



FEU INSTITUTE OF TECHNOLOGY  
COLLEGE OF ENGINEERING • COLLEGE OF COMPUTER STUDIES

# ITSE333A

## ABAP

### Lesson 2: Tools in the Development Environment

*Anthony D. Aquino*



# Agenda

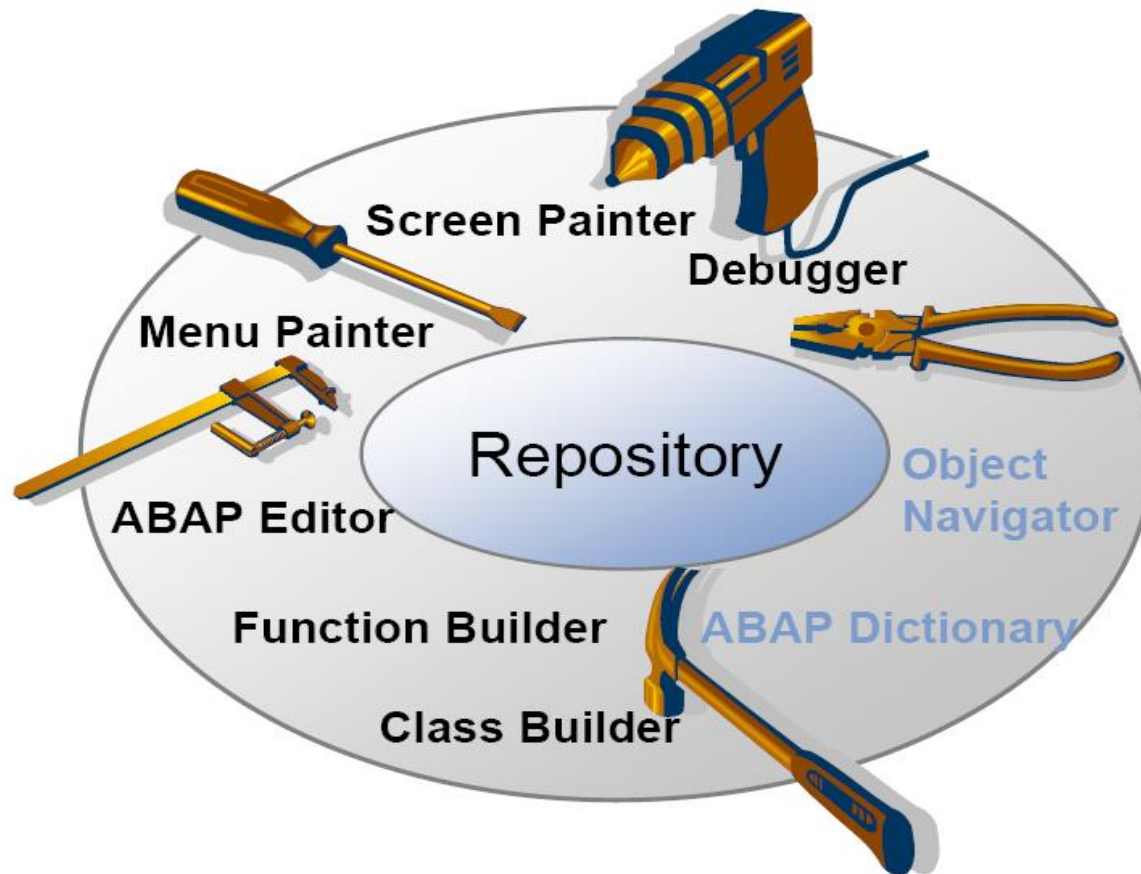
1. Development tools in SAP
2. Usage of the Object Navigator
3. Concepts and tools



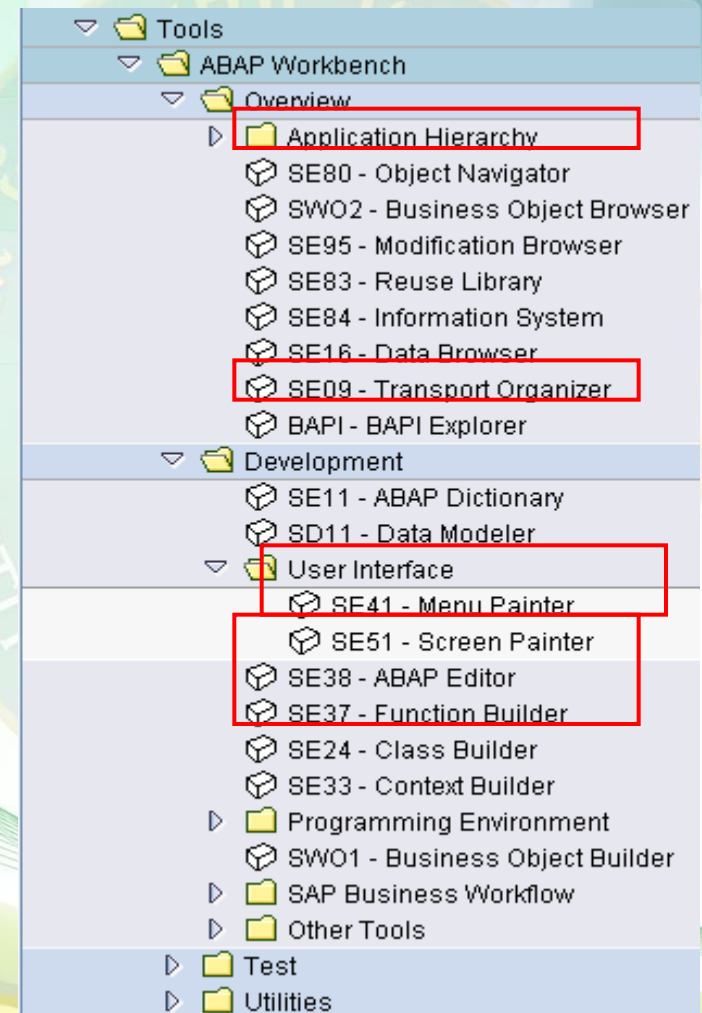




# Development tools in SAP



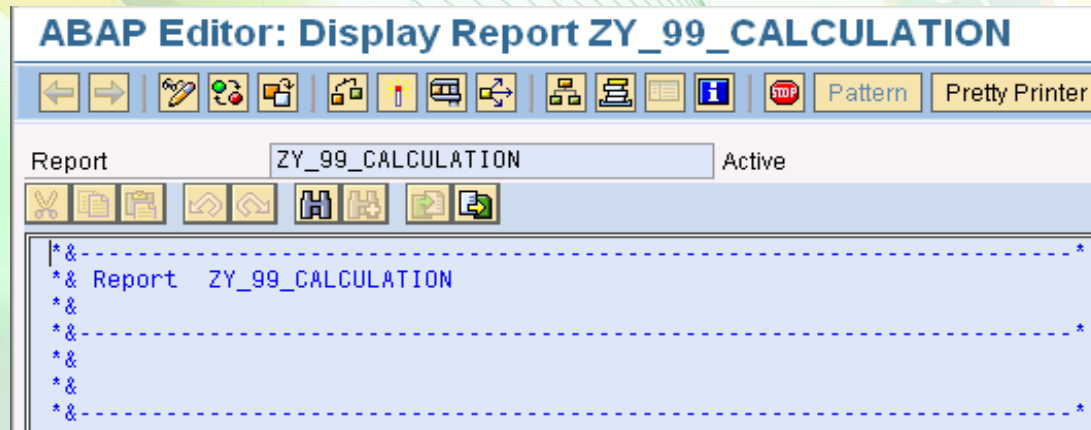
→ Every tool can be accessed in Object Navigator





# ABAP editor

- Menu path **Tools • ABAP workbench • Development • ABAP Editor**
- Transaction code: SE38
- Run, view, edit, activate, check ABAP code
- Integrated into Object Navigator







# Function Builder / Class Builder

## Function Builder:

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

## Class Builder:

- Menu path **Tools • ABAP workbench • Development • Class Builder (SE24)**
- Create and edit new global classes
- Will be used in chapter 8



# Screen Painter / Menu Painter

## Screen Painter:

- Menu path **Tools • ABAP workbench • Development • User Interface • Screen Painter (SE51)**
- Create and edit DynPro's
- Separate programs which is only installed when using SAPGui for Windows
- Will be used in chapter 6

## Menu Painter:

- Menu path **Tools • ABAP workbench • Development • User Interface • Menu Painter (SE41)**
- Create, edit menu's, header's and toolbar's in ABAP programs
- Will be used in chapter 6





# Debugger

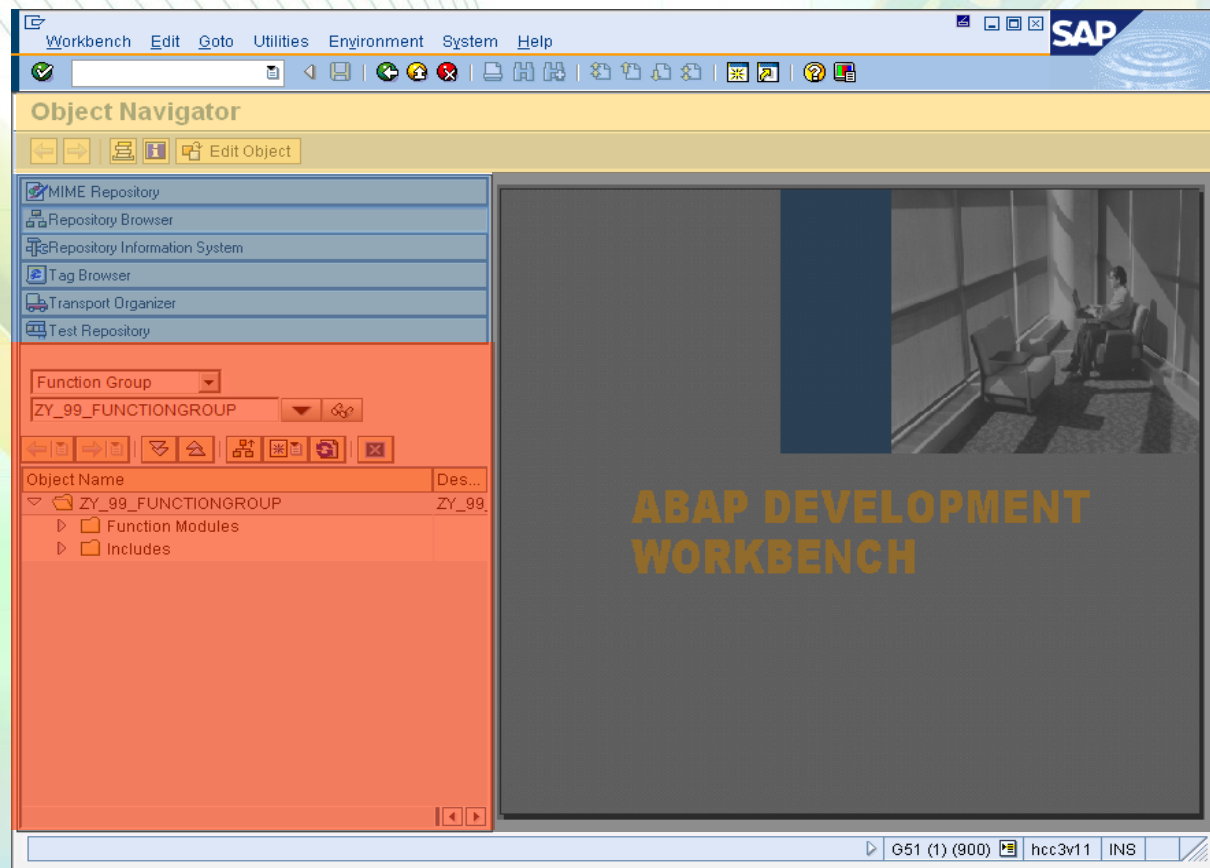
Debugger:

- 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 suffix /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

Navigation  
(similar to any browser)

Switch between  
view edit mode

Switch between  
active / inactive version

Other object



Check, activate,  
Test programs

Where-used  
list

Display  
Object list

Display  
Navigation Window

Fullscreen

Help on...

Set breakpoint  
at position

Uses a  
pattern

Launches  
Pretty Printer



# The pattern button

Pattern:

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

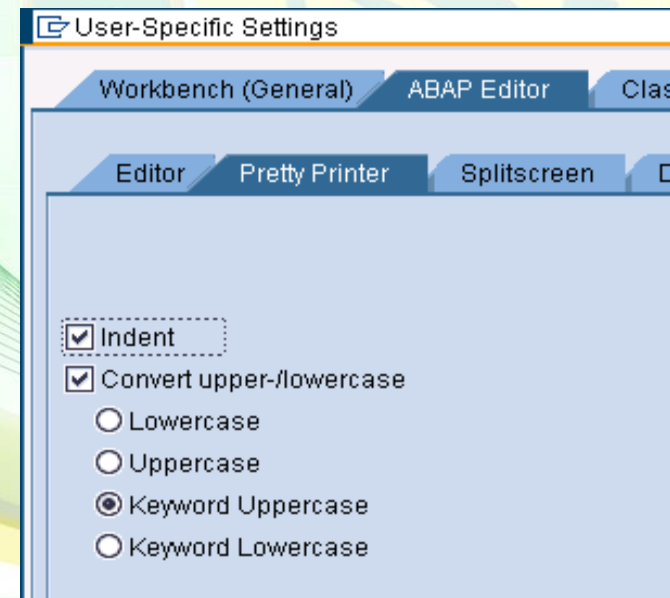
A screenshot of the 'Ins. statement' dialog box in SAP. The dialog has a title bar 'Ins. statement' and a close button. It contains several radio button options: 'CALL FUNCTION' (selected), 'ABAP Objects Patterns', 'MESSAGE', 'SELECT \* FROM', 'PERFORM', 'AUTHORITY CHECK', 'WRITE', 'CASE for status', 'Structured Data Object', 'CALL DIALOG', and 'Other Pattern'. Under 'Structured Data Object', there are sub-options: 'with fields from structure' (selected) and 'with TYPE for struct'. There are input fields for 'ID', 'Cat', 'E', 'Number', and a large text area for parameters. At the bottom, there are checkmark and cross icons.





# The Pretty Printer

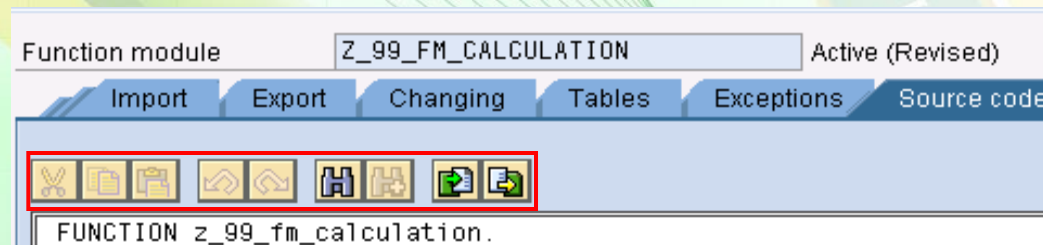
- Pretty Printer formats your source code
- Settings can be adjusted via **Utilities • Settings • ABAP Editor tab • Pretty Printer tab**
- Pretty Printer supports indent, keyword conversion upper-/lowercase





# 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

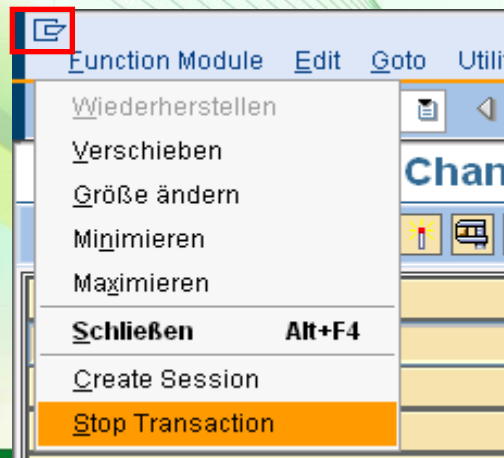






# Terminate program

- Long running programs may decrease the system performance
- 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 SAP Gui choose menu path: **System • Status** →  
double click on  
Program(GUI)

A screenshot of the 'System: Status' dialog box in SAP. The dialog 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), with links for Previous, Logon, and System. The 'SAP data' section contains a 'Repository data' sub-section with fields for Transaction (SE80), Program (screen) (SAPLS38E, highlighted with a red box), Screen number (500), and Program (GUI) (SAPLS38E).

Usage data		
Client	900	Previous
User	UCCABAP-99	Logon
Language	EN	System

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