

ABAP Course

Chapter 2 – Development Environment

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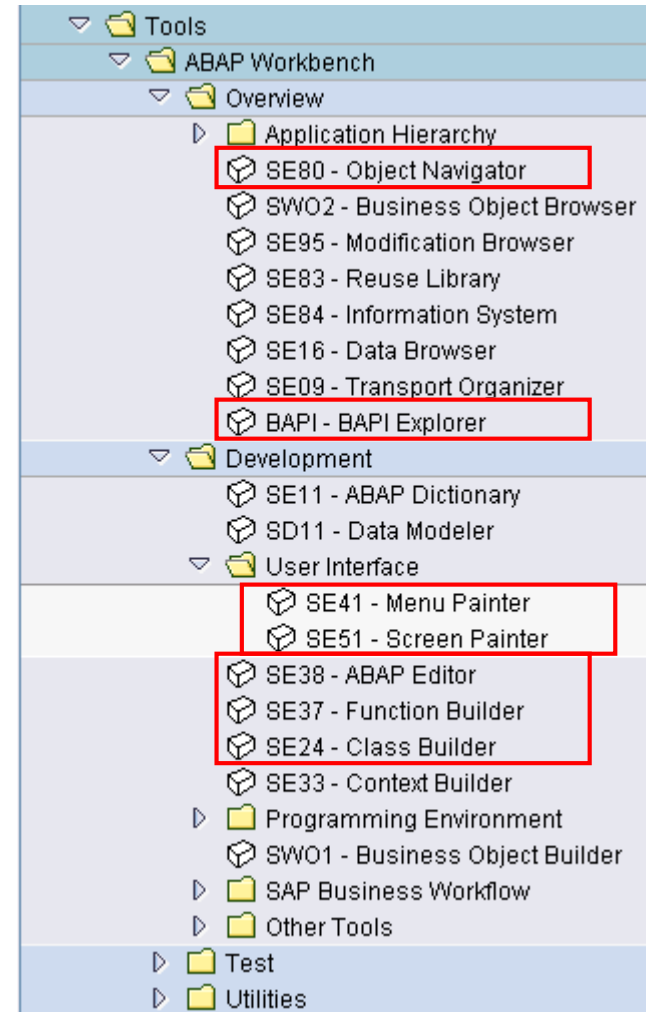
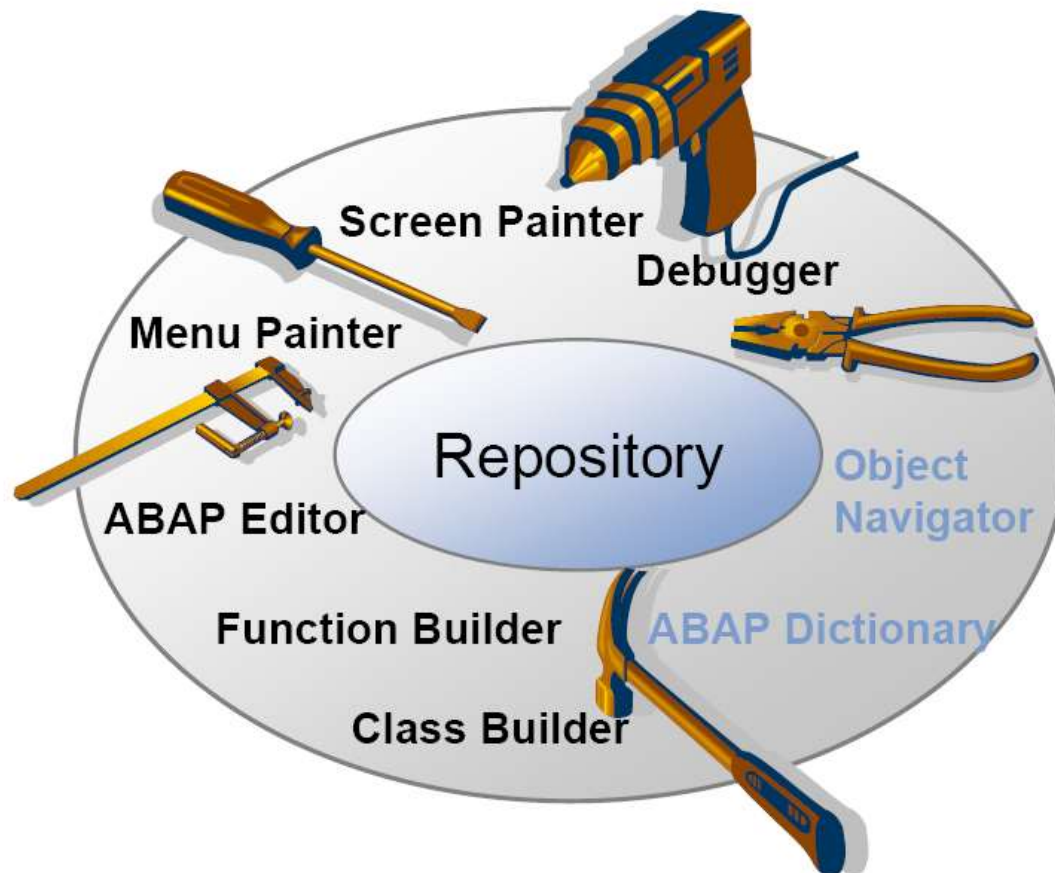
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Agenda



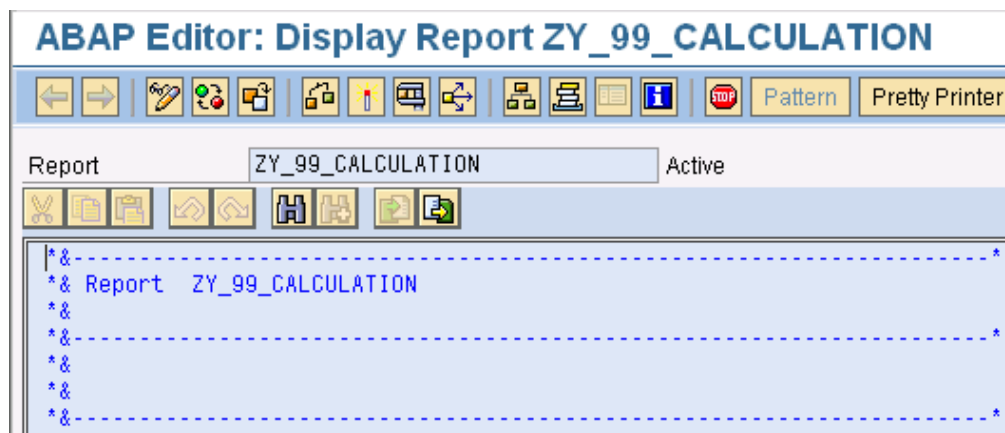
1. Development tools in SAP
2. Usage of the Object Navigator
3. Concepts and tools

Development tools in SAP



→ Every tool can be accessed in Object Navigator

- Menu path: **Tools • ABAP Workbench • Development • ABAP Editor (SE38)**
- Run, view and edit ABAP code
- Integrated into Object Navigator



Function Builder:

- Menu path: **Tools • ABAP Workbench • Development • Function Builder (SE37)**
- Create and edit function modules / groups
- Will be used in chapter 3 (Basic Concepts)

Class Builder:

- Menu path: **Tools • ABAP workbench • Development • Class Builder (SE24)**
- Create and edit global classes
- Will be used in chapter 6 (ABAP Objects)

Screen Painter:

- Menu path **Tools • ABAP workbench • Development • User Interface • Screen Painter (SE51)**
- Create and edit Dynpros
- Separate program (installed with the SAPGui) which is currently only available for windows
- Will be used in chapter 8 (ABAP Dynpros)

Menu Painter:

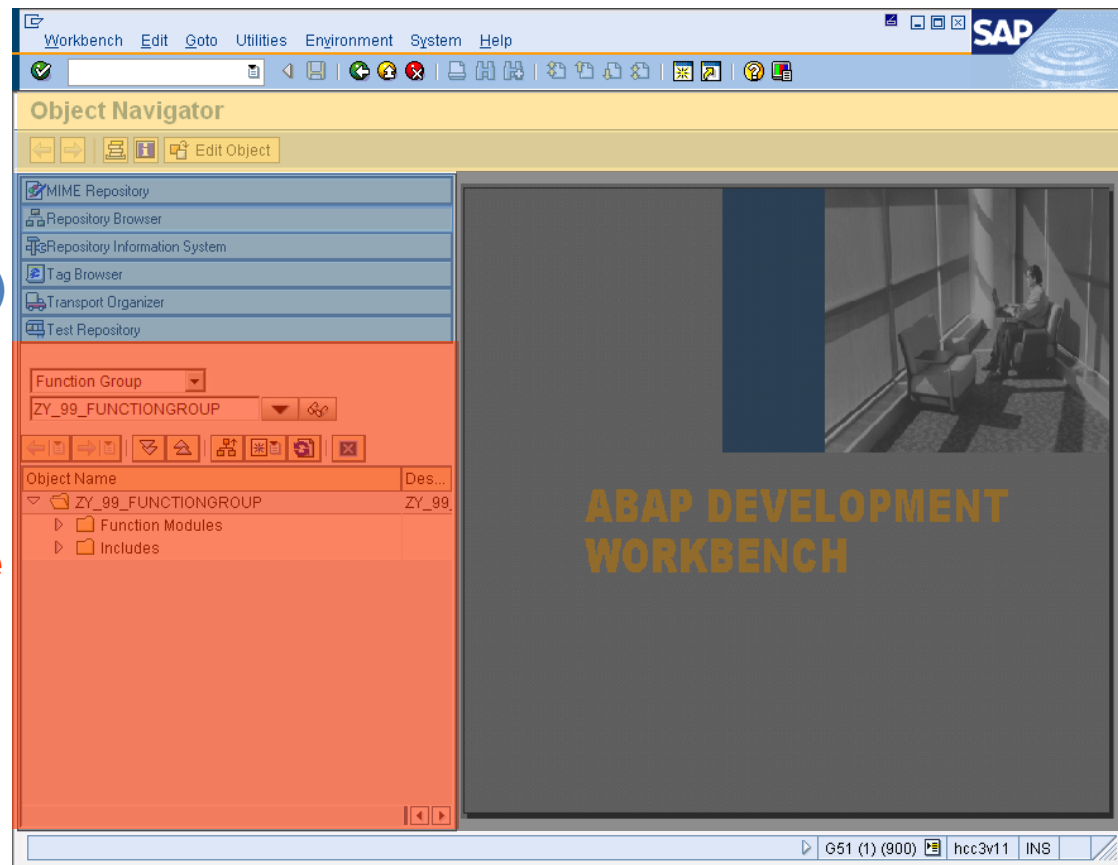
- Menu path **Tools • ABAP workbench • Development • User Interface • Menu Painter (SE41)**
- Create and edit menus, headers and toolbars in ABAP programs
- Will be used in chapter 8 (ABAP Dynpros)

Debugger:

- Execution of ABAP program step-by-step
- Variable values during runtime
- Breakpoint: program execution will be paused when getting to breakpoint
- Watchpoint: program execution is paused only when variable has defined value
- Debugging can be activated by prefix /h
- Test program: **Program • Test • Debugging**

Object Navigator

- Object Navigator integrates all development tools



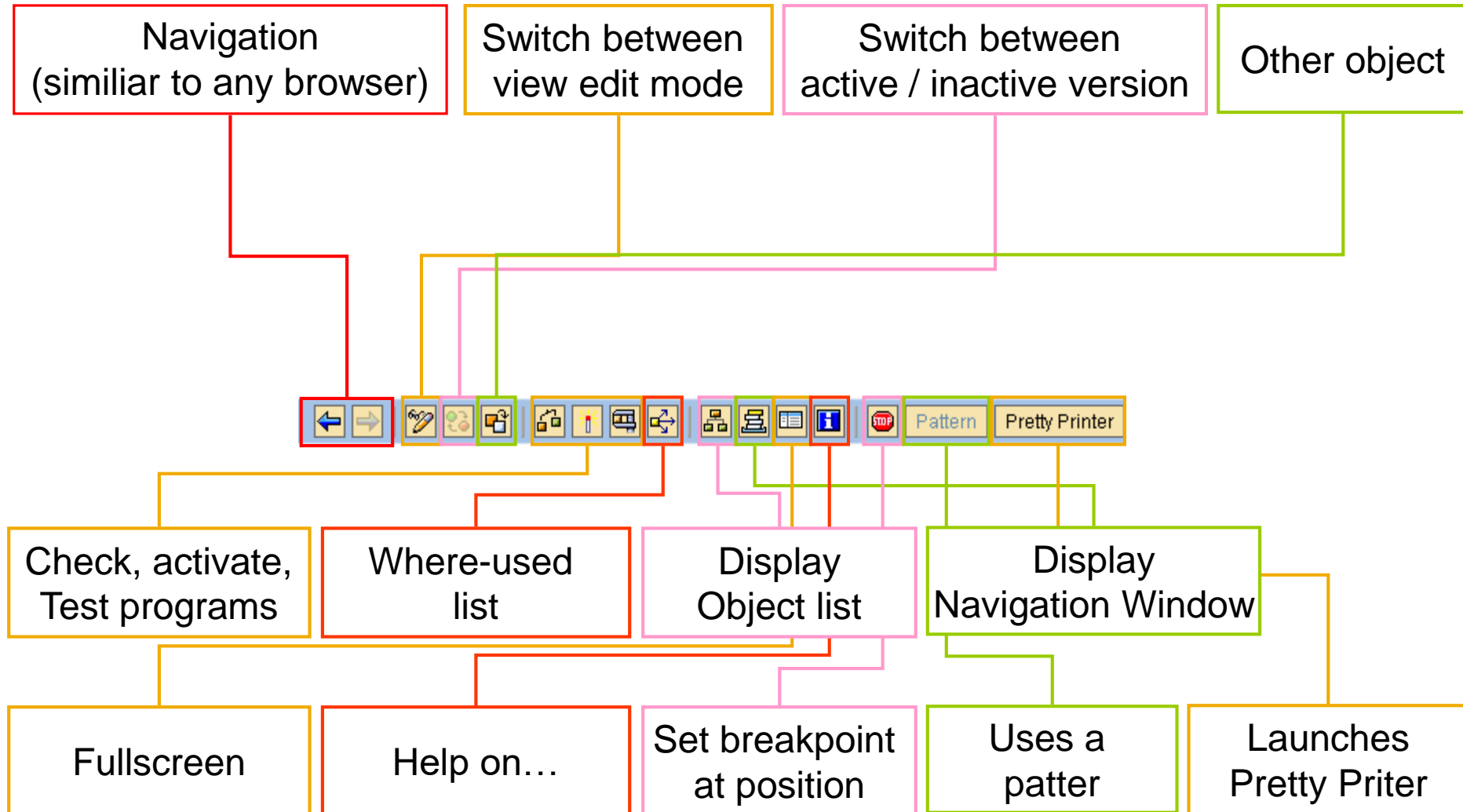
Browsers
(independent)

Toolbar
(context sensitive)

Working space
(context sensitive)

Navigation tree
(independent)

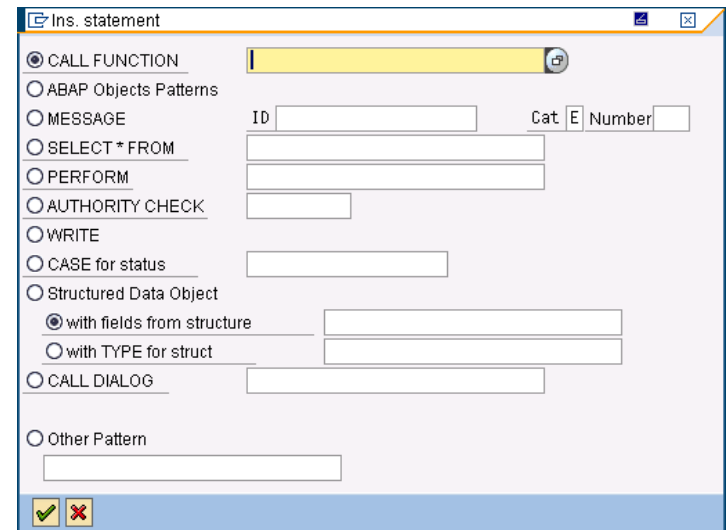
Toolbar in ABAP Editor



The pattern button

Pattern:

- Calling big functions with a lot of importing and exporting parameters may be error-prone
- Procedure:
 - Navigate to the position where the function should be called
 - Click the '**Pattern**' button
 - Choose the ABAP instruction
 - Choose parameters



Ins. statement

☒ CALL FUNCTION

☐ ABAP Objects Patterns

☐ MESSAGE ID Cat E Number

☐ SELECT * FROM

☐ PERFORM

☐ AUTHORITY CHECK

☐ WRITE

☐ CASE for status

☐ Structured Data Object

☒ with fields from structure

☐ with TYPE for struct

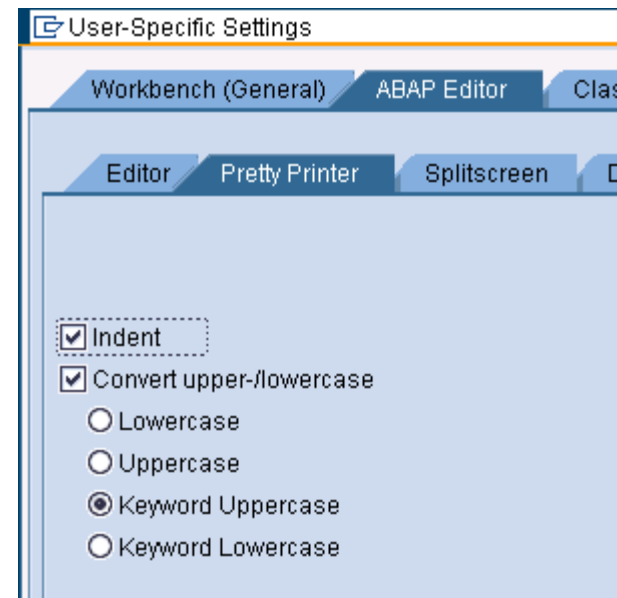
☐ CALL DIALOG

☐ Other Pattern

☒ ☐

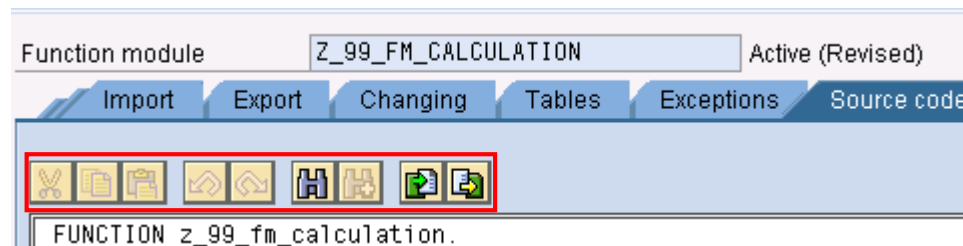
The Pretty Printer

- Pretty Printer formats your source code
- Settings can be adjusted via **Utilities • Settings • ABAP Editor tab • Pretty Printer tab**
- Pretty Printer supports text indent, keyword conversion upper-/lowercase



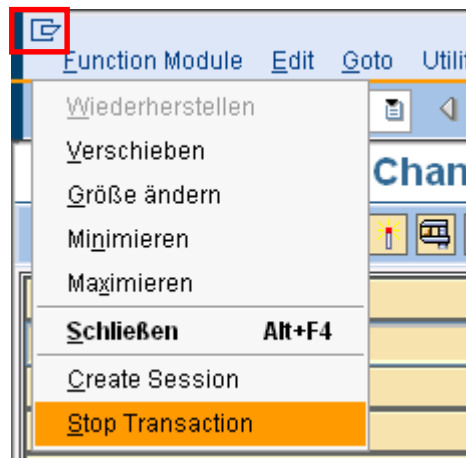
Other features of the Object Navigator

- Versioning: use different versions of your program
- Create documentation for you program via **Goto • Documentation**
- Auto completion, auto correction during programming
- Save and load source code to/from text files, search, copy, paste, undo, redo



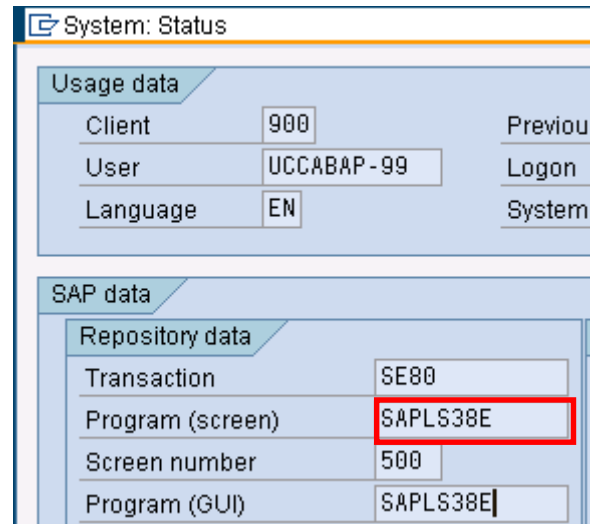
Terminate program

- Long running programs may decrease a system's performance and render the current user mode inoperable
- Sometimes infinite loops
- Termination of long running dialog program:
 - Click on SAP icon
 - Choose '**Stop Transaction**'



Forward navigation

- Basic concept in SAP
- By double clicking on an object the SAP system jumps to the object or to the position where the object can be created
- Example: in SAPGui choose menu path: **System • Status** → double click on **Program(GUI)**



The screenshot shows the 'System: Status' dialog box in SAP. It is divided into two main sections: 'Usage data' and 'SAP data'. The 'Usage data' section contains fields for Client (900), User (UCCABAP-99), and Language (EN). The 'SAP data' section contains a sub-section 'Repository data' with fields for Transaction (SE80), Program (screen) (SAPLS38E), Screen number (500), and Program (GUI) (SAPLS38E). The 'Program (screen)' and 'Program (GUI)' fields are highlighted with a red rectangle.

Usage data	
Client	900
User	UCCABAP-99
Language	EN

SAP data	
Repository data	
Transaction	SE80
Program (screen)	SAPLS38E
Screen number	500
Program (GUI)	SAPLS38E