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Thoroughbred *Script-IV*ä

Quick Reference

Starting the *Script-IV* Editor

Start IDOL-IV

From the Thoroughbred *Basic* Utilities Menu type **ID** and press **Enter**.

From the Thoroughbred Console Mode type **RUN"ID"** and press **Enter**.

Start the *Script-IV* Editor

From any IDOL-IV menu press **F1** and select **9-Scripts**.

From the Development Menu select **1-Edit** and select **9-Scripts**.

For More Information

...on 3GL system functions and system variables, refer to the Thoroughbred *Basic* Reference Manual.

...on *Dictionary-IV* features, refer to the Thoroughbred *Dictionary-IV* Reference Manuals.

...on *Query-IV* features, refer to the Thoroughbred *Query-IV* Reference Manual.

...on *Report-IV* features, refer to the Thoroughbred *Report-IV* Reference Manual.

...on *Script-IV* features, refer to the Thoroughbred *Script-IV* Reference Manual.

Library Maintenance

Do not use libraries that have the same name as any Thoroughbred IDOL-IV based application installed on your system.

IDOL-IV Libraries:

4G, 4S, 8D, 8S, ID, OE, OO, Q4, and UT

Solution-IV Libraries:

AP, AR, BR, CV, FA, FS, GL, IC, IM, OF, OP, PM, PO, PR, S4, TA, UP, ap, ar, br, fa, fs, gl, ic, op, po, pr, and ta

Use Library Maintenance to change, delete, rename, or copy libraries. You may create libraries here or during definition maintenance. For more information see the *Dictionary-IV Developer Guide*.

Script Definition Maintenance

Use Script Definition Maintenance to add/change, delete, rename, or copy definitions.

Naming Conventions

The following provides a guideline to naming definitions.

LLTNNNS

LL Specifies the library name.

T Specifies the definition class (see below).

F Format

S Screen

V View

L Link

M Message

H Help

P Script (Procedure)

Q Query (*Query-IV*)

R Report (*Report-IV*)

B *Basic Program (3GL)*

NNNN Specifies the definition name (description).

S Specifies the definition suffix (see below).

0-9 Physical Formats (for a data file).

Physical Screens (for Screen Database Maintenance).

Physical Views (for View Database Maintenance).

A-Z Logical Formats (not associated with a data file).

Report Parameters.

Views used in the PRINT VIEW command in scripts.

Data Declarations

For more information on syntax elements, see Notational Symbols and Software Conventions in the General Reference.

DN - Data Name (String, Integer, and Decimal Data)

```
DN data-name-1(numeric-value-a[*
numeric-value-c])
    [,data-name-1...]
```

```
DN data-name-2(numeric-value-a.0[*
numeric-value-c])
    [,data-name-2...]
```

```
DN data-name-3(numeric-value-a.numeric-value-b
    [* numeric-value-c])[, data-name-3 . .
. ]
```

FN - Format Name

```
FN format-name[,format-name...]
```

LA - Link Alias

```
LA link-name,link-name-alias
```

LN -Link Name/Data File/Sort File/Format

```
LN link-name [,link-name...]
```

SN -Screen Name/(Link)/Format

```
SN screen-name[,screen-name...]
```

VN -View Name/Link/Format

```
VN view-name[,view-name...]
```

Commands

For more information on syntax elements, see Notational Symbols and Software Conventions in the General Reference.

.LONGVAR - Accept Long Elastic Variable Names

```
.LONGVAR
```

.PAGE - Force Page Break in Script Listing

```
.PAGE
```

.PREC - Specify How 4GL Data Names Accept Floating Point Results

```
.PREC-OFF
```

```
.PREC-ON
```

.SHORTVAR - Accept Only Short Elastic Variable Names

```
.SHORTVAR
```

ADD - Add New Data Record to Link/File

```
ADD link-name USING KEY IS string-value
    [DUPLICATE KEY PROCESS IS procedure]
    [ERROR PROCESS IS procedure]

ADD link-name USING RECORD NUMBER IS
    numeric-value
    [ERROR PROCESS IS procedure]
```

CALL - Execute 3GL Public Program

```
CALL ?program-name?[ ,value[,value]...]
    [ERROR PROCESS IS procedure]
```

CHANGE - Change Data Record in Link/File (Read/Write)

```
CHANGE link-name USING key-file-access
    index-file-access
    [MISSING KEY PROCESS IS procedure]
    [BUSY PROCESS IS procedure]
    [END PROCESS IS procedure]
    [ERROR PROCESS IS procedure]
    [SELECT WHEN condition]
    [PROCESSING IS procedure]
    [TEXT ?text-id? [WINDOW
window-options]]
    [RETRY IS retry-code-string]

    key-file-access:
        KEY [SORT numeric-value] IS
record-access |
        record-range

    index-file-access:
        RECORD NUMBER [SORT numeric-value]
IS
        record-access | record-range

    record-range:
        RANGE IS [REVERSE]
        ALL |
        FROM record-access TO
record-access

    record-access:
        value | NEXT | FIRST | LAST |
PREVIOUS

    window -options:
        [LINE IS numeric-value]
        [COLUMN IS numeric-value]
        [NUMBER LINES ARE numeric-value]
        [CHARACTERS PER-LINE ARE
numeric-value]
        [BORDER TYPE IS border-code-string]
        [HEADING IS string-value]
        [FUNCTION IS function-code-string]
```

border-code-string:
 R-Reverse Video
 C-Character
 N-None
 G-Graphics

function-code-string:
 C-Display, Change, Exit/Clear
 c-Display, Change, Exit
 D-Display, Scroll, Exit
 d-Display, Exit
 E-Erase Window

retry-code-string:
 C-Continue with Next Command
 I-Ignore. Invalid for CHANGE Command
 N-Do END PROCESS; Continue with Next

Command

S-Skip Busy Record
 Y-Use Standard Busy Processing

CLOSE - Close Link/File or Printer

CLOSE link-name [ERASE]
CLOSE PRINTER printer-link-name
CLOSE ALL

COMPILE - Compile Thoroughbred *Basic* Public Program

COMPILE cpp_string\$ AS program-name
 [ERROR PROCESS IS procedure]

CONNECT HELP - Connect to *Dictionary-IV* Help Definition

CONNECT HELP help-name\$

The optional HELP\$(ALL) string array is described below:

HELP\$(ALL)

Passed to help class from a script's CONNECT HELP command.

[0] Help function (FUNC\$), which is described below.

[1] Help code:

help-name\$.	1,8	Help code specified by
when new	8,40	Help description, which is used
		help is created.

[2] Substitute parameters.

[3] Returned value.

FUNC\$

1,1	"C"	Clear the help window and reselect the window prior to help.
	"X"	Allow scrolling, leave the help

window

Commands

displayed and selected.
 "X" Do not allow scrolling, leave the help window displayed and selected.

2,1 " " No heading.
 "C" Centered heading.
 "L" Left-justified heading.
 "R" Right-justified heading.

Note: The help description is the displayed heading.

3,1 " " F10 Home enabled.
 "X" F10 Home disabled. Perform defined F10 key function.

4,1 " " Do help for help.
 "X" Do index help module for F6 key.

5,1 " " F7 special functions enabled.
 "X" F7 special functions disabled.

6,1 " " Normal help display.
 "X" Go directly into edit help text.

7,1 " " Save changes to tab line.
 "X" Do not save changes to tab line.

8,1 "1" Substitute all four bytes of window create parameters:
 1 - starting column of window
 2 - starting row of window
 3 - number of columns per row
 4 - number of rows per window
 "2" Substitute only the starting column and row.
 "3" Substitute only the number of columns and rows.

9,1 Substitute value for starting column of window (ASC).
 10,1 Substitute value for starting row of window (ASC).
 11,1 Substitute value for number of columns per row (ASC).
 12,1 Substitute value for number of rows per window (ASC).
 13,1"X" Read the help text, unpack it, and return just the text in TAB\$[ALL].

CONNECT MENU - Connect to *Dictionary-IV* Menu Definition

CONNECT MENU menu-name\$

The optional MENU\$[ALL] string array is described below:

MENU\$ [ALL]

Passed to menu class from a script's CONNECT MENU command.

[0] Menu function (FUNC\$), which is described below.

[1] Menu name:

[1,n] Used to pass messages between user-developed

methods.

[2] Selection from menu. On input, used to set the default selection. On output, used to return the selected item.

Refer

to FUNC\$(15,1).

FUNC\$ from MENU[0]

1,1	"C"	Clear the menu window and reselect the window
		prior to menu display.
	"D"	Leave menu window displayed and reselect the window prior to displaying the menu using the NOUPDATE option. This is an efficient option but you must use it carefully.
	"X"	Leave the menu window displayed and selected after exit.
	"x"	Display the menu but do not allow the user to make a selection. Leave the menu window displayed and selected after exit.
2,1	" "	No heading.
	"C"	Centered heading.
	"L"	Left-justified heading.
	"R"	Right-justified heading.

Note: The menu description is the displayed heading.

3,1	" "	F10 Home enabled.
	"X"	F10 Home disabled. Perform defined F10 key function.
4,1	" "	When the F6 key is pressed but no help is defined, do help for help text.
	"X"	When the F6 key is pressed but no help is defined, do help for help index.
5,1	" "	F7 special functions enabled.
	"X"	F7 special functions disabled.
6,1	" "	If the menu exists, assign a unique name and create a new window.
	"X"	If the menu exists, use it.
7,1	" "	Preview of sub-menus enabled.
	"X"	Preview of sub-menus disabled.
8,1	" "	Save changes to tab line.
	"X"	Do not save changes to tab line.
9,1		For <i>Script-IV</i> internal use only.
10,1	" "	No substitution.
	"1"	Substitute all four bytes of window create

parameters:
 1 - starting column of window
 2 - starting row of window
 3 - number of columns per row
 4 - number of rows per window

"2" Substitute only the starting column and row.

"3" Substitute only the number of columns and rows.

11,1 Substitute value for starting column of window. One-byte binary value (ASC).

12,1 Substitute value for starting row of window. One-byte binary value (ASC).

13,1 Substitute value for number of columns per row. One-byte binary value (ASC).

14,1 Substitute value for number of rows per window. One-byte binary value (ASC).

15,1 "X" Use the current entry in MENU\$[2] as the default selection for the menu.

CONNECT QUERY - Connect to Query-IV Query

CONNECT QUERY query-name\$

The optional QUERY\$[ALL] string array is described below:

QUERY\$ [ALL]

Passed to query class from a script's CONNECT QUERY command.

[0] Return status:

"." On output, specifies normal query completion.

[1] Query library name. This can be a two-character library name, the complete library and query name, or a comma-separated string that contains the query name and

entries that correspond to the following array entries.

If the complete query name is provided, no entry is placed in this

array for a "From query" value in QUERY\$[2].

[2] From query.

[3] To query.

[4] Mask for query range.

[5] Sort number.

[6] Query device:

null	Ask hardcopy question.
"Y"	Ask hardcopy question.
N	Terminal output only.
LP P1 P2 Pn	Printer device name.
OP	Use operator's default printer.
SP	Use last printer opened by operator.

LP P1 P2 Pn	Printer device name.
OP	Use operator's default printer.
SP	Use last printer opened by operator.
CH:str-val	Use channel str-val for output.
CR	Reserved.
/file-name	Create or overwrite output to this file. Some extraneous characters may be captured after output text.

[7] Type output:

space	PRINT.
P	PRINT.
W	WRITE.
R	WRITERECORD.
N	No output.

[8] Report mode:

" "	Normal printing.
"D"	Print detail lines only. D, CTnn, STnn, and CBnn lines will not print. Header and footer lines will not print.

[9] Program to execute prior to executing each report detail Line. For information on how to write such a program, please refer to the *Report-IV* Reference Manual.

[10] Window name for a user-provided window.

CONNECT SCREEN - Connect to *Dictionary-IV* Screen Definition

CONNECT SCREEN screen-name\$

The optional SCREEN\$[ALL] string array is described below:

SCREEN\$ [ALL]

Passed to screen class from a script's CONNECT SCREEN command.

[0] Execution status.
 [1] Screen name.
 [2] Key of last record edited.
 [3] Sort number.
 [4] Key value of record to edit.
 [5] Not used.
 [6] Not used.
 [7] CONNECT message:
 "AUTO-EXIT"
 Set SCREEN\$[13]="YY Y".
 If SCREEN\$[4]=" "
 Put key value from format data area into SCREEN\$[4]

[8] View name for F9 key.

[9] Selected field list (Fields to Maintain).

[10] Not used.

[11] Last record read or changed. This is set after each read and after each record is successfully added or changed.

[12] Not used.

[13] On/Off indicators (YN). Space character applies defaults.

(1,1) Exit screen after editing the first record. The default is "N".

(2,1) Skip maintenance mode window. The default is "N".

(3,1) Auto key range for view. The default is "N".

(4,1) Skip printing mode. The default is "N".

(5,1) Sort change allowed. The default is "Y".

(6,1) Print screen description in window title.

Valid

values are:

" " Do not print title.

"C" Center title.

"R" Right-justify title.

"L" Left-justify title.

The default is " ".

[14] Application help code (LLHHHHHH).

[15] Maintenance modes:

" " All modes are available.

"A" Add.

"C" Change.

"D" Delete.

"I" Inquire.

"F" Logical screen entry. In this mode,

records cannot

be added, changed, or deleted.

If SCREEN\$[15]="F"

Set SCREEN\$[13]="YY

Y"

Modes can be used in any combination, except for the "F" mode. For example, "IC" starts in inquiry mode and enables only change and inquiry.

An attempt is made to open the file and read it using the key value provided in SCREEN\$[4]. If the file OPEN and READ are successful, the data read from the record is supplied as the default data for screen entry; otherwise, the format defaults are applied. The screen terminates after the last field is entered.

[16] Window disposition on exit:

"N" Delete screen windows before exit. This is the default.

"Y" Do not delete screen window.

"R" Do not delete screen window,

read and print the

last record entered before the **F9**

key was pressed
 record on exit.
 "r"
 read and print the
 pressed to view.

to view. Do not clear the last
 Do not delete screen window,
 last record before the **F9** key was

CONNECT VIEW - Connect to Dictionary-IV View Definition

CONNECT VIEW view-name\$

The optional VIEW\${[ALL]} string array is described below:

VIEW\${ [ALL] }

Passed to view class from a script's CONNECT VIEW command.

- [0] Execution status.
- [1] View name [, link-name]:
 If the view name is not found, create the view using the specified link. If the view name is not found and the link name is not specified, search for a link that uses the view name; if the search is successful, create a view with the same name as the found link.
- [2] Selected key. If VIEW\${10}="P", the value of the KEY INTO clause is returned into VIEW\${2}.
- [3] Sort number.
- [4] Starting key value when view is first displayed.
- [5] Starting key range allowed while in the view.
- [6] Ending key range allowed while in the view.
- [7] CONNECT message: SORT n, USING[RANGE FROM TO], SELECT WHEN.
- [8] Screen name for F9 key.
- [9] Cursor mode:
 "C" Single-character cursor.
 "E" Entire field in reverse video. Uses view color bar.
 "F" Full row in reverse video. Uses view color bar.
- [10] Carriage return:
 "F" Field edit.
 "S" Single-record maintenance. Press **F4** at maintenance option to return.
 "s" Single-record maintenance. Return after one record is edited.

"E" Exit and return current key in
VIEW\$[2].

"P" Simulate PRINT VIEW functionality.

[11] Not used.
[12] Not used.
[13] On/Off indicators (YN). Space character applies defaults.

(1,1) Key change allowed.
The default is "Y".

(2,1) Data change allowed.
The default is "Y".

(3,1) View alterations allowed. The default is "Y".

(4,1) Leave view window displayed after exit. The default is "N".

(5,1) Sort change allowed. The default is "Y".

[14] Application help code (LLHHHHHH).

[15] Reserved for system use.

[16] Command processing mode:

(1,1) "N" Count.
"L" List. Same as a view.

"S" Sum.
"P" Print hardcopy.

"C" Copy.
"M" Move.
"D" Delete.
"c" Change.

(2,1) Verify (Y/N) for C, M, D, or c.

(3,8) Link name for C, M, or D.

OR

(2,1) SUM number of elements.

(3,n) Elements to sum.
(3+n,x) Command description.

OR

(3,n) Change expression.
(3+n,x) Command description.

[17] Reserved for system use.

COPY TEXT - Copy Text File Data Records to Another Data File

```
COPY TEXT FROM link-name-1 USING
    key-file-access-1 TEXT text-id-1
TO link-name-2 USING key-file-access-2
    TEXT text-id-2
    [MISSING KEY PROCESS IS
```

```

procedure]
    [BUSY PROCESS IS procedure]
    [RETRY PROCESS IS
retry-code-string]
    [ERROR PROCESS IS procedure]
    [DUPLICATE KEY PROCESS IS
procedure]
key-file-access:
    KEY [SORT numeric-value] IS
record-access |
    record-range
    record-range:
        RANGE IS [REVERSE]
        ALL |
        FROM record-access TO
record-access
    record-access:
        value | NEXT | FIRST | LAST |
PREVIOUS
retry-code-string:
    C    Continue with Next Command
    I    Ignore
    N    Do END PROCESS; Continue with
Next
        Command
    S    Skip Busy Record
    Y    Use Standard Busy Processing

```

DELETE - Delete Data Record from Link/File

```

DELETE link-name [USING KEY IS
string-value]
    [MISSING KEY PROCESS IS procedure]
    [BUSY PROCESS IS procedure]
    [ERROR PROCESS IS procedure]

```

```

DELETE link-name USING RECORD NUMBER IS
numeric-value
    [BUSY PROCESS IS procedure]
    [RETRY IS retry-code-string]
    [ERROR PROCESS IS procedure]

```

```

retry-code-string:
    C    Continue with Next Command
    I    Ignore. Invalid for DELETE
Command
    N    Do END PROCESS; Continue with
Next
        Command
    S    Skip Busy Record
    Y    Use Standard Busy Processing

```

DIM - Dimension Numeric Array Or String Variable

```
DIM array-name [#-of-entries [, #-of-entries
    [, #-of-entries]]](length
    [, "preset-character"])[, array-name..
.]
```

```
DIM string-variable(length
    [,
    ?preset-character?)[, string-variable...]
```

DIMF - Create Temporary String Variable

```
DIMF(length [,value] [,ERC=n])
```

DO - Do a Procedure Subroutine

```
DO procedure [controlling-condition]

Do
procedure-0[, procedure-1[, procedure-2]...]
    DEPENDING ON numeric-value

DO LOOP controlling-condition
    command [command]...
    ENDLLOOP

controlling-condition:
    WHILE condition |
    UNTIL condition |
    CHANGING numeric-data-name/variable
    FROM numeric-value TO
```

```
numeric-value
    [BY numeric-value]
```

ENTER PUBLIC - Receive Values in a Public Script

```
ENTER PUBLIC[variable[, variable]...]
```

ESCAPE-KEY - Set Escape Key Process

```
ESCAPE-KEY PROCESS IS procedure|OFF|ON
```

FORMAT DEFAULT - Load Format Data Element Defaults

```
FORMAT DEFAULT format-name [,OPT="DFONLY"]
    [,ERC=n]
```

```
FORMAT DEFAULT ALL[,OPT="DFONLY"][,ERC=n]
```

```
OPT="DFONLY"
```

Bypasses the normal initialization process, and loads existing defaults only if the data element's value is at an initialized state.

FORMAT DELETE - Remove Formats

```
FORMAT DELETE format-name[,ERC=n]
```

```
FORMAT DELETE ALL[,ERC=n]
```

FORMAT INCLUDE - Load Format Attribute from Data Dictionary

```
FORMAT INCLUDE format-name  
[ ,OPT=option-str][ ,ERC=n]
```

```
option-str  
"INIT"  
"DEFAULT"  
"NONE"  
"DESC_TBL"
```

FORMAT INIT - Initialize Format Data Elements

```
FORMAT INIT format-name[ ,ERC=n]  
FORMAT INIT ALL[ ,ERC=n]
```

IF/THEN/ELSE/ENDIF - Conditional Command Execution

```
IF condition THEN  
    command [command]...  
[ELSE  
    command [command]...]  
ENDIF
```

INCLUDE - Include Copy of External Script at Compile Time

```
INCLUDE script-name
```

INPUT - Prompts for and Accepts Operator Input of Data

```
INPUT [data-options]  
  
data-options  
    data-name |  
    system-variable-name |  
    constant |  
    elastic-variable |  
    terminal-mnemonics
```

INPUT MESSAGE - Use IDOL-IV Dictionary Message to Get Input

```
INPUT MESSAGE msg-code-string INTO  
    data-name/variable  
        [USING ?msg-dict-name?]  
        [POST-HELP PROCESS IS  
procedure]
```

msg-code-string:

```
type, number [, display-mode[, clear[, (col,ln)  
[, *1-replacement[, *2-replacement ...]]]]]
```

type:

```
I      Input  
N      Non-Input  
P      Prompt  
S      Selector (Normal & Background Reverse
```

Video)

```
Y      Yes/No  
I      Input, prints data from ?INTO?
```

data-name/variable as
 default value
 n Non-Input, No Suffix, no RETURN needed
 s Selector (Background Reverse Video &
 Foreground Reverse Video)
 x Non-Input, No Suffix, RETURN Needed

number
 The number of a message in the IDOL-IV dictionary

display-mode:
 (blank) Standard Print Mode
 B Background
 C Clear message area and exit
 F Foreground
 R Reverse Video Foreground
 X Return Message (do not print)
 r Reverse Video Background

clear:
 A Clear Line Before & After
 B Clear Line Before
 C Clear Line After
 D Clear Message Area After
 E Clear Screen Before & After
 F Clear Screen Before
 G Clear Screen After
 X Do Not Clear
 (blank) Do Not Clear

INPUT SCREEN - Use IDOL-IV Dictionary Screen to Get Input

```
INPUT SCREEN screen-name [CLEAR]
[data-options]
  [LINE OFFSET IS numeric-value]
  [process-options]
[RESUME]
```

data-options:
 DATA |
 DATA-NAME data-name |
 DATA-NAME LIST data-name [, data-name...]|
 KEY

process-options:
 [PRE PROCESS ALL |
 data-name, procedure [data-name,
 procedure]...]
 [POST PROCESS ALL |
 data-name, procedure [data-name,
 procedure]...
 [POST-HELP PROCESS /S procedure]

LET - Assignment of Data Values

```
LET data-name | string-value=value | data-name |  

  string-value[,...]
```

LET format-name=format-name|link-name|
string-value[,...]

LET link-name=link-name|format-name|
string-value[,...]

LOCK - Lock Link/File

LOCK link-name
[BUSY *PROCESS IS* procedure]
[ERROR *PROCESS IS* procedure]

OPEN - Open Link/File, Message-List, Printer, Screen, or View

OPEN LINK link-name [CREATE] [CLEAR] [NEW]
[DATA-FILE *IS* string-value]
[SORT-FILE *IS* string-value]
[TEXT-FILE *IS* string-value]
[BUSY *PROCESS IS* procedure]
[ERROR *PROCESS IS* procedure]

OPEN MESSAGES ?msg-dict-name?

OPEN PRINTER printer-link-name
[COLUMN numeric-value LINE
numeric-value]
[BUSY *PROCESS IS* procedure]
[ERROR *PROCESS IS* procedure]

OPEN SCREEN screen-name

OPEN VIEW view-name

PASSWORD - Encrypts a Compiled Script

PASSWORD "password"

PRECISION - Numeric Data Rounding and Calculation

PRECISION numeric-value

PRINT - Print Data to Terminal/Printer

PRINT [data-options]

data-options
data-name |
system-variable-name |
constant |
elastic-variable |
terminal-mnemonics

PRINT HELP - Displays On-Line Help on Terminal

PRINT HELP ?help-name?
[POST-HELP *PROCESS IS* procedure]

PRINT MESSAGE - Displays IDOL-IV Dictionary Messages

PRINT MESSAGE msg-code-string
[USING "msg-dict-name"]

msg-code-string:

type, number [, display-mode[, clear[, (col,ln)
[, *1-replacement[, *2-replacement ...]]]]]

type:

I Input
N Non-Input
P Prompt
S Selector (Normal & Background Reverse

Video)

Y Yes/No
I Input, prints data from ?INTO?

data-name/variable

as default value
n Non-Input, No Suffix, no RETURN needed
s Selector (Background Reverse Video &
Foreground Reverse Video)
x Non-Input, No Suffix, RETURN Needed

number

The number of a message in the IDOL-IV dictionary

display-mode:

(blank) Standard Print Mode
B Background
C Clear message area and exit
F Foreground
R Reverse Video Foreground
X Return Message (do not print)
r Reverse Video Background

clear:

A Clear Line Before & After
B Clear Line Before
C Clear Line After
D Clear Message Area After
E Clear Screen Before & After
F Clear Screen Before
G Clear Screen After
X Do Not Clear
(blank) Do Not Clear

PRINT SCREEN - Display or Clear Screens, Data, or Lines

PRINT SCREEN screen-name[**CLEAR**
[data-options]
[LINE OFFSET IS numeric-value]

data-options:

DATA |
DATA-NAME LIST data-name [, data-name ...]|
FORMULAS

PRINT TO PRINTER - Output to Printer

PRINT TO PRINTER
printer-link-name[data-options...]
[BUSY PROCESS IS procedure]
[ERROR PROCESS IS procedure]

data-options
data-name |
system-variable-name |
constant |
elastic-variable |
terminal-mnemonics

PRINT VIEW - Display IDOL-IV Dictionary View

PRINT VIEW view-name [USING file-access]
[KEY INTO string-data-name/variable]
[SELECT WHEN Thoroughbred Basic
conditional]
[WINDOW window-options]

file-access:
KEY [SORT numeric-value] range |
RECORD NUMBER [SORT numeric-value] range

range:
RANGE /S
ALL |
FROM from-record TO to-record

from-record:
value | FIRST

to-record:
value | LAST

Thoroughbred *Basic* conditional
Refer to the Thoroughbred *Basic* Reference Manual

window -options:
[LINE /S numeric-value]
[COLUMN /S numeric-value]
[NUMBER LINES ARE numeric-value]
[CHARACTERS PER-LINE ARE numeric-value]
[BORDER TYPE /S border-code-string]
[HEADING /S heading-code-string]
[FUNCTION /S function-code-string]

border-code-string:
R Reverse Video
C Character
N None
G Graphics

heading-code-string:
Y Display Heading
N Do Not Display Heading

function-code-string:
C Display, Scroll, Exit/Clear
D Display, Scroll, Exit

d Display, Exit
E Erase Window

READ - Read Data Records from Link/File

```
READ link-name USING key-file-access |  
  index-file-access  
  [MISSING KEY PROCESS IS  
procedure]  
  [BUSY PROCESS IS procedure]  
  [RETRY IS retry-code-string]  
  [END PROCESS IS procedure]  
  [ERROR PROCESS IS procedure]  
  [SELECT WHEN condition]  
  [PROCESSING IS procedure]  
  [TEXT ?text-id? INTO  
  
  string-data-name/variable  
  [PROCESSES IS/ARE procedure  
  
  [,end-of-text-procedure]]]
```

key-file-access:

```
KEY [SORT numeric-value] /S record-access |  
record-range
```

index-file-access:

```
RECORD NUMBER [SORT numeric-value] /S  
record-access | record-range
```

record-access:

```
value | NEXT | FIRST | LAST | PREVIOUS
```

record-range:

```
RANGE /S [REVERSE]  
ALL |  
FROM record-access TO record-access
```

retry-code-string:

```
  C     Continue with Next Command  
  I     Ignore Error Zero. Clear Data Area And Set  
Key Area.  
  Do Processing Procedure, Continue With  
Next  
  Command.  
  N     Do END PROCESS; Continue with Next  
Command
```

S Skip Busy Record
Y Use Standard Busy Processing

RUN - Execute Script or Program

RUN ?program-name?
[ERROR PROCESS IS procedure]

RUN ?script-name?
[ERROR PROCESS IS procedure]

RUN OVERLAY ?script-name?
[ERROR PROCESS IS procedure]

RUN PUBLIC ?script-name?[,value/name
[,value/name]...]
[ERROR PROCESS IS procedure]

SET - Set Formatted Date/Time

SET date/time TO string-value

SET string-data-name/variable TO date/time

date/time:

SYSTEM-DATE | SYSTEM-TIME | TERMINAL-DATE

SET CMASK - Assign Foreign Currency Parameters

SET CMASK currency-mask\$

SET DATEMASK - Change SQL Date Format

SET DATEMASK date-mask\$

SET DATESTRINGS - Change System Variable Value

SET DATESTRINGS datestring\$

SET DIR - Change Current Directory for This Task

SET DIR string-value\$

SET DRIVE - Change Default Directory for File Name Search

SET DRIVE disk-specifier

Note: This command is only available under MS-DOS.

SET ERC - Specify User-Defined Value for ERC

SET ERC numeric-value | CLEAR

SET HOTKEY - Define Hotkey that Calls a Public Program

SET HOTKEY term-key-value, program-name\$

SET HOTKEY string-value\$, program-name\$

SET PREFIX - Specify Alternate Directory Paths for File Search

SET PREFIX directory-name\$

SET PRM - Sets All PRM Options that Are Flags

```
SET PRM prm-value$
```

SETTRACE - Trace Script Execution

```
SETTRACE [PRINTER printer-link-name]  
[PAUSE] [DIRECTIVE] [print-values]
```

SYSTEM - Temporarily Exit to Operating System/Execute Command

```
SYSTEM string-value$
```

TERMINATE - Terminate Script or Procedure

```
TERMINATE [PROCEDURE]
```

UNLOCK - Unlock Link/File

```
UNLOCK link-name
```

UPDATE

```
UPDATE link-name function [USING  
key-file-access]  
[index-file-access]  
[MISSING KEY[PROCESS IS]  
procedure]  
[Busy[PROCESS IS] procedure]  
[END[PROCESS IS] procedure]  
[ERROR[PROCESS IS] procedure]  
  
[SELECT[WHEN]condition][PROCESSING[ IS  
]  
procedure]  
[TEXT"text-id"[WINDOW  
window-options]]  
[RETRY[IS]retry-code-string]
```

WAIT - Pause in Script Execution

```
WAIT numeric-value
```

Variables

For more information on syntax elements, see Notational Symbols and Software Conventions in the General Reference.

COLUMN - Returns Column Position of Current Field

```
screen-name . [data-name] COLUMN
```

This variable interacts with the INPUT SCREEN command.

DATEMASK - Contains SQL Datemask

```
DATEMASK
```

The value of this variable is set by the SET DATEMASK command.

DATESTRINGS - Contains List of Months and Days

Variables

DATESTRINGS

The value of this variable is set by the SET DATESTRINGS command.

DIR - Contains Directory Path Name

DIR

The value of this variable is set by the SET DIR command.

ESCAPE - Enable/Disable Default Escape Processing

ESCAPE

The value of this variable can be set to "Y" or "N". For information on customized escape processing, refer to the ESCAPE-KEY command.

EXIT-OPTION - Primary/Continuation Script Termination Action

EXIT-OPTION

value of this variable can be set to "[SYSTEM]" or a program name.

FIELD - Specifies the Field that Contains the Cursor

screen-name.FIELD

This numeric variable interacts with the INPUT SCREEN command.

FIELD-NO - Contains Number of the Last or Next Processed Field

screen-name.FIELD-NO

This numeric variable interacts with the INPUT SCREEN command.

FILE-SUFFIX - Value Replaces File Suffix Indicator

FILE-SUFFIX

This variable interacts with the OPEN command and with the file suffix indicator.

INSTALLATION-NAME - Contents of Installation Name Field

INSTALLATION-NAME

The installation name field is contained in the Installation Record.

KEY-NAME - Value of Last Key

KEY-NAME

This variable contains the value of the last key used in an ADD, CHANGE, DELETE, or READ command.

LENGTH - Returns Length of Current Field Input Window

`screen-name.[data-name.]LENGTH`

This variable interacts with the INPUT SCREEN command.

LINE - Returns Line Number of Current Field

`screen-name.[data-name.]LINE`

This variable interacts with the INPUT SCREEN command.

MENU-PARMS - Receives Pass Values from Menu Definition

`MENU-PARMS`

Pass values are values passed from a standard IDOL-IV menu definition to the script.

OPERATOR-CODE - Contains Operator Code

`OPERATOR CODE`

The operator code is the 3-character code used to logon to IDOL-IV.

OPERATOR-PRINTER - Contains Name of Default Printer

`OPERATOR-PRINTER`

The default printer name is contained in the operator code information.

PREFIX - Contains Directory Path Names

`PREFIX`

The value of this variable is set by the SET PREFIX command.

RETRY - Specifies Action on Encountering a Busy Record

`RETRY = retry-code-string`

retry-code-string:

C	Continue with next command. This value is the same as specifying "N", but no END process is performed.
I	Ignores the error zero. Clear the data area and set the key area. Perform the processing procedure, then continue with the next command. This option is valid for the READ command, but invalid for the CHANGE and DELETE commands.
N	Treats a busy condition as an end-of-file condition. Performs the END PROCESS, then continues with the next command.
S	Skips the busy record.

Y Uses standard busy processing. This is the default.

This string variable interacts with the CHANGE, DELETE, and READ commands.

SYSTEM-DATE - Returns System Date in Defined Format

SYSTEM-DATE

The system date is in the format defined in the Installation Record.

SYSTEM-PARM - Contains Printer Information

SYSTEM-PARM(1)

SYSTEM-PARM(2)

This variable interacts with the OPEN PRINTER command.

SYSTEM-PARM(1) contains the device name of the last printer opened by the OPEN PRINTER command. SYSTEM-PARM(2) contains the lines per page information from the printer assignment record for the last opened printer.

SYSTEM-TIME - Returns System Time

SYSTEM-TIME

This variable returns the system time in the HH:MM:SS format.

TERM-KEY - Returns Numeric Value of Last Entered Key

A list of terminal keyboard values (see below).

Terminal Keyboard Values (TERM-KEY)	
E within a field)	Field Edit Keys (edit and move)
T to a field)	Termination Keys (terminates input)
C fields)	Field Control Keys (move between)
S fixed function,	Special Purpose Keys (performs a cannot override)

<u>Value</u>	<u>Special Key</u>	<u>Type (Function)</u>
16	Function Key 16	T
15	Function Key 15	T
14	Function Key 14	T
13	Function Key 13	T
12	Function Key 12	T
11	Function Key 11	T
10	Function Key 10	T, C (Goto Field)
09	Function Key 9	T
08	Function Key 8	T

07	Function Key 7	T
06	Function Key 6	S (Help)
05	Function Key 5	T
04	Function Key 4	S (End)
03	Function Key 3	T
02	Function Key 2	T
01	Function Key 1	T
00	Return/Enter	T
-01	Right Arrow	E
-02	Left Arrow	E
-03	Down Arrow	T (Next Field)
-04	Up Arrow	T,C (Previous Field)
-05	Back Space	E
-06	Character Delete	E
-07	Character Insert	E
-08	Line Insert	T
-09	Line Delete	T
-10	Line Erase	E
-11	Page Erase	T
-12	Tab	E
-13	Back Tab	E
-14	Home	E
-15	Control P	(None)
-16	Page Down	T, C (Last Field)
-17	Page Up	T, C (Last Field)
-18	Screen Down	T
-19	Screen Up	T
-20	Boundary Down	T
-21	Boundary Up	T
-99	Input Time-Out Occurred	
-101	1-Second Input Time Limit	
-32867	32867-Second Input Time Limit	

The TERM-KEY variable interacts with the CHANGE TEXT, INPUT, MESSAGE, INPUT SCREEN, and PRINT VIEW commands.

TERMINAL-DATE - Returns Terminal Date in Defined Format

Variables

TERMINAL-DATE

The terminal date is in the format defined in the Installation Record.

TERMINAL-TYPE - Contains Name of Current Terminal Type

TERMINAL-TYPE

The terminal name is an 8-character string defined in the *NPSD Utility or the Terminal Configurator Utility.

TEXT-END - End-of-Text Flag for Text Field Processing

TEXT-END

This variable interacts with the READ command with the TEXT option. The default is "N", which means the entire text field is read. Another valid value is "E", which stands for end of text.

WAIT-TIME - Specifies Timeout Value on Busy Records

WAIT-TIME numeric-value

This variable is used to control BUSY processing in commands such as CHANGE or DELETE. The numeric-value is the number of seconds. Valid values are 0 through 255; the default is 5.

WINDOWS - Specifies Thoroughbred Basic Window Generation

WINDOWS

This variable accepts a value of "W", which means IDOL-IV automatically generates Thoroughbred Basic Windows, or "N", which means that IDOL-IV does not automatically generate Thoroughbred *Basic* Windows. The default is "W".

Thoroughbred *Basic* Elements

Thoroughbred *Basic* Directives

Many of the directives available in the Thoroughbred *Basic* third generation language are available in *Script-IV*, including:

DELETE ARRAY	WINDOW ATTR
FORMAT DEFAULT	WINDOW COLOR
FORMAT DELETE	WINDOW CREATE
FORMAT INCLUDE	WINDOW DELETE
FORMAT INIT	WINDOW FKEYS
INSERT ARRAY	WINDOW GETINFO
LET FMD	WINDOW IOREGION
LET FMT	WINDOW MOVE
PACK ARRAY	WINDOW PANEL
SET CMASK	WINDOW POP

SET DATEMASK	WINDOW PUSH
SET DATESTRINGS	WINDOW PUT
SET DIR	WINDOW REFRESH
SETDRIVE	WINDOW RESIZE
SET ERC	WINDOW RESTORE
SET HOTKEY	WINDOW SAVE
SET PREFIX	WINDOW SCROLL
SET PRM	WINDOW SELECT
SYSTEM	WINDOW SHAPE
UNPACK ARRAY	WINDOW SWAP
	WINDOW WRAP

Thoroughbred *Basic* Functions

All functions available in the Thoroughbred *Basic* third generation language are available in *Script-IV*, including:

ABS	DSD	LST	SIN
ACS	DTN	MAX	SQR
AND	EPT	MIN	SSZ
ARG	ERM	MNE	STL
ASC	ERR	MOD	STR
ASN	EXP	NLG	SWP
ATH	FIX	NMV	TAN
ATN	FMD	NOT	TCB
ATQ	FMT	NTD	TSK
ATR	FPT	NUM	UCM
BIN	FST	PAD	UPK
BSZ	GAP	PCK	XOR
CGV	HSB	PFL	WIN(GET)
CHR	HTA	PFP	WIN(GETCURSOR)
COS	INF	PGM	WIN(GETLIST)
CPL	INT	POS	WIN(GETSAVEDLIST)
CRC	IOR	PUB	WIN(GETSCREEN)
CVT	LEN	RND	
DCM	LOG	SDX	
DEC	LRC	SGN	

The function name must be preceded by a space.

Thoroughbred *Basic* Variables

All system variables available in the Thoroughbred *Basic* third generation language are available in *Script-IV*, including:

ARGC	ESC
CDN	FMTNL
CDS	PGCHARBASE
CMASK	PGN
CTL	PRC
DATEMASK	PREFIX
DATESTRINGS	PRM
DAY	PSZ
DIR	PTN

DNE	QUO
DSZ	SSN
ERC	SYS
ERR	TSM
ERRBUF	TIM

The system variable name must be preceded and followed by a space.

Miscellaneous

Data Name Qualifier

To qualify a data name, the data name must be preceded by the format name and separated by a period:

```
format-name.data-name
```

File Suffix Indicator

@ The file suffix indicator is the @ character. It can be specified anywhere in a data, sort, or text file name, either in the link definition or in the DATA-FILE IS, SORT-FILE IS, or

TEXT-FILE IS clause of the OPEN command. The @ character indicates that the value of the FILE-SUFFIX variable is to be substituted for the @ when the OPEN

LINK command is used.

Script Comments

* When ?? is placed at column 1 on a line, all text to the right is a script comment (not compiled).

! Any text to the right of an exclamation point is a comment.

Error Messages

The following contain a list of syntax and compilation errors.

Syntax Errors

```
** ERR=(script statement where error found)
```

The compiler expects a *Script-IV* key word and one is not found, or a key word other than a data declaration is found in the Data Declaration section of the script.

```
** ERR: (statement with basic compile error)
```

The script has attempted to open or access undeclared definitions, or the script has attempted to access a definition

that has not been opened. Another common cause of this error is making assignments without using the LET keyword.

**** IF/ENDIF mismatch**

The compiler has encountered a new procedure with unmatched IFs and ENDIFs; there must be a corresponding ENDIF for each IF/THEN statement.

**** IF/LOOP nesting error**

The compiler has encountered a procedure with misplaced ENDIFs and ENDLOOPS. Check the order of ENDIFs and ENDLOOPS and make sure they match the nesting order.

**** IF/THEN mismatch**

The compiler has encountered an IF statement with an unmatched THEN; there must be a corresponding THEN for each IF statement.

**** Invalid IF structure**

The compiler has encountered incorrect IF/ENDIF, LOOP/ENDLOOP nesting.

**** Invalid Link Alias**

The link alias is too long. The limit is 8 characters.

**** LOOP/ENDLOOP mismatch**

The compiler has encountered a new procedure with unmatched LOOPS and ENDLOOPS. There must be a corresponding ENDLOOP for each LOOP statement.

**** No statement generated**

The compiler has encountered incomplete syntax. Check for incorrect command structure or key words which may be used out of context.

**** PRE/POST "ALL" must be first or last**

The compiler has encountered a PRE or POST option in an INPUT SCREEN command that specifies ALL, but ALL is not the first or last specification. Specify ALL in the first or last position for the PRE or POST option.

**** undefined procedure**

The compiler could not locate the referenced procedure.

Other Compile Errors

Generated code is nnnnnn bytes and cannot be saved

If a script is too large, the script will not be compiled. A compiled script cannot exceed 64K. If a script is too large, consider turning parts of the script into overlay scripts.

**** "xxxxxxx" already exists but is not a program**

The referenced script name is not a program file.

**** Copy source xxxxxx not found**

The source specified in a COPY or INCLUDE statement cannot be located.

**** Copy source xxxxxx is being edited by another user**

The source specified in a COPY or INCLUDE statement was located but it is being accessed by another user.

**** Duplicate line number**

The same Thoroughbred *Basic* line has been generated twice. Call Thoroughbred Product Support.

**** Duplicate procedure**

The same procedure name has been used twice in a script.

**** Invalid format (format-name)**

The specified format is not defined in the IDOL-IV dictionary, or it is corrupt.

**** Invalid link (link-name)**

The specified link is not defined in the IDOL-IV dictionary, or it is corrupt.

**** Invalid screen (screen-name)**

The specified screen is not defined in the IDOL-IV dictionary, or it is corrupt.

**** Invalid view (view-name)**

The specified view is not defined in the IDOL-IV dictionary, or it is corrupt.

****(link-name) has no text field defined**

There is no text field defined in the script. Specify a text-id for the relevant command.

****(link-name) text field "text-id" is not defined**

The specified text field is not defined in the link.

**** Missing Text File Name**

This message can only occur for links that specify MSORT or TISAM files. Check the TEXT File specification in the Link Definition.

**** No sorts defined for (link-name)**

There are no sorts defined in the specified link.

Notational Symbols

Syntax appears in a bold non-proportional font to better display spaces and punctuation. Elements of the syntax are always explained directly below. The following conventions are used in command formats throughout the Thoroughbred product line.

(BOLD FACE/UPPERCASE)

CONNECT VIEW

Commands or keywords you must type exactly as shown.

Example: **CONNECT VIEW UTVCUST**

You must type CONNECT VIEW including the space.

UPPERCASE ITALIC FACE

BUSY PROCESS IS procedure

Optional words used for script readability and have no effect on command syntax.

Example: **BUSY PROCESS IS procedure**

Italic Face

view-name-1

Information you must supply.

Example: **CONNECT VIEW UTVCUST**

You supply the view name UTVCUST.

In most cases, lowercase italics denotes values that accept uppercase or lowercase characters.

Underscore

Option-1 | Option-2 | Option-3

Either a default in a command description or display default in a screen image.

Example: **Add | Change | Delete**

You may select the Add, Change, or Delete option. The Change option is the default value.

Braces { }

{*view-name-1*} [[*view-name-2*]...]

You must select one of the values enclosed by the braces.

Example: **{UTVCUST1} [[UTVCUST2]...]**

You must supply the view name UTVCUST1.

Brackets []

{*view-name-1*} [[*view-name-2*]...]

You can select one of the options enclosed by the brackets; none of the enclosed values is required.

Example: **{UTVCUST1} [[UTVCUST2]...]**

You must supply the view name UTVCUST1.

You may also supply the optional view name UTVCUST2.

Ellipsis ...

{*view-name-1*} [[*view-name-2*]...]

You can repeat the word or clause that immediately precedes the ellipsis.

Example: {UTVCUST1} [[UTVCUST2]...

You must supply the view name UTVCUST1.

You may also supply the optional view names

UTVCUST2, UTVCUST3, UTVCUSTX. X

represents any existing view name in the library.

Vertical Bar |

Option-1 | **Option-2** | **Option-3**

Piping separates options. One vertical bar separates options, two vertical bars separate three options. You select only one of the options.

Example: **Add** | **Change** | **Delete**

Punctuation and Symbols

With the exception of the above symbols, all punctuation or relational symbols shown within a command format, such as commas, parenthesis, semicolons, equal signs, etc. are part of the syntax and must be included.

Example: **DO procedure-0 [,procedure-1 [,procedure-2] ...]**

You must use the comma between procedures.

Software Conventions

Function Keys

F4 exit.
F6 on-line help.

Function Keys from the Definition Name Field

F1 switch maintenance modes.
F2 display lookup of definition names.
F4 display the class selector.

Cursor Movement During Field Edit

Left/Right Arrow

Moves the cursor one character left or right in the field. The cursor does not exit the field until you exit the edit mode.

Tab/Back Tab

Moves the cursor half the width of the input window to the right or left in the field. The cursor does not exit the field until you exit the edit mode. In this example 23 characters is half the width of the window.

Home

If the cursor is on the first character in the field, the system moves it to the last position.
If the cursor is on any other character in the field, the system moves it to the first position.

Character Insert/Delete

Press **Character Insert** in a field to insert characters in the field without typing over any characters.

Press **Character Delete** in a field to delete characters from the field.

Line Insert/Delete

Press **Line Insert** to insert a row in a file.

Press **Line Delete** to delete a row in a file.

Clear Line

Deletes all the characters from the field.

Types of Menus

IDOL-IV

Displays options. Type the selection number and press **Enter**.
For example, UTMENU10.

Pop-up

Allows you to scroll with a lightbar to highlight an item and press **Enter** to select it. For example, press **F1** from any IDOL-IV menu to display a pop-up menu.

Toggle

Allows you to select one or more items on the menu. Press the **Space Bar** or **Enter** to toggle. You must select **Execute** to exit and save the changes. For example, Press **15** in a CONNECT VIEW.

Using IDOL-IV Menus

Action	Description
F1	Displays the class pop-up menu for definition maintenance.
F2	Displays the Screen/View database maintenance pop-up menu.
F3	Displays the Thoroughbred product pop-up menu.
F6	Displays on-line help for the menu selection.
?F6	Displays on-help for menu selections.
#F6	Displays on-line help for the specified menu selection.
F7	Displays the language code selections.
F10	Displays the menu names.
Ctl-P	Activates Desk Services.
.query	Runs the specified query.
.report	Runs the specified report.
;menu	Displays the specified menu.
/program	Runs the specified program.
:program	Runs the specified program.
DBM	Displays the Screen/View database maintenance pop-up menu.
DM	Displays a lookup of menu names.
ID	Displays the IDOL-IV Development Menu.
LOF	Logs off and returns to the Enter Operator Code screen.
MAIN	Returns to the logon menu and clears the menu trail.
MRM	Allows you to perform multi-record maintenance on the selected View, Link, or Format.

MS	Accesses the internal mail system.
SRM	Allows you to perform single-record maintenance on the selected Screen,, Link,, or Format.
TQ	Runs <i>Query-IV</i> .
TS	Runs <i>Source-IV</i> .

Printing

If you select a print option or press **F16**, IDOL-IV prompts:

Select Printer (**xx**, **x₁x₁**, **x₂x₂**):

xx, x₁x₁, x₂x₂

refers to the names of the printers you added during Printer Assignment. For more information see Printer Table Maintenance and Printer Assignment in the *Dictionary-IV System Administrator Guide*.

Type the printer name and press **Enter**. You can press **F1** for a lookup of printer names.

Common Syntax Elements

Some commands in this manual use common syntax elements, which are explained in this section.

Expressions

An expression is two or more elements, consisting of constants, element names, variables, or functions that interact with operators to form a new value.

An expression can be used in a screen data field (formula), and conditions.

Operators in Expressions

+	addition or string concatenation
-	subtraction
*	multiplication
/	division
^ or **	exponentiation
()	grouping

Numeric expressions are evaluated according to the normal convention (grouping, exponentiation, multiplication/division, addition/subtraction).

Logical Conditions

A logical condition is two or more values, consisting of constants, data element names, variables, functions, or expressions that interact with relational or logical operators to form either a true or false result.

Operators in Conditions

=	equal to
>	greater than
<	less than
>= or =>	greater than or equal to
<= or =<	less than or equal to
<> or ><	not equal to
()	grouping

AND	logical AND (both true)
LIKE	search for a match using partial values
OR	logical OR (either true)

Special Operators in Conditions

NOT value

Negative condition. The NOT operator is used to negate a condition. It can be used to negate the result of the IN, BETWEEN, or LIKE operators.

IN (constant [,constant]...)

Matching value in list. Items in the list specified by the IN operator must each be separated by a comma and space. Alphanumeric values must be padded to the correct length for a proper match.

LIKE "partial-value"

Partial equality. The LIKE operator can specify a string value containing wildcards, which can match more than 1 character. LIKE automatically pads its values to the correct length. (You must manually pad values compared by other operators.)

LIKE Wildcards

*	Matches any characters (0 or more)
?	Matches a single character
[A-Z]	Matches a range for a single character
[AGCF]	Matches a single character in list
[wildcatted]	Matches the wildcard character

The brackets [] in wildcards are required; they do not indicate optional values. The * and ? wildcards do case-insensitive comparisons.

BETWEEN low-value AND hi-value

Greater than or equal to and less than or equal to. This operator can work with numeric or alphanumeric values, but the low -value and hi-value must be of the same type. Alphanumeric values must be padded to the correct length if you want to obtain a specific match for starting and ending values.

RANGE FROM "low-value" TO "hi-value"

Primary key field greater than or equal to and less than or equal to. This operator works only with alphanumeric values. It uses the primary key field from the first link defined in the FROM clause to select a range of records. The key field does not have to be used as a column in the query. Alphanumeric values must be padded to the correct length if you want to obtain a specific match for starting and ending records.

SOUNDEX value

Sounds like. The SOUNDEX operator will compare values using a phonetic operation to find data that has a similar pronunciation.

Boolean operators

All Boolean operators can be used in arithmetic functions.

Operators In Conditions

If the relation is true, the result is 1; otherwise, the result is 0.

Logical Operators

The result of AND is 0 if either or both of its operands are 0; otherwise, the result is 1. The result of OR is 0 if both of its operands are 0; otherwise the result is 1. If more than one logical operator appears in a statement, and the result is determined after evaluating the first operand, the statement will "short circuit", i.e., skip the evaluation of the second operand.

Examples:

```
00010      LET A=0, B= 0, C=5, D= -4, E=7, F=2
00020      LET VALUE= A+C OR B      ;VALUE IS 1
00030      LET VALUE = A AND B      ;VALUE IS 0
00040      PRINT (C AND E) + 1
          ;PRINTS 2
00050      LET VALUE= A=B
          ;VALUE IS 1
00060      PRINT (D>F OR E<C) +10   ;PRINTS 10
00070      IF A THEN GOTO 10
00080      LET VALUE = A$ LIKE A?PSD@
```

Any numeric syntax that is accepted between IF-THEN can be used as a valid numeric expression anywhere a number is expected or allowed.

String

A string is a connected sequence of characters treated as one piece of data.

Substring

Substrings can be used in screen data fields, sort definitions, and view commands. They allow you to specify a portion of the original value in a data element name.

- ▶ Substrings can only be used with alphanumeric data elements.
- ▶ Substrings cannot be used with a multiple occurrence element.

The syntax is as follows:

```
string-elt[(start,length)]
```

string-elt is an alphanumeric data element name.

start is the starting position for the substring.

length is the number of characters of the substring.

Masks (Output Format)

Syntax

The syntax is as follows:

```
num-elt:"mask"
```

num-elmt	is a numeric data element name, formula, or multiple occurrence.
mask	is one or more mask characters.

Mask Characters (Numeric Output)

An insignificant zero is a leading or trailing zero. A floating character is output at the rightmost leading zero.

0	Outputs a digit from 0 to 9. When the digit is an insignificant zero, outputs a 0.
#	Outputs a digit from 0 to 9. When the digit is an insignificant zero, outputs a space.
.	Outputs a decimal point between digits. If the number is zero and 0 is not used in the mask, outputs a space.
,	Outputs a comma between digits if the digit to the left is a significant digit; can only be used to the left of the decimal point.
\$	Outputs a dollar sign.
*	Outputs an asterisk when the digit is a leading zero.
-	Outputs a minus sign if the number is negative, or a space if the number is positive. This mask character can be placed at the left or right of the mask. If placed to the left, it is a floating character.
+	Outputs a plus sign if the number is positive, a minus sign if the number is negative or a space if the number is zero. This mask character can be placed at the left or right of the mask. If placed to the left, it is a floating character.
CR	Outputs a CR (to indicate a credit) if the number is negative or 2 spaces if the number is positive. This mask character must be placed at the right of the mask.
DR	Outputs DR (to indicate a debit) if the number is positive, a CR if the number is negative or 2 spaces if the number is zero. This mask character must be placed at the right of the mask.
(Outputs a left parenthesis if the number is negative or a space if the number is zero or positive. This mask character must be placed at the left of the mask.
)	Outputs a right parenthesis if the number is negative or a space if the number is zero or positive. This mask character must be placed at the right of the mask.
B (Blank)	Outputs a space.
????	Any characters other than the mask characters are output in the specified position.

Date Masking Characters

Date masking characters can be used as valid mask characters with SQL numeric dates.

YY	Two-digit year, showing only the least significant 2 digit of the year.
YYY	Three-digit year, showing only the least significant 3 digits of the year.
YYYY	Full four-digit year; leading minus sign will appear for BC dates.
MM	Two-digit month (e.g. January = 01 December =12).
MON	Uppercase three-character abbreviation of the month (e.g. JAN).
MONTH	Full uppercase name of the month (e.g. JANUARY).
Mon	Upper/lower-case three-character abbreviation of the

	month (e.g. Jan).
Month	Upper/lower-case full name of the month (e.g. January).
DD	Two-digit day of the month.
DDD	Three-digit day of the year (Julian) from 001 through 366.
DY	Uppercase 3 character abbreviation of the day of the week (e.g. MON).
DAY	Uppercase full day of the week (e.g. MONDAY).
Dy	Upper/lower-case 3 character abbreviation of the day of the week (e.g. Mo).
Day	Upper/lower-case full day of the week (e.g. Monday).
HH	Hour of the day in 24-hour format.
MI	Minutes.
SS	Seconds.

Services

The following sections describe the services provided by Thoroughbred Software International, Inc.:

Printed Documentation

Thoroughbred provides printed documentation for its products. Refer to the Product Reference Manual or your Thoroughbred Sales Representative for a list of available documentation.

On-line Documentation

Thoroughbred provides on-line documentation for IDOL-IV products. You must have installed the Developer Reference module when you installed IDOL-IV. For more information see the IDOL-IV Installation Guide.

You may access help by pressing **Ctrl-P** and selecting Help Topics or by pressing **F6** at any menu option or any field.

The Help Topics option allows you to search the help by a keyword or phrase. For example, if you need help for the Sort File field in Link Definition type **Sort File** and press **Enter**. The system displays all matching sort file topics.

If you are operating in a Windows 95 or Windows NT environment, Thoroughbred Software International, Inc. provides Windows help. You may access this help by selecting the Help file you want from **My Computer** or **Windows Explorer**.

Support

Thoroughbred offers customer support by telephone, fax, CompuServe, and e-mail. Our e-mail address for customer support is **support@tbred.com**.

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