

Configuration: use Notepad++ as local editor for MCP sources

Notepad++ is a popular (distributed as free software) text editor and source code editor for use with Microsoft Windows. It supports tabbed editing, which allows working with multiple open files in a single window. See the Notepad++ home webpage (www.notepad-plus-plus.org) for details.

Notepad++ can also be used in combination with SURE as the local editor for MCP sources.

The following configuration gives a smooth integration of Notepad++ with SURE and good support for MCP sources and/or MicroFocus COBOL sources

Configuration in SURE

Define Notepad++ as the Local Editor for MCP sources as follows:

Toolbar → Options → SURE options → tab: Local Options:

Field	Value
Edit MCP files	Enter the full name of the Notepad++ program (<path>\Notepad++.exe)

Define the number for OLE server (to be able to start a compilation from Notepad++):

Toolbar → Options → SURE options → tab: Local Options:

Field	Value
OLE server id	Enter a number between 1 and 99. <ul style="list-style-type: none">- If SURE is installed multiple times on a workstation, then each instance must have a unique OLE server id.

Configuration in Notepad++

For most options, the default value (which comes with the installation of Notepad++) is fine, but a few options need attention to make things better.

These options are stipulated in the following paragraphs.

Install the SURE MCP Source Editor plugin

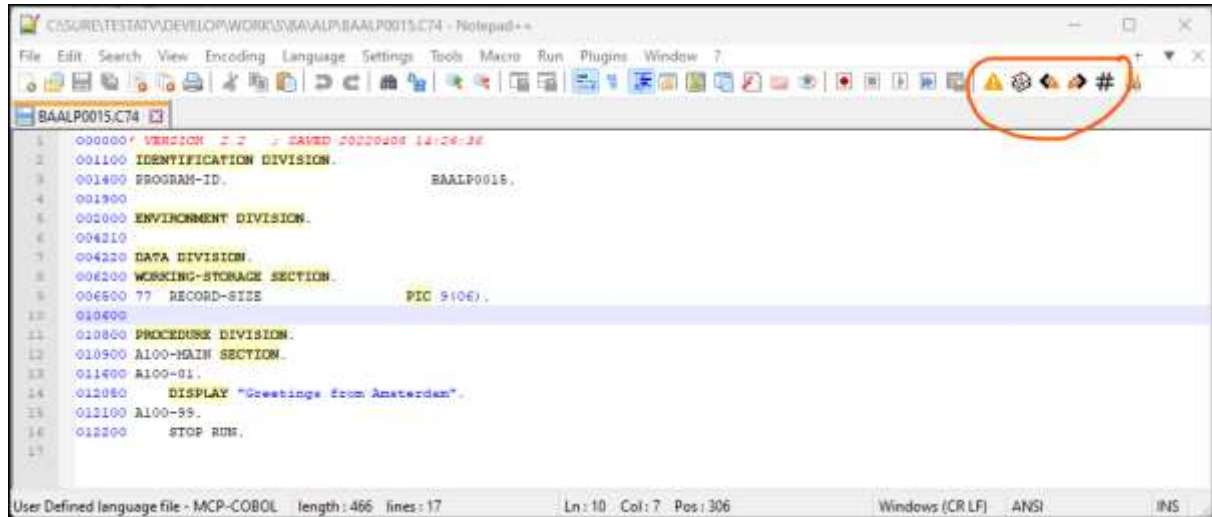
ITSforSURE has created a plugin to improve the support for MCP source files with filekinds COBOL, ALGOL, and JOB. The plugin can be found in the SUREforWindows BIN directory

The SUREforWindows BIN directory = <SURE installation directory>\RIS\BIN\

The MCPSourceEditor plugin has the following functionality:

- The plugin works for sources with file extension C74, C85, COB, CBL, DMA, DCA, ALG, or JOB.
- Jump quickly forwards or backwards to the changes that you made in the source.
- Automatically create the new sequence number (length 6 for COBOL, length 8 for ALGOL and WFL) for new lines in the source.
 - o When a new line is created via the enter button
 - o When lines are copied or moved to another place in the source (copy/paste special)
- Resequence a part of the source.
- A warning (color) when text is typed after position 72 (COBOL), 80 (ALGOL), or 88 (WFL)
- Start a compilation on the MCP of a source that is opened in Notepad++.
- If the file has syntax errors: show the error file and position the source automatically on the line with the syntax error.
- Short keys and toolbar icons are available for all these functions.

Example



- The icons for functions resequence, compile, jump to changed lines, and show syntax errors are placed on the toolbar.



Open the error file and show the syntax errors.



Compile the source on the MCP. If syntax errors are found, then the error file is automatically opened.



Jump backwards in the source to the previous changed line (since the source was opened in Notepad++).



Jump forwards in the source to the next changed line (since the source was opened in Notepad++).



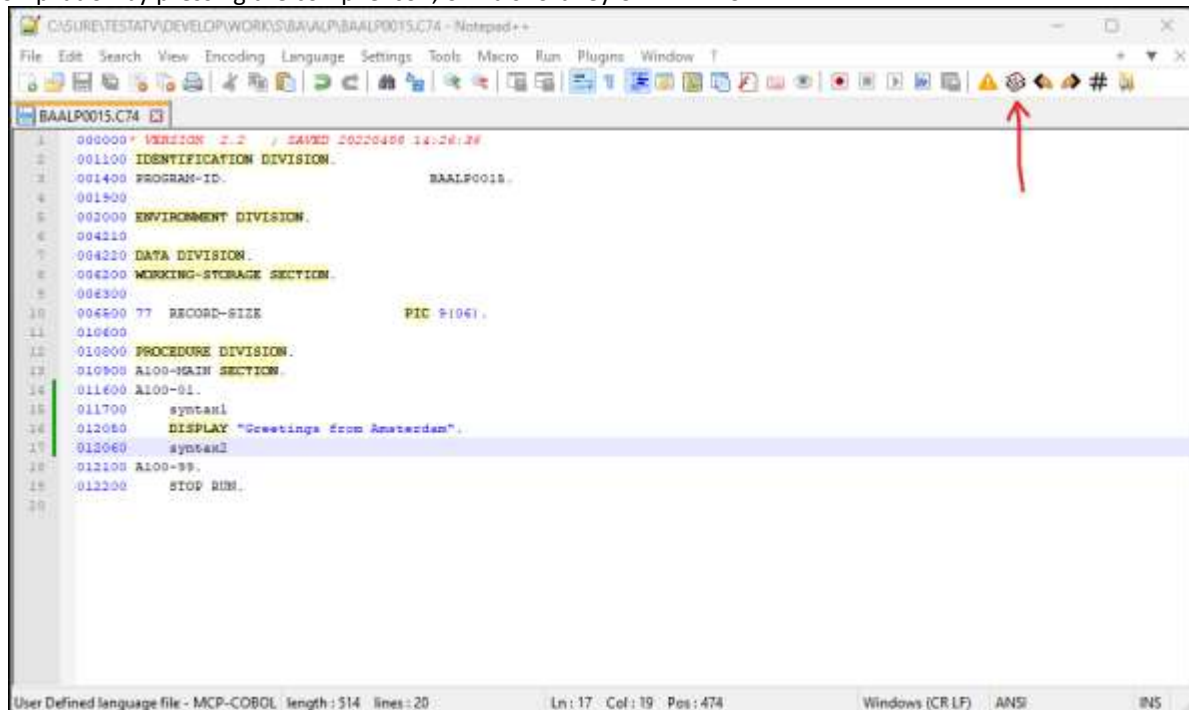
Resequence the selected lines.

- The available short keys are listed under Menu bar → Plugins → MCP source Editor

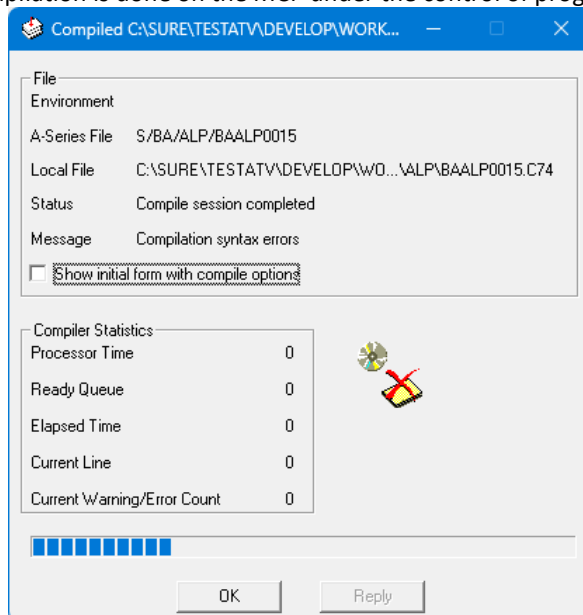
CTRL-ALT-C	Compile the source on the MCP. If syntax errors are found, then the error file is automatically opened.
CTRL-ALT-E	Open the error file and show the syntax errors.
CTRL-ALT-N	Jump forwards in the source to the next changed line (since the source was opened in Notepad++).
CTRL-ALT-P	Jump backwards in the source to the previous changed line (since the source was opened in Notepad++).
CTRL-ALT-Q	Resequence the selected lines.
CTRL-ALT-V	Paste Special.
CTRL-ALT-1,2,3,4	Only applicable if compilers are defined for multiple repositories. Activate the compiler with that number and start it.
CTRL-ALT-7	Switch 'Paste Special' to 'with new line numbers' mode.
CTRL-ALT-8	Switch 'Paste Special' to 'with empty line numbers' mode.
CTRL-ALT-9	Switch 'Paste Special' to 'with unchanged line numbers' mode.

Example of compilation and loading syntax errors

Start a compilation by pressing the compile icon, or via short key CTRL-ALT-C:

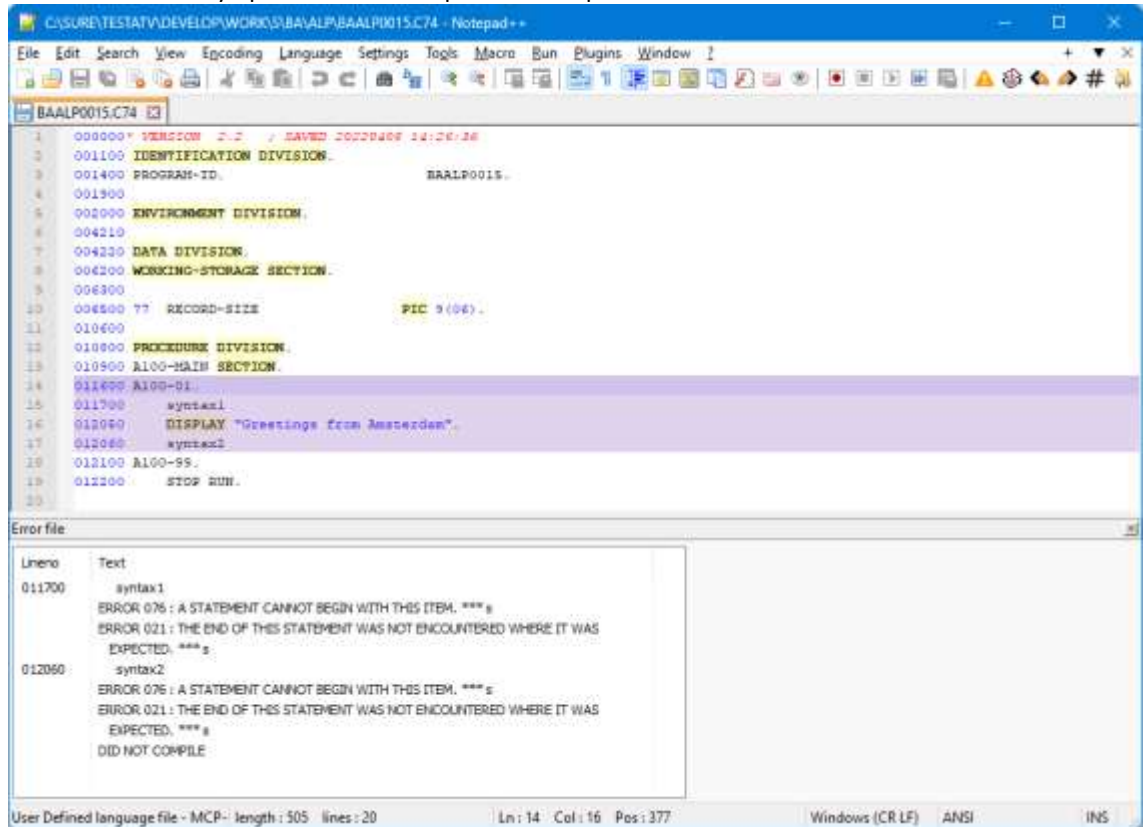


The compilation is done on the MCP under the control of program AS_COMP.EXE:



- In this example the compiler found syntax errors

The error file is automatically opened in an extra pane of Notepad++:



The screenshot shows the Notepad++ interface with two panes. The top pane displays the source file 'BAALP0015.C74' with the following code:

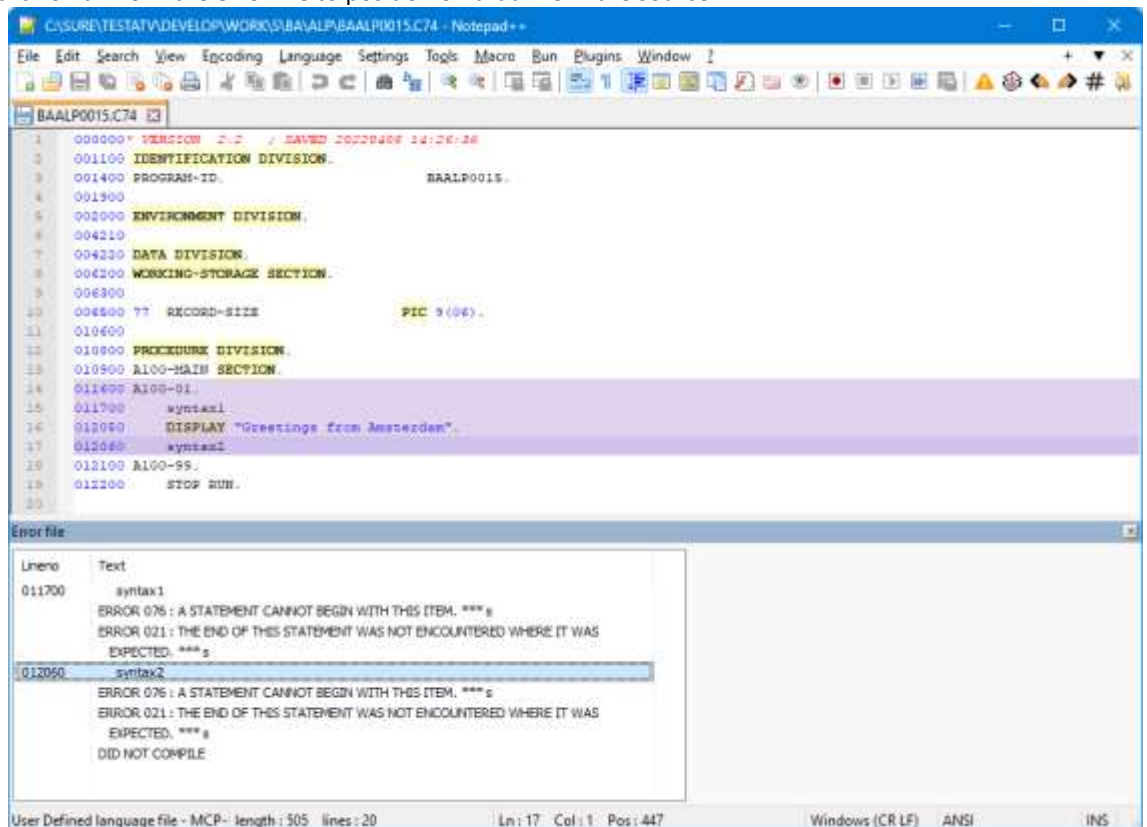
```
1 000000* VERSION 2.2 / SAVED 20020409 14:26:38
2 001100 IDENTIFICATION DIVISION.
3 001400 PROGRAM-ID.          BAALP0015.
4 001900
5 002000 ENVIRONMENT DIVISION.
6 004210
7 004220 DATA DIVISION.
8 004200 WORKING-STORAGE SECTION.
9 006300
10 006500 ?? RECORD-SIZE          PIC 9(06).
11 010400
12 010900 PROCEDURE DIVISION.
13 010900 AL00-MAIN SECTION.
14 011400 AL00-01.
15 011700      syntax1
16 012050      DISPLAY "Greetings from Amsterdam".
17 012060      syntax2
18 012100 AL00-99.
19 012200      STOP RUN.
```

The bottom pane, titled 'Error file', displays the following error messages:

Line#	Text
011700	syntax1 ERROR 076 : A STATEMENT CANNOT BEGIN WITH THIS ITEM. *** ERROR 021 : THE END OF THIS STATEMENT WAS NOT ENCOUNTERED WHERE IT WAS EXPECTED. ***
012060	syntax2 ERROR 076 : A STATEMENT CANNOT BEGIN WITH THIS ITEM. *** ERROR 021 : THE END OF THIS STATEMENT WAS NOT ENCOUNTERED WHERE IT WAS EXPECTED. *** DID NOT COMPILE

The status bar at the bottom indicates: 'User Defined language file - MCP- length: 505 lines: 20' and 'Ln: 14 Col: 16 Pos: 377'.

Double click on a line in the error file to position on that line in the source:



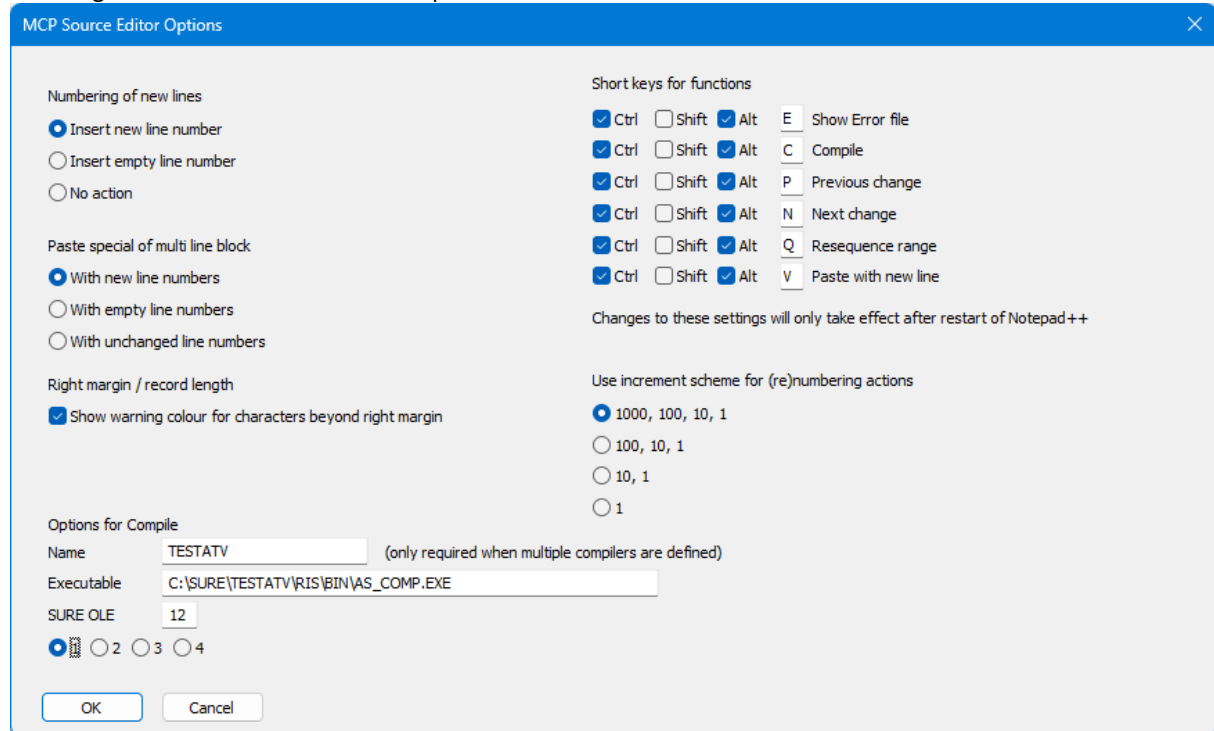
The screenshot shows the same Notepad++ interface. In the 'Error file' pane, the line for '012060' is selected (highlighted in blue). In the source file pane, the corresponding line '012060 syntax2' is also highlighted in blue. The status bar at the bottom now indicates: 'User Defined language file - MCP- length: 505 lines: 20' and 'Ln: 17 Col: 1 Pos: 447'.

Installation

Copy <SURE installation directory>\RIS\BIN\MCPSourceEditor.dll
as <Notepad++ installation directory>\plugins\MCPSourceEditor\MCPSourceEditor.dll

Configuration

Menu bar → Plugins → MCP Source Editor → Options



- Radio button 'Numbering of new lines'
 - Insert new line number The new line automatically gets a new sequence number (length 6 for COBOL, length 8 for ALGOL and WFL). This is the preferred setting for MCP sources.
 - Insert empty line number The new line gets an empty sequence number (6 or 8 spaces). This is the preferred setting for MicroFocus COBOL sources.
 - No action No action; the cursor starts at position 1
- Paste special of multi line block
 - With new line number The new lines automatically get new sequence numbers (length 6 for COBOL, length 8 for ALGOL and WFL). This is the preferred setting for MCP sources.
 - With empty line number The new lines get an empty sequence number (6 or 8 spaces). This is the preferred setting for MicroFocus COBOL sources.
 - With unchanged number The original sequence number are kept
- Show warning color for characters beyond right margin
 - The background color changes to bright orange if characters are typed beyond the right margin at position 72 (COBOL), 80 (ALGOL), or 88 (WFL).
- Short keys for functions of this plugin
 - You can change the short keys to your own preferences, for example when a short key is already in use by another plugin that you installed

- Increment scheme for (re)numbering actions
 - o This is applicable for the functions where new sequence numbers are created (paste special, resequence, and enter new line).
 - o For example: scheme '1000, 100, 10, 1' means: new sequence numbers are increased with 1000 until it does not fit anymore, then 100 until it does not fit anymore, then 10, and finally the number is increased by 1.
- Options for Compile
 - o These settings are only relevant when MCP sources are compiled (so, not for MF-COBOL).
 - o It is possible to define compile support for up to 4 different SURE repositories. For each SURE repository the following must be defined:

Field	Value
Name	The logical name of the SURE repository
Executable	<SURE installation directory>\RIS\BIN\AS_COMP.EXE
SURE OLE	The OLE server id of the SURE client that works for the SURE repository. If the SURE client is installed multiple times on a workstation, then each instance must have a unique OLE server id.
Radio button 1,2,3,4	This only applicable if compile support is defined for multiple SURE repositories: <ul style="list-style-type: none"> - Each defined compiler has its own number from 1 to 4. This radio button identifies the compiler for the SURE repository that is currently active on your Notepad++ session. - Short key CTRL-ALT-C and the Compile Icon on the toolbar start the compilation for that repository.

Import syntax highlighting for languages COBOL, ALGOL, and JOB

ITSforSURE has created 3 configuration files for syntax highlighting that you can import in Notepad++. The configuration files can be found in the SUREforWindows HELP directory.

The SUREforWindows HELP directory = <SURE installation directory>\RIS\HELP\

Installation:

- Menu bar → Language → User Defined Language → Define your language → Button [Import]:
 - Import file "NotepadPlus syntax highlighting for language Unisys-ALGOL.XML" from the SURE help directory SURE\RIS\HELP\
 - Import file "NotepadPlus syntax highlighting for language Unisys-COBOL.XML" from the SURE help directory SURE\RIS\HELP\
 - Import file "NotepadPlus syntax highlighting for language Unisys-JOB.XML" from the SURE help directory SURE\RIS\HELP\
 - Restart Notepad++ to activate the new languages

About the syntax highlighting:

- The most frequently used commands are highlighted. You can adjust the set with recognized keywords to your own needs, as follows:
 - o Open screen Menu bar → Language → Define your language
 - o Select the language via the User language button (top left corner)
 - o Go to tab <Keywords lists> to adjust the lists with recognized words

- For COBOL, ALGOL, and JOB: the language syntax statements, and the Unisys file and task attributes are highlighted in **bold** and with background color 'light yellow':

```
004810      STRING SCAN-DIRECTORY DELIMITED BY SIZE
004820      , "." DELIMITED BY SIZE
004830      INTO SCAN-FILETITLE
004840
004850      MOVE SCAN-FILETITLE TO WS-F500-FILENAME
004860      PERFORM F500-INSPECT-FILENAME
```

- For COBOL and ALGOL: DMS2 statements are highlighted in **bold** and with background color orange:

```
13825000  SET SRELA TO BEGINNING:DMR;
13826000
13827000  WHILE NOT BOOLEAN(DMR) DO BEGIN
13828000      FIND KEY OF NEXT SRELA AT REL-VERSION = V_VERSION
13829000                                AND REL-ASSET = V_ASSET :DMR;
13830000
```

- For ALGOL and JOB: The keywords BEGIN and END are highlighted in **bold** and with background color 'light blue':

```
86553000  IF B_INIT_ERRINFO THEN BEGIN
86553500      REMOVE_FILE("ERRORS/GEN/LFI/"!!ID,EMPTY);
86554000      SET_FILETITLE(ERRORFILE,"ERRORS/GEN/LFI/"!!ID!!".");
86555000  END;
```

- Number and string literals are highlighted in foreground color 'bright blue'
- Comment lines are highlighted in *italic* and foreground color red
- Dollar cards are highlighted in foreground color green

You are free to adjust the used colors to your own preference

Other options of Notepad++

Configure keyboard button [Tab] as 1 space

- Menu bar → Settings → Preferences → tab: Language →

Field	Value
Tab size	1
Replace by space	Enabled

Reason: an MCP source file should not contain tabs.

Allow to select text between delimiters over multiple lines

- Menu bar → Settings → Preferences → tab: Delimiter →

Field	Value
Open and Close	enter appropriate open and close delimiters
Allow on several lines	Enabled

Reason: this option helps the developer to find a matching delimiter

Enable the option to allow cursor positioning beyond the end of a line:

- Menu bar → Settings → Preferences → tab: Editing →

Field	Value
Enable virtual space	Enabled

Reason: handy for developers

- If the option is disabled, then you cannot place your cursor in the trailing spaces after the end of a line
- If the option is enabled, then you can place your cursor anywhere on the line

Disable the option to backup a file when it is saved:

- Menu bar → Settings → Preferences → Backup →

Field	Value
Backup on save	None

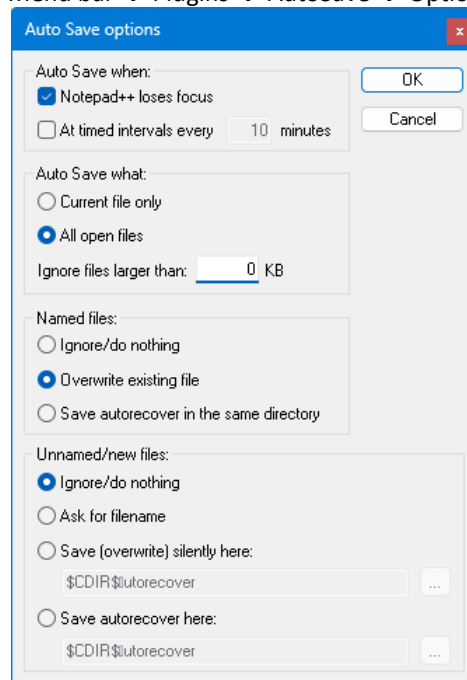
Reason: there is no reason to make intermediate backups when working with SURE

Import the plugin to save the current file automatically when the desktop focus changes to another Window

- Menu bar → Plugins → Plugin Admin... → Tab: Available
Select plugin 'AutoSave' → [Install]

Configure plugin AutoSave as follows:

- Menu bar → Plugins → AutoSave → Options



Reason: when plugin AutoSave is installed then the changes in Notepad++ are automatically saved when you switch to another app. For example, when you switch to SURE to do the check in. This improves the integration between SURE and Notepad++.

Try the function in Notepad++ to shift a group of lines to left or right:

- Select a column in the source with [Alt] + Drag mouse with left button pressed

To shift lines to right: press [Tab]

To shift lines to left: press [Delete]

Update the Popup Context Menu

A right mouse click anywhere in the source shows the Popup Context Menu.
It is possible to customize this menu.

Reason:

- For developers it is very handy when commands 'Resequence range' and 'Paste Special' (both commands are from the MCP Source Editor plugin) are added to the Popup Context Menu, because those two commands are typically used when you are working with the mouse.

Example:

- In case of function Resequenece Range:
 - You first select multiple lines via the mouse.
 - Then you right click with the mouse and use function Resequenece range.
- In case of function Paste with New Line Numbers:
 - You first select multiple lines via the mouse.
 - Then you right click with the mouse and use function Copy.
 - Finally you position the mouse at the destination location in the source, right click, and use function Paste Special.

Update the Popup Context Menu as follows:

- Menu bar → Settings → Edit Popup Context Menu
- This opens file Contextmenu.xml
- Update Contextmenu.xml and add the two yellow marked lines to section <ScintillaContextMenu>:

```
<Item MenuEntryName="Edit" MenuItemName="Cut"/>
<Item MenuEntryName="Edit" MenuItemName="Copy"/>
<Item MenuEntryName="Edit" MenuItemName="Paste"/>
<Item PluginEntryName="MCP Source Editor" PluginCommandItemName="Paste Special"/>
<Item PluginEntryName="MCP Source Editor" PluginCommandItemName="Resequence range" />
<Item MenuEntryName="Edit" MenuItemName="Delete"/>
<Item MenuEntryName="Edit" MenuItemName="Select all"/>
```
- Save file Contextmenu.xml and restart Notepad++ to test the changed context menu.

You can customize the menu to your own preferences and remove commands from the menu that you don't need.