, enter **YES**:

Figure 84: Field Types—Adding a New Entry to a Pointed-To File

```
    PROVIDER: O.FMPROVIDER,EIGHT M.
       Are you adding 'FMPROVIDER,EIGHT M.' as a new OUTSIDE PROVIDER?  No// YES
<Enter> (Yes)
    OUTSIDE PROVIDER SEX: MALE
    OUTSIDE PROVIDER DATE OF BIRTH: 020235 <Enter> (FEB 02, 1935)
    OUTSIDE PROVIDER SSN: 000987321
```

7.10 BOOLEAN Fields

A field defined as a BOOLEAN data type can have only two entry choices: **YES** or **NO**. The internal values of the BOOLEAN DATA TYPE is set to:

- **1**—YES
- **0**—NO

Table 15: BOOLEAN Data Type Example

External	Internal
YES	**1**
NO	**0**

7.11 LABEL REFERENCE Fields

A field defined as a LABEL REFERENCE data type is designed to store a tag and routine entry of the format, TAG^ROUTINE. It is stored as a FREE-TEXT field.

Table 16: LABEL REFERENCE Data Type Example

External	Internal
TAG^ROUTINE	TAG^ROUTINE

7.12 TIME Fields

A field defined as a TIME data type can accept many of the date/time entries, but only stores the TIME portion.

Table 17: TIME Data Type Example

External	Internal
15:09:43	150943

7.13 YEAR Fields

A field defined as a YEAR data type can accept many of the date entries, but only stores the YEAR portion.

Table 18: YEAR Data Type Example

External	Internal
2016	3160000

7.14 UNIVERSAL TIME Fields

A field defined as a UNIVERSAL TIME data type can accept many of the date/time entries and stores the date/time in a format with the local time and includes an indicator showing the offset from Universal Time.

The first **14** characters of the internal storage of the UNIVERSAL TIME data type are exactly like the current DATE/TIME data type that includes seconds. The **three** characters in position **15**, **16**, and **17** indicate the UTC time offset in **five** (**5**) minute increments. In the example below: **(440-500)/12=-5**, this is a negative **five** hour offset from UTC.

Table 19: UNIVERSAL TIME Data Type Example

External	Internal
JAN 6,2016@08:03:36 (UTC-5:00)	3160106.080336440

7.15 FT POINTER Fields

A field defined as a FT POINTER data type works similar to the POINTER data type, but internally stores the free text that was returned from the pointed-to value.

Table 20: FT POINTER Data Type Example

External	Internal
PATCH,USER	PATCH,USER

7.16 FT DATE Fields

A field defined as a FT DATE data type works similar to the DATE/TIME data type, but internally stores the free text that was input by the user to determine the date.

Table 21: FT DATE Data Type Example

External	Internal
T-1	T-1

7.17 RATIO Fields

A field defined as a RATIO data type is designed to accept **two** numbers with a colon (**:**) between the **two** numbers. It is formatted and stored like a mathematical ratio.

Table 22: RATIO Data Type Example

External	Internal
1:14	1:14

7.18 Subfiles (Multiples)

Sometimes, a single field in a record is *not* enough to hold all the information required. For example, to keep track of the appointment history for a patient, a single field would *not* be enough. An ordinary field could only hold enough information to record a single appointment. But there needs to be a way to record as many appointments as a patient has had, which could range from none to several hundred. In addition, each appointment might have its own information that needs to be stored (e.g., date, time, location, doctor, etc.).

This situation is handled with what are known as Subfiles (also known as Multiples). Within an individual record, a Subfile (Multiple) can be used to hold this type of information:

Figure 85: Field Types—Sample Subfile (Multiple) Field
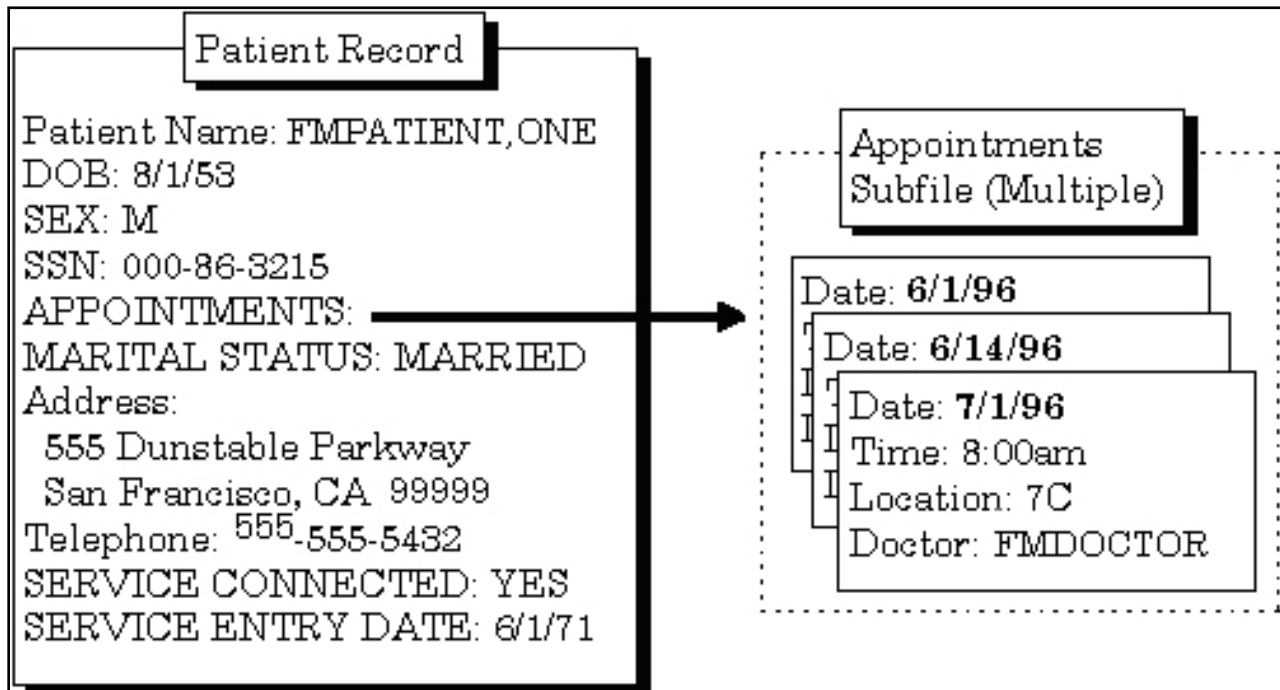
The fields in a Subfile (in this example [Figure 85], DATE, TIME, LOCATION, and DOCTOR) are called Subfields.

The word "**Select**" is always the first part of the prompt when you encounter a Multiple, to indicate that you are choosing among one of several possible values on file, as shown in Figure 86:

Figure 86: Field Types—Example of a Multiple Field Prompt

```
Select APPOINTMENTS:
```

If, for a given Multiple, more than one entry has already been entered, the most recently created entry is displayed as a default. To see the list of entries already in the Multiple, enter **two** question marks (**??**) at the "Select..." prompt.

Because they are so useful, Subfiles (Multiples) are widely used throughout VistA. They are usually straightforward to use, because their structure as Subfiles mirrors the real-world structure of the information. For example, for a purchase order, the top-level record would be the purchase order. Because a single purchase order needs a place to store as few or as many items as are requested, the purchase order record has a Multiple to record the order items for the purchase order.

Subfiles can themselves contain Subfiles creating additional levels in files.

8   Adding and Deleting Records

8.1   .01 Field

The **.01** field is the most important field in a file. For the records in a file, it usually identifies the record more than any other single field. For example, the **.01** field of the PATIENT (#2) file is NAME. The **.01** field of a WARD file might be WARD NAME.

Usually, in an edit dialogue the **.01** field is the field you are prompted for when you choose a record to edit. Typically, it is also the first field you actually edit once you have chosen the record.

The **.01** field plays a role in both adding and deleting entries in a file:

- To *add* an entry to a file, you usually enter a new value at the **.01** field's prompt.

- To *delete* an entry to a file, you usually enter an at-sign (@) in the entry's **.01** field.

8.2   How to Add a Record

As you recall from the "Introduction", an entry is a complete record in a file. To *add* a new entry to a file, enter the name of the new entry at the "Select..." prompt where you ordinarily choose which record in the file to edit:

Figure 87: Records—Dialogue to Add a Record: Sample User Entries at Prompts

```
    Enter a new name at the "Select…" prompt.

Select PATIENT NAME: FMPATIENT,ONE
   ARE YOU ADDING 'FMPATIENT,ONE' AS A NEW PATIENT (THE 121082ND)? No// Y <Enter>
(Yes)
```

This is the prompt for the record's **.01** field (see Figure 87). If you enter a name that does *not* exist in the file, you are prompted "Are you adding *'XXXXXXXX'* as a new *'ENTRY'*?"; where "*XXXXXXXX*" represents the field value and "ENTRY" represents the field or file name. If **LAYGO** is allowed and you answer **YES** to this prompt, VA FileMan adds the new entry to the file. You then go on to edit other fields for the new entry.

If a file has one or more data Keys defined (i.e., fields or combinations of fields that uniquely identify a record), then those fields *must* also be filled in before the new entry is added. There *must not* be any other records on the file that have the same values in all of those fields.

Finally, there may be a set of required fields (identifiers) for the new entry; these *must* be filled in with values for the new entry to be saved.

8.3 Adding a Duplicate Record (Use Quotes)

What if there is already a "**FMPATIENT,ONE**" in the PATIENT (#2) file, and you need to add a second entry with the same name "**FMPATIENT,ONE**"? Simply entering that name at the "Select..." prompt selects the existing entry. To create a *second* **FMPATIENT,ONE** entry, even though one with that name *already* exists, enter the entry name you want to add, but with *quotation marks* around it, as shown in Figure 88:

Figure 88: Records—Dialogue to Add a Duplicate Record: Sample User Entries at Prompts

> **Use quotes at the "Select…" prompt to add another patient of the *same name* to the file.**

```
Select PATIENT NAME: "FMPATIENT,ONE"
   ARE YOU ADDING 'FMPATIENT,ONE' AS A NEW PATIENT (THE 121082ND)? No// Y <Enter>
(Yes)
```
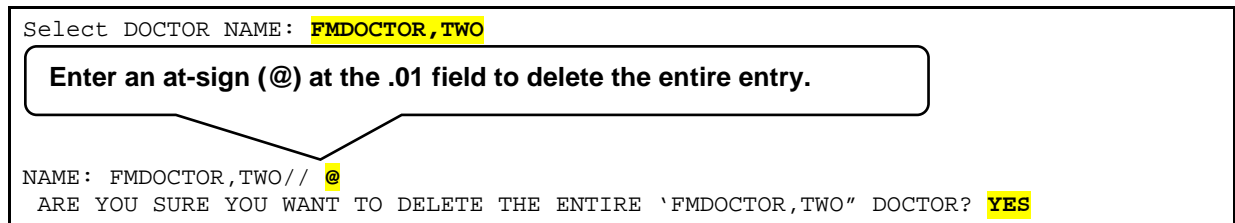
REF: For instructions on adding entries with the same name to pointed-to files from a POINTER TO A FILE data type field, see the "Adding Records at a POINTER TO A FILE Field" section.

If a record has a data Key defined (i.e., fields or combinations of fields that uniquely identify a record), and if the data Key contains more than one field, then it would be possible to add a second **FMPATIENT,ONE** *without* using quotes. Suppose the Key fields were the NAME and the DATE OF BIRTH. Then the user would be prompted for both NAME and DATE OF BIRTH, and assuming that the DATE OF BIRTH of the second **FMPATIENT,ONE** were different from the existing record, VA FileMan would allow the user to add the new **FMPATIENT,ONE** *without* enclosing the name in quotes.

8.4 How to Delete a Record

To delete an existing record in a file, enter an at-sign (@) in the record's **.01** field. This tells VA FileMan to delete the record. In all deletions, you are asked to confirm the deletion before VA FileMan goes ahead and deletes the record. Figure 89 is an example of deleting a record in a file:

Figure 89: Records—Dialogue to Delete a Record: Sample User Entries at Prompts

```
Select DOCTOR NAME: FMDOCTOR,TWO

   Enter an at-sign (@) at the .01 field to delete the entire entry.



NAME: FMDOCTOR,TWO// @
 ARE YOU SURE YOU WANT TO DELETE THE ENTIRE 'FMDOCTOR,TWO" DOCTOR? YES
```

In this example, the user entered an at-sign (@) at the DOCTOR NAME (#.01) field to delete the entire entry for the **FMDOCTOR,TWO**.

8.5 Repointing When Deleting Records

What if a record in another file points to the record you are deleting?

If you delete a record that is pointed to from another file, this would leave a dangling pointer that points to a *non*-existent entry. To prevent this, if the record you delete could be pointed to from another file, you are given the opportunity to either delete any pointers to the deleted record, or change them all to point to another record.

For example, an entry in the PATIENT (#2) file may have a field that points to a doctor in the (fictitious) PROVIDER file. If you delete the doctor from the (fictitious) PROVIDER file, you should indicate what should happen to any entries in other files, including the PATIENT (#2) file that points to this doctor.

In the example in [Figure 90](#), when you delete the **FMDOCTOR,TWELVE** record, you also re-points any entries that had been pointing to **FMDOCTOR,TWELVE** to point to **FMDOCTOR,EIGHT**.

Figure 90: Records—Dialogue to Delete a Record and Re-Point to a Different Record: Sample User Entries at Prompts

```
Select DOCTOR NAME: FMDOCTOR,TWELVE

NAME: FMDOCTOR,TWELVE// @
 ARE YOU SURE YOU WANT TO DELETE THE ENTIRE 'FMDOCTOR,TWELVE" DOCTOR? YES

SINCE THE DELETED ENTRY MAY HAVE BEEN 'POINTED TO' BY ENTRIES IN THE 'PATIENT'
FILE, ETC., DO YOU WANT THOSE POINTERS UPDATED (WHICH COULD TAKE QUITE A WHILE)?
NO// Y <Enter> (YES)
```

Choose to update pointers.

```
WHICH DO YOU WANT TO DO?
    1) DELETE ALL SUCH POINTERS
    2) CHANGE ALL SUCH POINTERS TO POINT TO A DIFFERENT 'DOCTOR' ENTRY
  CHOOSE 1) OR 2): 2
```

In this case, point them all to a different entry.

```
THEN PLEASE INDICATE WHICH ENTRY SHOULD BE POINTED TO
```

Change FMDOCTOR,TWELVE entries to point to FMDOCTOR,EIGHT.

```
Select DOCTOR NAME: FMDOCTOR,EIGHT
  -OK? YES// Y <Enter> (YES)
   (RE-POINTING WILL OCCUR WHEN YOU LEAVE ENTER/EDIT OPTION)
```

When you leave the **Enter or Edit File Entries** [DIEDIT] option, the updating is done. A report is generated listing all changed entries; you need to specify on what device this report should be listed:

Figure 91: Records—Dialogue Showing a Report of Changed Entries: Sample Report

```
…EXCUSE ME, LET ME PUT YOU ON 'HOLD' FOR A SECOND...
DEVICE: HOME// <Enter> SYSTEM

PATIENT ENTRIES WHOSE 'ATTENDING PHYSICIAN' POINTERS HAVE BEEN CHANGED
 ───────────────────────────────────────────────────────────────────

 FMPATIENT,TWENTY
 FMPATIENT,ONE
 FMPATIENT,ELEVEN
 FMPATIENT,SEVEN

Select OPTION:
```

In this case (Figure 91), four entries are found that had **FMDOCTOR,TWELVE** as their doctor. Now that **FMDOCTOR,TWELVE** was deleted, these records are re-pointed to **FMDOCTOR,EIGHT**.

8.6 Adding Records to a POINTER TO A FILE Field

Suppose you are editing a POINTER TO A FILE-type field. This lets you choose an entry from another file to point to. If you have **Learn-As-You-Go** (**LAYGO**) access to the pointed-to file, you can also *add* new entries to it when editing the POINTER TO A FILE field.

For example, suppose you are editing the TITLE (#8) field in the NEW PERSON (#200) file, which is a POINTER TO A FILE type field that "points" to the TITLE (#3.1) file. What if you want to choose a TITLE that is *not* already in the TITLE (#3.1) file? You can add it as in the example shown in Figure 92:

Figure 92: Records—Dialogue to Add a New Entry to a Pointed-To File: Sample User Entries at Prompts

```
NAME: FMUSER,ONE// <Enter>

.
.
.
```

> Press Enter until you reach the field in question. Entering ?? at a pointer field provides a list of entries in the pointed-to file from which to choose.

```
TITLE: ??
        This is the title for the new person.
```

> This is a list of existing entries in the TITLE file. Press Enter to see the whole list or a caret (^) to exist the list.

```
    Choose from:
    ACCOUNTANT
    ACCOUNTANT/TRAINEE
    ACCOUNTING TECHNICIAN
    ACCOUNTING TECHNICIAN (OA)
    ACCOUNTS MAINT CLERK (OA)
    ACCOUNTS RECEIVABLE ASSISTANT
    ACOS/AMBULATORY CARE
    ADDICTION THERAPIST
    ADJUDICATOR
    ADMIN OFFICER
    ADMIN SUPPORT ASSISTANT
    ADMINISTRATIVE ASSISTANT
    ADMINISTRATIVE INTERN
    ADMINISTRATIVE LIBRARIAN
    ADMINISTRATIVE OFFICER
    AIR COND EQUIP MECHANIC
    AIR COND EQUIP MECHANIC/HLPR
    AIR COND EQUIP MECHANIC/LDR
    ANESTHESIOLOGIST
                ^
        You may enter a new TITLE, if you wish
        ANSWER MUST BE 3-30 CHARACTERS IN LENGTH

TITLE: OIT STAFF
  Are you adding 'OIT STAFF' as a new TITLE (the 750TH)? No// Y <Enter> (Yes)
```

```
      TITLE OCCUPATION CODE: 2210
```

Add a new entry by typing it in and confirming its addition to the list.

```
SSN: 000111659// <Enter>

 .
 .
 .
```

In this example, after adding **OIT STAFF** as a new entry, if you go back to the TITLE field and enter **two** question marks (**??**) again and scroll through the list, **OIT STAFF** would be one of the choices listed for TITLE.

8.6.1   Adding Duplicate-Named Entries

You can force an entry to be added to the pointed-to file, even if an entry with the same value already exists in the pointed-to file. To add a duplicate-named entry, surround the value to be added with **one** set of quotation marks, like Figure 93:

Figure 93: Records—Adding a Duplicate-Named Entry to a Pointed-To File

```
POINTER FIELD: "FORCED NEW ENTRY"
```

If the POINTER TO A FILE field that you are editing happens to be the NAME (#.01) field of the current file, you can add entries to both the current file and to the pointed-to file by surrounding your value with **two** sets of quotation marks as shown in Figure 94:

Figure 94: Records—Adding an Entry to Both the Current File and to a Pointed-To File

```
POINTER FIELD (.01): ""FORCED NEW ENTRY""
```

8.7   Adding and Deleting from Multiples

Some special considerations apply when you are editing Multiple-valued fields. One example of a Multiple field is the DIAGNOSIS field in the PATIENT (#2) file. As you recall from the "Field Types" section, a Multiple is a field in a record that can store multiple subrecords. In this case, VA FileMan *must* be able to store multiple diagnosis entries for a single patient, and it uses a Multiple field to do so:

Figure 95: Records—Dialogue Showing Entries to a Multiple Field: Sample User Entries at Prompts

```
Select PATIENT NAME: FMPATIENT,NINE

NAME: FMPATIENT,NINE // <Enter>
PATIENT DATE OF BIRTH: 4/19/49// <Enter>
Select DIAGNOSIS: ??
```

> At the DIAGNOSIS Multiple's "Select…" prompt, enter two question marks to see what entries are currently in the Multiple.

```
  1   ANGINA PECTORIS
  2   PNEUMONIA

ANSWER with DIAGNOSIS
      You may enter a new DIAGNOSIS, if you wish
```

> "Select" is used before the Multiple field name, indicating you should choose one value from among several possible values.

```
Select DIAGNOSIS: ANGINA PECRORIS
   DIAGNOSIS: ANGINA PECTORIS// <Enter>
   AGE AT ONSET: 25
   HISTORY:
   1) <Enter>
   EDIT OPTION: <Enter>
```

> After you edit one DIAGNOSIS Multiple entry, you are given the chance to edit another.

```
Select DIAGNOSIS: <Enter>

Select PATIENT NAME:
```

Multiples have **.01** fields, just like records at the top-level of a file. Thus, just as with records at the top-level of a file, you select entries in the Multiple at the Multiple's "Select..." prompt. You can also add a new entry by typing it in at the Multiple's "Select..." prompt. You can delete an entry in a Multiple by entering an at-sign (@) in the existing entry's **.01** field.

Enter **one** question mark (**?**) at a Multiple's "Select..." prompt to retrieve brief help for the field; enter **two** question marks (**??**) to choose from the list of entries in the Multiple.

8.8 Enter or Edit File Entries Option

In most cases you enter and edit data through application programs. Applications are pre-programmed to allow you to edit specific files, and often only a subset of the fields in any given file. The application shields you from many aspects of editing the file data, such as even knowing the name of the file with which you are working. Usually, this information is already chosen for you by the application.

You can also edit data in a file directly, however, using VA FileMan's **Enter or Edit File Entries** [DIEDIT] option. Your ability to edit data in any given file depends on:

- Whether you have the **Enter or Edit File Entries** [DIEDIT] option on your menu.

- Whether you have access to edit the file in question.

The steps to use the **Enter or Edit File Entries** [DIEDIT] option are:

1. At the "INPUT TO WHAT FILE:" prompt, choose which file to edit. To see what files you have access to, you can enter two question marks (**??**) at this prompt:

Figure 96: Records—Choosing a File to Edit

```
INPUT TO WHAT FILE:??
 Choose from:
   335235         FMUSER'S DATA          (7 entries)
   335238         PROJECTS               (3 entries)
   335668         WARD HISTORY           (178 entries)


INPUT TO WHAT FILE: PROJECTS
```

2. At the "EDIT WHICH FIELD:" prompt, choose what fields to edit for each file entry. The easiest response is to just accept the default of **ALL** fields by pressing the **Enter** key:

Figure 97: Records—Choosing the File Fields to Edit

```
EDIT WHICH FIELD: ALL//
```

If, however, you want to edit only *certain fields* (*not all* fields), answer the "EDIT WHICH FIELD:" prompt with the name (or number) of the *first* field you want to edit. You can then enter additional fields to edit (when you are done, press the **Enter** key at the "THEN EDIT FIELD:" prompt). For a list of fields that you can edit, enter **two** question marks at any "EDIT FIELD:" prompt.

Figure 98: Records—Choosing Specific File Fields to Edit

```
EDIT WHICH FIELD: ALL// NAME
THEN EDIT FIELD: PROJECT SHORT DESCRIPTION
THEN EDIT FIELD: PROJECT ISSUE <Enter> (multiple)
   EDIT WHICH PROJECT ISSUE SUB-FIELD: ALL// <Enter>
THEN EDIT FIELD: <Enter>
Select PROJECTS NAME:
```

3. You can now edit entries. Choose each entry to edit at the "Select...NAME:" prompt. Each time you choose an entry, you step through each field you specified in Step 2. When you are done with editing an entry, you are prompted for another entry to edit at the "Select..." prompt. When you are done editing entries, just press the **Enter** key.

Figure 99: Records—Dialogue Using the Enter or Edit File Entries Option: Sample User Entries at Prompts

```
Select VA FileMan Option: ENTER <Enter> or Edit File Entries
```

```
1. Choose what file to edit.
```

```
INPUT TO WHAT FILE: PROJECTS// <Enter> (500 entries)
```

```
2. Choose which fields to edit (default is ALL).
```

```
EDIT WHICH FIELD: ALL// NAME
        1    NAME
        2    NAME COMPONENTS
CHOOSE 1-2: 1 <Enter> NAME
THEN EDIT FIELD: PROJECT SHORT DESCRIPTION
THEN EDIT FIELD: PROJECT ISSUE <Enter> (multiple)
    EDIT WHICH PROJECT ISSUE SUB-FIELD  ALL// <Enter>
THEN EDIT FIELD: <Enter>
```

```
3. Choose an entry to edit.
```

```
Select PROJECTS NAME: ??

Choose from:
    BUILDING 9 NETWORK CABLING
    WARD 7 CONSTRUCTION
    WARD 9 CONSTRUCTION
```

```
4. Edit the fields in the entry you choose.
```

```
Select PROJECTS NAME: WARD 9 CONSTRUCTION
NAME: WARD 9 CONSTRUCTION// <Enter>
PROJECT SHORT DESCRIPTION: REFURBISH WARD
Select PROJECT ISSUE: ??
```

```
5. Edit the entry's PROJECT ISSUE Multiple.
```

```
Choose from:
    ASBESTOS REMOVAL
    CEILING TILES
    DATA cabling
    DRYWALL
    ELECTRICAL WIRING
    '^' TO STOP: ^

Select PROJECT ISSUE: DRYWALL
        ...OK? YES// <Enter> (Yes)

  PROJECT ISSUES: DRYWALL// <Enter>
  Date Started: 3/3/96 <Enter> (MAR 03, 1996)
```

```
        Status: In Progress//  <Enter>
        Description:
          No existing text
          Edit? NO//  <Enter>
```

6. You can add or edit additional entries in the *Multiple* here.

```
Select PROJECT ISSUE:  <Enter>
```

7. You can add or edit additional entries in the *file* here.

```
Select PROJECTS NAME:  <Enter>

Select VA FileMan Option:
```

9   ScreenMan

ScreenMan is VA FileMan's *screen-oriented* data entry tool. It is an alternative to the Scrolling Mode approach. With ScreenMan, data is entered in *forms*. Each form field occupies a fixed position on the screen (instead of scrolling off!). You can see many data fields at once and use simple key combinations to edit data and move from field to field on a screen. You can also move from one screen to another; like turning through the pages of a book.

9.1   Scrolling Mode Editing vs. Screen Mode Editing

9.1.1   Similarities

The following are similarities when editing in Scrolling Mode and Screen Mode:

- You can change a field's value by entering a different value or delete a field's value by entering the at-sign (@).

- You can enter one or two question marks to call up a list of acceptable responses and other help. If you enter a value deemed unacceptable, ScreenMan displays a message explaining what type of information should be entered.

- You can jump from the current field to any other field in your current screen. With your cursor resting at any field's prompt, simply enter a caret (**^**) and then the name of the field.

9.1.2   Differences

The following are differences when editing in Scrolling Mode and Screen Mode:

- In Scrolling Mode, you *must* enter and store your response to one field prompt before you can continue to the next field. In Screen Mode, you can move the cursor from field prompt to field prompt without entering or storing any responses.

- In Scrolling Mode, your data values or responses to field prompts are stored one at a time, as you move from prompt to prompt. In Screen Mode, your responses to most prompts are stored only when you exit the form.

- The "Customize Colors" suboption within ScreenMan allows selection of ANSI colors for all ScreenMan presentations, on a parameterized basis (user, institution, etc.) using Kernel parameters.

- The "ScreenMan Record Selection" page can now be a full ScreenMan page using a COMPUTED Multiple pointer, so that the user can select an entry by scrolling up or down. This feature lets forms contain embedded lookups.

- You can set this up automatically when you create a form. At the query "Do you want you're Form to begin with a display of all entries, for selection," answer **YES**. The initial position can be set to be the user's last selection, rather than first, last, or new.

- ScreenMan supports the use of a mouse for emulators that support ANSI standard control sequences to turn the mouse on and off. However, the Department of Veterans Affairs (VA) has elected to turn this feature off due to support complications with Attachmate® and Micro Focus® Reflection terminal emulator software. The **DI SCREENMAN NO MOUSE** parameter needs to be established for SYSTEM and set to **YES**.

REF: For a detailed explanation on *creating* ScreenMan forms, see the *ScreenMan Tutorial for Developers Manual*—available in both Adobe Acrobat PDF and HTML formats (Zip) on the VDL: http://www.va.gov/vdl/application.asp?appid=5

9.2 ScreenMan Screen

Figure 100: ScreenMan—Sample Screen Component Parts and Field Values

```
                            Edit an Existing User
NAME: FMUSER,ONE                                               Page 1 of 5
_____
    NAME... FMUSER,ONE                               INITIAL: OF
    TITLE: OIT STAFF                               NICK NAME: One
      SSN: 000111659                                     DOB:
   DEGREE:                                         MAIL CODE:
  DISUSER:                                   TERMINATION DATE:
  Termination Reason:


          PRIMARY MENU OPTION: EVE
 Select SECONDARY MENU OPTIONS: TIU MED MANAGEMENT
Want to edit ACCESS CODE (Y/N):       FILE MANAGER ACCESS CODE: @
Want to edit VERIFY CODE (Y/N):

            Select DIVISION:
            SERVICE/SECTION: INFORMATION RESOURCES MANAGEME
_____
Exit     Save     Next Page     Refresh

Enter a command or '^' followed by a caption to jump to a specific field.


COMMAND:                              Press <PF1>H for help     Insert
```

In this screen capture, you see the following highlighted areas on a sample ScreenMan form:

- Required Fields are underlined.

- Current field where the cursor is active are shown in reverse video (i.e., white text on black background), such as at the "NICK NAME:" field.

- Command Area below the line is where ScreenMan displays messages, help text, and interactive dialogue. For example, if you enter **one** or **two** question marks in a field, help is displayed in this area.

- Command Line: Here you can issue the commands **Exit**, **Save**, **Close**, **Next Page**, and **Refresh**.

- Help Reminder: This reminds the user that to get help at any time, press **<PF1>H**.

Fields are usually composed of a *data element* and a *caption*. ScreenMan displays data elements in high intensity (**boldface**) and other text in regular intensity. Text that identifies a data element is called a *caption* and is usually followed by a colon (**:**). A caption and its associated data element are together called a *field*. Captions of *required* fields are underlined; to save any changes you make on the form, required fields *must* contain data.

NOTE: ScreenMan highlights captions for required fields with an underline. However, on some terminals or depending on your terminal emulator software and your personal

preferences, the form of the highlight can vary (e.g., some terminal emulators will highlight required fields in a different color, with an underline, or both).

Specifically, on Qume 102 and Wyse 75 terminals, captions for required fields display in **boldface**, *not* underlined. Also, the edit window is displayed with an underline extending from the last character of the existing data to the right edge of the edit window. VA FileMan supports longer than **24**-line screens for those using terminal emulators.

9.3 Navigation Keystrokes (Cursor Movement)

9.3.1 How to Navigate between Fields

There are a number of ways you can move the cursor from field to field on a form (i.e., navigate). This is to provide you with as much flexibility as possible so that you can work quickly and efficiently with forms.

You can use the keystrokes listed in Table 23 to move the cursor to various fields located on a ScreenMan form:

Table 23: ScreenMan—Keystrokes to Navigate between Fields in a ScreenMan Form

To	Press
Move to the next field (to right or below).	**<Tab>**
Move to the previous field (to left or above).	**<PF4>**
Move to the field above.	**<ArrowUp>**
Move to the field below.	**<ArrowDown>**
Move to the next field in the pre-defined edit sequence.	**<Enter>**
Edit a WORD-PROCESSING field.	At field, press **<Enter>**
Select a subrecord in a Multiple.	At field, press **<Enter>**
Move to the next block on current page.	**<PF1><PF4>**
Jump to a specific field.	**^** followed by Caption of field and **<Enter>**
Jump to the Command Line.	**^<Enter>**

9.3.2 How to Navigate between Pages

Many ScreenMan forms have more than one *page* (i.e., there are additional screens besides the first one on the form) with additional fields that you can edit.

You can use the keystrokes listed in Table 24 to move between pages on a ScreenMan form:

Table 24: ScreenMan—Keystrokes to Navigate between Pages in a ScreenMan Form

To	Press
Move to next page.	**<PF1><ArrowDown>** or **<PageDown>**
Move to previous page.	**<PF1><ArrowUp>** or **<PageUp>**
Move to a page you specify.	**<PF1>P**

9.3.3 Saving and Exiting

To **SAVE** or **EXIT** the form, you need to reach ScreenMan's command line. It's reachable from any ScreenMan screen. To reach the command line, do any one of the following:

- Enter a caret (**^**) at any field prompt.
- Press **Enter**, **Tab**, or **PF4** to move from field to field until you reach the command line.
- Press the <**ArrowDown**> or <**ArrowUp**> keys to move the cursor from field to field downwards or upwards, until you reach the command line.

Then you can enter **SAVE** or **EXIT** at the command line.

9.3.4 Command Line Options (SAVE, EXIT, etc.)

From the Command Line, you can issue the commands to perform various functions while in ScreenMan. You can also use a shortcut key sequence to perform the same function without having to enter it on the command line.

9.3.4.1 Shortcut Keys

Table 25 lists the command line options and the corresponding shortcut responses while in a ScreenMan form:

Table 25: ScreenMan—Command Line Options and Shortcut Keystrokes in a ScreenMan Form

Command Line Option	Shortcut	Description
EXIT	**<PF1>E**	Exits the form. If you have made any changes, ScreenMan asks if you want to save them before exiting.
SAVE	**<PF1>S**	Saves your changes without exiting the form.
REFRESH	**<PF1>R**	Repaints the pages on the screen; if for some reason the information displayed on the screen has become corrupted.
NEXT PAGE	**<PF1><ArrowDown>** or **<PageDown>**	(Available only on multi-page forms.) Goes to the next page of the form.
CLOSE	**<PF1>C**	(Available only on "popup" pages.) Closes the current page and returns you to the parent page.
(none)	**<PF1>Q**	Quit the form, discarding changes.

NOTE: On a "popup" page, your only Command Line options are **CLOSE** and **REFRESH**.

9.4 Editing

9.4.1 How to Edit Fields

Table 26, Table 27, Table 28, and Table 29 list the key sequences for ScreenMan's Field Editor; the editor that allows you to edit data fields on a ScreenMan Form.

9.4.1.1 Cursor Movement

Table 26 lists the keystrokes you use to move the cursor while in a ScreenMan form:

Table 26: ScreenMan—Keystrokes to Move the Cursor in a ScreenMan Form

To Move	Press
Right one character.	**\<ArrowRight\>**
Left one character.	**\<ArrowLeft\>**
Right one word.	**\<Ctrl-L\>** or **\<PF1\>\<Spacebar\>**
Left one word.	**\<Ctrl-J\>**
Right edge of window.	**\<PF1\>\<ArrowRight\>**
Left edge of window.	**\<PF1\>\<ArrowLeft\>**
End of field.	**\<PF1\>\<PF1\>\<ArrowRight\>**
Beginning of field.	**\<PF1\>\<PF1\>\<ArrowLeft\>**

9.4.1.2 Deletion

Table 27 lists the keystrokes you use to delete characters while in a ScreenMan form:

Table 27: ScreenMan—Keystrokes to Delete Characters in a ScreenMan Form

To Delete	Press
Character under cursor.	**\<PF2\>** or **\<Delete\>** or **\<Remove\>**
Character left of cursor.	**\<Backspace\>**
From cursor to end of word.	**\<Ctrl-W\>**
From cursor to end of field.	**\<PF1\>\<PF2\>**
Delete entire field / Restore last edit / Restore	**\<PF1\>D** or **\<Ctrl-U\>**

To Delete	Press
default.	

9.4.1.3 Modes

Table 28 lists the keystrokes you use to switch modes while in a ScreenMan form:

Table 28: ScreenMan—Keystrokes to Switch Modes in a ScreenMan Form

To Switch to	Press
Insert/Replace mode.	**<PF3>**
Zoom editor (edit long fields).	**<PF1>Z**

If the first key you press upon navigating to a field is a printable character, the Field Editor assumes you want to replace any existing default and replaces the entire field with the character just typed. To just edit the existing field value, first press an editing key, such as **<ArrowLeft>** or **<ArrowRight>**.

9.4.2 Long Fields (and the Zoom Editor)

The actual contents of a field being edited can extend beyond the confines of the visible field on a ScreenMan form. As you use the **<ArrowLeft>** and **<ArrowRight>** keys at the left and right edges of the window, you can scroll left or right to display one end or the other of the field.

To see and edit the entire contents of a long field at once, press **<PF1>Z** to invoke the Zoom Editor. This opens an area up at the bottom of the screen, providing you as much space as you need to both see and edit the entire long field.

9.4.3 WORD-PROCESSING Fields

To edit or display a WORD-PROCESSING field, press the **Enter** key at the WORD-PROCESSING field. This clears the screen and passes control to your Preferred Editor to edit the field. If you do *not* have a Preferred Editor, the Screen Editor is used. When you exit the editor, you return to the ScreenMan screen.

REF: To set your Preferred Editor, see the "Choosing a Preferred Editor" section.

NOTE: If the WORD-PROCESSING field is uneditable or appears in a display block, you can view the contents of the field with an editor. However, if you edit the text, your changes are *not* filed in the permanent database, even if you tell the editor to save the changes. A plus sign (+) in a ScreenMan form indicates whether a WORD-PROCESSING field already contains data. If users have their PREFERRED EDITOR field set to **SCREEN EDITOR – VA FILEMAN**, the

previous message "**No existing Text**" has been modified to "**THERE ARE NO LINES!**" if a WORD-PROCESSING field has no data.

9.4.4   Multiples

You can easily spot a Multiple field. It usually begins with the word "Select" (as in "Select ADDRESS" or "Select ADMISSION DATE"). There are two ways Multiples can be displayed on a form:

- The Multiple is linked to a "popup" subpage, which contains the subfields of the Multiple.

- The Multiple is displayed in a repeating block—several subrecords can be displayed simultaneously on a page, much like a scrolling list and the Multiples within a single SreenMan page can be more than one line deep.

9.4.4.1   Multiples Linked to "Popup" Subpages

A Multiple field can appear on a page and be linked to a regular or "popup" subpage. When you navigate to the Multiple field, select a subrecord, and press **Enter**, you are taken to the subpage that contains the fields within the Multiple.

In Figure 101, the Multiple is the field with the caption "Select SECONDARY MENU OPTIONS:". When you enter a secondary menu option at this field, you are taken into a "popup" subpage, where you can edit the fields for that particular subrecord:

Figure 101: ScreenMan—A "Popup" Subpage for a Multiple: Sample Component Parts and Field Values

```
                           Edit an Existing User
 NAME: FMUSER,ONE                                              Page 1 of 5
_____
    NAME... FMUSER,ONE                                INITIAL: OF
     TITLE: OIT STAFF                               NICK NAME: One
       SSN: 000111659                                    DOB:
   DEGREE:                                          MAIL CODE:
  DISUSER:                                    TERMINATION DATE:
   Termination Reason:



         R,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,T
  Select .                                  SECONDARY MENU OPTIONS .
 Want to .                                                        .
 Want to . SECONDARY MENU OPTIONS: XU CHECKSUM REPORT            .
         .                  SYNONYM:                              .
         .                                                        .
         F,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,G
_____
 Close     Refresh

 Enter a command or '^' followed by a caption to jump to a specific field.


 COMMAND: Close                          Press <PF1>H for help      Insert
```

In this example, the popup subpage displays when an entry was made at the "Select SECONDARY MENU OPTIONS" prompt. The user can edit the selected entry for the Multiple in this popup subpage.

9.4.4.2   Exiting a Subpage

While in a subpage, your only Command Line options are **CLOSE** and **REFRESH**. You *cannot* **EXIT**, **Quit**, or **SAVE** until you return to the parent page. You can return to the parent page by pressing **<PF1>C** or issuing the **CLOSE** command at the Command Line. From there, you can select another subrecord to edit or navigate to another field.

9.4.4.3 Deleting an Entry in a Multiple

If a default subrecord is displayed at a Multiple field, you can delete that subrecord by entering an at-sign (@) at the Multiple field. You can also delete a specific subrecord by selecting that subrecord and going into the subpage and entering an at-sign (@) at the **.01** field.

CAUTION: Deletions of subrecords are immediate and permanent; even if you quit the form without saving, deleted subrecords are *not* restored to the database.

9.4.4.4 Adding a New Entry to a Multiple

You can respond to a Multiple field in one of two ways:

- Accept the field's default answer.

- Enter a new item: an employee's second address, for example, or another admission date for the same patient.

To enter a new entry in a Multiple, enter the new value for the new entry in the Multiple's **.01** field. If you have **LAYGO** access (permission to add new entries), you are asked if you want to add the entry to the Multiple. To change your mind about adding the item, enter **NO**. If you enter **YES**, though, ScreenMan opens either a "popup" page or a new window, allowing you to enter additional information for the new Multiple entry.

9.4.4.5 Multiples in Repeating Blocks

Subrecords in a Multiple can be displayed in another way. Rather than just the name of single entry in the Multiple being displayed on the current page, you can also see Multiples where several subrecords are displayed simultaneously on the page. Each subrecord occupies one line on the screen, in a scrolling list. This is called a repeating block. Instead of leading to a "popup" page, you can edit all visible fields in the Multiple as they are displayed.

For example:

Figure 102: ScreenMan—Dialogue Showing a Repeating Block in a Multiple: Sample ScreenMan Fields and Field Values

```
                            Employee Profile
NAME: FMUSER,ONE                                          Page 1 of 2
_____

                          NAME: FMUSER,ONE
                     NICK NAME: ONE
                         TITLE: ARTIFICIAL INTELLIGENCE THEORETICIAN
        POSITION DESCRIPTION (WP):

   DATE OF EMPLOYMENT     EMPLOYER                           YEARS WORKED
   ──────────────────     ────────                           ────────────
  +FEB 1, 1967            TEST EMPLOYER B                          2
   MAR 1, 1969            TEST EMPLOYER C                          3
   APR 1, 1972            TEST EMPLOYER D                          4
   MAY 1, 1976            TEST EMPLOYER E                          5


_____
Exit      Save     Next Page     Refresh

Enter a command or '^' followed by a caption to jump to a specific field.


COMMAND: Close                            Press <PF1>H for help     Insert
```

In this example, the employment data is the Repeated Block for the Multiple. There are **four** entries in the Multiple that are visible. The plus sign (+) indicates more records exist in the list above.

You can always navigate to a blank line below the end of the list. At this blank line, you can add a new subrecord if **LAYGO** is allowed or jump to an existing subrecord by entering its name.

9.4.5 Navigational Keys for Repeating Blocks

Table 29 lists the keystrokes you use to navigate while in a Repeating Block in a ScreenMan form:

Table 29: ScreenMan—Keystrokes to Navigate Repeating Blocks in a ScreenMan Form

To	Press
Scroll through the list.	**<ArrowUp>** and **<ArrowDown>**
Page down through the list.	**<PF1><ArrowDown>** or **<PageDown>**
Page up through the list.	**<PF1><ArrowUp>** or **<PageUp>**
Jump to the blank line at end of list.	**^<Enter>** in a *non*-blank line
Jump to the Command line.	**^<Enter>** at the end of the list

9.5 Details

9.5.1 How to File Edits

In general, the database is unaffected while you edit a record in a ScreenMan form. Changes are filed only at your request, when you **SAVE** or **EXIT**.

Before filing, ScreenMan checks that:

- Required fields on all pages that can be accessed via the **Next** and **Previous** page links have values, even if you have *not* accessed those pages during the editing session.

- If you have accessed any subpages, required fields in those subpages *must* also have values.

If any required field is empty, you *cannot* file any data changes. When you attempt to file, ScreenMan displays a list of those fields that require values.

The **<PF1>Q** key sequence allows you to **Quit** the form without saving changes. Filing does *not* occur if you time out.

⚠️ **CAUTION: There is one situation in which a change to the database is made immediately: when you delete an entry from a file or subfile. When you attempt to delete an entry, ScreenMan issues a warning that deletions are immediate and permanent. Even if you Quit the form without saving your changes, the entry is *not* restored to the database.**

9.5.2 Troubleshooting

While screen displays offer many advantages, they also require that the software can correctly identify the type of terminal being used or emulated. An incorrect identification may produce unreadable and unusable screens. To exit such a screen, enter **^<Enter>^<Enter>**.

If you continue to find the screens are unreadable, check the following sources for troubleshooting information:

- "System Management" section in the *VA FileMan Advanced User Manual* (e.g., the "Device Handling for Standalone VA FileMan" section).

- *Kernel 8.0 & Kernel Toolkit 7.3 Systems Management Guide* (look for information on "Device Type at Signon" and changing your terminal type).

- Systems Administrator.

10 Word-Processing Fields

10.1 Word-Processing Editors

WORD-PROCESSING-type fields are typically used so that you can write, edit, and format text for letters and reports, text information in patient records, electronic MailMan messages, application packages, responses, and so on.

VA FileMan provides two editors for WORD-PROCESSING fields:

- [Line Editor](#)
- [Screen Editor](#)

The system manager can provide other editors as well (e.g., Extensible Editor).

You can select any of the available editors on the system as your Preferred Editor. If you select a Preferred Editor that editor is used whenever you edit a WORD-PROCESSING field. If you *do not* choose a Preferred Editor, the following defaults are used:

- [Line Editor](#)—When editing WORD-PROCESSING fields from Scrolling Mode.

- [Screen Editor](#)—When editing WORD-PROCESSING fields from a ScreenMan form.

10.2 Choosing a Preferred Editor

To select your preferred editor, perform the following procedure:

1. At any menu prompt, enter "**TBOX**" to go to the **User's Toolbox** [XUSERTOOLS] menu.

2. From the **User's Toolbox** [XUSERTOOLS] menu, choose the **Edit User Characteristics** [XUSEREDITSELF] option.

3. At the "Select TERMINAL TYPE NAME:" prompt, you can usually just accept the default by pressing the **Enter** key.

4. You are now placed in a ScreenMan form where you can edit your user characteristics. Press **<ArrowDown>** until your cursor arrives at the "PREFERRED EDITOR:" prompt.

5. At the "PREFERRED EDITOR:" prompt, you can choose your Preferred Editor. Enter **two** question marks (**??**) to get a list of the available editors on your system. Choose one as your Preferred Editor and then press the **Enter** key. The Screen Editor is usually a good choice.

6. Press **<PF1>E** to exit the ScreenMan form. If you are asked whether to save changes before leaving the form, answer **YES**.

Your Preferred Editor should now be set to the editor you have chosen. This is the editor that is used whenever you edit the contents of a WORD-PROCESSING field.

10.3 Switching to another Editor While Editing

Selecting your default editor determines which editor is used whenever you edit a WORD-PROCESSING field. However, if you want to *temporarily* switch to another editor once you have started editing, both the Screen Editor and the Line Editor allow you to do this:

- In the Screen Editor:

  1. Press **<PF1>A**.

  2. Choose the editor to which you wish to switch.

- In the Line Editor:

  1. Choose the **Utilities in Word-processing** option.

  2. At the "Edit Option:" prompt, choose **Editor Change**.

  3. Choose the editor to which you wish to switch.

REF: For more information on the Screen Editor, see the "Screen Editor" section. For more information on the Line Editor, see the "Line Editor" section.

11 Screen Editor

To edit the contents of DATA TYPE field values of WORD-PROCESSING in files, you need to use a word-processing editor. VA FileMan provides two standard editors:

- Screen Editor

- Line Editor

The Screen Editor provides flexibility and freedom *not* provided by the Line Editor. The Screen Editor provides such features as the following:

- Full-screen editing

- Automatic text wrapping

- Search-and-replace

In most cases, you would want your default editor to be the Screen Editor.

For most people, the Screen Editor should be your Preferred Editor for WORD-PROCESSING fields.

REF: To set your default editor, see the "Choosing a Preferred Editor" section. This section also explains how you can switch your current editor on-the-fly.

REF: For more information on the Line Editor, see the "Line Editor" section.

If you enter **<PF1>H** at any time in the Screen Editor, you can get online help that lists all the available commands.

At any time, while entering text using the Screen Editor, you can select a command. For example, at any time you can change your left margin, move to a different screen, save your document, or get online help. To invoke most commands, you need to enter only two keystrokes: the **<PF1>** key and a character key, such as **D** for delete line.

You usually find the **<PF>** keys at the top or right-hand side of your terminal keyboard, along with the numeric keypad. If you are using a personal computer rather than a computer terminal, the **<PF>** keys are mostly likely re-mapped to another set of keys (consult your system administrator to find out to what keys the **<PF1>** through **<PF4>** are re-mapped).

11.1 Screen Editor Screen

The Screen Editor display consists of a status bar at the top and a ruler at the bottom. Between the two status bars is the area where you create and edit text, as shown in Figure 103:

Figure 103: Screen Editor—Sample WORD-PROCESSING Field in the Screen Editor: Sample Component Parts

```
==[ WRAP ]==[ INSERT ]============< FIELD NAME >============[ <PF1>H=Help ]====
```

Wrap Mode is set to "ON."

Insert Mode is set to "ON."

Name of word-processing field being edited.

<PF1>H displays help for all Screen Editor commands.

Location of left margin (<).

Tab stops ("T").

Location of right margin (>).

```
<=======T=======T=======T=======T=======T=======T=======T=======T=======T>======
Scr 1 of 52                              Ln 1 of 97                         Col 1
```

The bottom line, with the current screen, line, and column numbers, is ordinarily hidden. The <PF1>? toggles display of this line.

11.2 Entering Text

When using the Screen Editor, you type your text as you normally would. As you type, the Screen Editor automatically wraps lines of text to fit within the left and right margins. There is no need to press the **Enter** key at the end of each line. The Screen Editor accepts any printable characters as keyboard input. However, it *cannot* be used to edit text that contains control characters.

11.3 Entering Commands

Editor commands are invoked using keyboard command sequences. The Screen Editor makes use of the **<PF>** keys, the cursor keypad, and, if available on the keyboard, the edit keypad to perform its editing functions.

11.4 Navigation Keystrokes (Cursor Movement)

lists the keystrokes you use to navigate while in the Screen Editor:

Table 30: Screen Editor—Keystrokes to Navigate in the Screen Editor

Action	Key Sequence
Move one column left or right.	**<ArrowLeft>** or **<ArrowRight>**
Move one line up or down.	**<ArrowUp>** or **<ArrowDown>**
Move one word left or right.	**<Ctrl>J** or **<Ctrl>L**
Move to next tab stop to the right.	**<Tab>**
Move cursor left or right one screen.	**<PF1><ArrowLeft>** or **<PF1><ArrowRight>**
Move cursor to beginning or end of line.	**<PF1><PF1><ArrowLeft>** or **<PF1><PF1><ArrowRight>** Or: **<Find>** or **<Select>** Or: **<Home>** or **<End>**
Move cursor one screen up or down.	**<PF1><ArrowUp>** or **<PF1><ArrowDown>** Or: **<PrevScreen>** or **<NextScreen>** Or: **<Page Up>** or **<Page Down>**
Move to top or bottom of document.	**<PF1>T** or **<PF1>B**
Go to a specific screen, line, or column.	**<PF1>G**

You can *move forward quickly across a line* by pressing the **Tab** key (**<Tab>**). The **Tab** key in the Screen Editor does *not* insert anything into the text. The **Tab** key is for navigation only and simply moves the cursor to the next tab stop to the right. Another way to move across a line, either forward or backward, is to move a word at a time, using **<Ctrl>J** or **<Ctrl>L**.

11.5 Saving, Printing, and Exiting

Table 31 lists the keystrokes you use to exit and save text while in the Screen Editor:

Table 31: Screen Editor—Keystrokes to Exit and Save Text in the Screen Editor

Action	Key Sequence
Exit and save text	**<PF1>E** Or Enter **two** carriage returns (press **Enter** twice) at the end of the document to exit ScreenMan.
Quit without saving	**<PF1>Q**
Exit, save, and switch editors	**<PF1>A**
Save without exiting	**<PF1>S**
Screen Print (including all multiples)	**<PF1>P**

If your editing session ends unexpectedly because of hardware failure or another reason that prevents normal exiting, any changes you have made in the current WORD-PROCESSING field *are not* saved. On the other hand, if you time out when editing text, your changes *are* saved.

11.6 Finding Text

Table 32 lists the keystrokes you use to find text while in the Screen Editor:

Table 32: Screen Editor—Keystrokes to Find Text in the Screen Editor

Action	Key Sequence
Find text (*not* case sensitive)	**<PF1>F** Brings up a "Find" dialogue (see Figure 104): • To search for text downward, enter the text to find and press the **Enter** key. • To search for text upward, enter the text to find and press **<ArrowUp>**.
Find next occurrence of text	**<PF1>N**
Find/Replace text	**<PF1>P**

Figure 104: Screen Editor—Dialogue to Do a "FIND" while Using the Screen Editor

```
Find What: ████████████████████████████
Replace with:
Option:                      Find Next   Replace    Replace All    Quit
```

11.7 Formatting Paragraphs

Table 33 lists the keystrokes you use to format paragraphs while in the Screen Editor:

Table 33: Screen Editor—Keystrokes to Format Paragraphs in the Screen Editor

Action	Key Sequence
Join and/or break the current line and next line	**<PF1>J** Make sure Wrap mode is on before joining or breaking lines (Toggle Wrap mode with **<PF2>**).
Reformat paragraph	**<PF1>R** Joins and/or breaks all lines between current line and next *blank* line, to create a word-wrapped paragraph. Make sure Wrap mode is on first (Toggle with **<PF2>**). ℹ **NOTE:** The reformat paragraph command is very useful!

11.8 Cutting and Pasting

Table 34 lists the keystrokes you use to cut and paste text while in the Screen Editor:

Table 34: Screen Editor—Keystrokes to Cut and Paste Text in the Screen Editor

Action	Key Sequence
Select/Mark text	**<PF1>M** Position the cursor at the beginning of the text you wish to select and press **<PF1>M**. Move the cursor to the end of the text you want and press **<PF1>M** again. The selected text is highlighted in reverse video.
Deselect/Unmark text	**<PF1><PF1>M**
Delete selected text	**<Delete>** or **<Backspace>** on selected text
Cut and save to buffer	**<PF1>X** on selected text

Action	Key Sequence
Copy and save to buffer	**<PF1>C** on selected text
Paste from buffer	**<PF1>V**
Move text to another location	**<PF1>X** at new location
Copy text to another location	**<PF1>C** at new location

To *move or copy* selected text to another location:

1. Select the text (use **<PF1>M**).

2. Place the *cursor at the new location*.

3. Press **<PF1>X** (move text) or **<PF1>C** (copy text).

To *save* text to the buffer so that you can paste one or more times:

1. Select the text (use **<PF1>M**).

2. With the *cursor on the selected text*, press **<PF1>X** (cut text to buffer) or **<PF1>C** (copy text to buffer).

To *paste* text from the buffer:

1. Move the cursor to the location you want to paste the text.

2. Press **<PF1>V**.

11.9 Deleting

Table 35 lists the keystrokes you use to delete text while in the Screen Editor:

Table 35: Screen Editor—Keystrokes to Delete Text in the Screen Editor

Action	Key Sequence
Character before cursor	**<Backspace>**
Character at cursor	**<PF4>** or **<Remove>** or **<Delete>** (which key depends on your terminal and keyboard type)
Word at cursor	**<Ctrl>W**
From cursor to end of line	**<PF1><PF2>**

Action	Key Sequence
Entire line	**<PF1>D**

11.10   Settings/Modes

Table 36 lists the keystrokes you use to change settings and mode while in the Screen Editor:

Table 36: Screen Editor—Keystrokes to Change the Settings and Mode in the Screen Editor

Action	Key Sequence
Wrap/No Wrap mode toggle	**<PF2>** If wrap is off, left and right margin settings are ignored.
Insert/Replace mode toggle	**<PF3>** or **<Insert Here>** or **<Insert>** Determines whether new characters are inserted before existing text, or instead overwrite existing text.
Set/Clear tab stop	**<PF1><Tab>** Change from default tab stops is effective for current session only.
Set left margin	**<PF1><Comma>** Move cursor to desired left margin position first.
Set right margin	**<PF1><Period>** Move cursor to desired right margin position first.
Status line toggle (on or off)	**<PF1>?**

11.11   Troubleshooting

11.11.1   Terminal Type Setting

The Screen Editor is designed for use on all terminal types known in the Kernel computing environment. It is very important that your terminal type be correctly identified to VA FileMan.

REF: For more information about how terminal types are identified, see the Kernel documentation located on the VDL: https://www.va.gov/vdl/application.asp?appid=10

Since the **<PF>** keys are used in the Screen Editor, those keys should *not* be reprogrammed.

11.11.2   <PF> Keys Not Working: How to Exit

If your **<PF>** keys do *not* work in the Screen Editor, your terminal type is probably set incorrectly. Before you can correct the setting, you need to make an emergency exit from the editor by using one of the following keystroke combinations:

- Press **<Esc>OPQ** (if your keyboard has an **Escape [Esc]** key).

- Press **<Ctrl>[OPQ** (if your keyboard does *not* have an **Escape[Esc]** key).

- Press **<Ctrl>A@<Enter>Q** (if *neither* of the above methods work).

NOTE: You *must* enter all letters in the above key sequences in *uppercase*.

11.12   Screen Editor and Personal Computers

11.12.1   Pasting and Uploading

If you are accessing your computer system from a personal computer (PC), you can *paste* text from an application on the PC into the Screen Editor, and also *upload* files into the Screen Editor. There are some issues to be aware of when pasting text or uploading files into the Screen Editor.

11.12.2   Symbol Characters

Extended ASCII characters (typically "symbol" characters) *cannot* be stored in WORD-PROCESSING fields. Examples of such characters include:

- "Smart Quote" characters

- Bullets

- Symbols

Such characters, when encountered, are stripped or replaced with a **space**, **'**, **"**, or *****, as appropriate. To avoid problems uploading these types of characters, you should:

- Turn off "Smart Quotes" in your word-processor on your personal computer.

- Avoid using bullets.

- Avoid using symbols in your text such as: **¼**, **½** , and **º**.

11.12.3   Files: Save as Text

If you are uploading an entire word-processing document (as opposed to pasting), save it first as a "Text Only with Line Breaks" (or similar) file type in your personal computer word-processor.

11.12.4   Wrap Vs. No Wrap

If your source document contains a carriage return at the end of every line, turn **WRAP** off in the Screen Editor *before* you paste or upload by pressing **PF2**. Turn it back on once the paste or

upload is completed. If your source document contains a carriage return at the end of each paragraph only; however, leave **WRAP** on in the Screen Editor.

11.12.5   Avoiding Lost Characters

If the host computer system *cannot* keep up with the text upload, characters can get "lost." This can be a factor if you upload large quantities of text or characters. This character loss can occur because pastes and ASCII uploads do *not* use *error*-correcting communications protocols.

If you notice characters getting lost, one way to solve this is to adjust the "character pacing" (or similar) setting in your terminal emulation program. This can slow down the transfer of text such that characters no longer get lost due to communications overload.

If you need to paste or upload large quantities of text, consider switching to an Alternate Editor (e.g., Kermit) that uses an *error*-correcting communications protocol. This automatically compensates for communications overflows, preventing the loss of characters during text transfer.

NOTE: To use Kermit, it *must* be installed as an Alternate Editor at your site.

12 Line Editor

The Line Editor is a scrolling mode editor. It is the second of two standard editors VA FileMan provides for editing WORD-PROCESSING-type fields. The distinguishing characteristic of a Scrolling Mode editor is that you enter your text one line at a time, and that you can only edit lines one at a time. Because word-processing in a scrolling mode interface can be cumbersome, you can set your Preferred Editor to the Screen Editor. VA FileMan continues to provide the Scrolling-Mode Line Editor, however, for those who prefer it.

> **REF:** To set your default editor, see the "Choosing a Preferred Editor" section.
>
> **NOTE:** For most people, the Screen Editor should be your Preferred Editor for WORD-PROCESSING fields.

12.1 Recognizing the Line Editor

When you edit a WORD-PROCESSING field, it's easy to see if VA FileMan chooses the Line Editor as your editor. If the Line Editor is used, the last **nine** lines of text (if there are that many) are displayed on the screen, with numbered prompts at the start of each line. Also, after the text is listed, you are prompted with "EDIT Option:". The "EDIT Option:" prompt is where you can enter each Line Editor command to work with the text.

For example:

Figure 105: Line Editor—Example of a WORD-PROCESSING Field in the Line Editor

```
HISTORY:
  1>Owing to poverty in early youth, patient seems not to
  2>have had proper diet. Since achieving economic success,
  3>his diet has been adequate, but traces of original
  4>deficiency remain.
  5>
EDIT Option:
```

12.2 How to Enter Text in the Line Editor

If no text exists yet in a WORD-PROCESSING field that you are about to edit, you see the field name followed by "**1>**". This is the Line Editor's prompt for entering word-processing text.

For example:

Figure 106: Line Editor—Prompts for Entering Word-Processing Text

```
Select PATIENT FILE NAME: FMPATIENT,FOUR
  Select DIAGNOSIS: ANGINA PECTORIS// B-12 DEFICIENCY
  HISTORY:
    1>
```

You can now enter the text for Line **1** and press the **Enter** key. This brings you to a prompt "**2>**" for Line **2**, and so forth. Keep adding lines until you are done; then, press the **Enter** key on a blank line to finish your edit, as shown in :

Figure 107: Line Editor—Completing Your Edits in the Line Editor

```
HISTORY:
  1>Owing to poverty in early youth, patient seems not to<Enter>
  2>have had proper diet. Since achieving economic success,<Enter>
  3>his diet has been adequate, but traces of original<Enter>
  4>deficiency remain.<Enter>
  5><Enter>
EDIT Option: <Enter>

Select DIAGNOSIS:
```

12.3 Revising Existing Text

To revise the contents of the WORD-PROCESSING field, you need to call up each individual line that you want to edit and then edit each line.

To revise existing text, perform the following procedure:

1. At the "EDIT Option:" prompt, enter the letter **E** for Edit a Line (Replace __ With __).

2. At the "Edit line:" prompt, enter the number of the line you need to revise.

3. Beneath the "EDIT Option:" and "Edit line:" prompts, you see the line of text that you identified by number and you see the "Replace" prompt.

4. Enter a string in the current line to be replaced.

5. If the string you enter is found in the current line, set the "With" prompt. Enter a string to replace the original string.

6. The line is now updated, and you are prompted for another string to replace. If you are done editing the line, simply press the **Enter** key.

12.3.1 Shortcut: Enter Line Number to Edit at "EDIT Option:" Prompt

There's a shortcut to edit a particular line. At the "EDIT Option:" prompt, instead of choosing the Edit a Line (Replace __ With __) option and entering the line number, just enter the line number instead. You are taken directly to the line you specify, and then given the "Replace" prompt to edit the line:

Figure 108: Line Editor—Shortcut to Edit a Specific Line Using the Line Editor

```
EDIT Option: 5
  5>was the time of the day that I wnet over to Building 8 and
  Replace wnet With went  Replace <Enter>
   was the time of the day that I went over to Building 8 and
Edit line:
```

12.4 "Replace...With" Edits: Be Careful

When editing individual lines, you make changes using the "Replace...With" dialogue, where you enter an existing string in the line, and a new string with which to replace it. Be careful as you enter your responses to the "Replace" and "With" prompts. Enter enough letters to ensure that the computer replaces the desired string of characters.

Here is why this issue is so important. In one line, you may have two identical words, or you may have two identical sets of characters embedded. Since the computer changes only the *first* occurrence of any series of letters that you enter, review your line carefully before responding to the "Replace" prompt. Then enter enough identifying characters to correct *the specific word or characters* you wish to change. To illustrate the point, look at an *incorrect* entry (Figure 109).

In Figure 109, you need to change the sentence in the second line from "This example is sample" to the sentence "This example is simple."

Figure 109: Line Editor—Example of an *Incorrect* Edit with the "Replace...With" Editor

```
EDIT Option: 2
  2>This example is sample
  Replace ample With imple Replace <Enter>
   This eximple is sample
Edit line:
```

As you can see from this example, VA FileMan replaced the *first* occurrence of the "**ample**" characters. Thus, "**example**" was changed to "**eximple**" rather than "**sample**" being changed to "**simple**" because the word "**example**" came before the word "**simple**" in the sentence (i.e., it was the first occurrence). Obviously, we should have replaced the whole word "**sample**" with "**simple**" to avoid any confusion.

12.4.1 Shortcuts at the "Replace...With" Prompt

As with editing long field values, you can replace long strings of characters by using ellipses. An ellipsis is **three** successive periods (**...**). When editing, you can replace longer strings of characters by using an ellipsis at the "Replace" prompt. You can specify ranges of text to replace for any line (just as with a long text field) with the ellipsis.

For example, to replace an entire line at a "Replace...With" prompt, enter the ellipsis (three periods) at the "Replace" prompt. You are then able to replace the entire default with what you entered at the "With" prompt, as shown in Figure 110:

Figure 110: Line Editor—Using the Ellipsis (…) to Replace an Entire Line

```
EDIT Option: 5
  5>care of the boxes.
  Replace ... With care to replace the existing supplies.  Replace <Enter>
   care to replace the existing supplies.
Edit line:
```

12.4.2 "Replace..." Prompt Shortcuts

Table 37 lists valid shortcut you can use in the "Replace...With" editor:

Table 37: Line Editor—"Replace" Prompt Shortcuts

Shortcut	Action
...	Replaces everything.
xxx...	Replaces everything starting from the characters **xxx** to the end. **<PF1>E**.
...xxx	Replaces everything from the beginning up to and including the characters **xxx**. **<PF1>Q**.
xxx...yyy	Replaces everything starting from **xxx** up to and including **yyy** **<PF1>A**.
end or **END**	Appends what you enter at the "With" prompt to the end of the value. **<PF1>S**.

12.5 Commands

12.5.1 Available Commands

In the Line Editor, all commands are available at the "EDIT Option:" prompt. To see a list of available commands, simply enter **two** question marks, as shown in Figure 111:

Figure 111: Line Editor—Edit Options Available with the Line Editor

```
EDIT Option: ??
     Choose, by first letter, a Word Processing Command from the following:
          Add Lines to End of Text
          Break a Line into Two
          Change Every String to Another in a Range of Lines
          Delete Line(s)
          Edit a Line (Replace __  With __)
          Insert Line(s) after an Existing Line
          Join Line to the One Following
          List a Range of Lines
          Move Lines to New Location within Text
          Print Lines as Formatted Output
          Repeat Lines at a New Location
          Search for a String
          Transfer Lines From Another Document
          Utility Sub-Menu
          Y-Programmer Edit
     or type a Line Number to edit that line.
EDIT Option: U <Enter> tilities in Word-Processing
UTILITY Option: ??
     Choose, by first letter, a Utility Command from the following:
          Editor Change
          File Transfer from Foreign CPU
          Text-Terminator-String Change
UTILITY Option:
```

12.5.2 LIST: List the Message

Assume that you have just entered four lines of text in a WORD-PROCESSING field and would now like to review the entire text. After entering text on Line **4** (**4>**), press the **Enter** key. When prompted for Line **5** (**5>**), press the **Enter** key again and you arrive at the "EDIT Option:" prompt. Enter **L** (for List a Range of Lines option) and choose the range of lines to list (in this case, Lines **1** to **4**):

Figure 112: Line Editor—Example Using the List a Range of Lines Option

```
EDIT Option: L <Enter> ist line: 1// <Enter> to: 4// <Enter>
  1>Owing to poverty in early youth, patient seems not to
  2>have had proper diet. Since achieving economic success,
  3>his diet has been adequate, but traces of original
  4>deficiency remain.
EDIT Option:
```

12.5.3 ADD: Append More Text

After listing lines of text (see "LIST: List the Message" section), suppose you need to add a few comments at the end of your message. From the "EDIT Option:" prompt, enter **A** (for Add Lines to End of Text option). You can now add additional lines:

Figure 113: Line Editor—Example Using the Add Lines to End of Text Option

```
EDIT Option: A <Enter> dd lines
   5> Next appointment is in three weeks.<Enter>
   6> Regular appointments need to be set up. <Enter>
   7> <Enter>
```

12.5.4 JOIN: Combine Two Lines of Text

Suppose you are at the "EDIT Option:" prompt. After briefly reviewing your text, you have decided that Lines **2** and **3** (**2>** and **3>**) are too short. You can use the **Join** command (i.e., Join Line to the One Following option) to join Line **2** to the next line:

Figure 114: Line Editor—Example Using the Join Line to the One Following Option

```
EDIT Option: L <Enter> ist line: 2// <Enter> to: 3// <Enter>
  2>left by
  3>the doorway.
EDIT Option: J <Enter> oin line: 2
  2>left by the doorway.
..
EDIT Option:
```

12.5.5 INSERT: Insert New Lines of Text between Existing Ones

Suppose that you want to insert new lines of text in the middle of existing text in a WORD-PROCESSING field. Using the Add Lines to End of Text does *not* work, because that appends new text lines at the *end* of the existing lines. Instead, you can use the **Insert** command [i.e., Insert Lines after an Existing Line option], to do this:

Figure 115: Line Editor—Example Using the Insert Lines after an Existing Line Option

```
EDIT Option: L <Enter> ist line: 1// <Enter> to: 5// <Enter>
  1>The delivery people came, and left several packages
  2>by the doorway.
  3>We have some work ahead of us now.
EDIT Option: I <Enter> nsert after line: 2
  3> <Enter>
  4> Finally, the order arrived! <Enter>
  5> <Enter>
```

12.5.6 DELETE: Delete a Line or Lines

To delete lines of text in a WORD-PROCESSING field, use the **Delete** command [i.e., Delete Line(s) option] at the "EDIT Option:" prompt, as shown in Figure 116:

Figure 116: Line Editor—Example Using the Delete Line(s) Option

```
EDIT Option: D <Enter> elete from line: 5 <Enter> thru: 3// 6

OK TO REMOVE 2 LINES? No// Y <Enter> (Yes).....
  1>The delivery people came, and left several packages
  2>by the doorway.
  3>
  4>Finally, the order arrived!
EDIT Option:
```

12.6 Advanced Features

Most of the features of the Line Editor are self-explanatory and simple to use. However, a few require additional explanation, as follows in this section.

NOTE: To see a full list of the commands available at the "EDIT Option:" prompt, enter two question marks (**??**), as shown in Figure 111.

12.6.1 File Transfer (Use When Uploading ASCII Text)

The **File Transfer from Foreign CPU** option from the **Utility** menu lets you upload text from another system into your WORD-PROCESSING field text, using an ASCII (*non-error-correcting*) transfer. For example, if you are connected from a personal computer (PC), you can use your communication software to send a text file.

The file to be transferred *must* be a text (pure ASCII) file. Most word-processing programs have a way of saving a document as text (i.e., without special formatting information); check your word-processor's manual. Also, you need to know how to send a text file using your PC's communication software; if you are not sure how, check your communications software manual.

To use the **File Transfer from Foreign CPU** option, perform the following procedure:

1. Make sure the file you are transferring is a pure ASCII text file.

2. While editing a WORD-PROCESSING field in the Line Editor, choose the **Utility** menu option at the "EDIT Option:" prompt. Then choose the **File Transfer from Foreign CPU** option from the **Utility** menu.

3. At the "MAXIMUM string length? : (3-245):" prompt, enter maximum string length for lines you are uploading.

4. The Line Editor now waits up to **30** seconds for you to initiate an ASCII transfer of the file.

5. Use your communications software to perform an ASCII upload of the file. All uploaded text is appended to the WORD-PROCESSING field that you are editing.

6. Once you have finished uploading, it takes **30** seconds of inactivity until the transfer can complete. When done, and after **30** seconds of inactivity, the computer responds "FILE TRANSFER COMPLETE" and you are returned to the "EDIT Option:" prompt.

The same precautions apply for uploading large quantities of text to the Line Editor as apply with the Screen Editor. In particular, if you need to upload large quantities of text quickly, consider switching to an Alternate Editor, such as Kermit (if installed as an Alternate Editor by your site), which provides *error*-correcting communications protocol. Unlike an ASCII transfer (used with the **File Transfer** option), an error-correcting protocol (e.g., Kermit) can transfer text and automatically compensate for any communications overflows, without losing characters.

12.6.2 Text Terminator-String Change

NOTE: Use this when uploading text with blank lines.

In the Line Editor, a blank line (**NULL** string) signals the end of data entry (and returns you to the "EDIT Option:" prompt. Thus, if you plan to *paste* or *upload* text into the Line Editor from a personal computer, any blank lines in the uploaded text have the side-effect of signaling the end of data entry (prematurely). One way around this is to use the File Transfer from Foreign CPU option. Another way around this problem is to use the **Text-Terminator-String Change** option on the **Utility** menu. This lets you change the text terminator so that some character string, rather than a blank line, is what is used to signal the end of data entry.

You can change the text terminator to any string of between **one** and **five** characters; question marks (**?**) or carets (**^**) are *not* allowed in the string. To finish editing a WORD-PROCESSING field and get to the "EDIT Option:" prompt, simply enter your new text terminator string instead of pressing the **Enter** key on a blank line. You should choose a text terminator that does *not* appear in your text: "**end**" would *not* be a good choice, but "**EnD**" might be.

The new text terminator is *not permanent*; it remains only as long as you are editing a particular WORD-PROCESSING field. You can change it back to a **NULL** line by entering an at-sign (**@**) at the "Text-Terminator:" prompt. You can permanently change your default text terminator by changing it in your user characteristics as described in the Kernel manuals.

12.6.3 Programmer Edit (Edit Lines with M Commands)

The **Y-Programmer Edit** option (invoked by entering the letter **Y**) is only available to users with programmer's access. You can enter a line of M code that, line-by-line, reads in the current line in variable **X** and returns the transformed line in variable **Y**. You can specify the range of lines to be transformed by the M code you enter.

For example, to blank out all lines containing the words "**Top Secret**", you could enter the following M code:

Figure 117: Line Editor—Example of Entering M Code while Using the Y-Programmer Edit Option

```
EDIT Option: Y

The text is in X and returned in Y
Enter MUMPS xecute string to do transformation: I X["Top Secret" S Y=" "
```

12.6.4 Editor Change: Switch Editors

The **Editor Change** option, on the **Utility** menu, shows you a list of the editors available for your use, if you enter **two** question marks (**??**) at the "Select ALTERNATE EDITOR:" prompt. The editors include VA FileMan's own editors (the Line Editor and Screen Editor) and any other editors to which you have access. You choose the editor to use by entering its name. When you exit your chosen editor, you return to the Line Editor's "EDIT option:" prompt.

12.6.5 Transfer Text (from another WORD-PROCESSING Field)

The **Transfer Lines From Another Document** option lets you copy text from some other WORD-PROCESSING field into your current field. You need to specify on which line of the current field to place the incoming text and identify the source of the text.

To identify the source of the text, you need to use extended pointer syntax.

REF: The extended pointer syntax is described in the "Relational Navigation" section in the *VA FileMan Advanced User Manual*.

The syntax lets you specify the particular field of a specific entry in a specific file. Briefly, the syntax can be in one of the following two forms:

<expression>:*<file>*:*<field>*

Or

<expression> IN *<file>* FILE:*<field>*

The ***<expression>*** or lookup value has several possible forms. One way to refer to the field is by entry name. To retrieve text from the WORD-PROCESSING PROGNOSIS field of the entry **Angina Pectoris** in a (fictitious) file named DIAGNOSES, you could enter the following, as shown in Figure 118:

Figure 118: Line Editor—Dialogue of the Extended Pointer Syntax while Using the Transfer Lines From Another Document Option: Sample User Entries at Prompts (Example #1)

```
EDIT Option: T <Enter> ransfer incoming text after line: 1
From what text: ?

     Select another entry in this file, OR
     use relational syntax to pick up information from a word-
     processing field in another file.
     ex.  "VALUE":FILE NAME:WORD PROCESSING FIELD NAME

Do you want the entire TEST list?
Enter Yes or No: ^
From what text: "Angina Pectoris":DIAGNOSES:PROGNOSIS
From line: 1 <Enter> thru: 20
ARE YOU SURE? NO// Y <Enter> (YES)... . .
```

Alternately, you can use the second syntax to retrieve the same field in the same file entry, as shown in Figure 119:

Figure 119: Line Editor—Dialogue of the Extended Pointer Syntax while Using the Transfer Lines From Another Document Option: Sample User Entries at Prompts (Example #2)

```
EDIT Option: T <Enter> ransfer incoming text after line: 4

    Entry Name         File Name              Field Name

From what text: "Angina Pectoris" IN DIAGNOSIS FILE:PROGNOSIS
From line: 1 <Enter>  thru: 20
ARE YOU SURE?  NO// Y <Enter>   (YES) ...
```

In this example, at the "From what text:" prompt:

- "**Angina Pectoris**" is the entry name.

- **DIAGNOSIS** is the file name.

- **Prognosis** is the field name.

The requested text is identified by the value of the **.01** field in quotes ("**Angina Pectoris**"). Thus, in this example the ***<expression>*** is the entry's name. You also specify which lines you want to transfer. If you enter **one** question mark (**?**) at the "From line:" prompt, you can list the current numbered lines in the WORD-PROCESSING field. You can then easily choose the lines to be transferred.

If the field from which you are transferring text displays text without wrapping, you receive the message shown in Figure 120:

Figure 120: Line Editor—Example of a Possible Warning Message when Using the Transfer Lines From Another Document Option

```
   WARNING!
   The field you are transferring text from displays text without wrapping.
   The field you are transferring text into may display text differently.

   Do you want to continue?

   Enter Yes or No:
```

Consider the possibility that the text transferred from the no-wrap field may be unreadable, if the field you are transferring into does wrap text. For example, a spreadsheet might lose the alignment of its columns.

If the transfer does *not* succeed, the message **<no change>** is shown. The transfer might fail for several reasons:

- Incorrect syntax for the extended pointer.

- An attempted transfer from other than a WORD-PROCESSING field type.

- Lack of permission to read the file from which you are trying to extract text.

You *must* have **READ** access to transfer text from a file.

REF: For details of the different types of file security, see the "Data Security" section in the *VA FileMan Advanced User Manual*.

Glossary

Term	Description
.001 Field	A field containing the internal entry number of the record.
.01 Field	The one field that *must* be present for every file and file entry. It is also called the NAME field. At a file's creation the **.01** field is given the label **NAME**. This label can be changed.
Access Codes	In VA FileMan, a string of codes that determines your security access to files, fields, and templates. In Kernel, you enter an Access code to identify yourself during signon.
Alternate Editor	One of the text editors available for use from VA FileMan. Editors available vary from site to site. They are entries in the ALTERNATE EDITOR (#1.2) file.
At-Sign (@)	A VA FileMan security Access Code that gives the user programmer-level access to files and to VA FileMan's developer features. See Programmer Access. Also, the at-sign character (**@**) is used at VA FileMan field prompts to delete data. **CAUTION: Programmer access in VistA is defined as DUZ(0)="@". It grants the privilege to become a developer in VistA. Programmer access allows you to work outside many of the security controls enforced by VA FileMan, enables access to all VA FileMan files, access to modify data dictionaries, etc. It is important to proceed with caution when having access to the system in this way.**
Audit Trail	The record or log of an ongoing audit.
Auditing	The monitoring and recording of computer use.
Backward Pointer	A pointer to your current file from another file; used in the extended pointer syntax.
Boolean Expression	A logical comparison between values yielding a **true** or **false** result. In M: • **Zero** means **false**. • *Non*-**Zero** (often one) means **true**.
Canonic Number	A number with no leading **zeroes** and no trailing **zeroes** after a decimal point.
Caption	In ScreenMan, a label displayed on the screen. Captions often identify fields that are to be edited.

Term	Description
Caret	The ^ character (caret); used in VA FileMan for exiting an option or canceling a response. Also used in combination with a field name or prompt to jump to the specified field or prompt. ℹ **NOTE:** Sometimes referred to as the up-arrow in some legacy documentation.
Command Area	In ScreenMan, the bottom portion of the screen used to display help information and to accept user commands.
Cross-Reference	An attribute of a field or a file that identifies an action that should take place when the value of a field is changed. Often, the action is the placement of the field's value into an index. A Traditional cross-reference is defined with a specific field. A New-Style cross-reference is a file attribute and can be composed of one or more fields. New-Style cross-references are stored in the INDEX (#.11) file.
Cursor	On your display terminal, the line or rectangle identifying where your next input is placed on the screen.
Data Dictionary	A record of a file's structure, its elements (fields and their attributes), and relationships to other files. Often abbreviated as DD.
DATA TYPE	The kind of data stored in a field. The following are examples of VA FileMan DATA TYPEs: • NUMERIC • COMPUTED • WORD-PROCESSING
Database	An organized collection of data spanning many files. Often, all the files on a system constitute that system's database.
Decentralized Hospital Computer Program (DHCP)	See VistA.
Default	A computer-provided response to a question or prompt. The default might be a value pre-existing in a file. Often, you can change a default.
Device Prompt	A Kernel prompt at which you identify where to send your output.
Edit Window	In ScreenMan, the area in which you enter or edit data. It is highlighted with either reverse video or an underline. In Screen Editor, the area in which you enter and edit text; the area between the status bar and the ruler.
Entry	A record in a file. "Entry" and "record" are used interchangeably.
Extended Pointers	A means to reference fields in files other than your current file.
Field	In an entry, a specified area used to hold values. The specifications of each VA FileMan field are documented in the file's data dictionary.

Term	Description
Field Number	The unique number used to identify a field in a file. A field can be referenced by **#** followed by the field number.
File	A set of related records (or entries) treated as a unit.
Form	In ScreenMan, a group of one or more pages that comprise a complete transaction. Comparable to an INPUT template.
FREE TEXT	A DATA TYPE that can contain any printable characters.
Full-Screen Editing	The ability to enter data in various locations on the two-dimensional computer display. Compare to scrolling mode.
Histogram	A type of bar graph that indicates frequency of occurrence of particular values.
Identifier	In VA FileMan, a field that is defined to aid in identifying an entry in conjunction with the NAME field.
Index	An ordered list used to speed retrieval of entries from a file based on a value in some field or fields. Definitions: • **Simple Index—**Refers to an index that stores the data for a single field. • **Compound Index—**Refers to an index that stores the data for more than one field. Indexes are created and maintained via cross-references.
INPUT Template	A pre-defined list of fields that together comprise an editing session. Within INPUT templates, sub files can now be edited in more than one place within the template, so that different subfields can be edited each time.
Internal Entry Number	The number used to identify an entry within a file. Every record has a unique internal entry number. Often abbreviated as IEN.
Kernel	A VistA software application that functions as an intermediary between the host operating system and VistA applications. Kernel includes installation, menu, security, and device services.
Key	A group of fields that, taken collectively, uniquely identifies a record in a file or subfile. All fields in a key *must* have values. Definitions: • **Simple Key—**Refers to keys that are composed of only one field. • **Compound Key—**Refers to keys that are composed of more than one field. Keys are stored in the KEY (#.31) file.
LAYGO	A user's authorization to create a new entry when editing a computer file. An acronym for **L**earn **A**s **Y**ou **Go**.
Line Editor	The VA FileMan editor that lets you input and change text on a line-by-line basis. The Line Editor works in scrolling mode. See Screen Editor.

Term	Description
Lookup	To find an entry in a file using a value for one of its fields.
Mailman	An electronic mail system (email) that allows you to send messages to and receive them from other users via the computer. It is part of VistA.
Menu	A list that includes the names of options from which you can select an activity.
Multiple	A VA FileMan DATA TYPE that allows more than one value for a single entry. See Subfile.
MUMPS	Abbreviated as M. The American National Standards Institute (ANSI) computer language used by VA FileMan and throughout VistA. The acronym MUMPS stands for **M**assachusetts General Hospital **U**tility **M**ulti **P**rogramming **S**ystem.
Name Field	The one field that *must* be present for every file and file entry. It is also called the **.01** field. At a file's creation the **.01** field is given the label **NAME**. This label can be changed.
Navigation	Navigation can mean switching your reference point from one file to another. Navigation can also mean moving your cursor around a terminal display or a document using cursor keys and other commands.
Non-Canonic Number	A number with either leading **zeroes** or trailing **zeroes** after a decimal point. M treats *non*-canonic numbers as text instead of as numbers.
Non-NULL	A value other than **NULL**. A **space** and **zero** are *non*-**NULL** values.
NULL	Empty. A field or variable that has no value associated with it is **NULL**.
NULL Response	When replying to a prompt, pressing only the **Enter** key, abbreviated as **<Enter>**, to enter nothing.
Numeric Expression	An expression whose value is a number. Compare to string expression.
Operator	One of the processes done to the elements in an expression to create a value.
Option	A computing activity that you can select, usually a choice from a menu.
Paste	Insert text or other data as input into one computer program that has been copied into a clipboard by the same or by another computer program.
Pattern Match	In M, an operator that compares the contents of a variable or literal to a specified pattern of characters or kinds of characters.
PF Keys	Keys on a terminal keyboard labeled **PF1**, **PF2**, etc. that are used to perform special functions instead of displaying visible characters.
POINTER TO A FILE	A field DATA TYPE that contains an explicit reference to an entry in a file. POINTER TO A FILE-type fields are used to relate files to each other.

Term	Description
Popup Page	In ScreenMan, a page that overlays the regular ScreenMan screen in order to present the contents of a selected Multiple.
Preferred Editor	The editor always entered when you access a WORD-PROCESSING-type field; your default editor. Kernel *must* be present to establish a Preferred Editor.
Print Template	The stored specifications of a printed report, including fields to be printed and formatting instructions.
Programmer Access	The ability to use VA FileMan features that are reserved for application developers. Referred to as "having the at-sign (@)" because the at-sign is the **DUZ(0)** value that grants programmer access. ⚠ **CAUTION: Programmer access in VistA is defined as DUZ(0)="@". It grants the privilege to become a developer in VistA. Programmer access allows you to work outside many of the security controls enforced by VA FileMan, enables access to all VA FileMan files, access to modify data dictionaries, etc. It is important to proceed with caution when having access to the system in this way.**
Prompt	A question or message from the computer requiring your response.
Record	A set of data pertaining to a single entity in a file; an entry in a file.
Record Number	See Internal Entry Number.
Relational Navigation	Changing your current (or primary) file reference to another file. Relational navigation is accomplished by using the extended pointer syntax without specifying a field in the referenced file.
Required Field	A field that *cannot* be left **NULL** for an entry.
Scattergram	A graph in which occurrences of two fields are displayed on an **X-Y** coordinate grid to aid in data analysis.
Screen Editor	VA FileMan's Screen-Oriented text editor. It can be used to enter data into any WORD-PROCESSING field using full-screen editing instead of line-by-line editing. See Line Editor.
Screen-Oriented	A computer interface in which you see many lines of data at a time and in which you can move your cursor around the display screen using screen navigation commands. Compare to Scrolling Mode.
ScreenMan	The set of routines that supports Screen-Oriented data editing and data display.
Scrolling Mode	The presentation of the interactive dialogue one line at a time. Compare to Screen-Oriented.

Term	Description
SDP	An area on disk set aside for temporary, sequential storage of data; an abbreviation for **S**equential **D**isk **P**rocessor. It is available on some M implementations (e.g., DSM-11).
SEARCH Template	The saved results of a search operation. Usually, the actual entries found are stored in addition to the criteria used to select those entries.
Security	The strategies and procedures used to ensure that user access to data and data structures is controlled and appropriate.
SET OF CODES	A field DATA TYPE where a short character string is defined to represent a longer value.
Simple Extended Pointers	An extended pointer that uses a pre-existing pointer relationship to access entries in another file.
Sort	To place items in order, often in alphabetical or numeric sequence.
SORT Template	The stored record of sort specifications. It contains sorting order as well as restrictions on the selection of entries. Used to prepare entries for printing.
Stuff	To place values directly into a field, usually with no user interaction.
Subentry	An entry in a Multiple; also called a subrecord.
Subfield	A field in a Multiple.
Subfile	The data structure of a Multiple. In many respects, a Subfile has the same characteristics as a File.
Terminal Emulation	Using one kind of terminal or computer display to mimic another kind. Often used with personal computer (PC) remote communication applications.
Terminal Type	The designation of the kind of computer peripheral being used (e.g., the kind of video display or printer). Full terminal type functionality is supplied by Kernel.
Truth Test	An evaluation of an expression yielding a **true** or **false** result. In M, usually either of the following is returned from a truth test: • **1**—True. • **0**—False.
Upload	Send a file from one computer system to another (usually using communications software).
VistA	The Veterans Health Information Systems and Technology Architecture (VistA), within the Department of Veterans Affairs (VA), is the component of the Veterans Health Administration (VHA) that develops software and installs, maintains, and updates compatible computer systems in VA medical sites. (Previously known as the Decentralized Hospital Computer Program [DHCP].)

REF: For a list of commonly used terms and definitions, see the OIT Master Glossary VA Intranet website.

For a list of commonly used acronyms, see the VA Acronym Lookup Intranet Website.

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