

Editing Area

The editing area is either empty or contains source code that was last read into the source work area with the command `EDIT` or `READ` as shown in the example of a program in *Invoking the Program Editor*.

When you read in the source of an existing object, the entire source code is loaded into the source work area and is available for editing. However, depending on the size of the source, the editing area may not show all of the lines that belong to the source. In this case, you have to scroll down the source (see *Editor Commands for Scrolling*) to go to the line you want to view or modify.

In addition, if you use split-screen mode (see the relevant section), the editing area displays fewer lines of source code.

You can use multiple methods to create or modify source code:

- Type in or update text directly in the relevant source line.
- Use one or more line commands as described in the relevant section.

A line command, for example, is used to insert or delete a line or copy variable or field definitions within the current source.

- Use one or more editor commands or alternative PF keys as described in *Editor Commands for Scrolling*, *Editor Commands* and *Displaying and Modifying PA/PF-Key Assignments*.

An editor command, for example, is used to scroll in the source, find and replace text strings, undo an edit action, invoke the editor profile facility or display another object from which you can copy variable or field definitions.

This section covers the following topics:

- Inserting Text
 - Copying and Pasting Text
 - Copying or Moving Text with a Data Window
 - Finding and Replacing Text
 - Formatting Source Code
 - Checking Source Code
-

Inserting Text

This section provides example instructions for using a line command to insert text into the current source.

 **To insert text into a source**

1. In the leftmost column of the prefix area, next to the required source line, enter an I (insert) command (see *Line Commands*) thus temporarily overwriting the characters in the prefix area.

For example, enter the following line command:

```
I5
```

Insert mode is activated as indicated by a series of apostrophes (' ' ' ' ' ') and five blank source lines are inserted below the line in which you entered the line command. The cursor is positioned at the beginning of the first blank source line.

2. In the blank source lines, type in text. Lines that are left blank are eliminated from the source when you press ENTER.

The apostrophes are replaced by line numbers indicating that the new text has been incorporated into the source.

Renumbering of Source Lines

When you add lines to the source code of an object, Natural numbers the added lines in increments of ten. When you insert lines in source code, Natural automatically renumbers all lines contained in the source code in increments of ten beginning with 000010 at the first line.

You can change the number of increments by using the system command RENUMBER described in the *System Commands* documentation.

See also *Renumbering of Source-Code Line Number References* in the *Programming Guide*.

Copying and Pasting Text

This section provides instructions for copying text within the current source by using copy and paste functionality. For instructions on copying text from another Natural object into the current source, see *To display and copy definitions with SPLIT*.

To cut or copy and paste text to a source

1. Cut or copy text to the clipboard.
2. Add the number of source lines required to place the text you cut or copied to the clipboard, for example, by proceeding as follows:
 - Insert a line with the I line command.
 - Enter a character in the new line.
 - Copy the new line with the Rn line command where n is the repetition factor.
3. In the command line, enter the following:

```
PROTECT ON
```

This command protects the prefix area to avoid overwriting of source lines if a pasted line contains more than 72 characters.

4. Position the cursor in the first position of the first source line where you want to paste the text.
5. Choose the paste function of your terminal emulation or press CTRL+V.

The text placed on the clipboard is pasted in the source lines from the cursor position to the end of the source.

If a pasted line starts with a 6-digit line number copied from a source, you can remove the line number with the following steps.

6. In the command line, enter the following:

```
PROTECT OFF
```

The prefix area is no longer protected and you can enter a line command.

7. Next to the pasted line that contains a copied line number, enter the following line command:

```
(7
```

The line is shifted left by 7 columns thus deleting the line number.

Copying or Moving Text with a Data Window

You can use a data window to copy or move text that does not start or end at the beginning or end of a line. Data window functions can be performed by using line commands and/or editor commands.

When you define a window, all text on your screen between start and end of the window become part of the window.

Example of Using a Data Window

This section provides an example of defining and moving text with a data window by using either line commands or corresponding editor commands.

The example refers to the text shown in Step 1 and assumes that you want to move the whole sentence starting `Note that when...` (line 80) to follow the first sentence of the displayed text ending `...copy operations` (line 30).

To define and move a window using line commands

1. Type in text as shown below:

```
>> -----Columns 001 072 <<      Text WINEX      Lines  10      User MMO
Command ==>                          Mode  Report Lib  SAGTEST
***** ***** top of data *****
000010 Copy a Window with Text
000020
000030 You can specify a window with text for move or copy operations. This
000040 allows you to copy or move text that does not start or end at the
000050 beginning or end of a line. This function can be performed using
000060 line commands and/or editor commands.
000070
000080 Below are some examples of copying windows with text. Note that when
000090 you define a window, all text on your screen between start and end of
000100 the window become part of the window. Available line commands are:
***** ***** bottom of data *****

Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help  Save  Exit  Run   Rfind Stow                      Check Home Undo  Canc
```

2. Type the line command WS in line 80, the first line of text to be moved, place the cursor in the required column (N of the word Note) and press ENTER.

The message WS55 appears in the prefix area of line 80, indicating the column number selected:

```
>> -----Block is pending <<      Text WINEX      Lines  10      User MMO
Command ==>                          Mode  Report Lib  SAGTEST
***** ***** top of data *****
000010 Copy a Window with Text
000020
000030 You can specify a window with text for move or copy operations. This
000040 allows you to copy or move text that does not start or end at the
000050 beginning or end of a line. This function can be performed using
000060 line commands and/or editor commands.
000070
WS55 Below are some examples of copying windows with text. Note that when
000090 you define a window, all text on your screen between start and end of
000100 the window become part of the window. Available line commands are:
***** ***** bottom of data *****

Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help  Save  Exit  Run   Rfind Stow                      Check Home Undo  Canc
```

3. Type the line command WE in line 100, the last line of text to be moved, move the cursor to the last column to be moved (full stop (.) after window) and press ENTER.

The message WE37 appears in the prefix area of line 100:

```
>> -----Block is pending <<      Text WINEX      Lines 10      User MMO
Command ===>                          Mode  Report Lib  SAGTEST
***** ***** top of data *****
000010 Copy a Window with Text
000020
000030 You can specify a window with text for move or copy operations. This
000040 allows you to copy or move text that does not start or end at the
000050 beginning or end of a line. This function can be performed using
000060 line commands and/or editor commands.
000070
WS55  Below are some examples of copying windows with text. Note that when
000090 you define a window, all text on your screen between start and end of
WE37 the window become part of the window. Available line commands are:
***** ***** bottom of data *****

Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help  Save  Exit  Run   Rfind Stow                      Check Home Undo  Canc
```

4. Type the line command WM in line 30 (the text will be moved to the following line, line 40), and move the cursor to the column at which line 30 is to be split (the blank before the word This). Press ENTER.

The specified text section is moved:

```
>> -----Columns 001 072 <<      Text WINEX      Lines 13      User MMO
Command ===>                          Mode  Report Lib  SAGTEST
***** ***** top of data *****
000010 Copy a Window with Text
000020
000030 You can specify a window with text for move or copy operations.
000040 Note that when
000050 you define a window, all text on your screen between start and end of
000060 the window become part of the window.
000070 This
000080 allows you to copy or move text that does not start or end at the
000090 beginning or end of a line. This function can be performed using
000100 line commands and/or editor commands.
000110
000120 Below are some examples of copying windows with text.
000130 Available line commands are:
***** ***** bottom of data *****

Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help  Save  Exit  Run   Rfind Stow                      Check Home Undo  Canc
```

You can achieve the same result described in the instructions above by using the command sequence indicated below.

▶ **To define and move a window using editor commands**

1. Type in the text shown in Step 1 above.
2. In the command line, enter the following:

```
WINDOW 80 100 55 37;MWINDOW 30 64
```

The specified text section is moved as illustrated in Step 4 above.

Finding and Replacing Text

This section provides instructions for finding and replacing a character string in the current source.

▶ **To find and replace a character string in a source**

1. Search for a string by using the following editor command:

```
FIND 'string'
```

where *string* is any alphanumeric character string.

The first occurrence of the specified string is found.

2. Replace the string found by using the following command:

```
CHANGE 'string' 'new-string'
```

Or:

Search for the next occurrence of the string by pressing PF5.

Depending on the command used, the first occurrence of the string is either replaced or the next occurrence (if any) of the string is found.

3. Replace the string found by pressing PF17.

Or:

Search for the next occurrence of the string by pressing PF5.

Depending on the PF key used, the next occurrence of the string is either replaced or the next but one occurrence (if any) of the string is found.

Formatting Source Code

You can format source code by indenting source lines. Indentation is performed differently for sources created in reporting mode than for sources created in structured mode.

▶ To format source code

1. In the command line, enter the following system command:

```
STRUCT
```

The lines in the source code are indented.

For details, see `STRUCT` in the *System Commands* documentation.

Checking Source Code

▶ To check the current source code for syntax errors

- On the editor screen, press PF9.

Or:

In the command line, enter the following:

```
CHECK
```

The source code currently contained in the source work area is checked for syntax errors. If a syntax error is detected, an appropriate error message appears indicating the line number affected and the erroneous definition.