CHAPTER 3

CREATE FACILITY

CREATING A FILE DEFINITION

After the the design decisions outlined in Chapter 2 are completed for your application, the next step in creating an INTAC database is to define the database structure. The file definition, created with the CREATE facility is the INTAC structure that describes and organizes the file, the indexes, and the data items in the records.

This chapter presents:
- three general concepts frequently referred to in INTAC: the filename, the data item name, and the data type.
- the CREATE command and its sequence of questions
- the use of the HELP command within the CREATE facility

GENERAL CONCEPTS

THE FILENAME

Every INTAC file is identified by a unique filename. The filename consists of three parts: a system logical disk assignment, a name specified by the user, and an extension.

The system logical disk assignment is automatically added to the filename by the system and may be ignored. (See Appendix B under *Use of Private Pack* for use of this disk assignment.)

The user-specified name contains from one to six alphabetic or numeric characters. (On VMS systems, as many as 9 characters are allowed.) Spaces, special characters, and INTAC and BASIC reserved words are not allowed. (See Appendix D for a list of reserved words.) For a detailed explanation of file specifications, see the users guide appropriate to your computer.

The filename extension consists of a period (.) followed by one to three alphabetic or numeric characters. If the user omits the extension, INTAC assigns an extension based on the operation. The following table lists the default extension assigned by INTAC when creating a file during the execution of each major command:

COMMAND	DEFAULT EXTENTION
CREATE	.INT
LIST	.LST
MODIFY	.MO
REBUILD	.REB
DUMP	.DMP
INQUIRE	.INQ
GENERATE	.TSK or .BAC or .EXE
TRANSACTION	.TSK or .BAC or .EXE

Filename extensions pertain not only to the file created by a command, but to the file entered as input to a command. Most INTAC commands accept input from a source file as well as from the keyboard. Valid source file extensions are covered in the question sequence of each command.

THE DATA ITEM NAME

Every data item within a file is identified by a data item name. The name may contain from one to 24 alphabetic characters, numbers, and periods. The first character must be alphabetic. Special characters, spaces, or INTAC and BASIC reserved words are not allowed. The same data item name may be used in several files.

In a multi-file database management system, some data items will occur in more than one file. When using the system, you can distinguish a data item name in one file from the same name in another file by qualifying the item name or number as explained next.

QUALIFIED DATA ITEM NAMES

The general format of the qualified data item name is:

    Fn.dataitemname

    where

    F   is a constant abbreviation for FILE.

    n   is the relative number of the file associated with the filename
                     in a previous INTAC statement. (The FILE(S) statement in the
                     INQUIRE command and in the GENERATE and
                     TRANSACTION definition file implicitly associates a filename
                     with a file number. This statement is discussed in subsequent
                     chapters.) If omitted, the file number defaults to the primary
                     file.

    dataitemname   is a valid data item in an INTAC file definition.

For example, if Tri–City Company's ASSET and DEPT files are defined as files 1 and 2 respectively, and DEPT.NO is a data item name in both files, then F1.DEPT.NO refers to the data item in the ASSET file and F2.DEPT.NO refers to the item in the DEPT file.

QUALIFIED DATA ITEM NUMBERS

The general format of the qualified data item number is:

    Fn.dataitemno

    where

F	is a constant abbreviation for FILE.
n	is a file number associated with a filename in a previous INTAC statement.
dataitemno	is the number of the data item in an INTAC file definition.

For example, if DEPT.NO is defined as data item 1 in both the ASSET and DEPT files, then F1.1, F1.DEPT.NO, and DEPT.NO refer to the item in the ASSET file, and F2.1 and F2.DEPT.NO refer to the item in the DEPT file.

THE DATA TYPE

To maximize storage efficiency, each data item is characterized by a data type. The data type reflects the way information is represented in storage. To determine the data type of an item, evaluate the following factors:

1. The content of the data item (if the field is to contain alpha, numeric, or date information)

2. The potential size of the item (how large the field may be)

3. If the item is numeric, the range of the number

4. If the item is a string, the need for leading zeros

The CREATE command is one of several INTAC commands that prompts you for the data type of an item. Awareness of an item's data type minimizes the likelihood of requesting an inappropriate operation on a field, such as an arithmetic operation on a string.

The following table summarizes the seven data types available in INTAC. The examples are data items in Tri-City Company's ASSET file. For complete descriptions of these items, see *DesignDecisions* in Chapter 2 for the sample application.

S	An alphanumeric character string not requiring an arithmetic operation. Suitable for descriptive data, comments, or numeric data that does not involve calculation. (Allows numeric data to be sorted by parts of the string; ensures numbers will not be acted upon by calculations.)	
	Examples: DESCRIPTION, ASSET.TYPE	1 – 132
Z	A zero–filled alphanumeric character string, not requiring an arithmetic operation. If a numeric value does not fill the field, INTAC right justifies the value and precedes the value with leading zeros. An alphanumeric value is left–justified and no zeros are added. Suitable for numbers that must be aligned uniformly.	
	Example: ASSET.NO	1 – 132
R	A real, floating point (decimal) number, either positive or negative. Includes a maximum of 16 significant digits. Suitable for all arithmetic operations.	
	Examples: ORIG.COST, LEASE.D.PYMT	8
B	A one–byte integer; includes fixed point whole numbers between 0 and +255. No decimals or negative numbers are allowed. Suitable for smaller numbers not requiring calculation. (If a byte field is used as an index, you should ensure that it never has a value equal to 255.)	
	Example: DELETE FLAG	1
I	A two–byte integer; includes numbers between –32768 and +32767. These numbers represent the smallest and largest binary values that can be stored in two–bytes. Suitable for integers within this limited range that may or may not be acted upon arithmetically.	
	Examples: PUR.YEAR, PUR.MONTH, LIFE	2
P	A pointer or three–byte integer; includes whole numbers between 0 and 8388607. Decimals or negative numbers are not allowed. Suitable for large numbers that may or may not be acted upon arithmetically.	
	Example: PURCHASE.ORD.NO	3
D	A date field with the format MM/DD/YY or MM/DD/YYYY.	2

THE CREATE FACILITY

The CREATE command creates a new INTAC file definition and defines each data item and index in the file. As noted previously, the file definition contains descriptive information rather than actual data values. The CREATE command prompts you for answers to a series of questions and uses your responses to develop the file definition.

THE LONG VERSION OF QUESTIONS

Two question formats are available with the CREATE command. The long version gives you greater control over the file by allowing you to limit file access or optimize storage efficiency. This version prompts for eight additional questions, distinguished here in the manual by an asterisk (*). The short or default version causes INTAC to bypass the extra questions and to automatically assign appropriate values to those fields.

SEQUENCE OF CREATE QUESTIONS

To begin the prompting sequence, enter the abbreviation CR and a carriage return in response to the COMMAND? prompt.

```
COMMAND? CR        (Enter a carriage return)

CREATE AN INTAC FILE
```

For the purposes of this description, the questions appear numbered below.

1. INPUT FROM <KB:> ?

You indicate whether command input will be from the keyboard or from a file. You may also specify the long version of questions. The following responses are acceptable:

> A carriage return or KB: indicates that input is to be entered interactively, at the keyboard.
>
> /L specifies the long version of keyboard questions. The short version is the default and does not require an entry.
>
> A filename indicates that input is from a definition file called filename. The file may be created with the LIST command, described in Chapter 4. An extension of .LST is assumed if none is provided. If the response is filename, no further questions are asked.

2. FILE TO BE CREATED ?

Enter the name of the INTAC file to be created. An extension of .INT is assumed if none is given.

Questions 3 through 15 are asked sequentially for each data item. After information for one item is entered, INTAC increments the item number by one and prompts for the next item. After all items have been entered, type a carriage return. This terminates prompting for data item information and initiates prompting for general file and index information (questions 16 through 24).

3. ITEM # 1 NAME ?

Enter the name of the data item based on the rules outlined under *The Data Item Name* many as 97 user-defined items are allowed.

To define multiple data items in numeric sequence, follow the data item name with /n, where n is the number of items to be created.

For example, to create three data items named ADDRESS1, ADDRESS2, and ADDRESS3, enter:

        ITEM #1 NAME? **ADDRESS/3**

These items will be numbered 1, 2, and 3 respectively in the file definition. The sequence number is added to the end of each name and is used in the report column heading, if an alternate heading is not specified.

The sequence number may also be positioned at any point in the data item name, other than at the beginning. To adjust its placement, type a pound sign (#) in the spot where the numbers are to be inserted, and type the total number of items to be created at the end of the name.

For example, to specify 12 data items, named MONTH1.AMT through MONTH12.AMT, enter:

        ITEM #4 NAME? **MONTH#.AMT/12**

INTAC will assign data item numbers 4 through 15 to the sequenced items.

4. DATA TYPE ?

Enter the data type of the item, as defined in this chapter, page 3-4.

5. LENGTH ?

This question is asked only for character string data items, including data types S and Z. Enter the maximum length in characters of the item. The number may range from 1 to 132. INTAC left justifies strings within the specified length.

∗6.   ADD SECURITY LEVEL <0>?

∗7.   CHANGE SECURITY LEVEL <0> ?

∗8.   INQUIRE SECURITY LEVEL <0>?

These questions are asked only if you specify the long version of the CREATE command.

Security level codes, ranging from 0 to 99, may be assigned to a data item to protect it from unauthorized adds, changes, and inquiries. If the ADD SECURITY LEVEL is non−zero, the INTAC EDIT facility will not prompt for value of the item when adding a record. A default value must exist. If the CHANGE SECURITY LEVEL is non−zero, the INTAC EDIT facility will not allow the value of the item to be changed. If the INQUIRE SECURITY LEVEL is non−zero, the EDIT and INQUIRE facilities will not allow the item to be shown.

Security levels may be implemented with user−written routines in the INTAC GE and TR facilities.

9. PRINT FORMAT <default>?

The print format describes the field size for printing numeric and date items. INTAC right−justifies numerics within the print field. Real numbers are stored in the file rounded to the number of decimals specified in the print format. If you misjudge the maximum size of a number and make the print format too small, results each time you print (in DU, IN, GE, and TR) are unpredictable. Sometimes numbers will be printed preceded by a question mark and the printed items may be slightly misaligned. Correct the problem by increasing the print format using the MO facility.

NUMERIC ITEMS

To print numeric data, enter a print format in the format xx.y where

xx   is the total width of the printed field including commas, decimal point, and a sign (whether or not a sign is printed).

y   is the number of decimal places in a floating point number.

For example, the print format for −23,476.98 should be at least 10.2.

The value of xx may not exceed 22 for floating point numbers, 10 for pointers, 7 for integers, and 4 for bytes. The value of y on real numbers cannot exceed 9.

DATE ITEMS

Two print formats are available to print date items. Enter 8 in response to the PRINT
FORMAT prompt to print the date as mm/dd/yy or 03/22/81. Specify 10 to print the
date as mm/dd/yyyy or 03/22/1981.

PRINT FORMAT DEFAULTS

The print format default depends on the data type of the item, as shown in the table
below.

DATA TYPE	PRINT FORMAT
Real, floating point	14.2
Integer	6
Pointer	7
Byte	4
Date	8

10. COLUMN HEADING <none>?

Enter the data item's column heading for use on reports and inquiries. INTAC automatically
underlines and centers the heading within the available space. The maximum length of each
line of heading is 32 characters.

If a heading is to print on more than one line, separate each heading line with a slash (/).
For example, the entry

     COLUMN HEADING <none>? PUR.ORD/NO

prints in the report column as

         PUR.ORD
           NO

To print the data item name as the column heading, enter a carriage return in response to
the COLUMN HEADING prompt.

Questions 11 through 15 establish a default value and validation criteria (called "EDIT
PARAMETERS") for a data item. INTAC allows newly entered data item values to be
validated against four different sets of criteria:
   • a minimum value
   • a maximum value
   • an external file
   • a table of values

The procedures for setting the edit parameters are described below.

11.   DEFAULT VALUE <none>?

The default value for a data item is entered into the records if you do not specify a value for the field. This value is used when new records are added to the file with the EDIT command.

For example, the default for a date item is often TODAY, a value obtainable from the operating system. If you do not supply an alternate date, INTAC enters today's date as the field's value.

ZEROS AND BLANKS

If the default is 0, enter a zero. If the default value is a blank, enter one or more spaces.

OPTIONAL DATA ITEMS

Data items must be given default values if they are to be optional. If a default is not supplied, the EDIT ADD subcommand, described in Chapter 7, does not allow the user to skip the item during editing. (See No Default Value below.)

COMMENTS

The default value may be followed by a comment. Separate the value from the comment with a colon (:). The maximum length of the default value and the comment is 32 characters. For example, if the default value of the data item ASSET.TYPE is F, you may enter

        DEFAULT VALUE <none>? F:OFFICE FURNITURE

to describe the value. The comment appears with the default value under the heading "Edit Parameters" in the file definition listing, discussed in Chapter 4.

NO DEFAULT VALUE

If the data item is required and a value must be supplied, enter a carriage return in response to the prompt.

12.   MINIMUM <none>?

Enter the smallest or lowest value allowed for the data item. INTAC validates incoming values for the field against this value when records are added to the file.

For example, in the Tri-City asset file, the minimum value for the data item PUR.YEAR is 71. This was the year the company was founded. If the user attempts to enter a value lower than 71, INTAC flags the entry as invalid.

COMMENTS

The minimum value may be followed by a colon (:) and a comment. The maximum length of the minimum value and the comment is 32 characters.

NO MINIMUM

If you do not want to specify a minimum value, enter a carriage return in response to the prompt.

13. MAXIMUM <none>?

Enter the largest or highest value allowed for the data item. Incoming data item values are checked against this value when records are added to the file or when the file is updated.

For example, in the ASSET file, the largest value allowed for the data item PUR.MONTH is 12. An entry greater than 12 causes INTAC to flag the entry as invalid.

COMMENTS

The maximum value may be followed by a colon (:) and a comment. The combined entry may not exceed 32 characters.

NO MAXIMUM

If you do no want to specify a maximum value, enter a carriage return in response to the prompt.

14. EXTERNAL FILE INDEX <none>?

As noted in Chapter 2 of the manual, one of the practical uses of an index is to create an external table for validation purposes. The values to be validated are stored in two places--in the primary file and in a secondary file. Only values that correspond to existing values in the external file can be added to the primary file. There must be an index in the external file on the data item used to link the files. It is possible to link files with data items with different names and print formats, so long as the data type and length (for strings) are the same.

An external file can be used for validation only if MINIMUM, MAXIMUM, and TABLE VALUES are not specified.

EXAMPLE

The data item PURCHASE.ORD.NO exists in both Tri–City Company's ASSET file and ORDER file. As new records are added to the ASSET file, the PURCHASE.ORD.NO is verified against existing purchase order numbers in the ORDER file. Validation can occur because PURCHASE.ORD.NO is an index on the referenced file and values for the item already exist in the ORDER file.

FORMAT

Enter the name of the external file in the format

    filename(n)

where filename is the name of an external INTAC file. An extension of .INT is assumed if none is given. (n) is the index number of the data item on the external file. (n) may be omitted if the item is the primary index on the external file.

For example, the following entry instructs INTAC to use the external ORDER file, with index 1 defined as PURCHASE.ORD.NO, for validation:

```
EXTERNAL FILE INDEX <none>? ORDER.INT(1)
```

15. TABLE VALUE # 1 <none>?

If you did not enter MINIMUM and MAXIMUM values or specify an EXTERNAL FILE INDEX, INTAC will prompt for a table of values. The table specifies the absolute values that the data item can assume. Any number of entries is allowed, so long as the total number of edit parameters for the file does not exceed 32,767. INTAC increments the table entry number by one after each user entry.

Enter the values, one after the other, until the entire table is defined. Type a carriage return to terminate the TABLE VALUE prompt and begin prompting for the next data item.

COMMENTS

Each table value can be followed by a colon (:) and a comment. The value and comment may not exceed 32 characters.

EXAMPLE

In the example below, a table of four values is created for the data item ASSET.TYPE. A descriptive comment follows each value. As records are added to the file, INTAC will accept only the four specified values.

```
ITEM # 4 NAME? ASSET.TYPE
DATA TYPE? S
LENGTH? 1
```

```
COLUMN HEADING  <none>? ASSET/TYPE
DEFAULT VALUE  <none>?
MINIMUM  <none>?
MAXIMUM  <none>?
EXTERNAL FILE INDEX  <none>?

TABLE VALUE # 1  <none>? F:FURNITURE
TABLE VALUE # 2  <none>? C:COMPUTER EQPT
TABLE VALUE # 3  <none>? E:MISC EQPT
TABLE VALUE # 4  <none>? O:OTHER
TABLE VALUE # 5  <none>?

ITEM # 5 NAME?
```

Questions 16 through 24 prompt for information concerning the indexes and the file as a whole. These questions are asked after all data items have been entered and a carriage return has been entered in response to question 3.

*16. DELETE SECURITY LEVEL <0>?

This question is asked only if the long version of the CREATE command is specified.

Similar to questions 6,7, and 8, which may be used to protect items from unauthorized adds, changes, and inquiries, this specification protects records from unauthorized deletions. If the value is non-zero, the INTAC EDIT facility will not allow records to be deleted from the file. Security levels may range from 0 to 99.

17. MAXIMUM NUMBER OF RECORDS ?

Enter the number of records the file is likely to contain in the near future. To determine a file's maximum number of records, consider how active the file is likely to be.

For example, the large, dynamic Tri–City ASSET file is expected to contain a maximum of 600 records. The smaller, more static VENDOR file is not likely to exceed 50 records, since the same vendors are likely to be used repeatedly.

INTAC pre–extends all files to their maximum size for efficiency and for handling several simultaneous accesses to the file. The maximum number of records is used to calculate the number of blocks of disk storage allocated to the file. As the file grows, the user can easily change the maximum number of records with the REBUILD command , described in Chapter 6.

A default is not permitted for this prompt.

*18. BLOCKING FACTOR <1>?

This question is asked only if the long version of the CREATE command is specified.

The blocking factor indicates the number of 512–byte blocks in a physical block of the file. By controlling the blocking factor, you may often conserve space in your file. The savings may be considerable in a large file.

For example, assume that a file's blocking factor is 1, with each block containing 512 bytes and that every record is 340 bytes long. This configuration allows only one complete record to fit into a block, resulting in 172 bytes of wasted storage per block. However, if a blocking factor of 2 is specified, each block can hold 1024 bytes. In this case, three 340–byte records, totaling 1020 bytes, can fit into one block. Only four bytes of storage are unused.

The record size in bytes is given on a listing of the file as "logical record size". Record size in bytes is figured by adding up the lengths of all items. The length of a string may be 1 to 132. Each item with data type R is 8 bytes; B is 1; I is 2; P is 3; and D is 2. The listing also tells you the number of records per block. (See Chapter 4, LI, for file listings.)

You can specify a blocking factor of 1, 2, 3, or 4 in response to the prompt. The default blocking factor is the minimum required to accommodate the logical record size and INTAC will not allow you to specify too low a factor. However, to achieve efficiency, you may want to specify a higher factor than the default. Defaults are assigned as follows:

RSTS/E	VMS
1 up to 512 bytes	up to 511 bytes
2 513 to 1024 bytes	512 to 1022 bytes
3 1025 to 1536 bytes	1023 to 1533 bytes
4 greater than 1536	greater than 1533

If a file contains records that are greater than 511 or 512 bytes, the blocking factor must be large enough to hold at least one record.

19.   FILE OPEN MODE <0>?

The FILE OPEN MODE indicates whether multiple users can access the file simultaneously for reporting or updating.

Enter 0 or a carriage return if only one user at a time can access the file. Enter 1 if multiple users can access the file simultaneously.

20.   NUMBER OF INDEXES <0>?

An INTAC file can have a maximum of five indexes. Enter a number from 1 to 5.

Enter a carriage return for a sequential file that does not require an index and that is to be searched record by record.

*21. INDEX LOADING PERCENT <67>?

This question is asked only if the long version of the CREATE command is specified.

The INDEX LOADING PERCENT indicates the percentage of each index block to be filled when the file is rebuilt. The percentage may range from 25 to 100.

An active file with many records added randomly requires a smaller loading percent to allow for additional index space. Stable files conserve space with a higher loading factor, since the index will be modified infrequently.

*22. NUMBER OF EXTRA INDEX BLOCKS <0>?

This question is asked only if the long version of the CREATE command is specified.

Enter the number of extra blocks to be added at the end of the index. These blocks are used when the majority of the records added to the file are sequential.

*23. INDEX FILE NAME <same>?

This question is asked only if the long version of the CREATE command is specified.

INTAC allows an index to be stored apart from its associated file. To store the index separately, enter the name of the file that will hold the indexes. Use a separate file only if the file is so large that data and indexes cannot be contained in the maximum file capacity.

A carriage return causes the index to be stored with its associated file.

24. INDEX #1 ITEM #1 ?

Prompting for this question is based on the number of indexes the user specified in question 20. INTAC prompts for the data item numbers or names comprising each index. A maximum of six item numbers may be entered for each index. (However, the total length in characters or bytes of the item lengths may not exceed 120.) Type a carriage return after all items for the first index are entered. INTAC then increments the index number by 1 and begins prompting for item numbers in the second index, until all items in every index are specified and the entire file has been created.

For example, in the ASSET file, if ASSET.NO is data item 2 and DEPT.NO is data item 1, then the following entries cause index 1 to be comprised of ASSET.NO and index 2 to be composed of DEPT.NO:

```
INDEX # 1 ITEM # 1? 2
INDEX # 1 ITEM # 2?

INDEX # 2 ITEM # 1? 1
INDEX # 2 ITEM # 2?

FILE ASSET.INT CREATED
```

```
COLUMN HEADING <none>? CITY STATE
DEFAULT VALUE <none>?
MINIMUM <none>?
MAXIMUM <none>?
EXTERNAL FILE INDEX <none>?
TABLE VALUE # 1 <none>?

ITEM # 5 NAME? ZIP.CODE
DATA TYPE? S
LENGTH? 5
COLUMN HEADING <none>? ZIP CODE
DEFAULT VALUE <none>?
MINIMUM <none>?
MAXIMUM <none>?
EXTERNAL FILE INDEX <none>?
TABLE VALUE # 1 <none>?

ITEM # 6 NAME?
MAXIMUM NUMBER OF DATA RECORDS? 50
FILE OPEN MODE <O>? O
NUMBER OF INDEXES <O>? 1
INDEX # 1 ITEM # 1? 2
INDEX # 1 ITEM # 2?

FILE VENDOR.INT CREATED
```

OBTAINING HELP

The example below illustrates the use of the HELP command during the creation of Tri–City's DEPT file. Note the two unsuccessful attempts to use the backslash. After data items are created, INTAC cannot return to a previous question.

```
COMMAND? CR

CREATE AN INTAC FILE

INPUT FROM <KB:>? HELP
AN INTAC FILE CAN BE CREATED INTERACTIVELY AT THE TERMINAL
OR THROUGH A TEXT FILE THAT IS IN THE SAME FORMAT AS A
FILE CREATED WITH THE LI OPTION.

INPUT FROM <KB:>?
FILE TO BE CREATED? HELP
ENTER NAME OF INTAC FILE TO BE CREATED
AN EXTENSION OF '.INT' IS ASSUMED IF NONE IS GIVEN

FILE TO BE CREATED? DEPT
ITEM # 1 NAME? HELP
ENTER NAME OF ITEM FROM 1-24 CHARACTERS
NAME MUST NOT BE A WORD RESERVED BY INTAC OR BASIC
FIRST CHARACTER MUST BE ALPHABETIC - NO SPECIAL CHARS
TO DEFINE MULTIPLE ITEMS, FOLLOW NAME WITH '/N',
WHERE N IS THE NUMBER OF ITEMS

ITEM # 1 NAME? DEPT.NO
DATA TYPE? HELP
     S - STRING
     Z - ZERO-FILLED STRING
     R - REAL
     P - POINTER
     I - INTEGER
     B - BYTE
     D - DATE
```

The INTAC file has now been created. A listing of the file definition may be obtained using the LI facility described in Chapter 4.

COMPLETE CR SESSION EXAMPLE

The following example illustrates the creation of Tri–City Company's VENDOR file, one of the four files used by the Asset Tracking System. The file contains five user–defined data items and one index, composed of the data item VENDOR.NO. For every item except STREET.ADDRESS, the Tri–City planner supplies a report column heading that is different from the data item name. Note the use of the backslash to return to a previous prompt.

```
Ready

INT

     TM
INTAC
Interactive Data Management and Retrieval - VERSION:APR-82
(c) COPYRIGHT 1979 BY ROSS SYSTEMS, INC.

COMMAND? CR

CREATE AN INTAC FILE

INPUT FROM <KB:>?
FILE TO BE CREATED? VENDOR
ITEM # 1 NAME? VENDOR.NAME
DATA TYPE? S
LENGTH? 225
COLUMN HEADING <none>? \
LENGTH? 5
COLUMN HEADING <none>? \
LENGTH? 25
COLUMN HEADING <none>? VENDOR/NAME
DEFAULT VALUE <none> ?
MINIMUM <none>?
MAXIMUM <none>?
EXTERNAL FILE INDEX <none>?
TABLE VALUE # 1 <none>?

ITEM # 2 NAME? VENDOR.NO
DATA TYPE? I
PRINT FORMAT <6>? 4
COLUMN HEADING <none>? VEND/NO
DEFAULT VALUE <none>?
MINIMUM <none>? 1
MAXIMUM <none>? 50

ITEM # 3 NAME? STREET.ADDRESS
DATA TYPE? S
LENGTH? 25
COLUMN HEADING <none>?
DEFAULT VALUE <none>?
MINIMUM <none>?
MAXIMUM <none>?
EXTERNAL FILE INDEX <none>?
TABLE VALUE # 1 <none>?

ITEM # 4 NAME? CITY.STATE
DATA TYPE? S
LENGTH? 25
```

```
DATA TYPE?  I
PRINT FORMAT  <6>? HELP
ENTER PRINT FORMAT IN FORM XX.Y, WHERE XX IS
TOTAL WIDTH OF PRINTED FIELD INCLUDING COMMAS,
DECIMAL POINT, AND SIGN. Y IS THE NUMBER OF
DECIMAL PLACES IN FLOATING POINT NUMBERS ONLY
FOR DATE ITEMS PRINT FORMAT IS 8(MM/DD/YY) OR
10(MM/DD/YYYY)

PRINT FORMAT  <6>? 4
COLUMN HEADING  <none>? HELP
ENTER COLUMN HEADING TO USED ON REPORTS AND INQUIRIES
IF (CR) DATA ITEM NAME WILL BE USED

COLUMN HEADING  <none>? DEPT/NO
DEFAULT VALUE  <none>? HELP
ENTER DEFAULT VALUE FOR DATA ITEM TO BE USED WHEN YOU
ADD A NEW RECORD AND DO NOT SPECIFY A VALUE
ENTER (CR) IF NO DEFAULT. THIS CAUSES ITEM TO BE
A REQUIRED ITEM

DEFAULT VALUE  <none>?
MINIMUM  <none>? HELP
ENTER LOWEST ALLOWED VALUE FOR ITEM
ENTER (CR) IF NO MINIMUM IS DESIRED

MINIMUM  <none>?
MAXIMUM  <none>?
EXTERNAL FILE INDEX  <none>? HELP
YOU MAY SPECIFY THE NAME OF ANOTHER INTAC FILE TO BE
USED IN VALIDATING DATA FOR ITEM. ONE OF INDEXES OF
EXTERNAL FILE MUST BE SAME AS THIS DATA ITEM.
ENTER NAME OF EXTERNAL FILE IN FORM FILENAME(N)
WHERE FILENAME IS NAME OF INTAC FILE AND N IS
INDEX NUMBER THAT CONTAINS THE DATA ITEM. N MAY
BE OMITTED IF ITEM IS THE PRIMARY INDEX ON EXTERNAL
FILE. AN EXTENSION OF INT IS ASSUMED, IF NONE IS GIVEN

EXTERNAL FILE INDEX  <none>?
TABLE VALUE # 1  <none>?

ITEM # 2 NAME?
MAXIMUM NUMBER OF DATA RECORDS? \
BACKING UP IS NOT ALLOWED HERE
MAXIMUM NUMBER OF DATA RECORDS? 25
FILE OPEN MODE  <o>? \
FILE OPEN MODE  <o>? HELP
OPEN MODE IS O OR 1
MODE = O - ONLY ONE USER MAY ACCESS THE FILE AT ANY ONE TIME
MODE = 1 - MULTIPLE USERS MAY ACCESS THE FILE SIMULTANEOUSLY

FILE OPEN MODE  <o>?
NUMBER OF INDEXES  <o>? 1
INDEX # 1 ITEM # 1? 1
INDEX # 1 ITEM # 2?

FILE DEPT.INT CREATED
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