

# *Rational Rose*

*2001*

*The leading tool to  
design with **UML***

# Agenda



## ➤ **Rational Rose 2001**

- **Rational Architecture**
- **UML diagrams**
- **Extending the language**
- **Web publishing**
- **Working with team**
- **Foreword reverse eng. with Oracle**
- **Foreword reverse eng. with Java**
- **Integration with Jdeveloper**

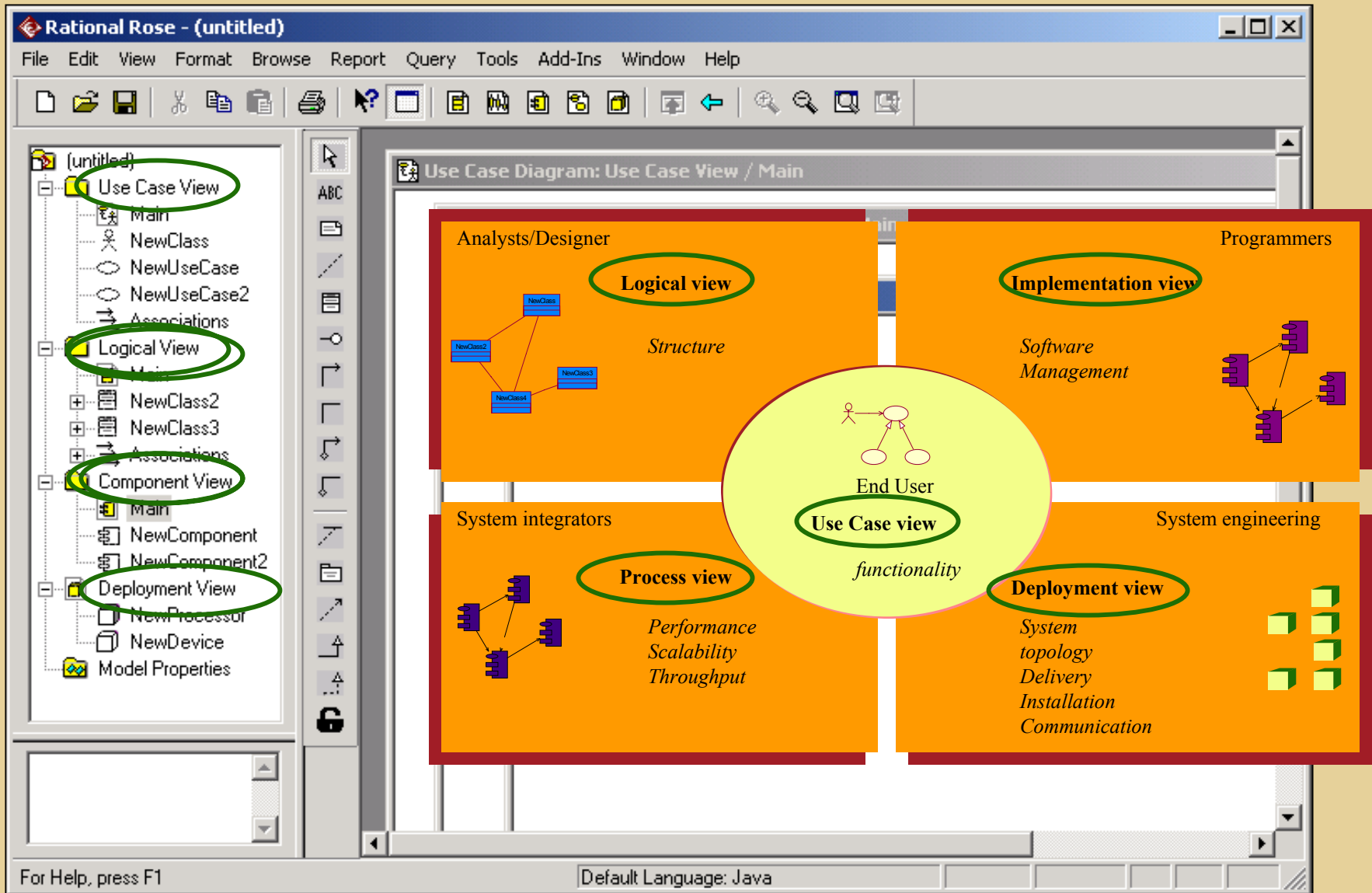
## ➤ **Rational SoDA 2001**

- **Generation Word document**

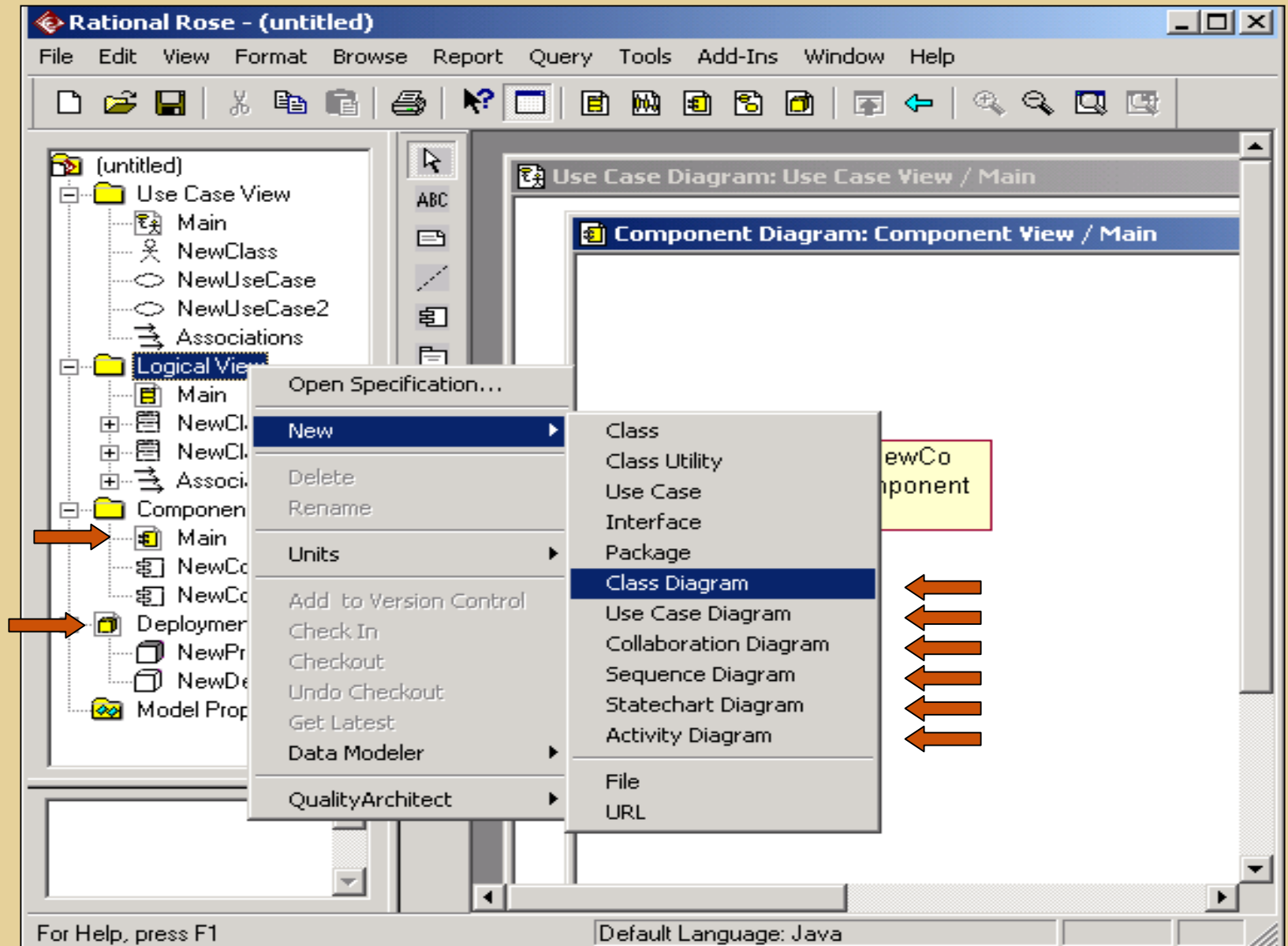
## ➤ **Rational Unified Process**

- **Overview**

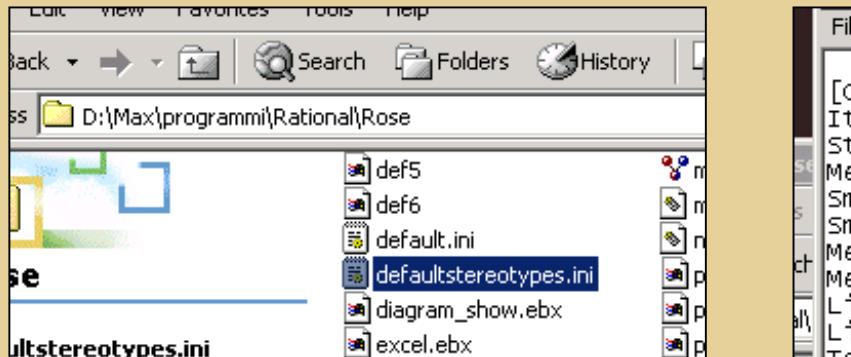
# UML architecture



# UML diagrams



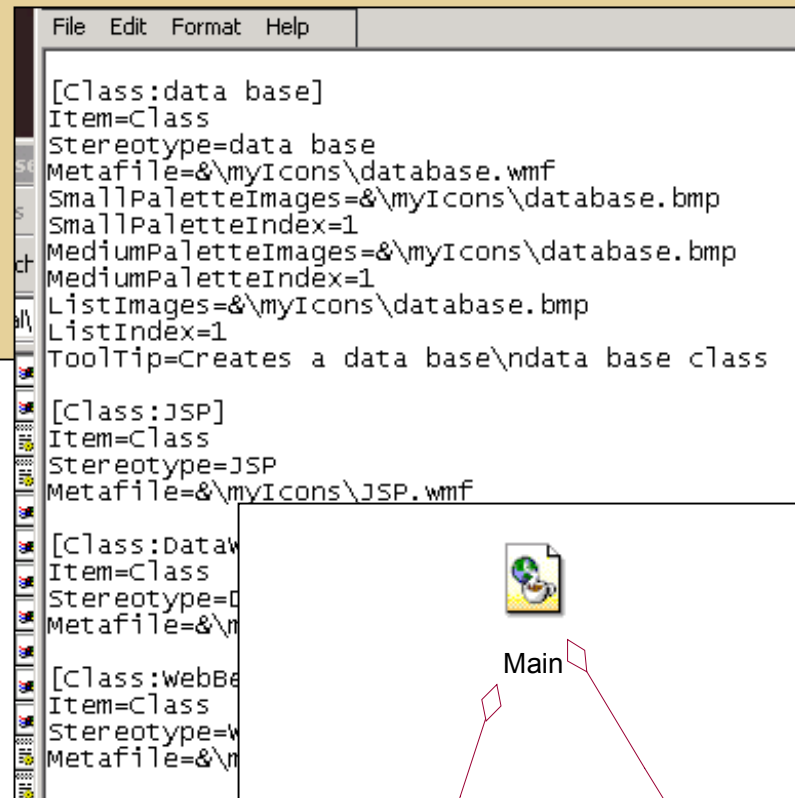
# Extending the language: Stereotypes



File Explorer window showing the file `defaultstereotypes.ini` selected in the folder `D:\Max\programmi\Rational\Rose`. The file size is 13.2 KB and it was last modified on 6/22/2001 at 5:10 PM.

```
CLASS:Domain
Logical Package:Domain Package

Class:data base
Class:ASP
Class:JSP
Class:DatawebBean
Class:webBean
Class:viewObj
Class:EntityObj
Class:ApplicationModule
Class:PortalPage
Class:PortalTab
Class:Portlet
Use Case:business process
Device:internet
Device:modem
Device:net
Device:intranet
Processor:server
Processor:client
Processor:legacy
Processor:oracleDB
Processor:router
Activitystate:test
Activitystate:subActivity
Logical Package:Portlet Package
```



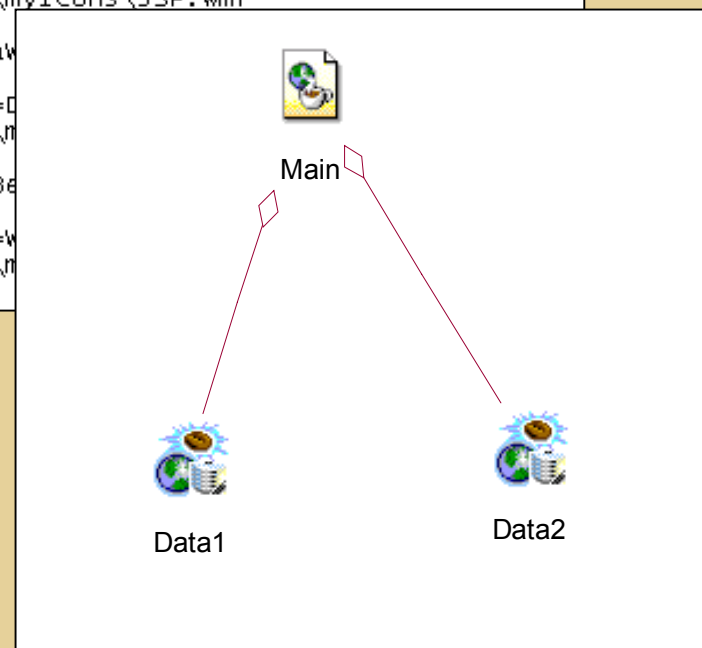
```
File Edit Format Help

[Class:data base]
Item=Class
Stereotype=data base
Metafile=&\myIcons\database.wmf
SmallPaletteImages=&\myIcons\database.bmp
SmallPaletteIndex=1
MediumPaletteImages=&\myIcons\database.bmp
MediumPaletteIndex=1
ListImages=&\myIcons\database.bmp
ListIndex=1
ToolTip=Creates a data base\ndata base class

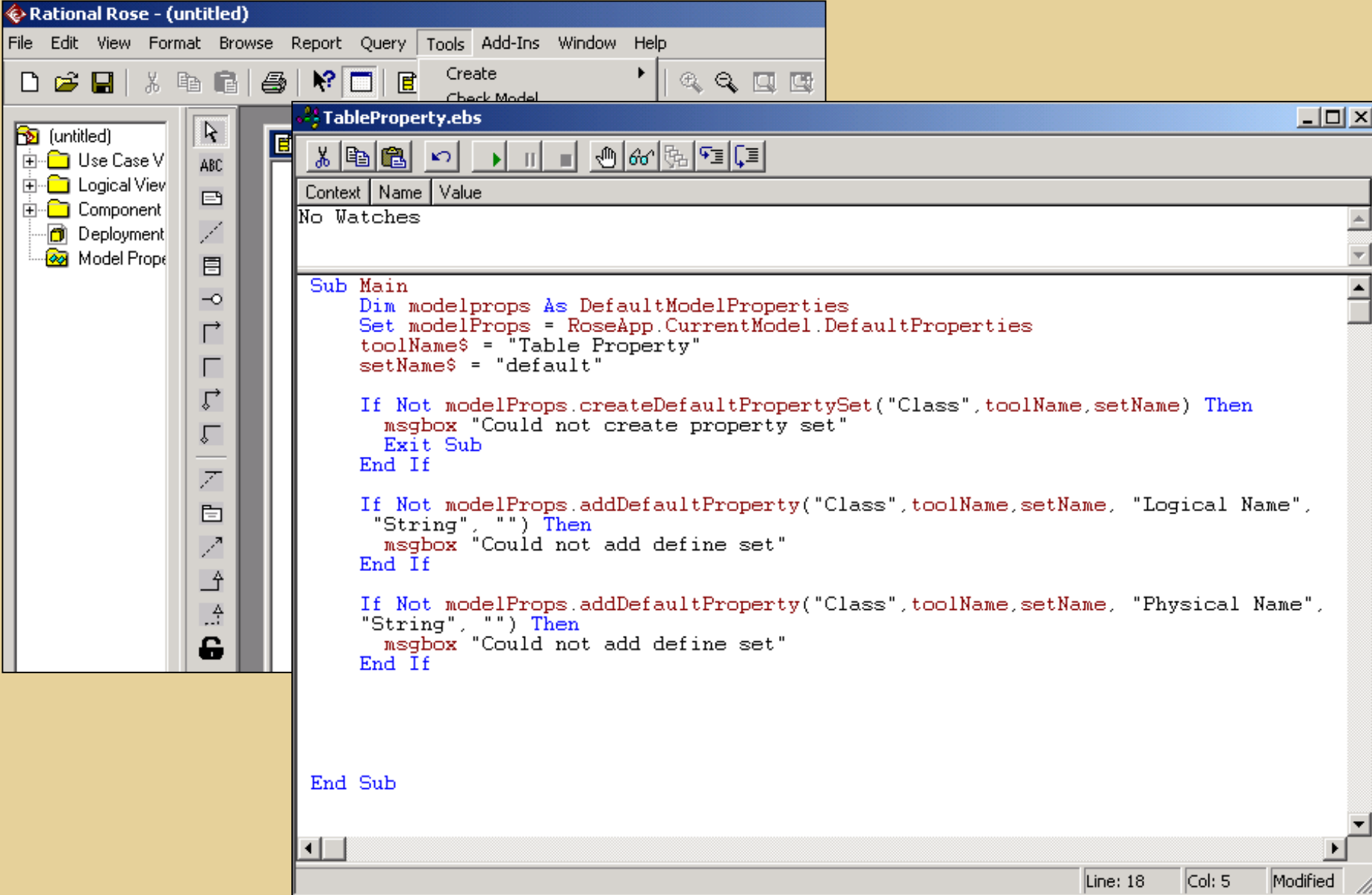
[Class:JSP]
Item=Class
Stereotype=JSP
Metafile=&\myIcons\JSP.wmf

[Class:DatawebBean]
Item=Class
Stereotype=DatawebBean
Metafile=&\myIcons\DatawebBean.wmf

[Class:webBean]
Item=Class
Stereotype=webBean
Metafile=&\myIcons\webBean.wmf
```



# Extending the language: tagged value



The screenshot shows the Rational Rose application interface. The main window is titled "TableProperty.ebs" and contains a VBA script. The script defines a sub procedure named "Main" that interacts with the RoseApp's DefaultModelProperties to create and define property sets for "Table Property".

```
Sub Main
    Dim modelProps As DefaultModelProperties
    Set modelProps = RoseApp.CurrentModel.DefaultProperties
    toolName$ = "Table Property"
    setName$ = "default"

    If Not modelProps.createDefaultPropertySet("Class", toolName, setName) Then
        MsgBox "Could not create property set"
        Exit Sub
    End If

    If Not modelProps.addDefaultProperty("Class", toolName, setName, "Logical Name",
        "String", "") Then
        MsgBox "Could not add define set"
    End If

    If Not modelProps.addDefaultProperty("Class", toolName, setName, "Physical Name",
        "String", "") Then
        MsgBox "Could not add define set"
    End If

End Sub
```

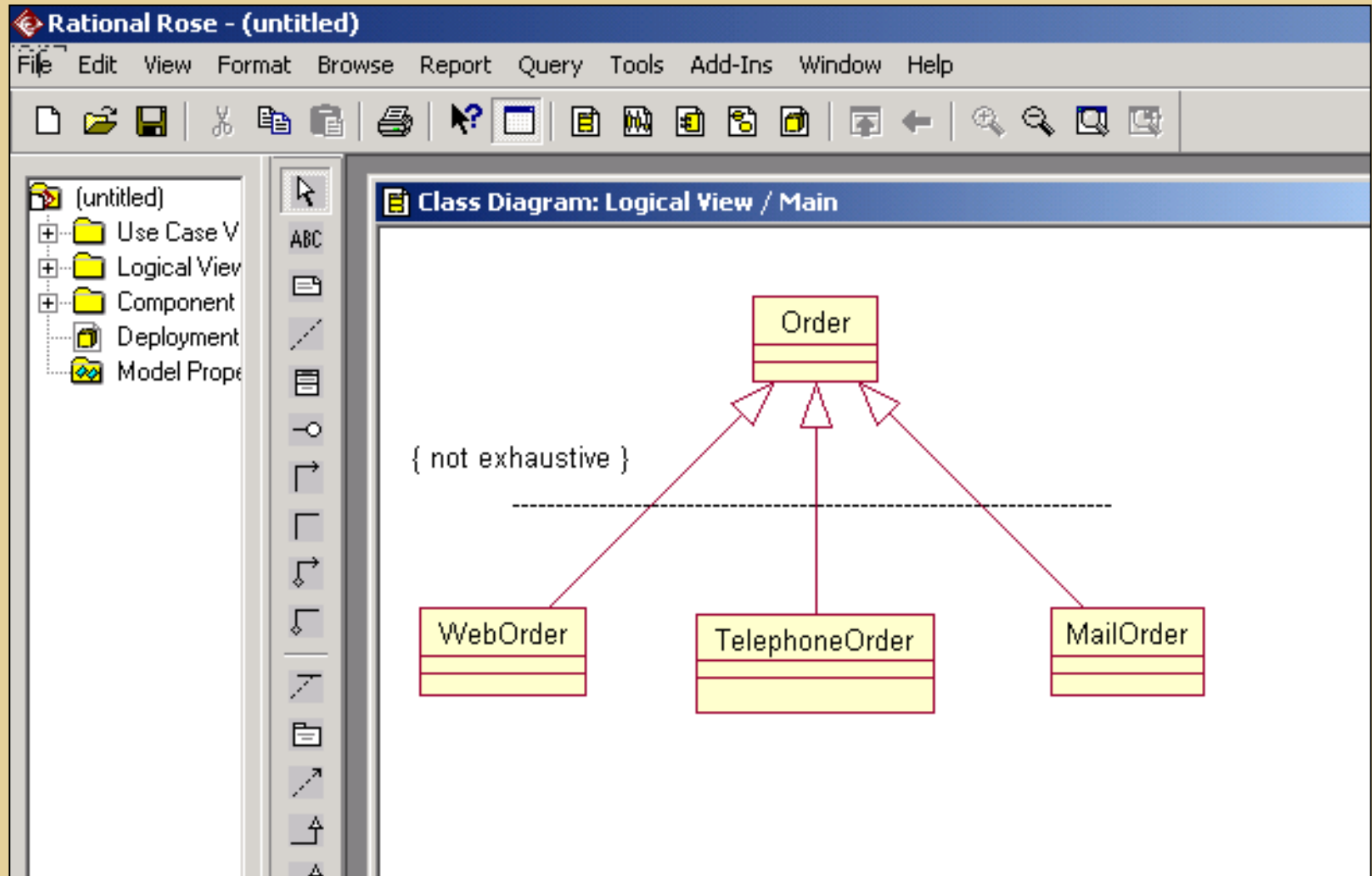
The status bar at the bottom right indicates "Line: 18", "Col: 5", and "Modified".

# Extending the language: tagged value

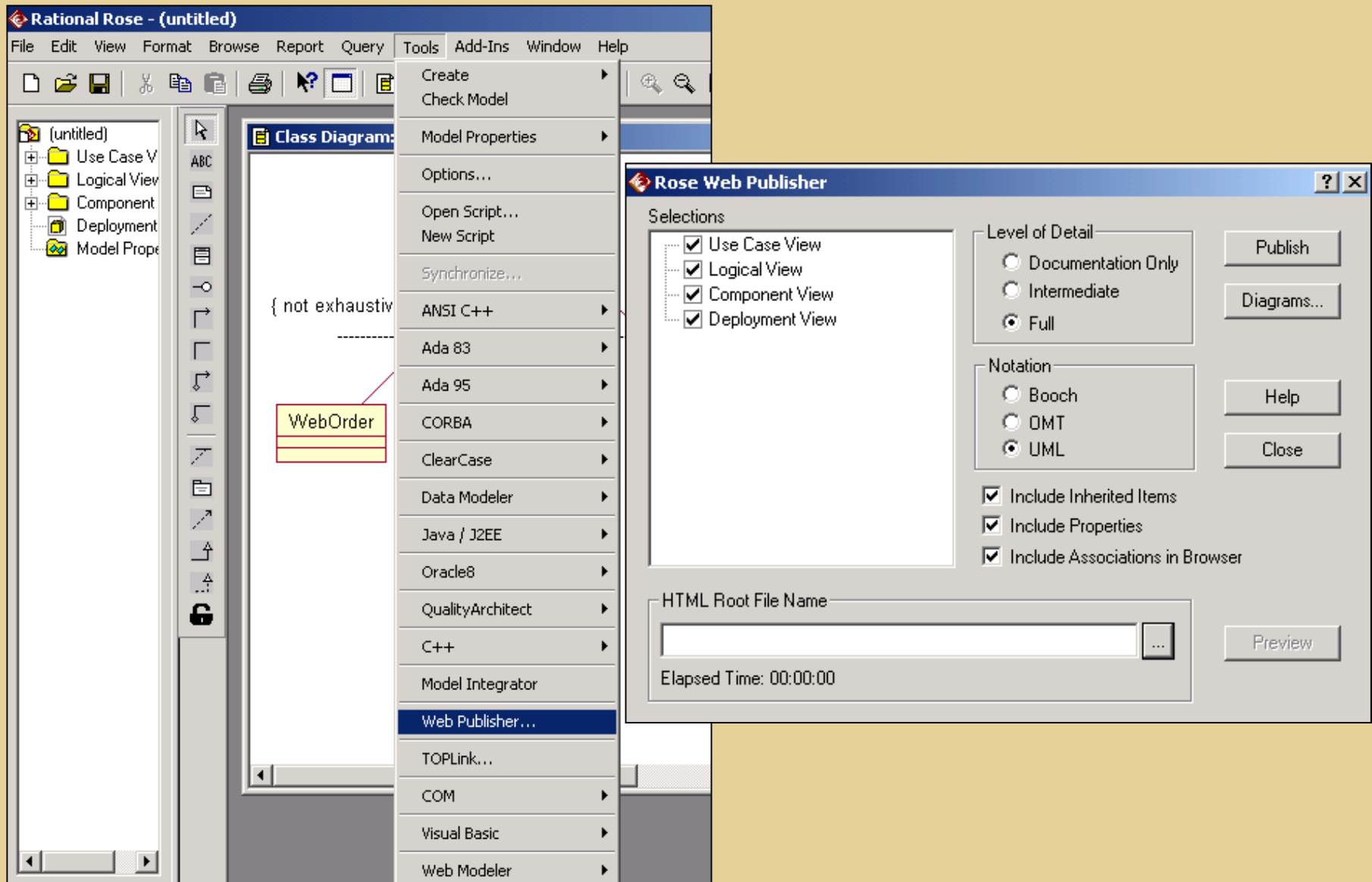
The screenshot shows the Rational Rose software interface. The main window displays a class diagram with a class named "NewClass". Below the diagram, a "Class Specification for NewClass" dialog box is open. The "Table Property" tab is selected and circled in green. The dialog shows the following table of model properties:

* Name	Value	Source
* Logical Name	ordini	Override
* Physical Name	mo001	

# Extending the language: OCL



# Web Publishing



# Web Publishing

Rose Web Publisher - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites History Print W Y

Address D:\Max\dati2\sugar\SugarRoseModel\integratedModel\HTMLDoc\index.htm Go

Links Customize Links Free Hotmail Windows

Display documentation

- Use Case View
  - 1. Business Model
  - 2. Functional Requirements
  - 3. Application Workflow
  - Main
    - Managing Sugar Project
    - Modeling Business
    - Modeling Functional Requirements
    - Modeling Application Workflow
    - Data Modeling
    - Application Design
    - Managing Phase 1
    - Managing Phase 2
    - Managing Phase 3
    - Associations
- Logical View
  - Application Design
  - Data Model
  - Global Data Types
  - Schemas
  - Main
    - Managing Sugar Project
    - Modeling Business
    - Modeling Functional Requirements
    - Modeling Application Workflow
    - Data Modeling
    - Application Design
    - Managing Phase 1
    - Managing Phase 2
    - Managing Phase 3
    - Associations
- Component View
- Deployment View
- Project Properties

No documentation available

**EnCoRE project**

```
graph TD; subgraph "EnCoRE project"; MS[Managing Sugar Project]; MP1[Managing Phase 1]; MP2[Managing Phase 2]; MP3[Managing Phase 3]; MB[Modeling Business]; MFR[Modeling Functional Requirements]; DM[Data Modeling]; MAW[Modeling Application Workflow]; end; MS <|-- MP1; MS <|-- MP2; MS <|-- MP3; MP1 -.->|<<extend>>| MB; MP2 -.->|<<extend>>| MFR; MP2 -.->|<<extend>>| DM; MP3 -.->|<<extend>>| MAW; MB -.->|<<extend>>| B1[1. Business Model]; MFR -.->|<<extend>>| F2[2. Functional Requirements]; DM -.->|<<extend>>| D3[Data Model (from Logical View)]; MAW -.->|<<extend>>| A4[3. Application Workflow];
```

Managing Sugar Project

Managing Phase 1

Managing Phase 2

Managing Phase 3

Modeling Business

Modeling Functional Requirements

Data Modeling

Modeling Application Workflow

1. Business Model

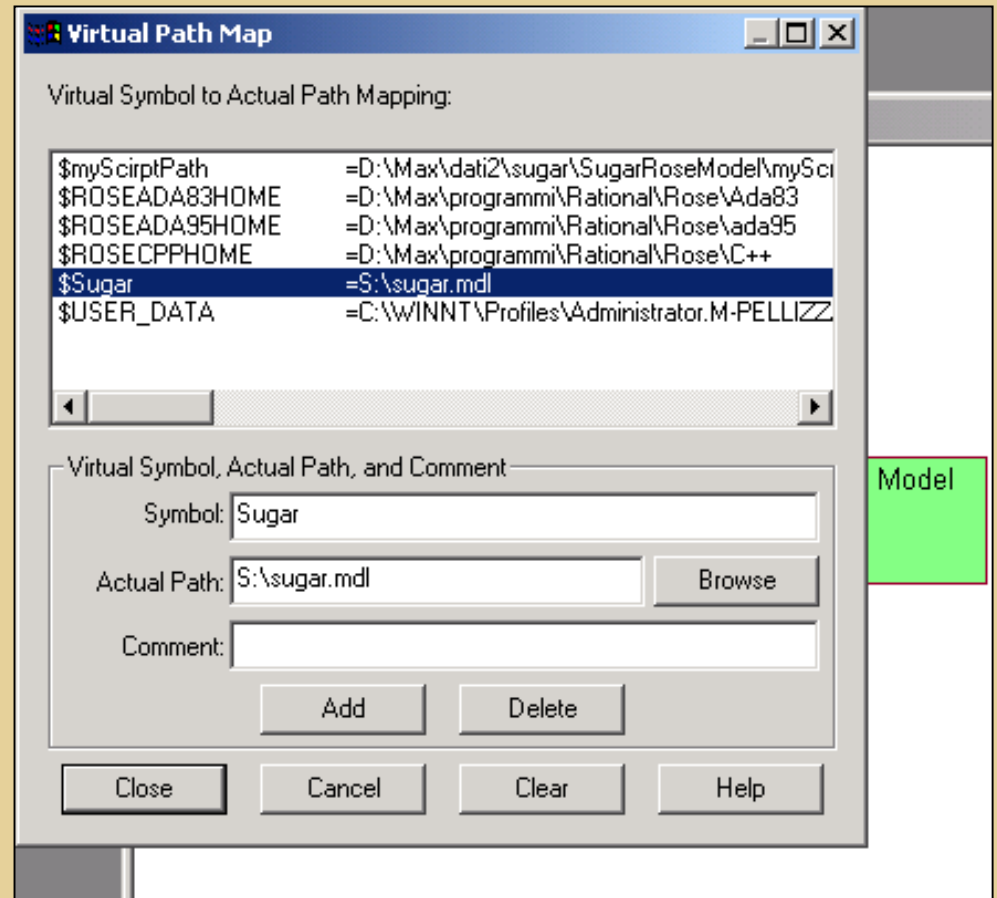
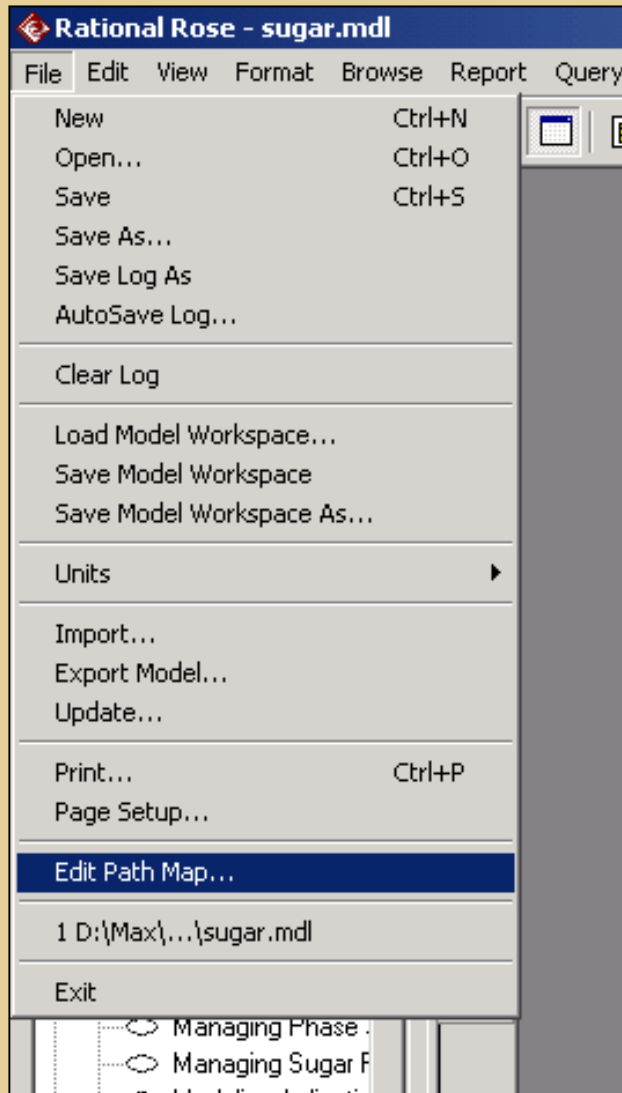
2. Functional Requirements

Data Model (from Logical View)

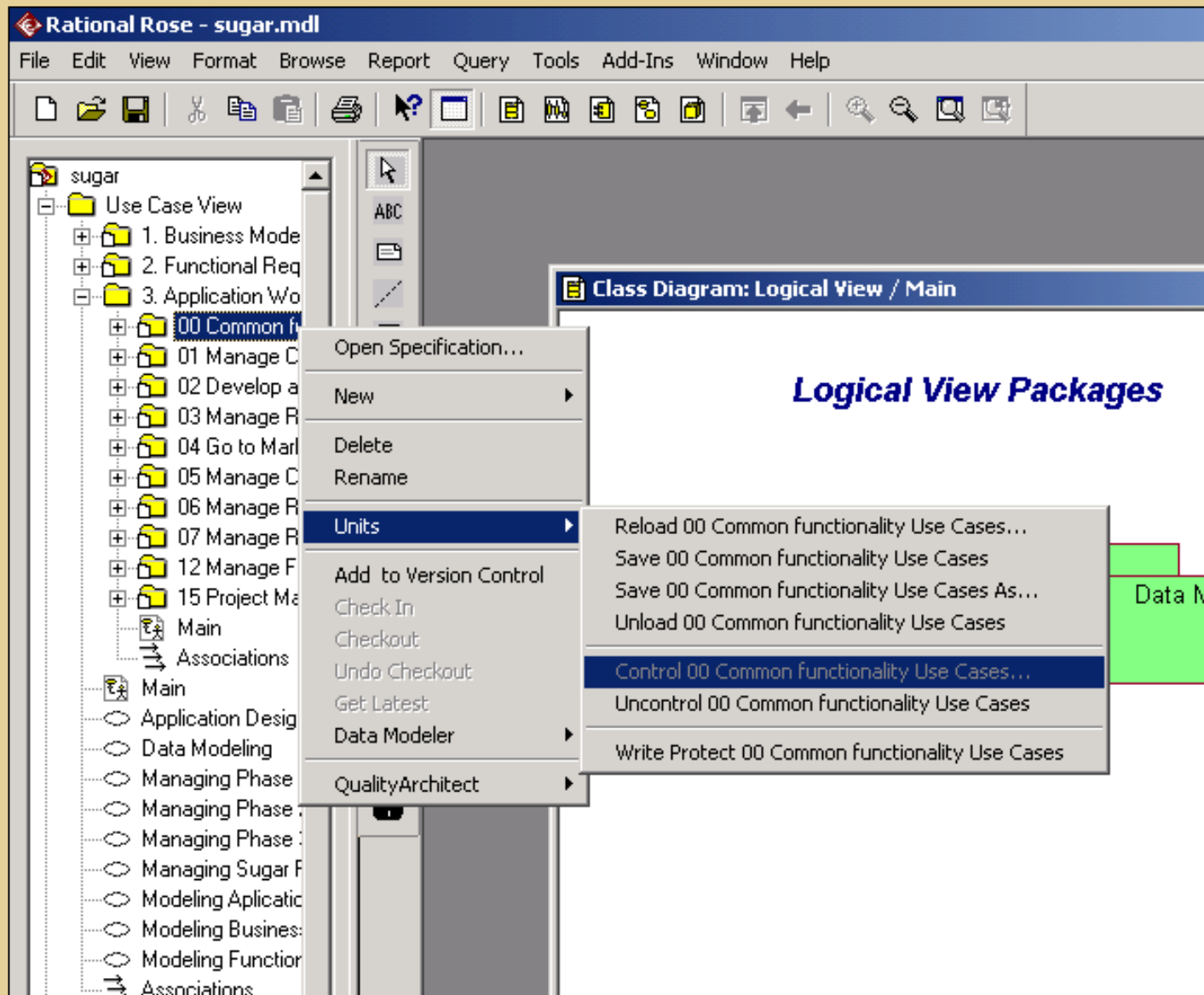
3. Application Workflow

My Computer

# Working with team



# Defining Units



# Oracle Data Base

**Rational Rose - (untitled)**

File Edit View Format Browse Report Query Tools Add-Ins Window

(untitled)

- Use Case View
- Logical View
  - Main
  - Associations
- Component View
  - Main
- Deployment View
- Model Properties

ABC

Cl

Create  
Check Model  
Model Properties  
Options...  
Open Script...  
New Script  
Synchronize...  
ANSI C++  
Ada 83  
Ada 95  
CORBA  
ClearCase  
Data Modeler  
Java / J2EE  
**Oracle8**  
QualityArchitect  
C++  
Model Integrator  
Web Publisher...  
TOPLink...  
COM

Oracle 8 - Data Type Creation Wizard

Data Type:

- Object Type
- Relational Table
- Relational View
- Object View
- VARRAY
- Nested Table**

Description:  
A Nested Table is a table that appears as a column in another table. You can perform the same operations on it as on other tables.

Selected Items:

Next > Cancel Help

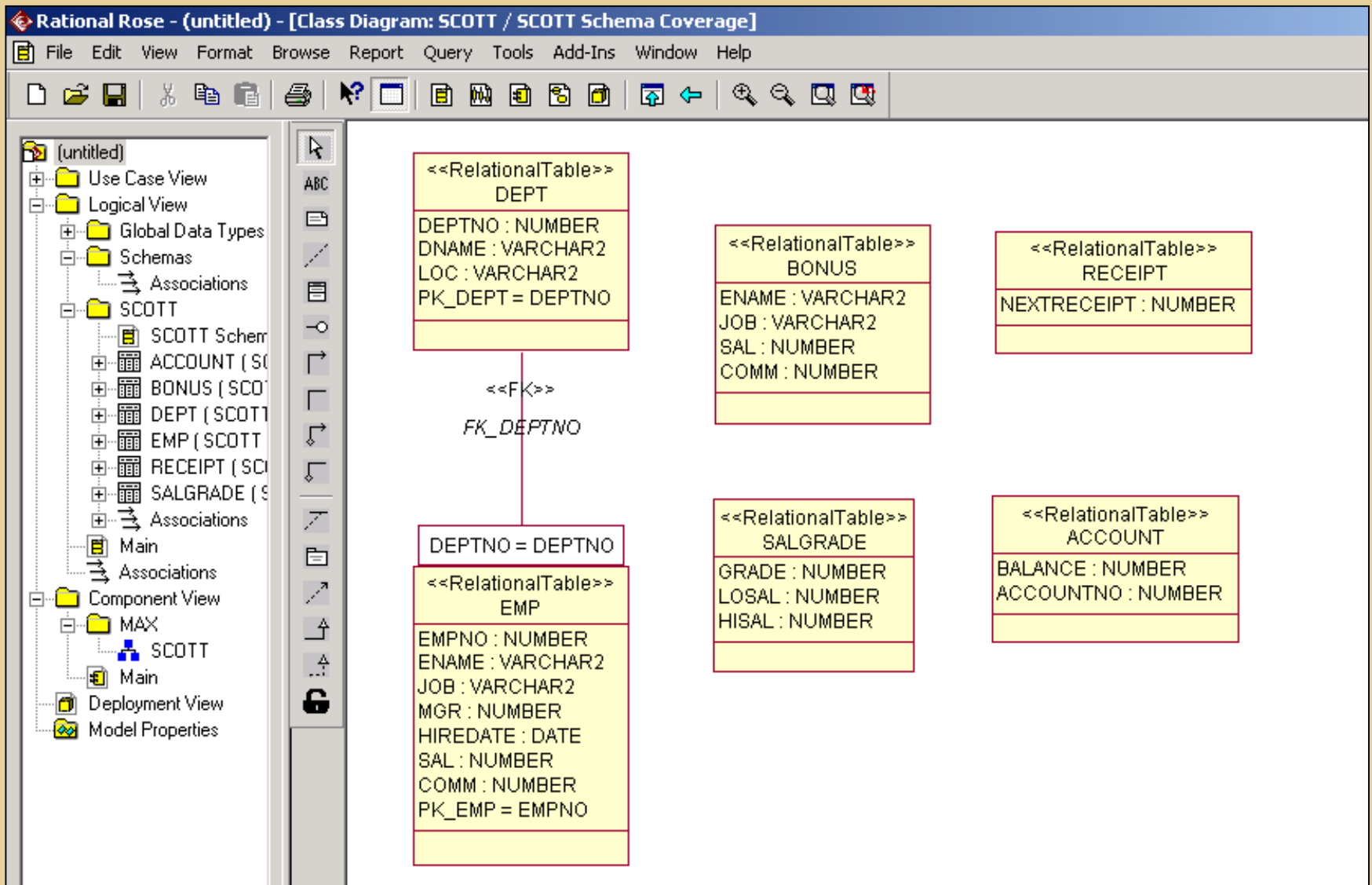
# Data Model

The screenshot displays the Rational Rose software interface. The main window shows a Data Model Diagram for the SCOTT database. A context menu is open over the diagram, with the 'Data Modeler' option selected, which has opened a sub-menu. In this sub-menu, the 'Table' option is highlighted. A 'Table Specification for EMP' dialog box is also open, showing the column definitions for the EMP table.

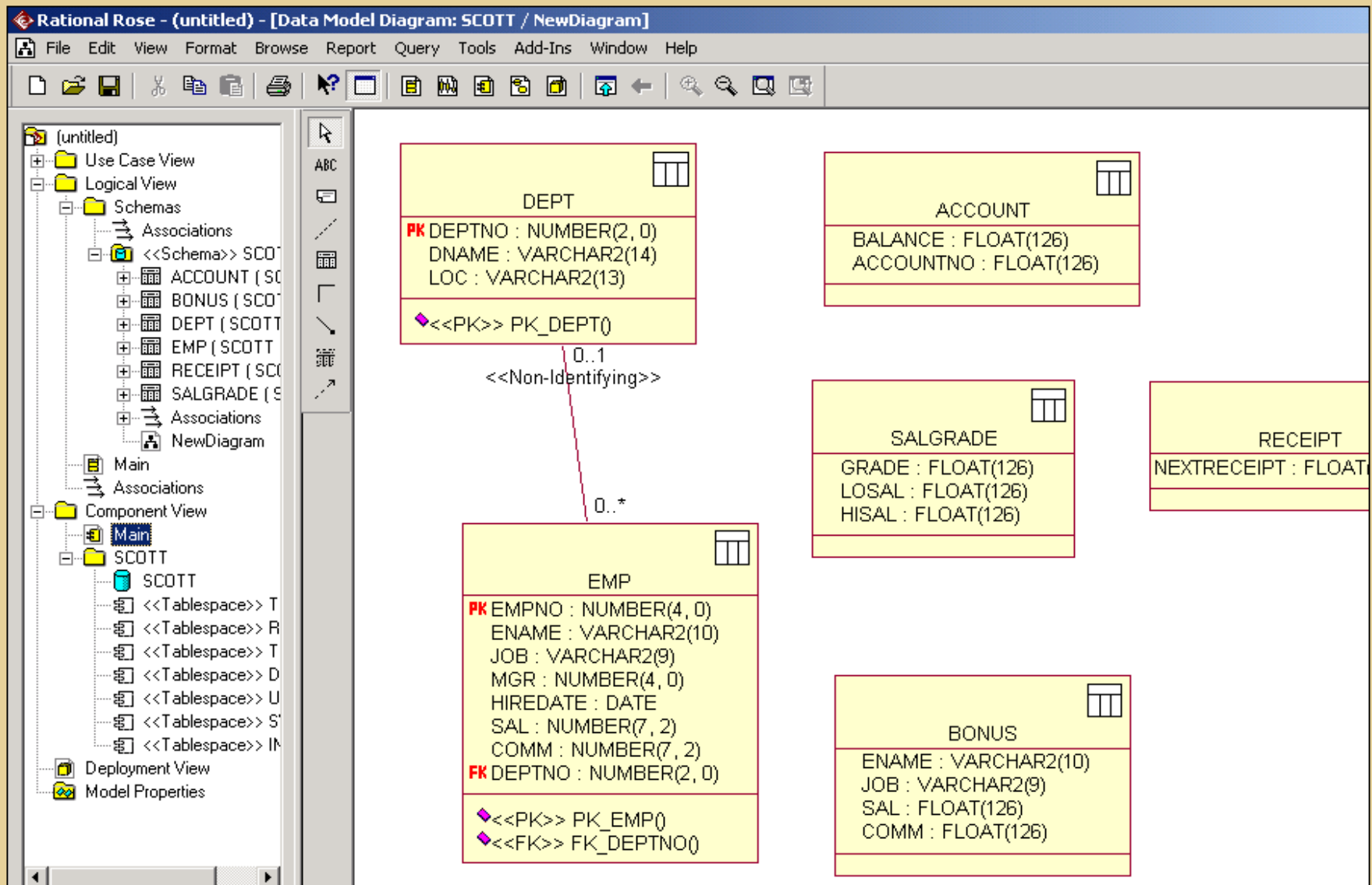
**Table Specification for EMP**

Name	PK	Domain	Type	Not Null	Unique	Default
EMPNO	PK		NUMBER	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
ENAME			VARCHAR2	<input type="checkbox"/>	<input type="checkbox"/>	
JOB			VARCHAR2	<input type="checkbox"/>	<input type="checkbox"/>	
MGR			NUMBER	<input type="checkbox"/>	<input type="checkbox"/>	
HIREDATE			DATE	<input type="checkbox"/>	<input type="checkbox"/>	
SAL			NUMBER	<input type="checkbox"/>	<input type="checkbox"/>	
COMM			NUMBER	<input type="checkbox"/>	<input type="checkbox"/>	
DEPTNO	FK		NUMBER	<input type="checkbox"/>	<input type="checkbox"/>	

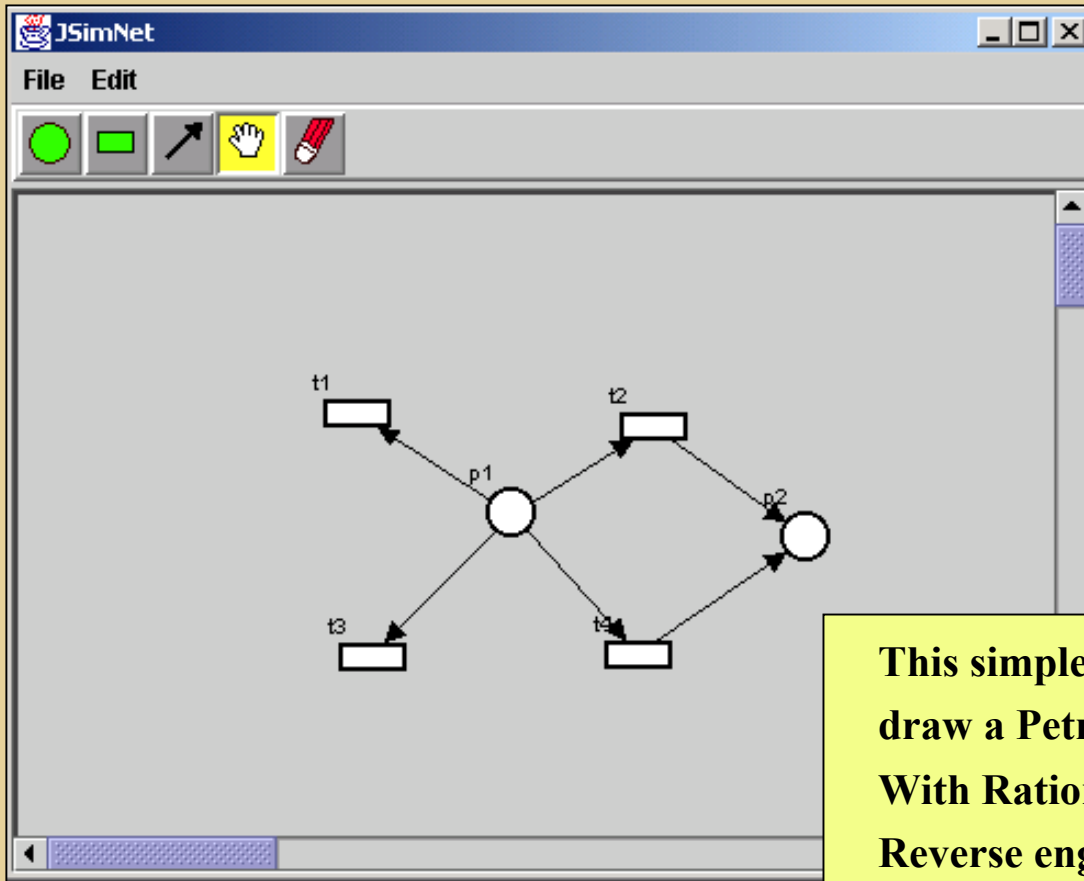
# Scott Tiger schema: Oracle reverse



# Scott Tiger schema: DM reverse



# A Java application



**This simple application enables you to draw a Petri Net.**

**With Rational Rose it will be possible to Reverse engineer the entire application and brows throughout the Java code.**

# Reverse engineering Java code

The image shows the Rational Rose IDE interface. The 'Project Specification' window is open, displaying the 'Classpath' tab. The classpath list includes:

- D:\Max\dati2\seminario\new presentation\Esercices\JavaReverse\
- d:\max\programmi\jdk1.3\src.jar
- d:\max\programmi\jdk1.3\jre\lib\i18n.jar
- d:\max\programmi\jdk1.3\jre\lib\jaws.jar
- d:\max\programmi\jdk1.3\jre\lib\rt.jar
- d:\max\programmi\jdk1.3\lib\dt.jar
- d:\max\programmi\jdk1.3\lib\tools.jar
- d:\max\programmi\jdk1.3\jre\lib\sunrsasign.jar
- D:\Max\dati2\seminario\new presentation\Esercices\JavaReverse\

The 'Java Reverse Engineer' dialog box is overlaid on the IDE. It shows a file tree with the following files selected for reverse engineering:

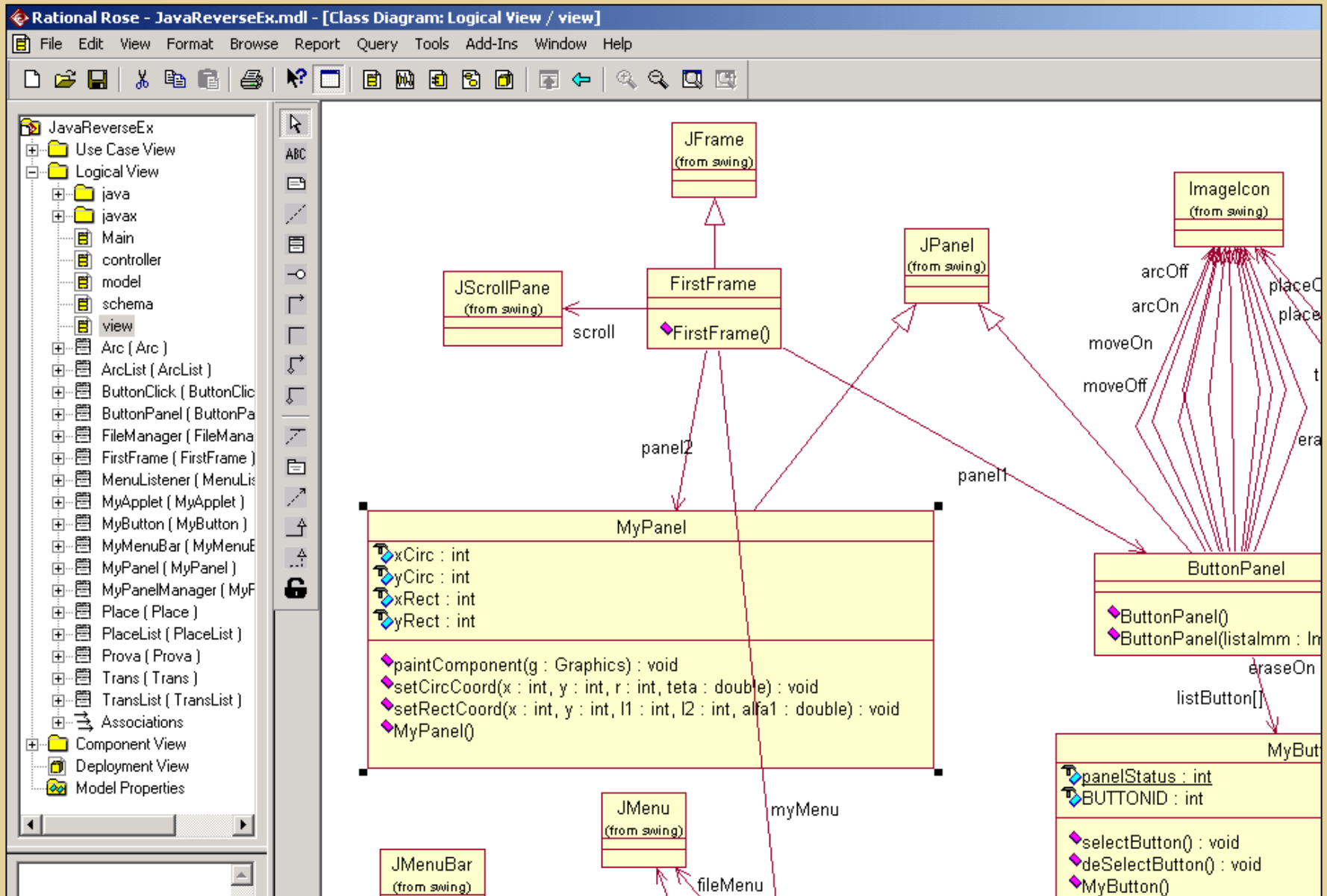
- MyButton.java
- MyMenuBar.java
- MyPanel.java
- MyPanelManager.java
- NewClass.java
- Place.java
- PlaceList.java
- Prova.java
- Trans.java
- TransList.java

The dialog also includes a 'Filter' set to '\*.java' and buttons for 'Edit CLASSPATH...', 'Add', 'Add All', and 'Add Recursive'. Below the file list is a table showing the file names and their sizes:

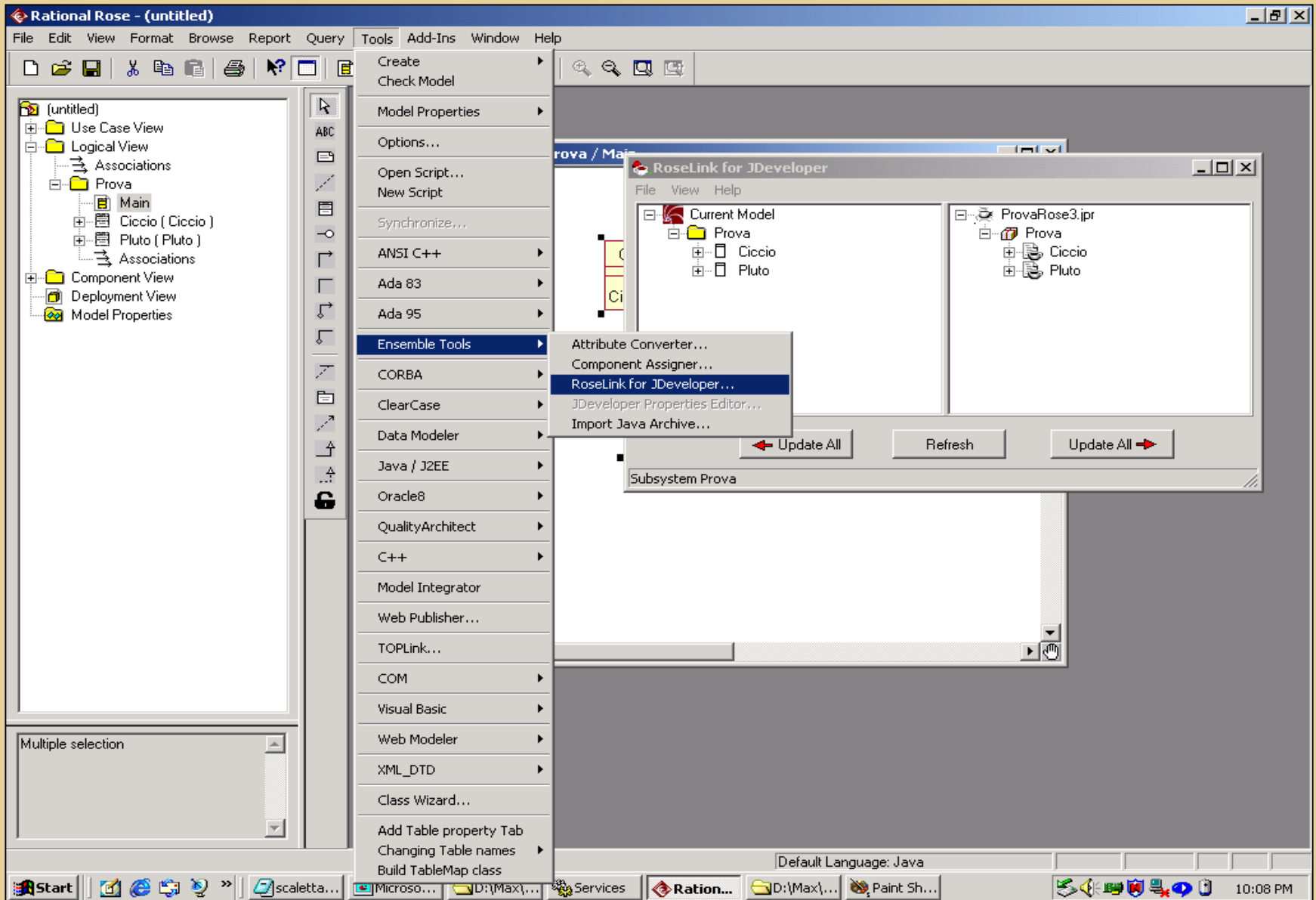
FileName	Size
D:\Max\dati2\seminario\new presentation\Esercices\JavaReverse\...	1837
D:\Max\dati2\seminario\new presentation\Esercices\JavaReverse\...	2966
D:\Max\dati2\seminario\new presentation\Esercices\JavaReverse\...	681
D:\Max\dati2\seminario\new presentation\Esercices\JavaReverse\...	3340
D:\Max\dati2\seminario\new presentation\Esercices\JavaReverse\...	970
D:\Max\dati2\seminario\new presentation\Esercices\JavaReverse\...	1250
D:\Max\dati2\seminario\new presentation\Esercices\JavaReverse\...	4171

At the bottom of the dialog, there are buttons for 'Select All', 'Reverse', 'Remove', 'Remove All', 'Done', and 'Help'. The 'Reverse' button is highlighted.

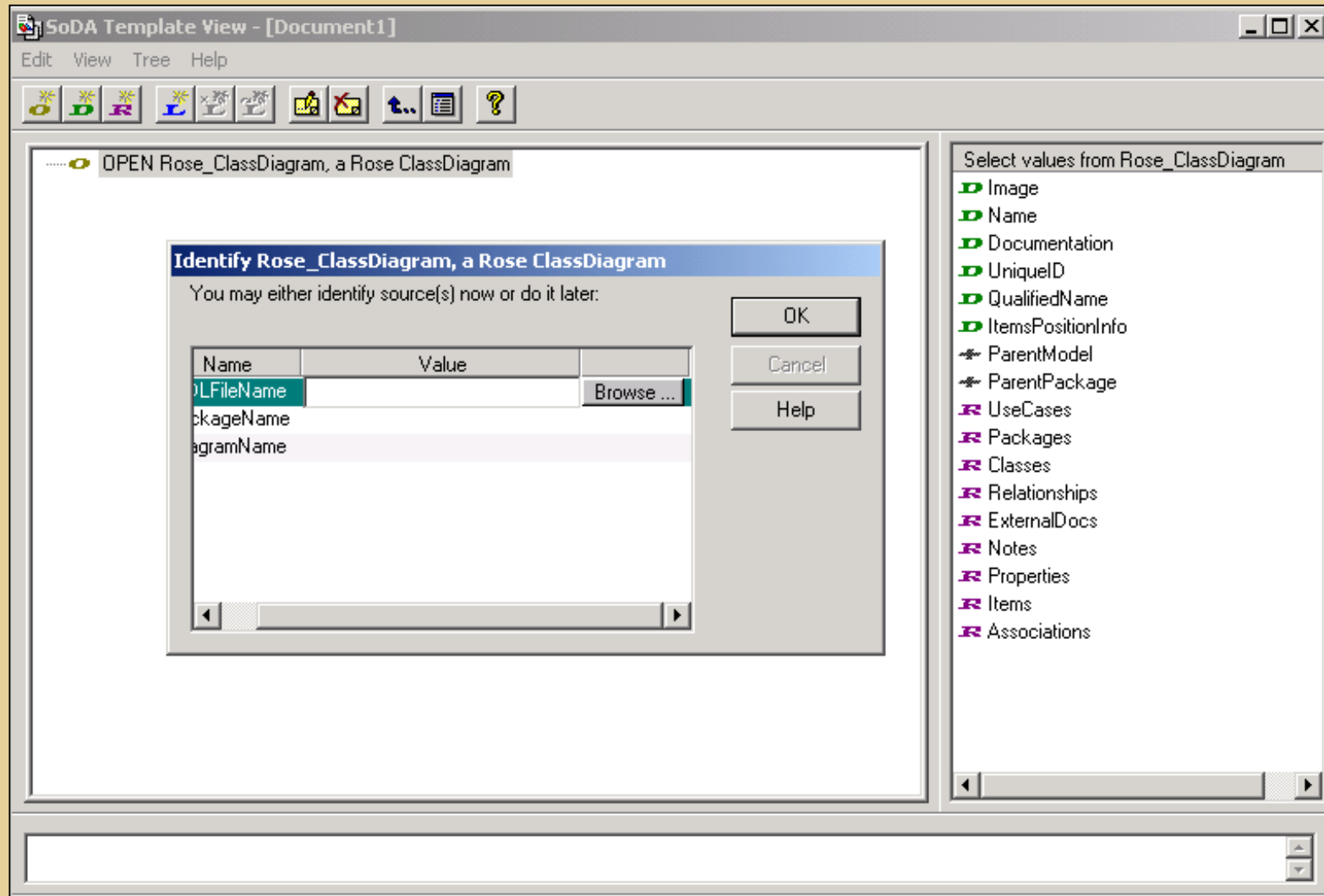
# The class diagrams



# Integration with JDeveloper



# Working with Rational SoDA



# Rational Unified Process

Address: D:\Max\programmi\Rational\RationalUnifiedProcess\index.htm

Where am I | Index | Search | Getting Started | Glossary | Print | Feedback

Overview

## Rational Unified Process: Overview

Artifacts | Examples | Roles | Roadmaps | Site Map

### Phases

Disciplines	Inception	Elaboration	Construction	Transition
Business Modeling	High	Medium	Low	None
Requirements	High	Medium	Low	None
Analysis & Design	Low	High	Medium	Low
Implementation Test	None	Low	High	Medium
Deployment	None	None	Low	High
Configuration & Change Mgmt	Low	Medium	High	Medium
Project Management	High	Medium	Low	None
Environment	Low	Medium	High	Medium

Iterations: Initial, Elab #1, Elab #2, Const #1, Const #2, Const #N, Tran #1, Tran #2

Click on an area of the screen for more information. **pwc**

# An iteratively approach

The screenshot shows a web browser window with the address bar displaying `D:\Max\programmi\Rational\RationalUnifiedProcess\index.htm`. The browser's navigation bar includes buttons for Back, Forward, Stop, Home, Search, Favorites, History, and Print. Below the address bar, there are links for 'Customize Links', 'Free Hotmail', and 'Windows'. The page content features a navigation menu on the left with items like 'Overview', 'Site Map', 'Navigating the Process', 'Best Practices', and 'Phases'. The main content area is titled 'Best Practice: Develop Iteratively' and contains a circular diagram illustrating the iterative development process. The diagram shows a cycle of activities: Initial Planning, Business Modeling, Requirements, Analysis & Design, Implementation, Test, Deployment, and Evaluation. In the center of the cycle are 'Config. & Change Management' and 'Environment'. Below the diagram, a text box states: 'To mitigate risks, develop incrementally in an iterative fashion. Each iteration results in an executable release.'

Where am I | Index | Search | Getting Started | Glossary | Print | Feedback

Overview > Best Practices > Develop Iteratively

## Best Practice: Develop Iteratively

The diagram illustrates the iterative development process as a circular flow of activities. The cycle starts with 'Initial Planning' (purple arrow) leading to 'Business Modeling' (purple arrow), which leads to 'Requirements' (red arrow). From 'Requirements', the flow goes to 'Analysis & Design' (blue arrow), then to 'Implementation' (blue arrow), followed by 'Test' (teal arrow), 'Deployment' (yellow arrow), and 'Evaluation' (green arrow). The 'Evaluation' step leads back to 'Initial Planning', completing the cycle. In the center of the cycle are two overlapping circles labeled 'Config. & Change Management' and 'Environment'. A vertical 'Display Treebrowser' button is located on the right side of the page.

To mitigate risks, develop incrementally in an iterative fashion. Each iteration results in an executable release.

Topics

# Business Modeling

The screenshot shows a web browser window with the address bar containing `D:\Max\programmi\Rational\RationalUnifiedProcess\index.htm`. The browser's address bar includes navigation buttons for Back, Forward, Home, Search, Favorites, History, and a Go button. Below the address bar, there are links for "Customize Links", "Free Hotmail", and "Windows".

The main content area of the browser displays a page titled "Business Modeling: Overview". The page has a navigation bar with buttons for "Introduction", "Workflow", "Activities", "Artifacts", "Guidelines", and "Concepts". A vertical "Display Treebrowser" button is located on the right side of the page.

On the left side of the page, there is a tree browser showing a hierarchical structure of the Rational Unified Process. The tree includes the following items:

- Overview
- Phases
  - Inception
    - Milestone
    - Sample Iteration F
  - Elaboration
  - Construction
  - Transition
- Disciplines
  - Business Modeling** (highlighted)
  - Requirements
  - Analysis & Design
  - Implementation
  - Test
  - Deployment
  - Configuration & Char
  - Project Management
  - Environment
- Roles and Activities
- Artifacts
- Tool Mentors
- Templates
- White Papers
- Work Guidelines
- Examples Overview
- Process Engineer Tool

The main content area features a flowchart illustrating the Business Modeling process. The flowchart starts with a black circle at the top, leading to a diamond-shaped decision node. From this node, an arrow labeled "[Early Inception]" points to a box labeled "Assess Business Status". Below this, another diamond-shaped decision node leads to a third diamond-shaped decision node. From the third diamond, a thick green bar labeled "[Business Modeling]" branches into four paths:

- A path leading to a box labeled "Describe Current Business".
- A path leading to a box labeled "Identify Business Processes", which then leads to a box labeled "Refine Business Process Definitions", which finally leads to a box labeled "Explore Process Automation".
- A path leading to a box labeled "Develop a Domain Model", with the label "[Domain modeling only]" positioned above it.
- A path leading to a box labeled "Explore Process Automation".