

Rational Rose

Jump Start Tutorial

Overview



Designing Complex Systems

- Three big steps in designing complex systems
 - Abstract the system by building models
 - Verify the model to satisfy requirements
 - Transform models into implementation
-

What Rational Rose does?

- ☐ Build visual models to analyze and design components
 - ☐ The models acts as a blueprint of the software system
 - ☐ Uses the **UML** Standard
-

Features

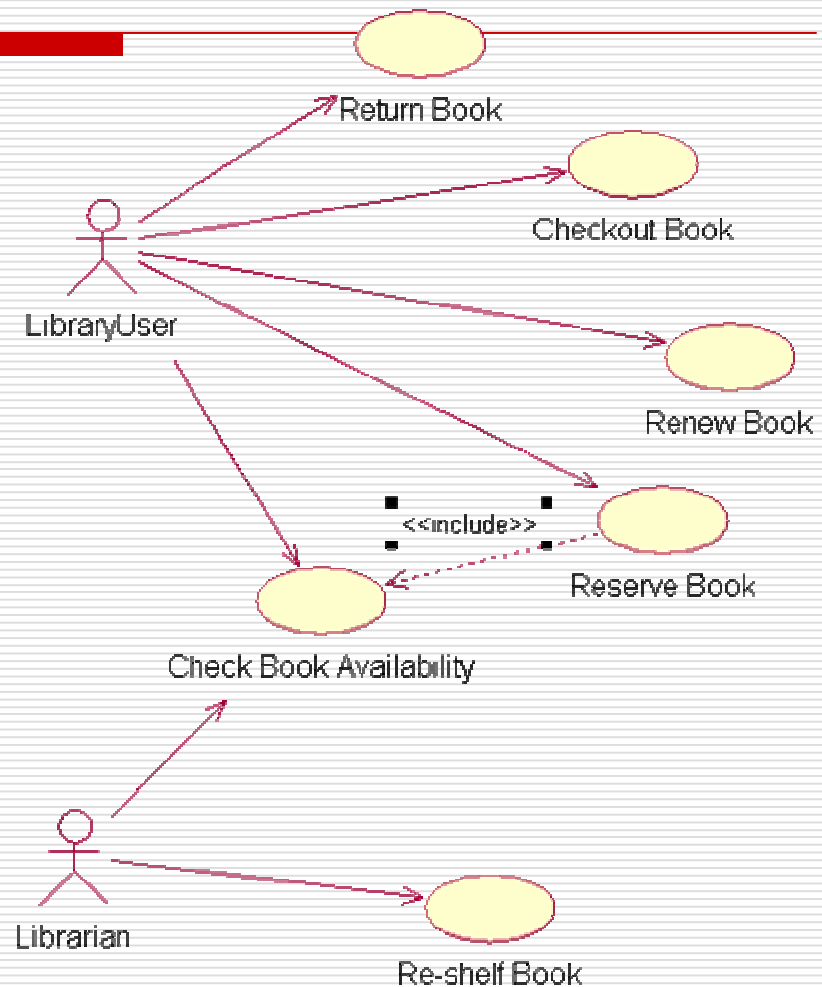


Types of Diagrams

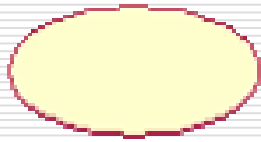
- ☐ Use Case Diagram
 - ☐ Class Diagram
 - ☐ Data Model Diagram
 - ☐ State Machine Diagram
 - ☐ Interaction Diagram
 - ☐ Component Diagram
 - ☐ Deployment Diagram
-

Use Case Diagram

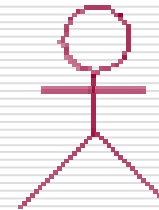
- ❑ A high-level view of how a system is used
- ❑ Specify the behavior of a system as implemented



Use Case Diagram

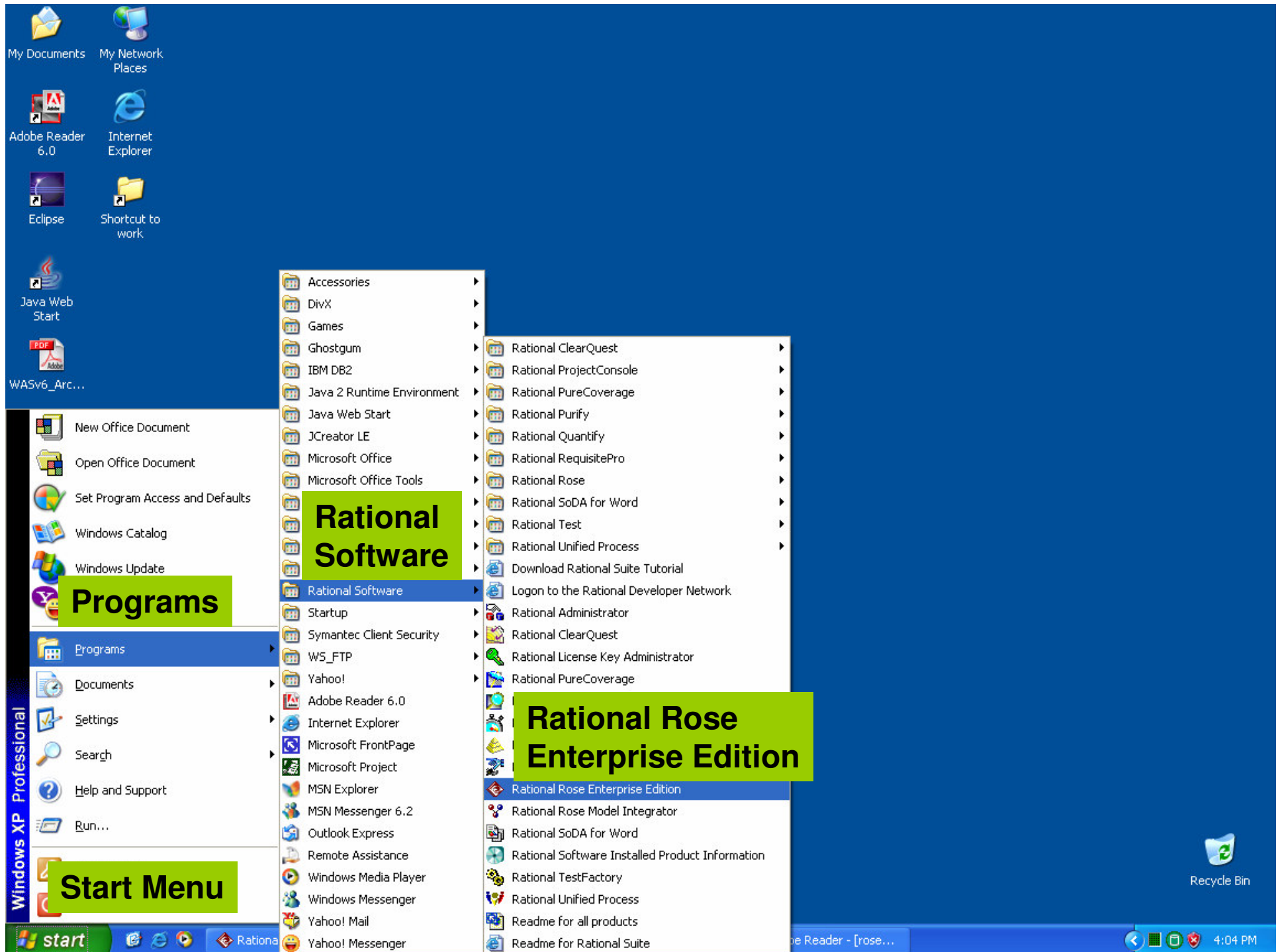


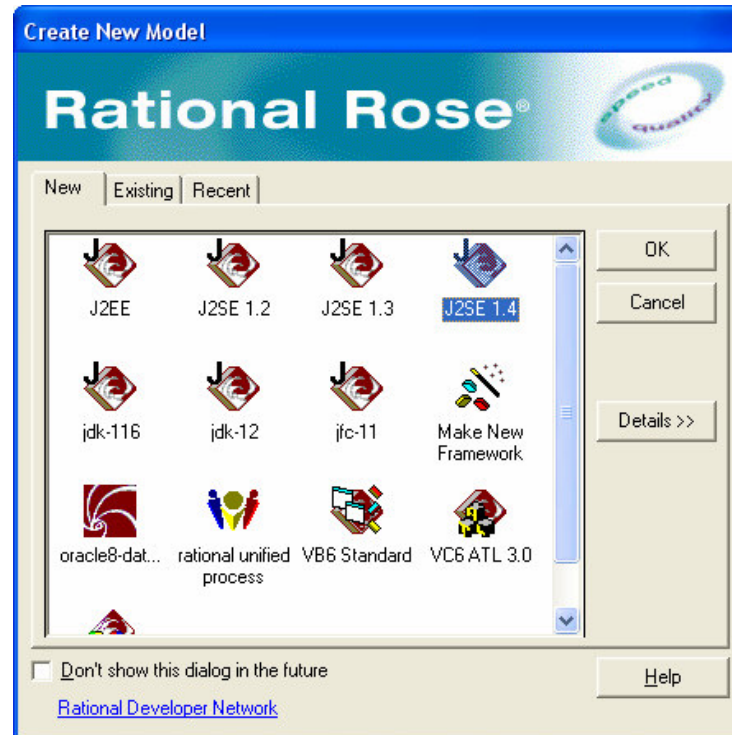
- ☐ Use Case
- ☐ A sequence of events performed by the system



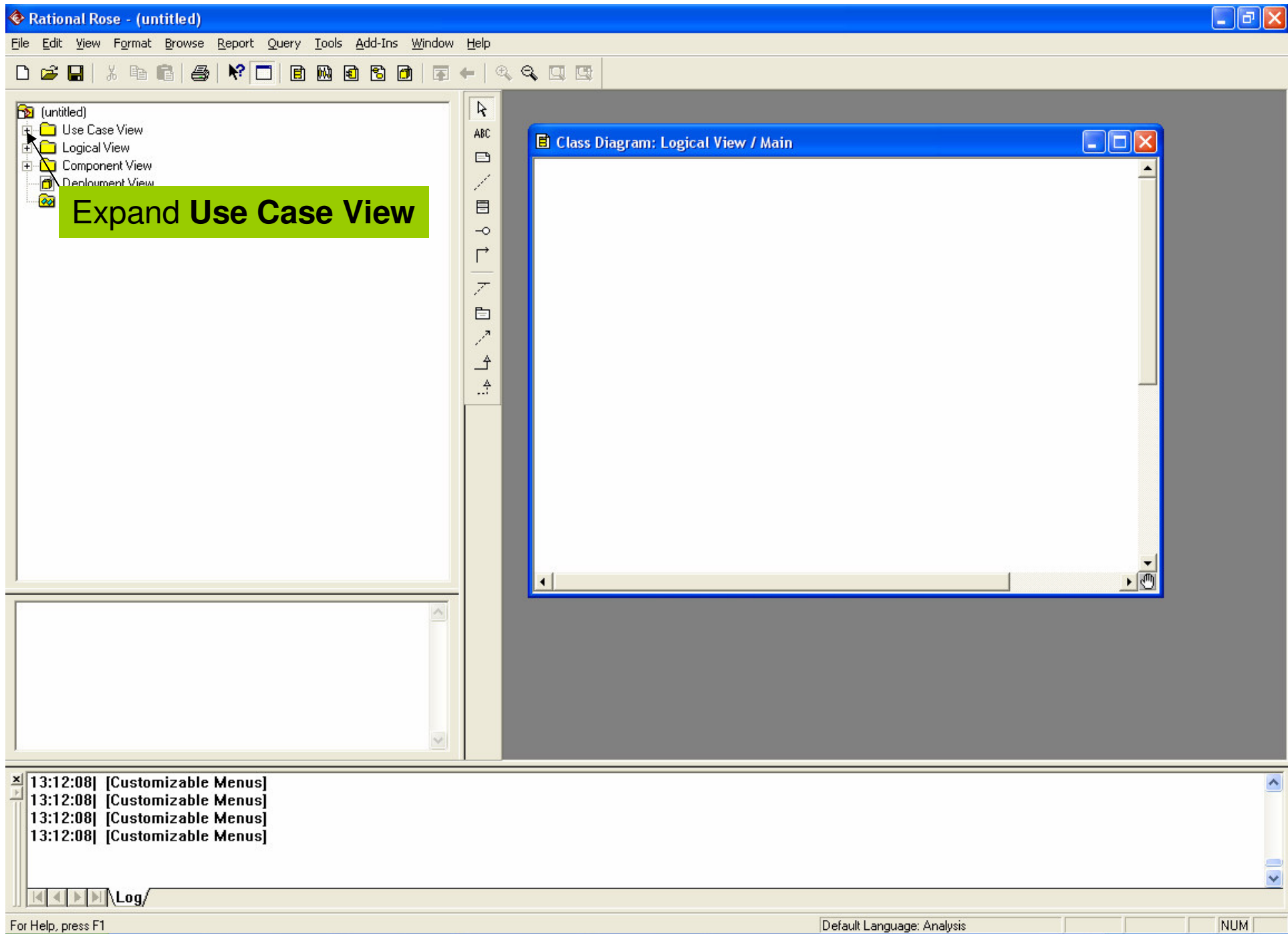
- ☐ Actor
 - ☐ A system user who interact with the system
-

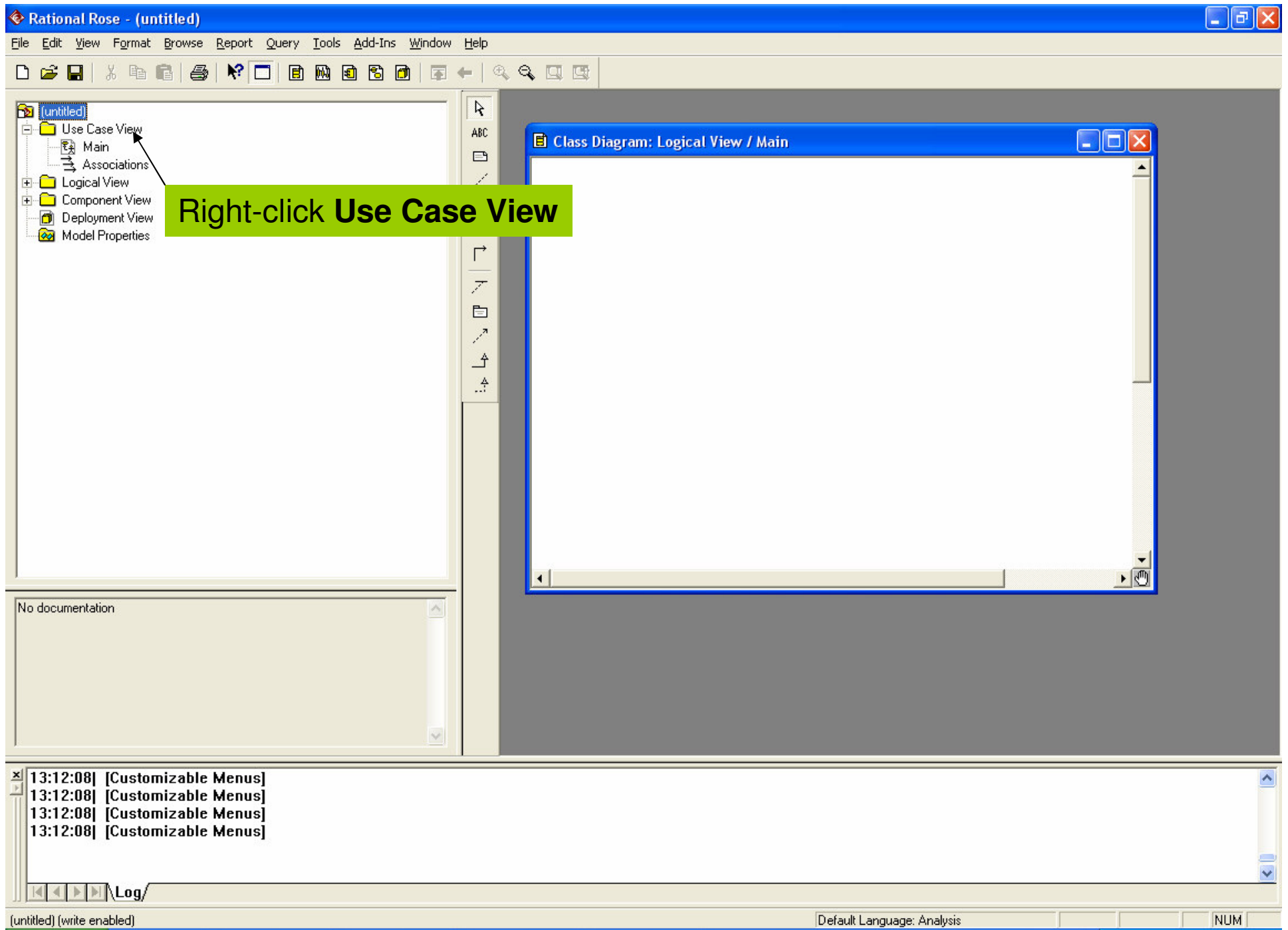
Creating a Use Case Diagram

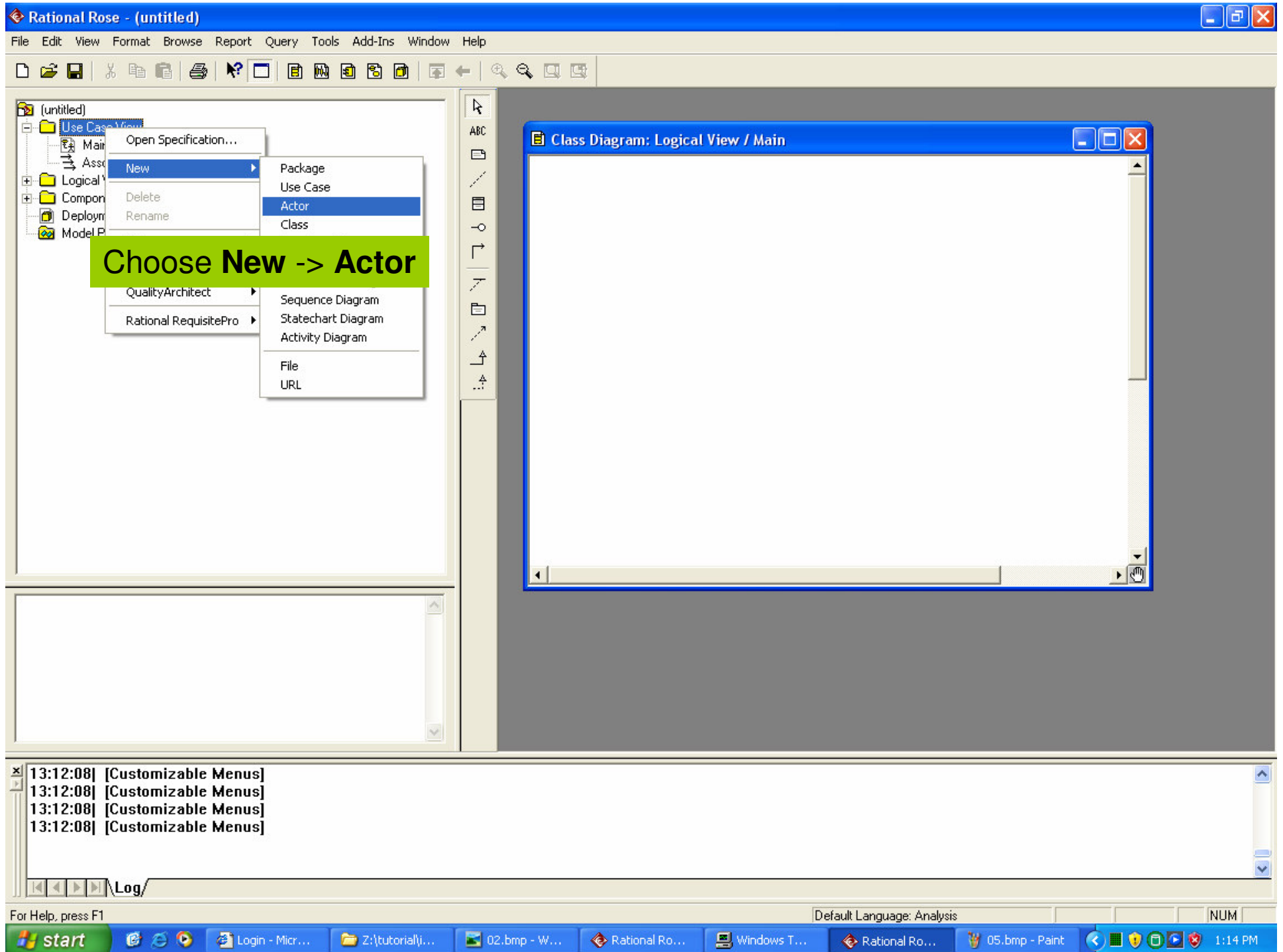


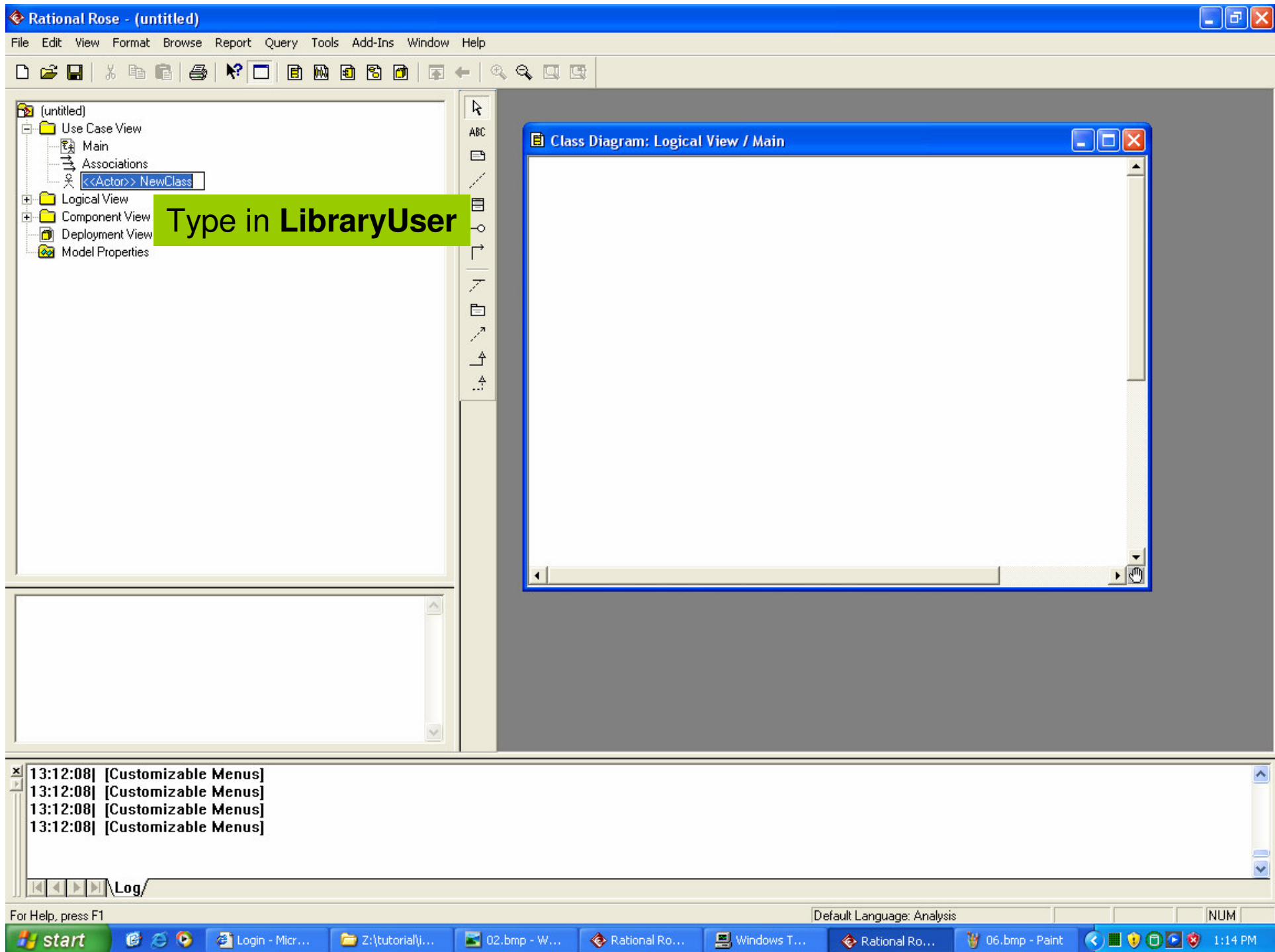


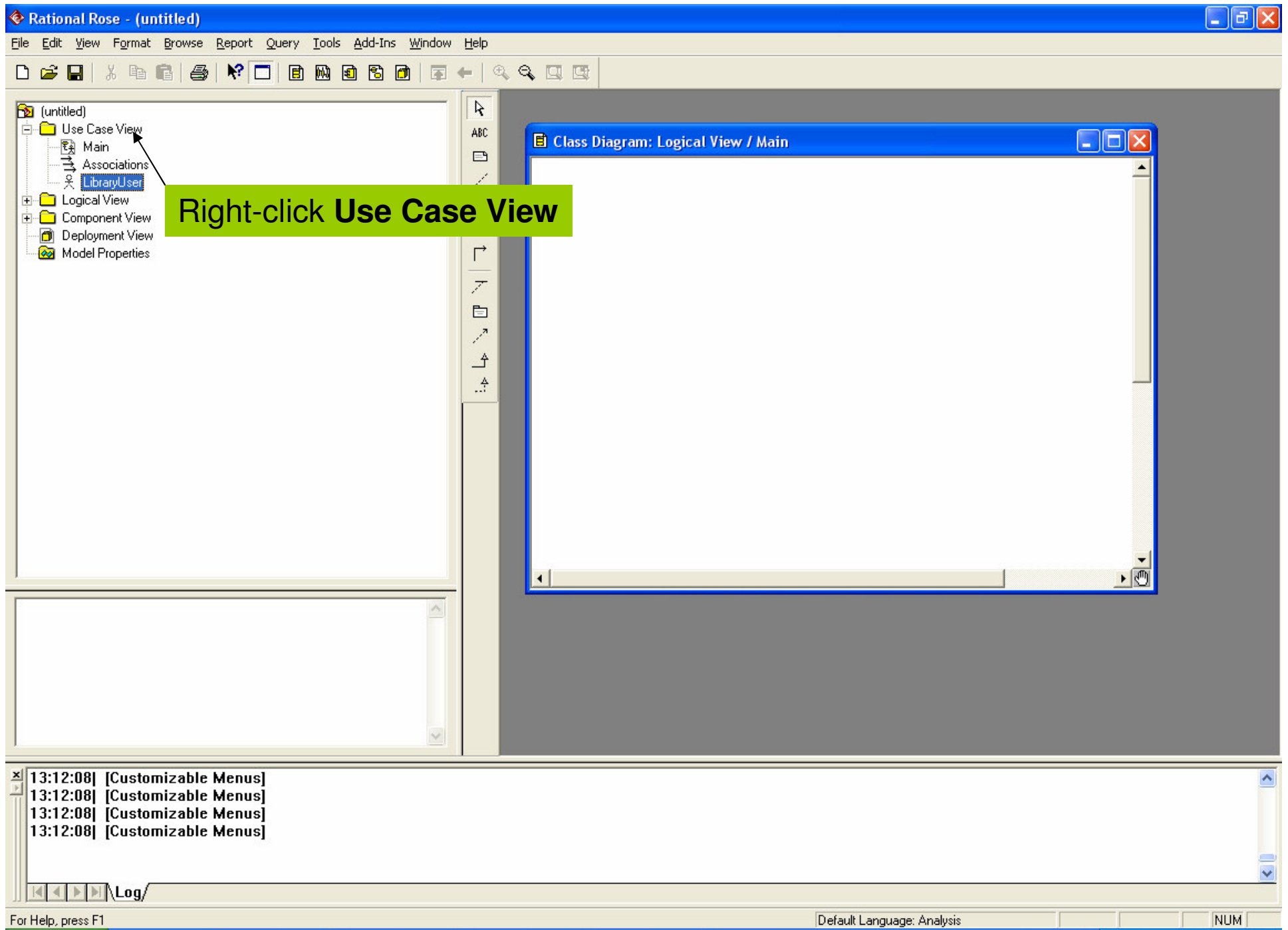
Click **Cancel**

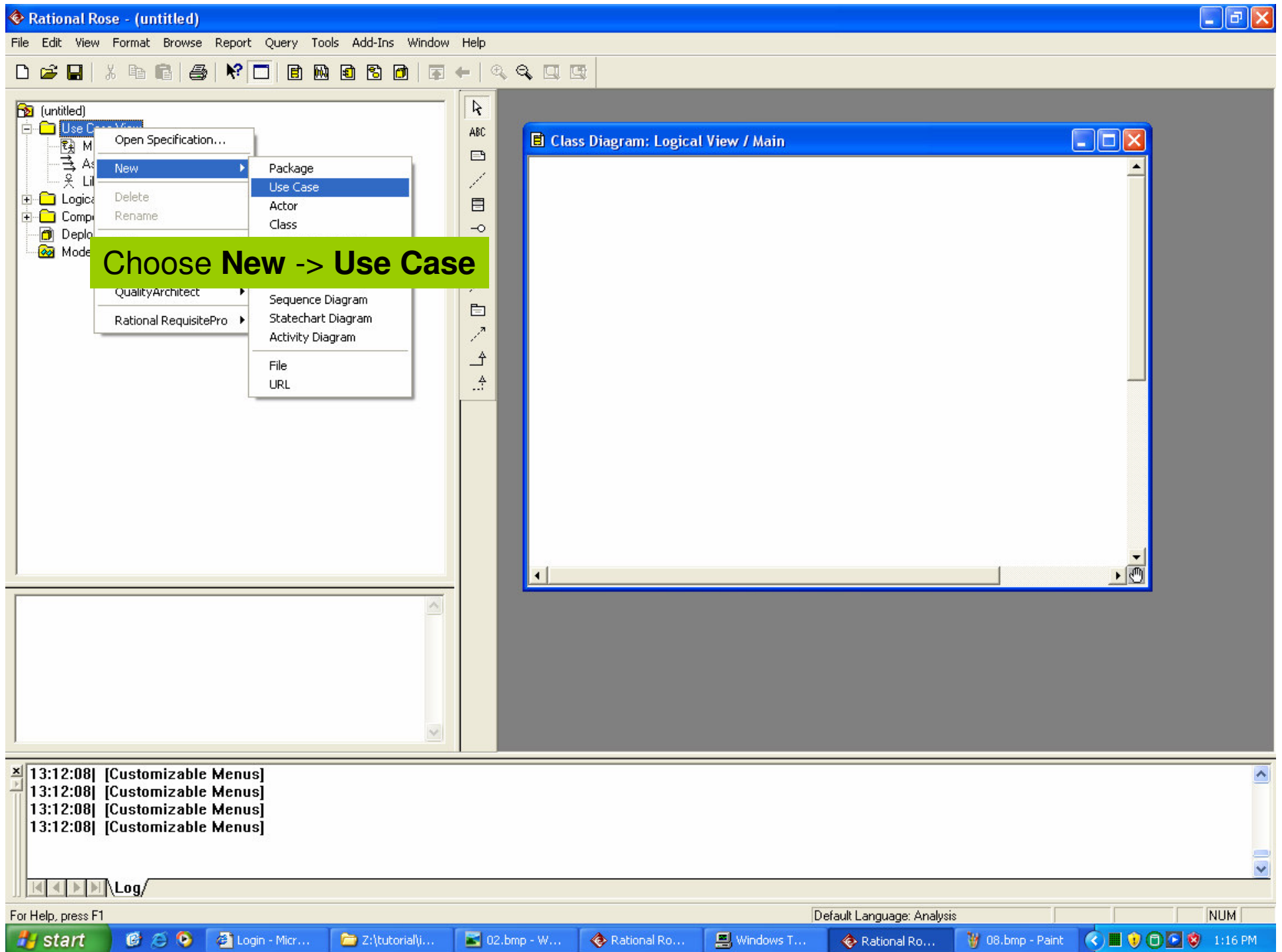


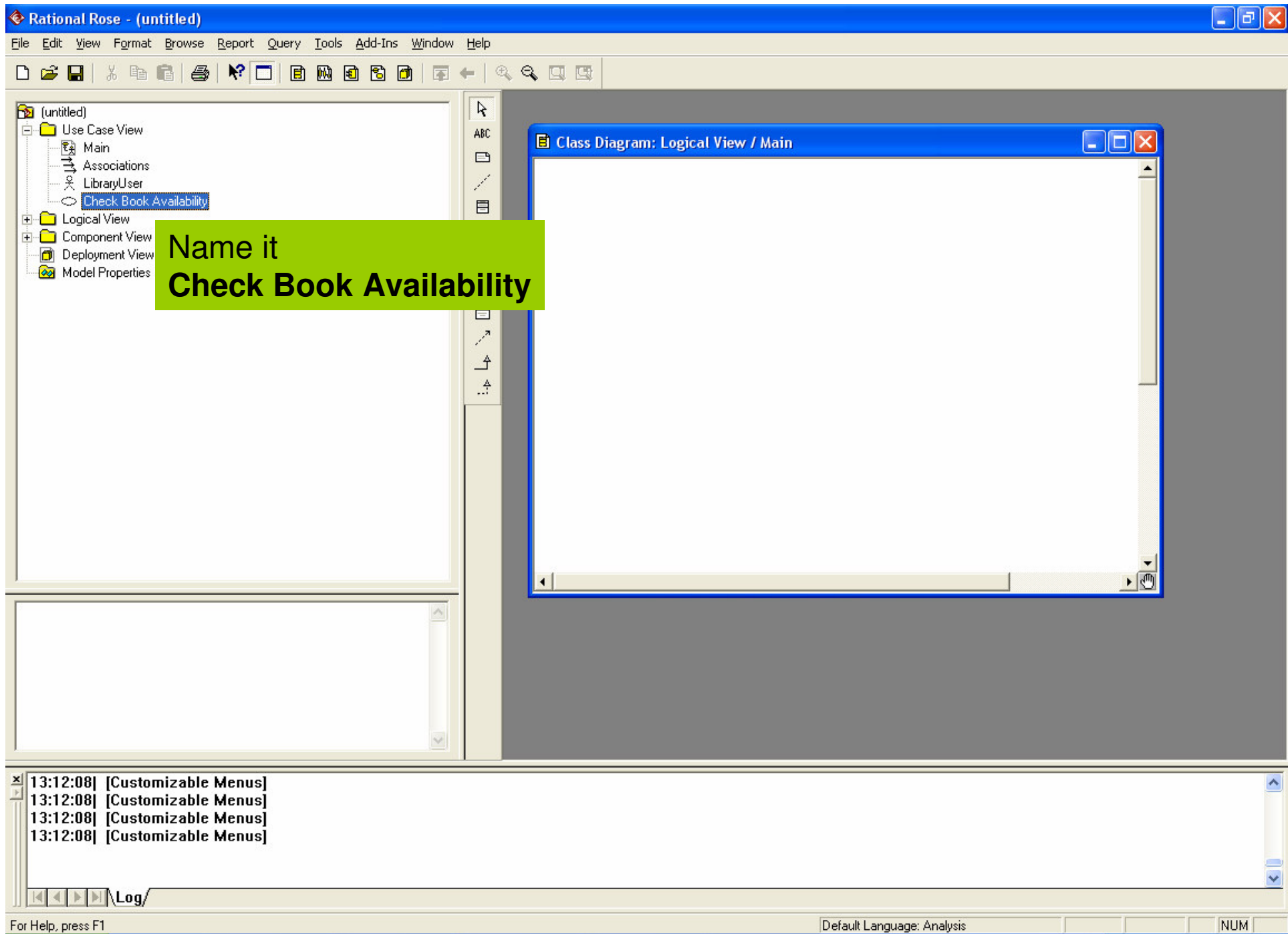


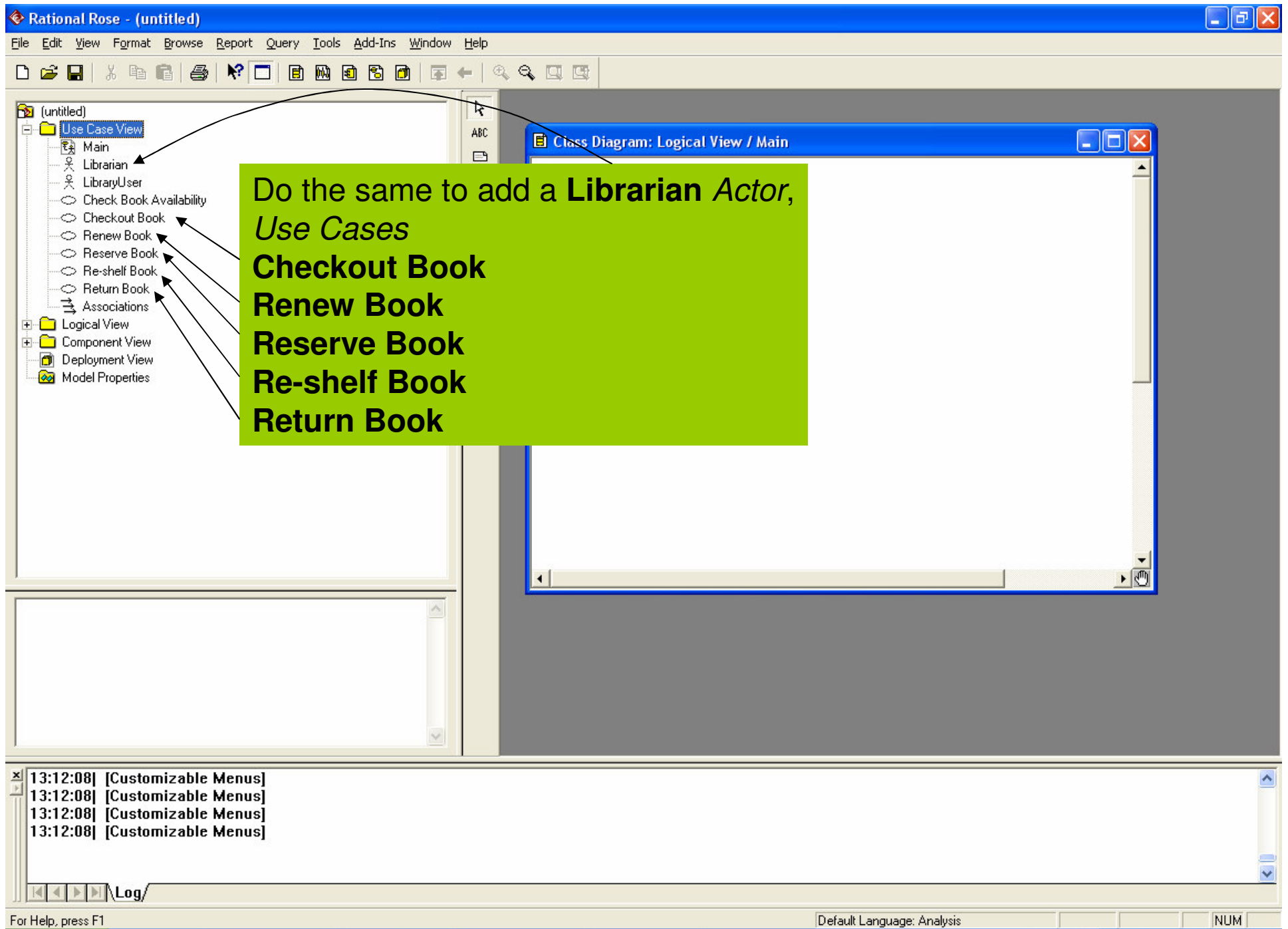


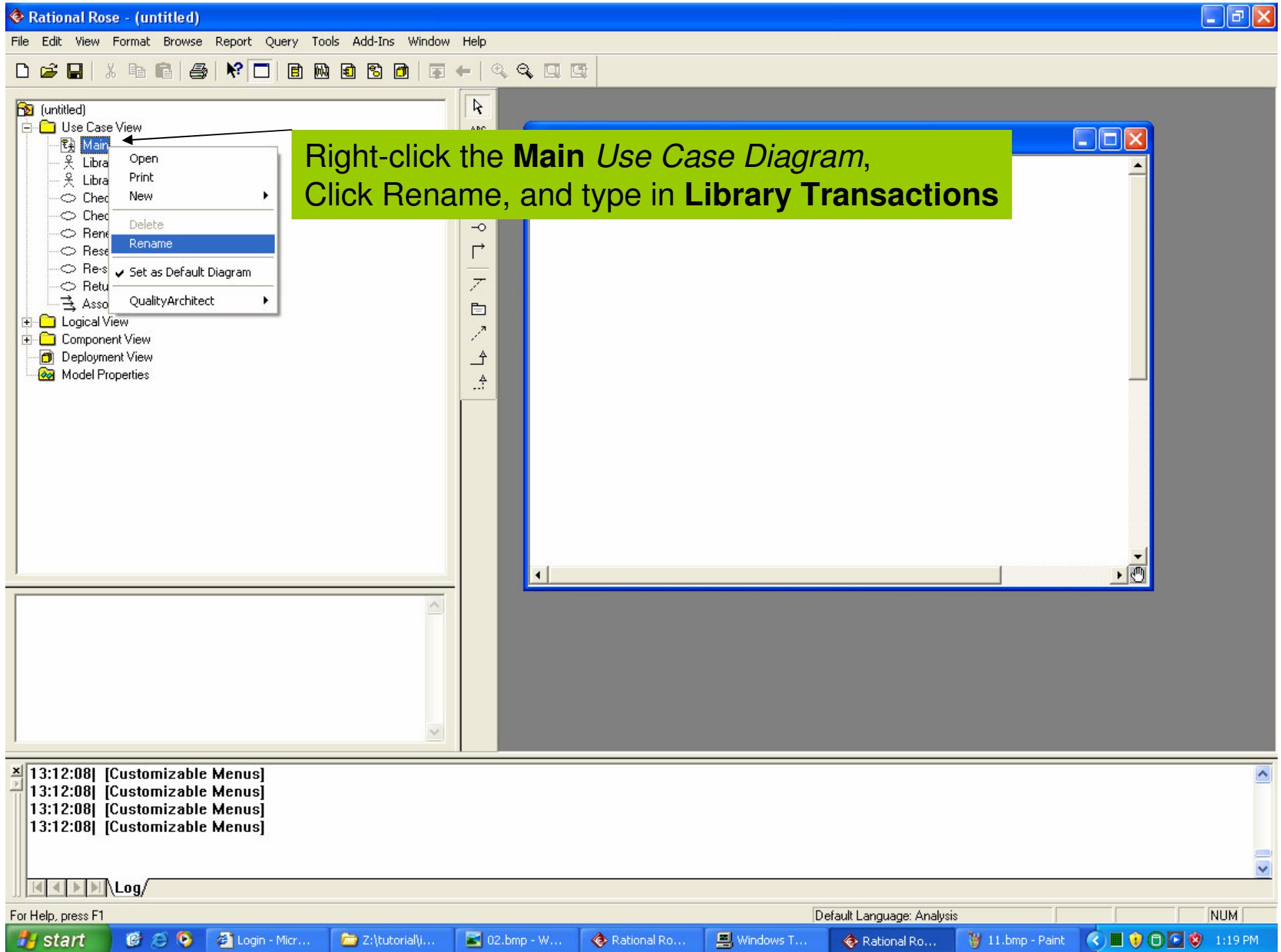


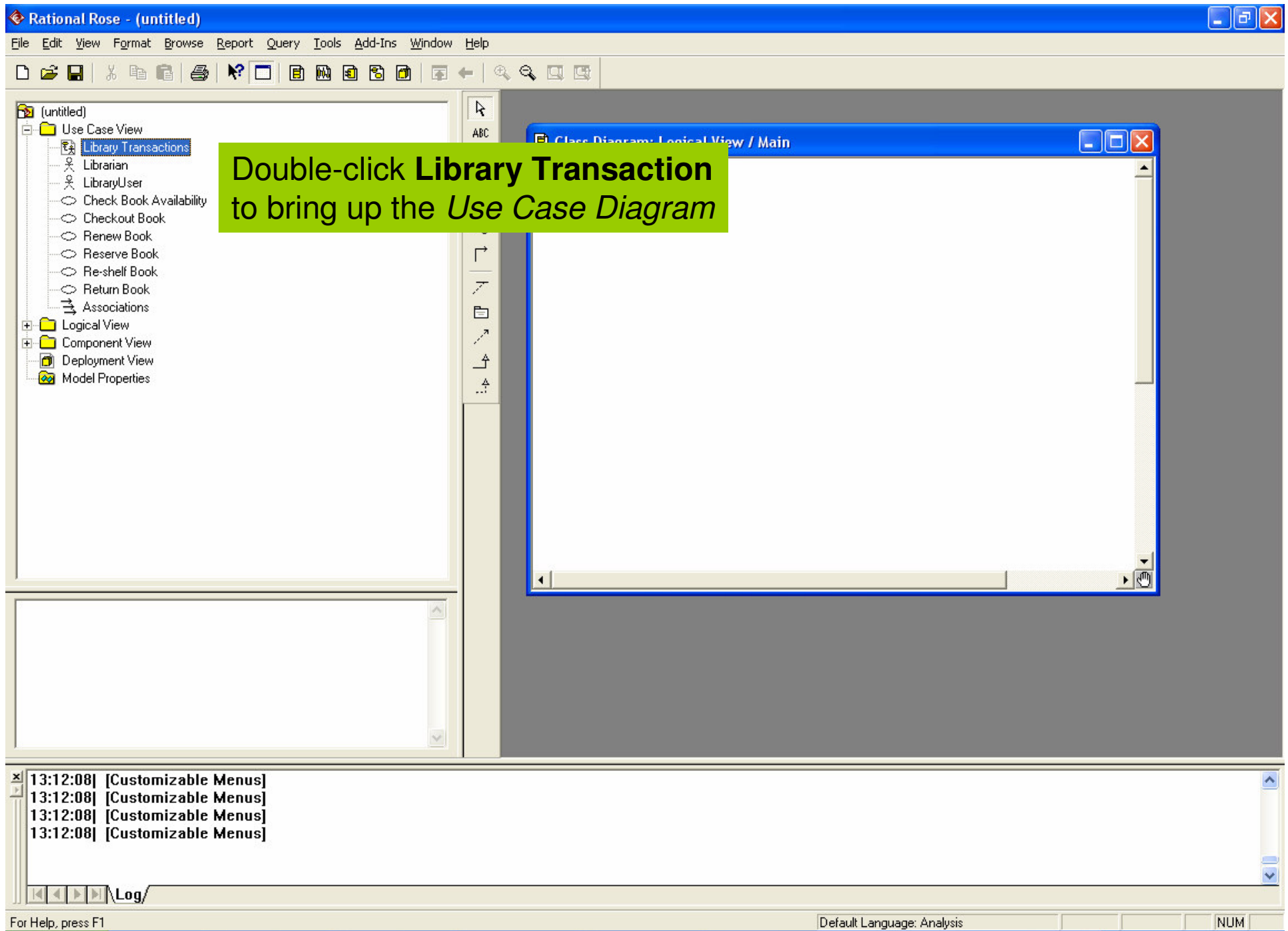


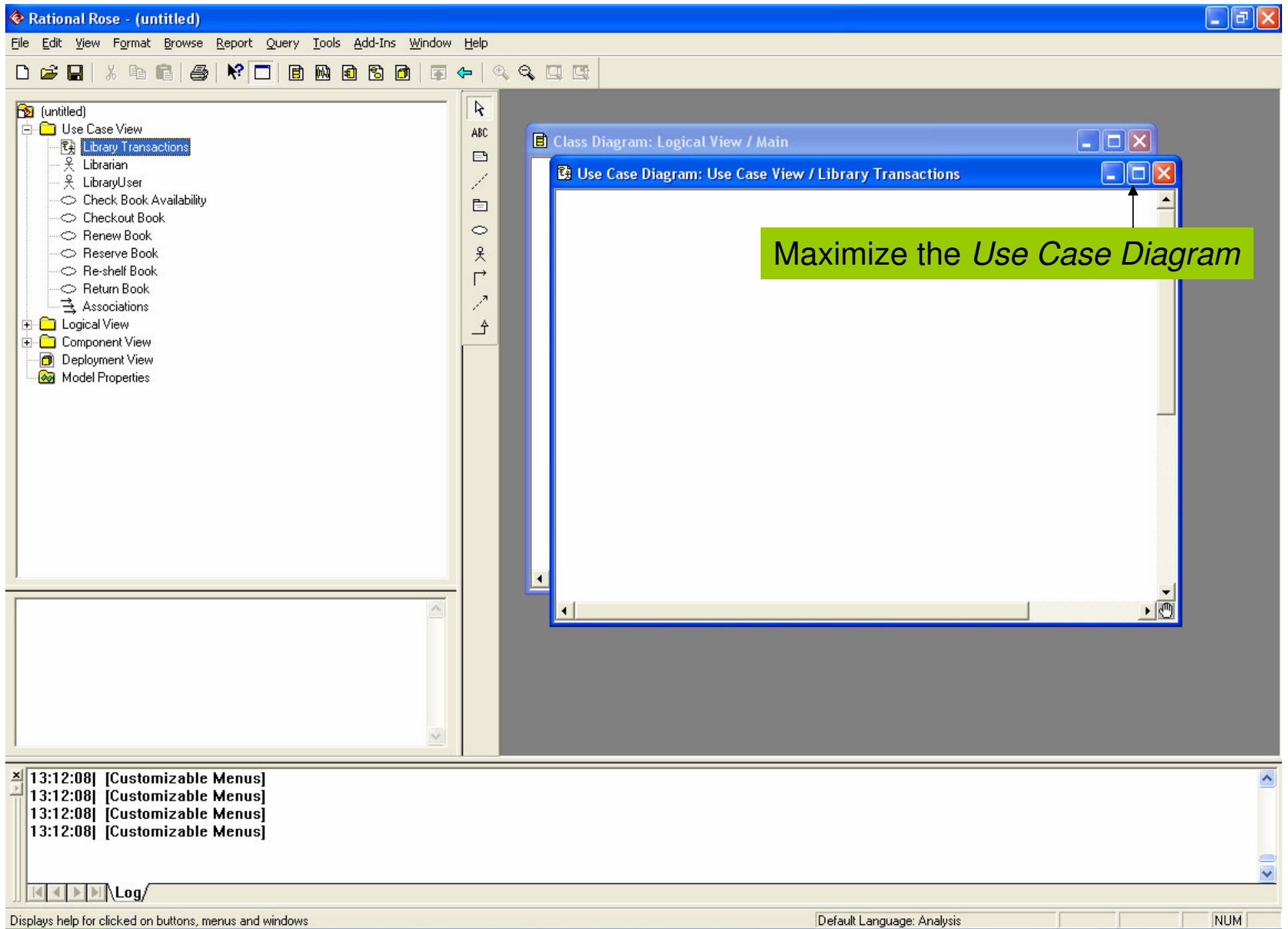


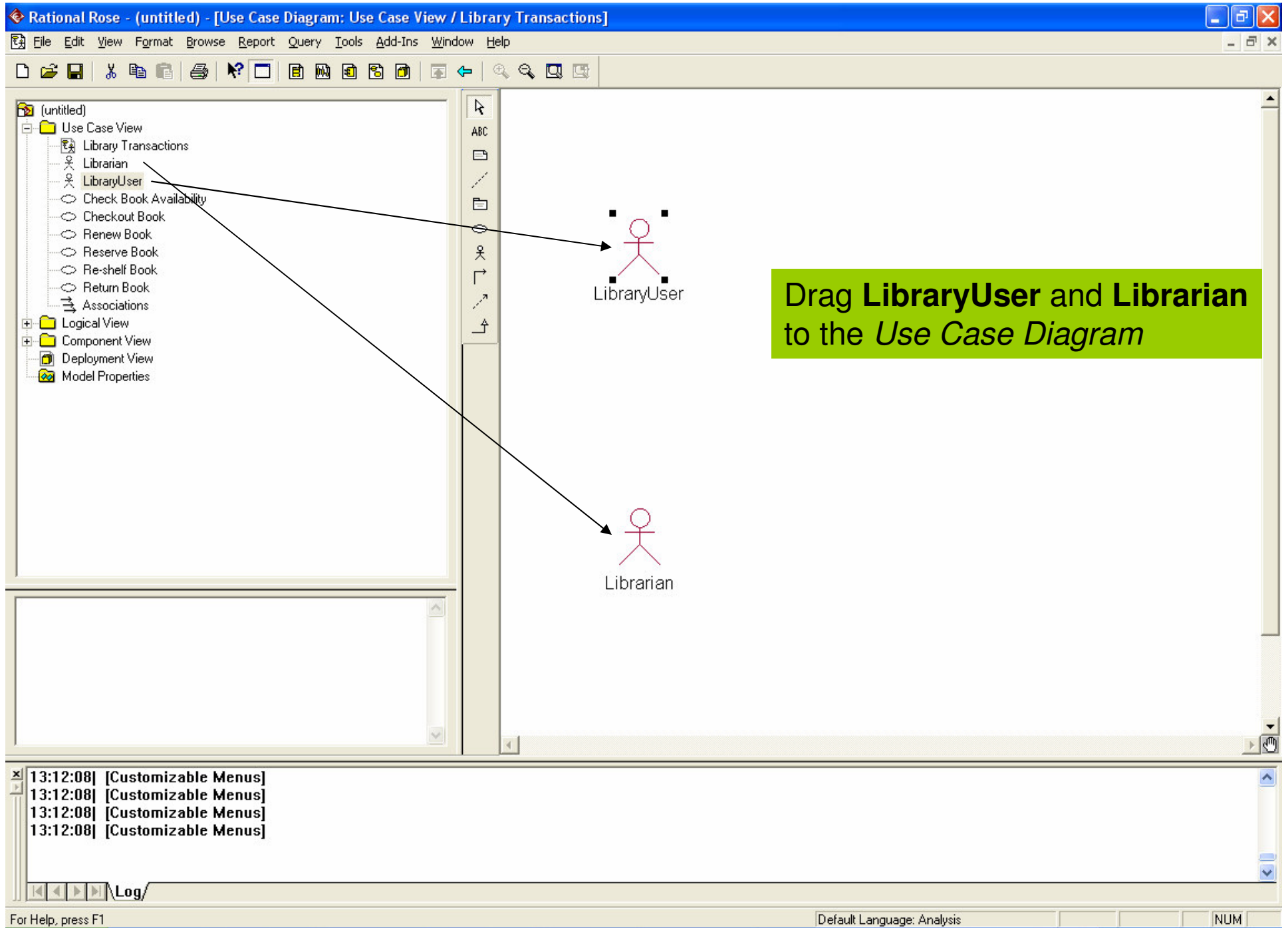


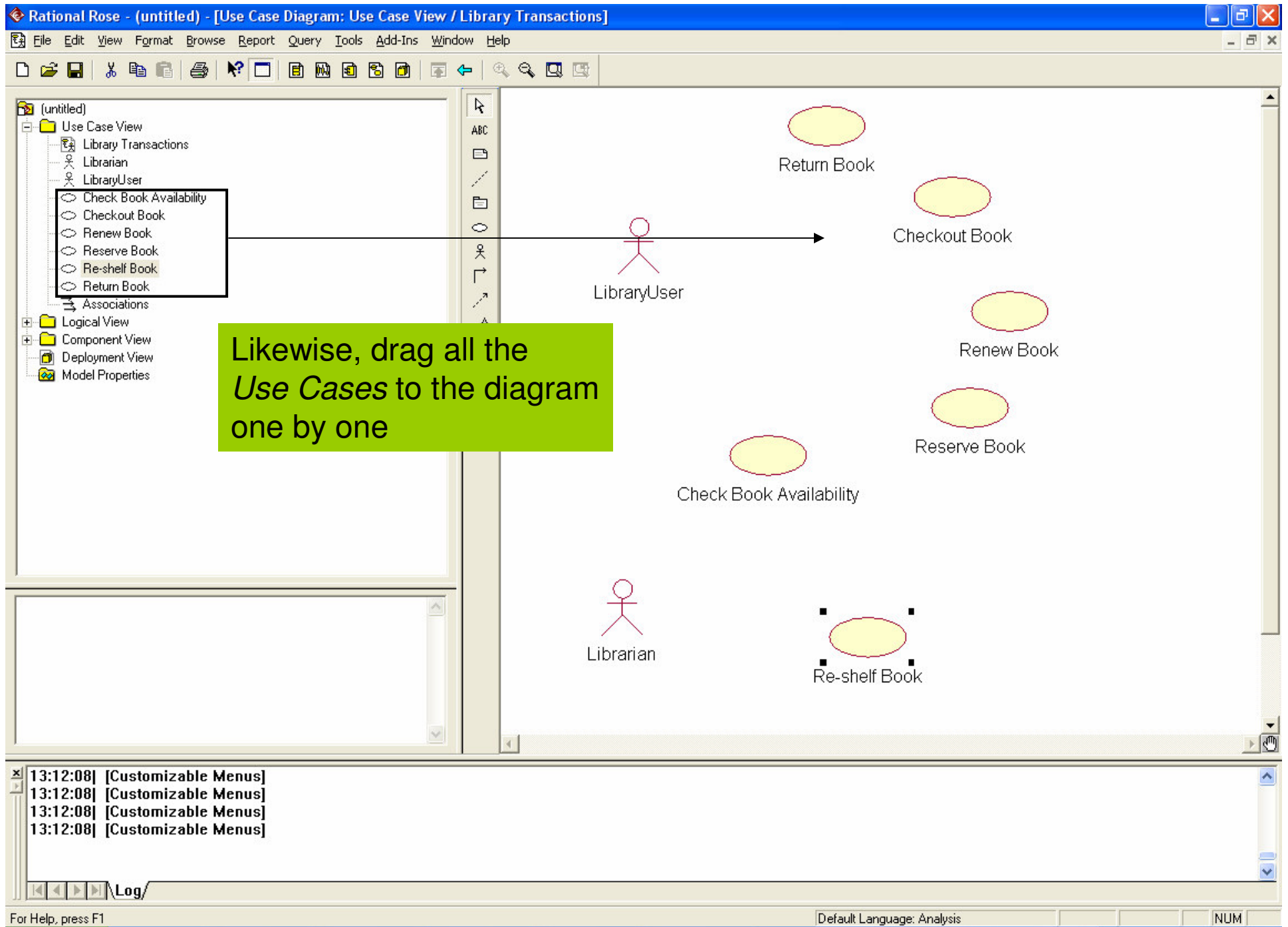


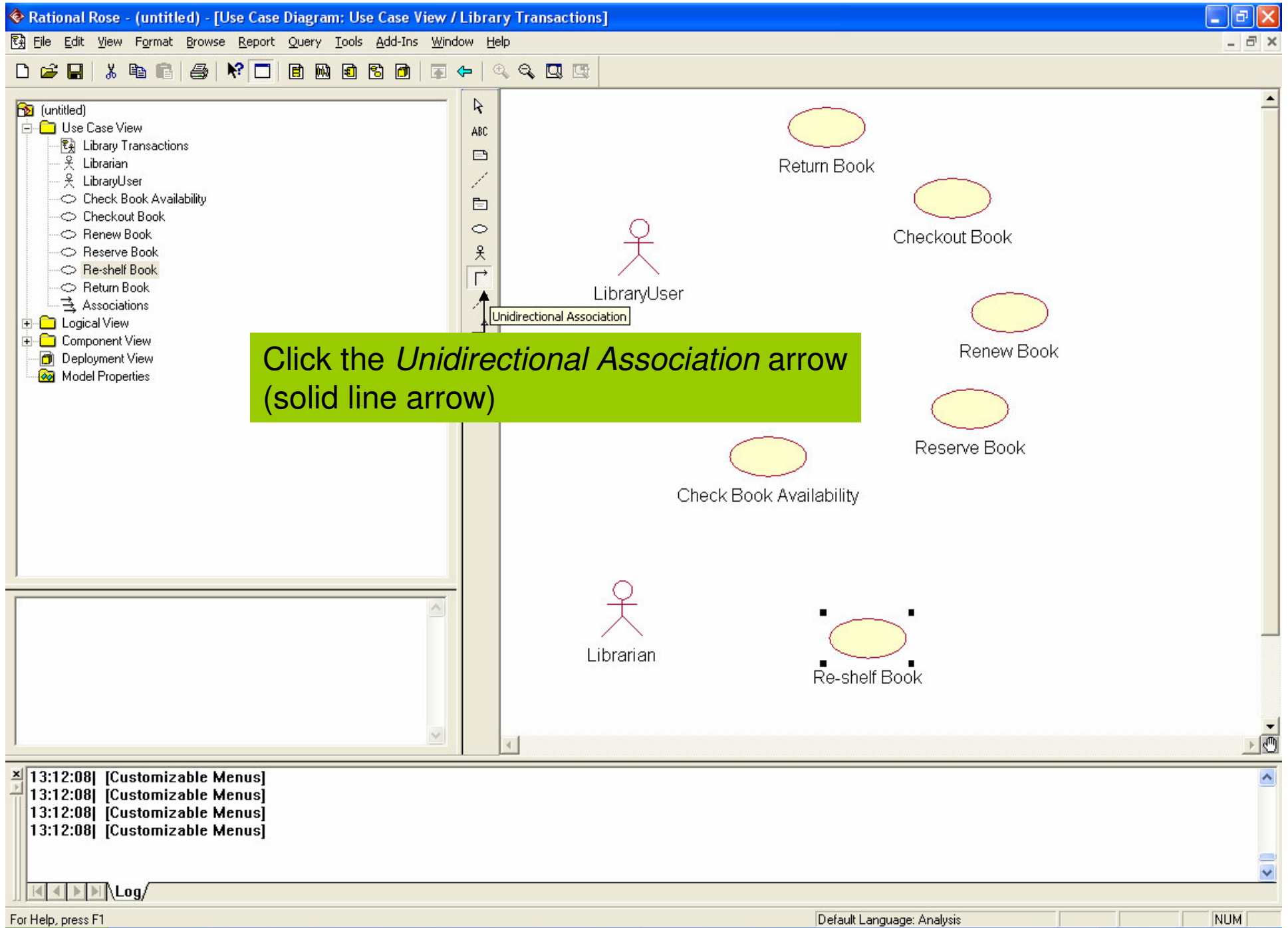


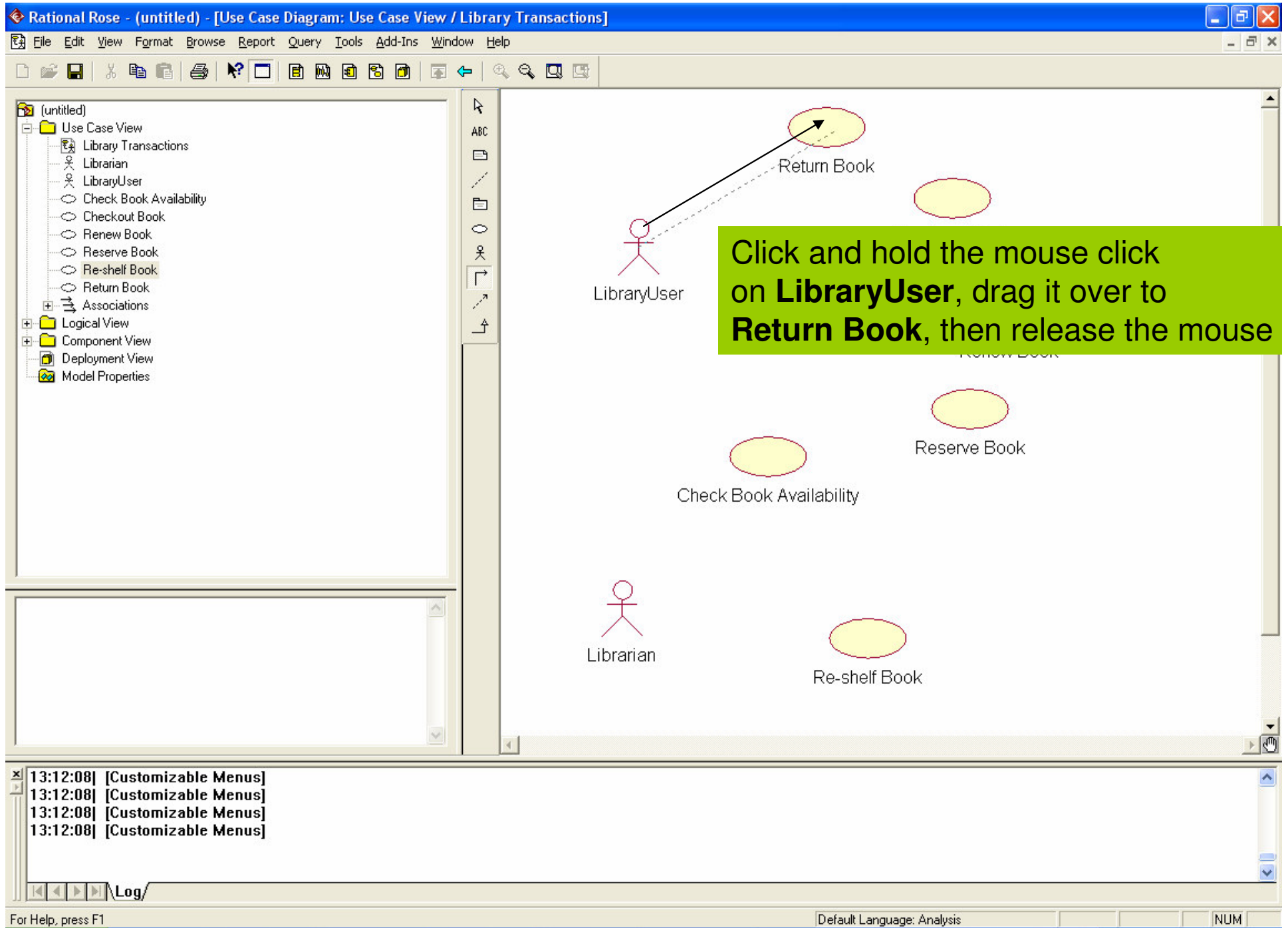


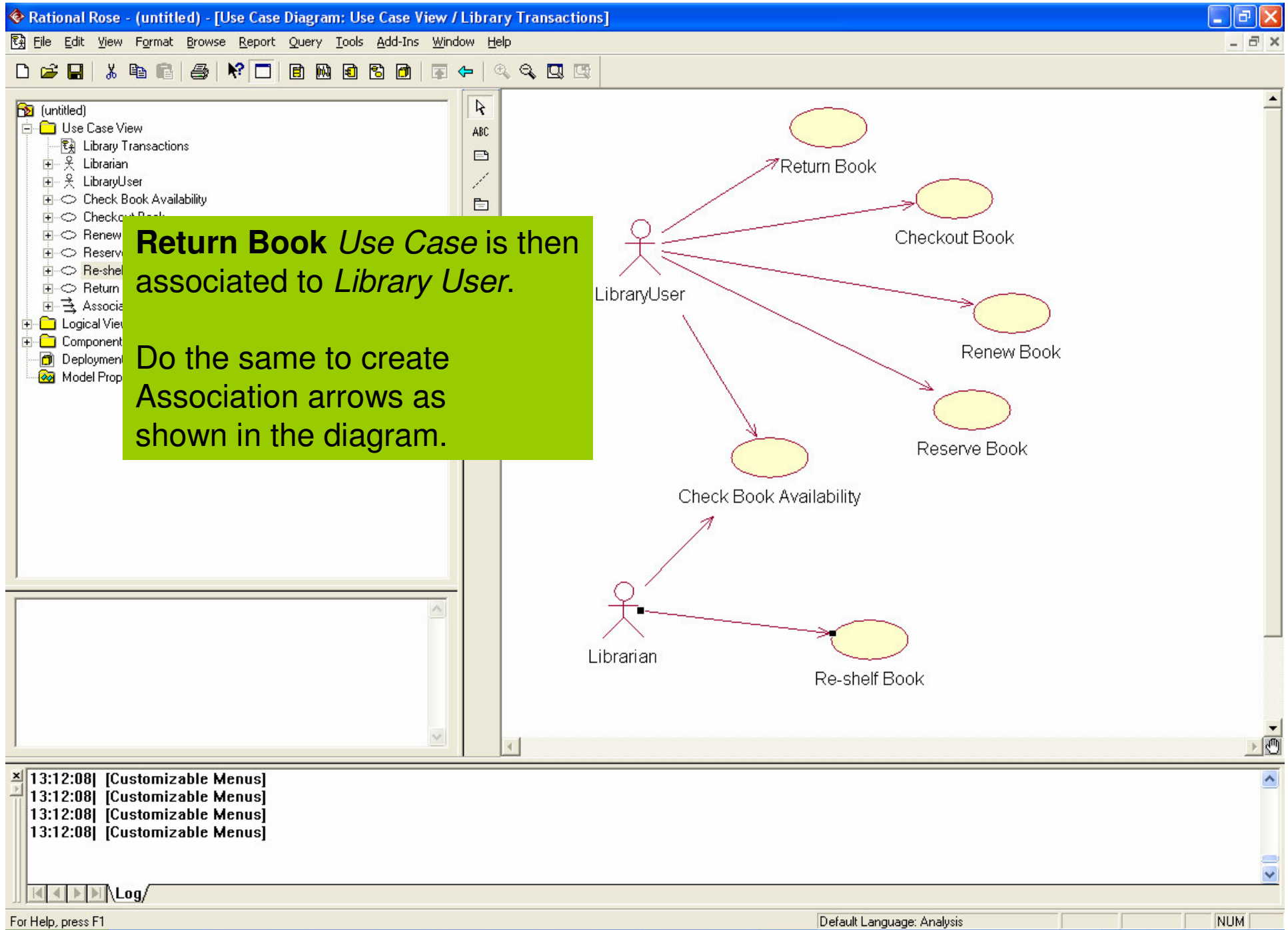


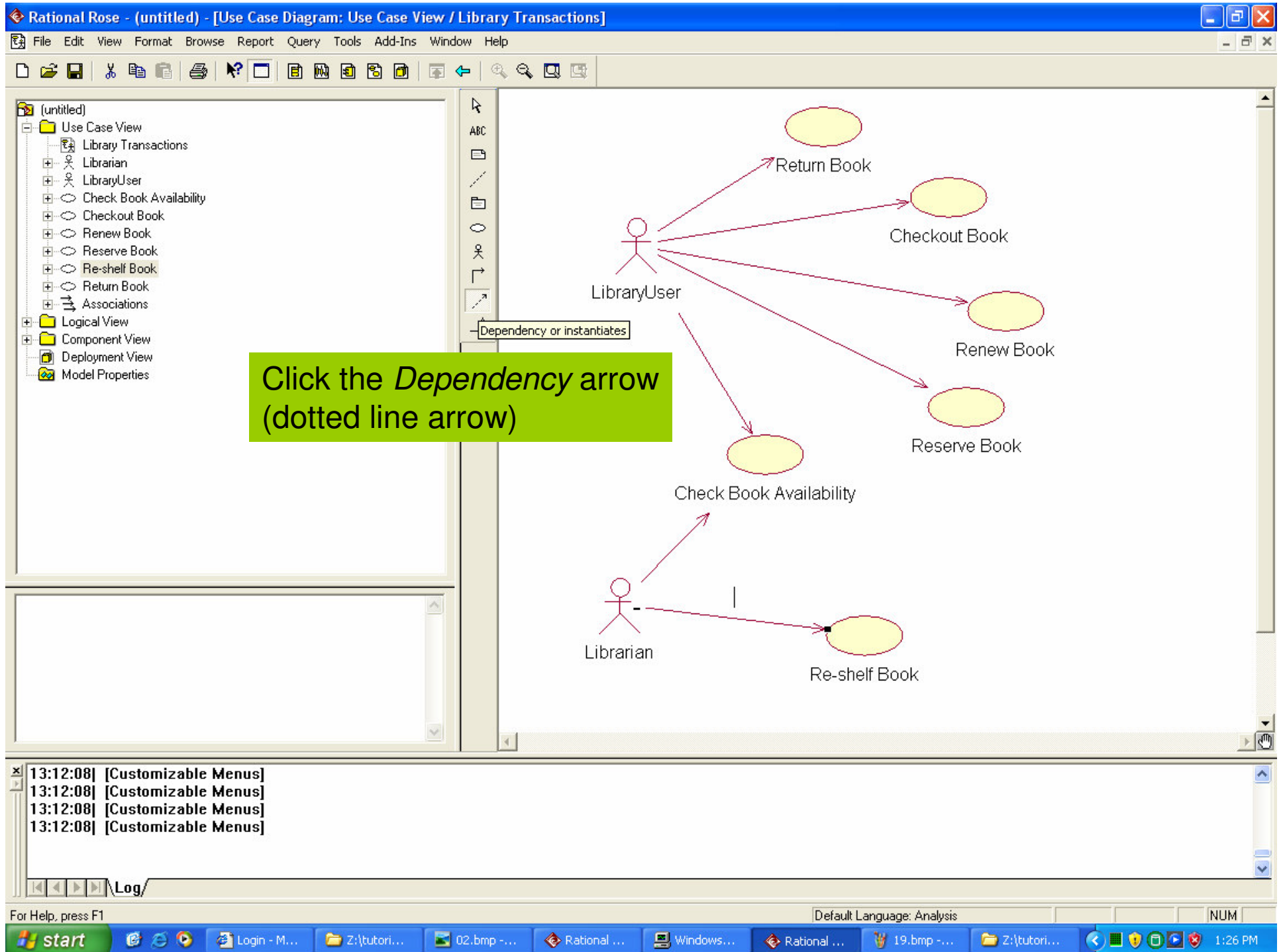


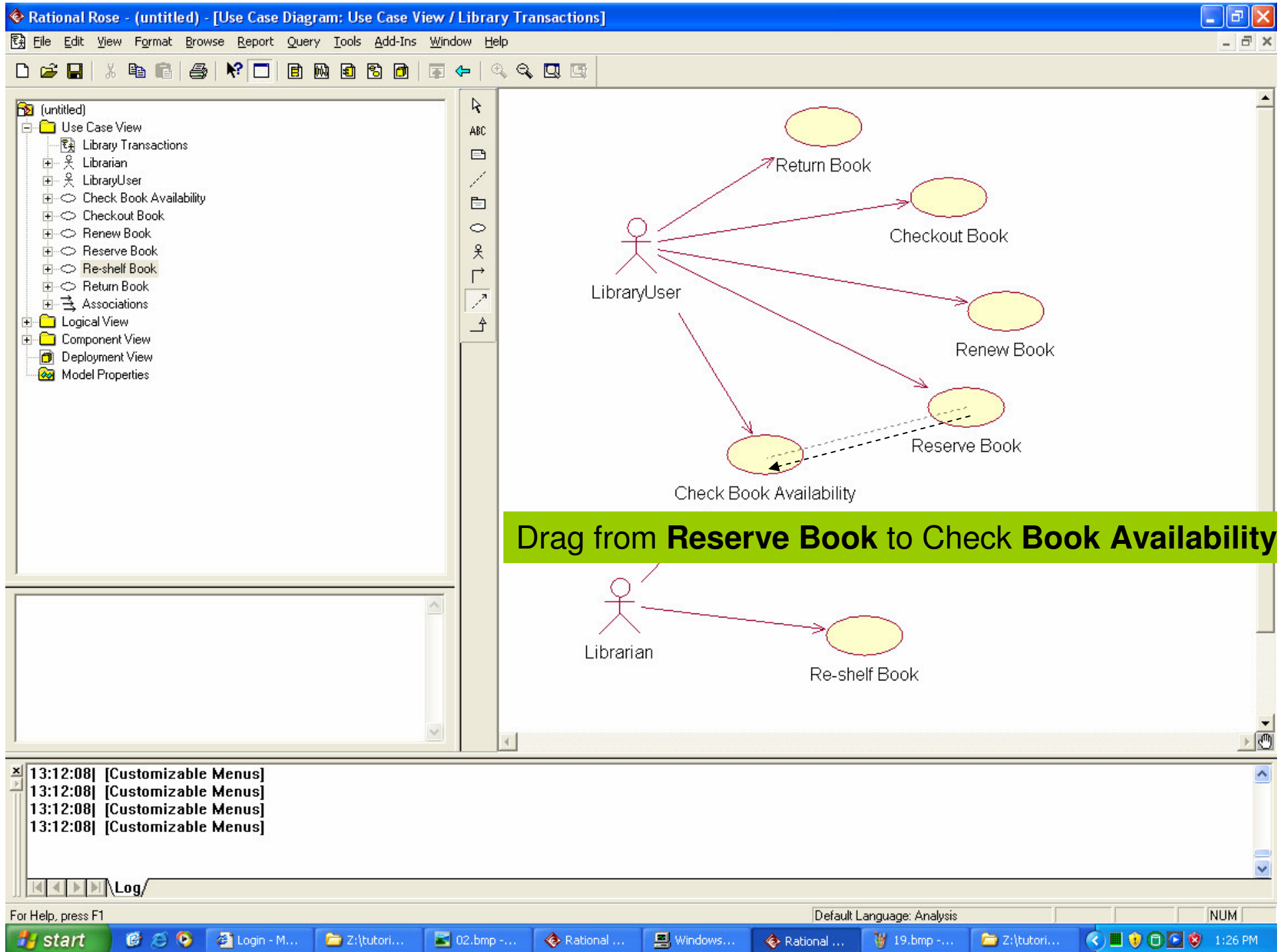


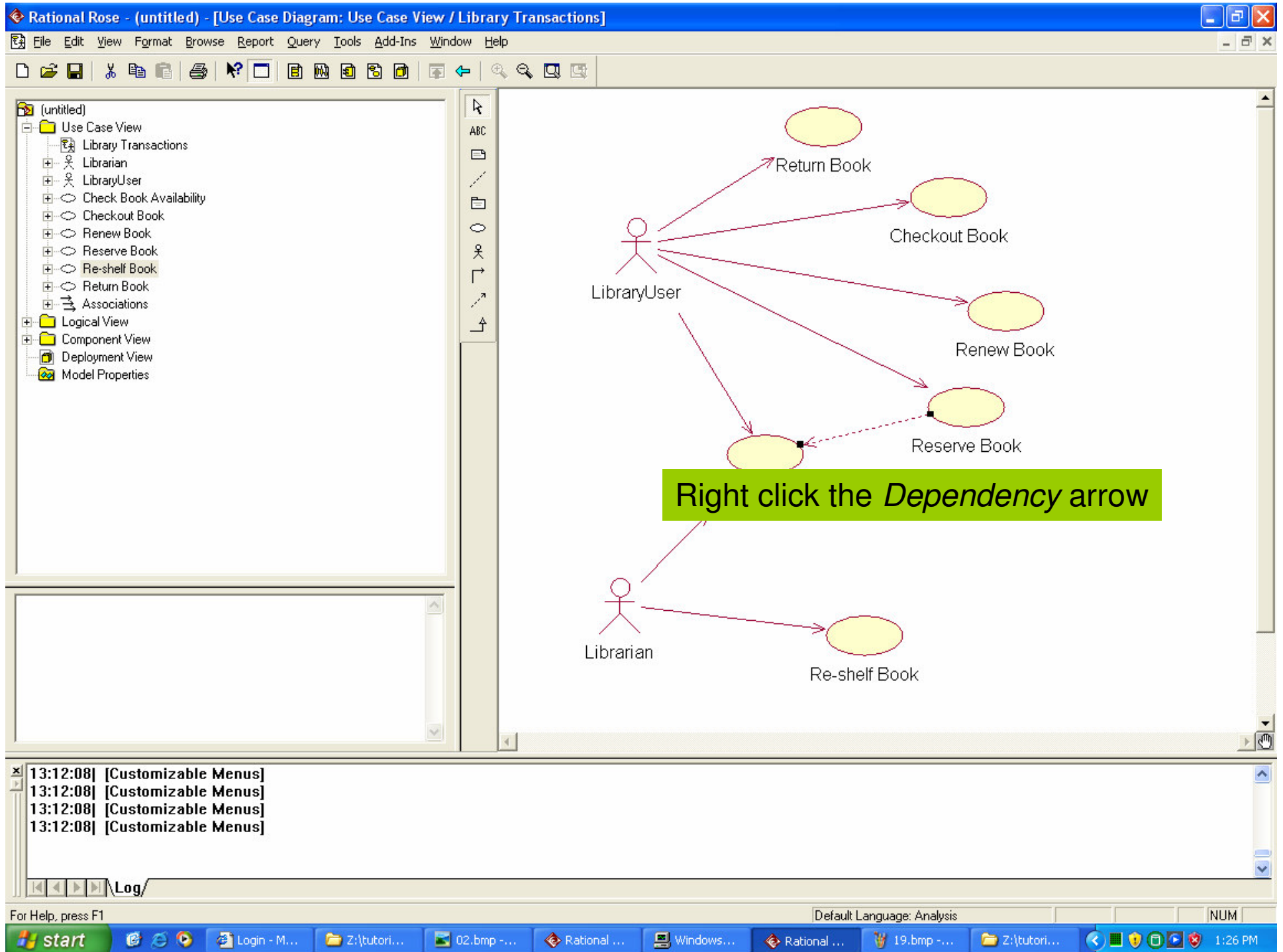


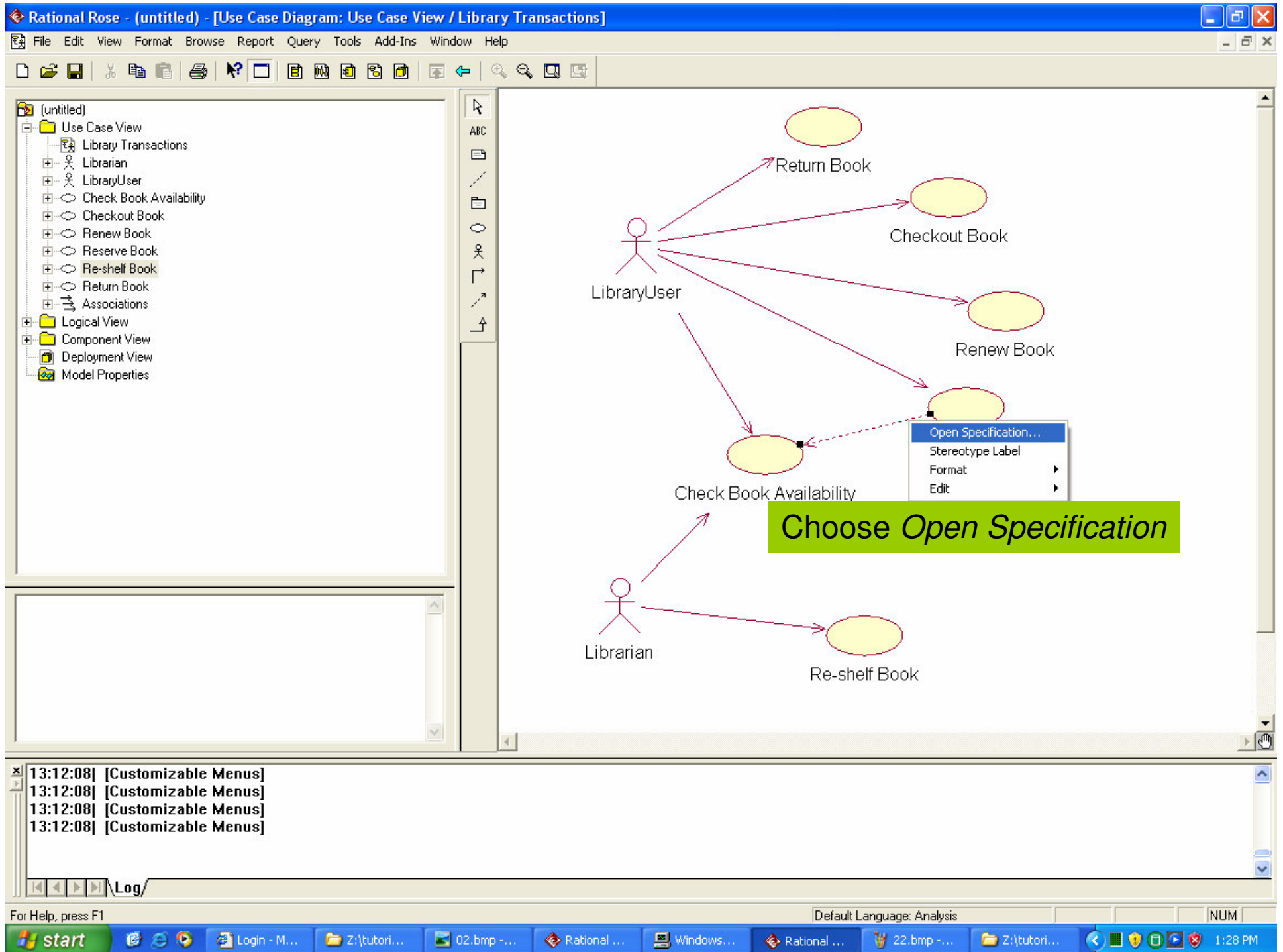












Dependency Specification for Untitled

General

Name: Class: Reserve Book

Stereotype:

Documentation:

OK Cancel Apply Browse Help

Open the drop down box

Dependency Specification for Untitled

General

Name: Class: Reserve Book

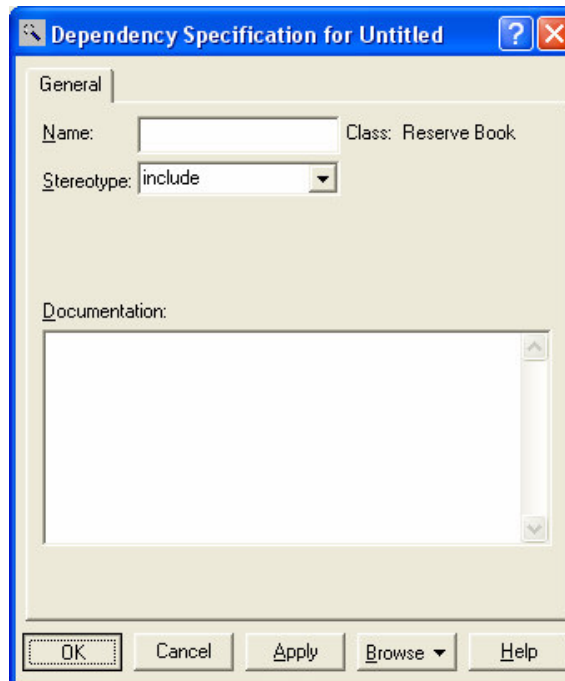
Stereotype:

- derive
- extend
- include
- owner
- refine

Documentation:

OK Cancel Apply Browse Help

Choose *Include*



The image shows a dialog box titled "Dependency Specification for Untitled". It has a blue title bar with a question mark icon and a close button. The dialog is divided into a "General" tab and a "Documentation" section. In the "General" section, there is a "Name:" label followed by an empty text box, and a "Class: Reserve Book" label. Below these is a "Stereotype:" label followed by a dropdown menu showing "include". The "Documentation" section has a label "Documentation:" above a large empty text area with a vertical scrollbar. At the bottom of the dialog are five buttons: "OK", "Cancel", "Apply", "Browse" (with a dropdown arrow), and "Help".

General

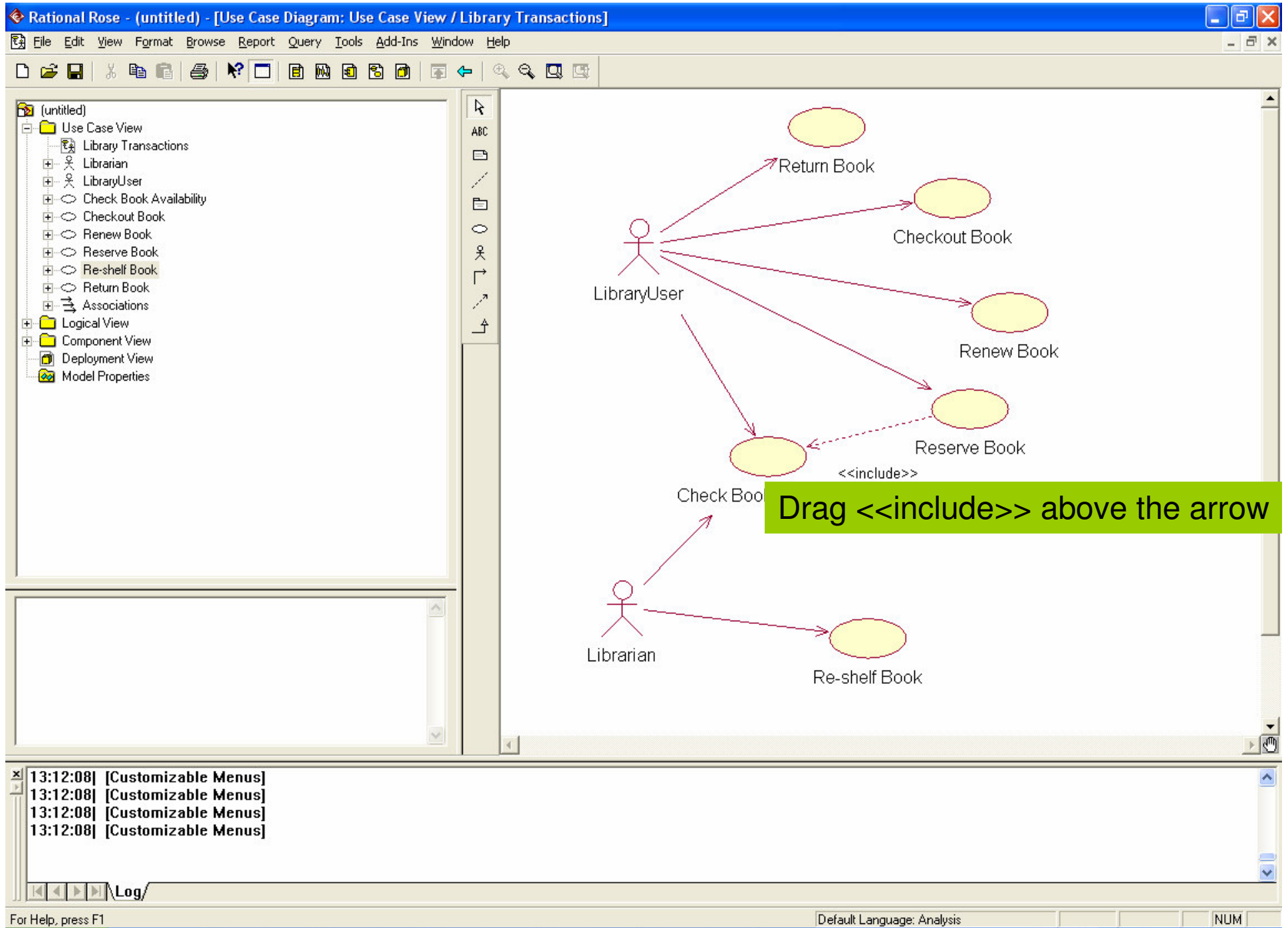
Name: Class: Reserve Book

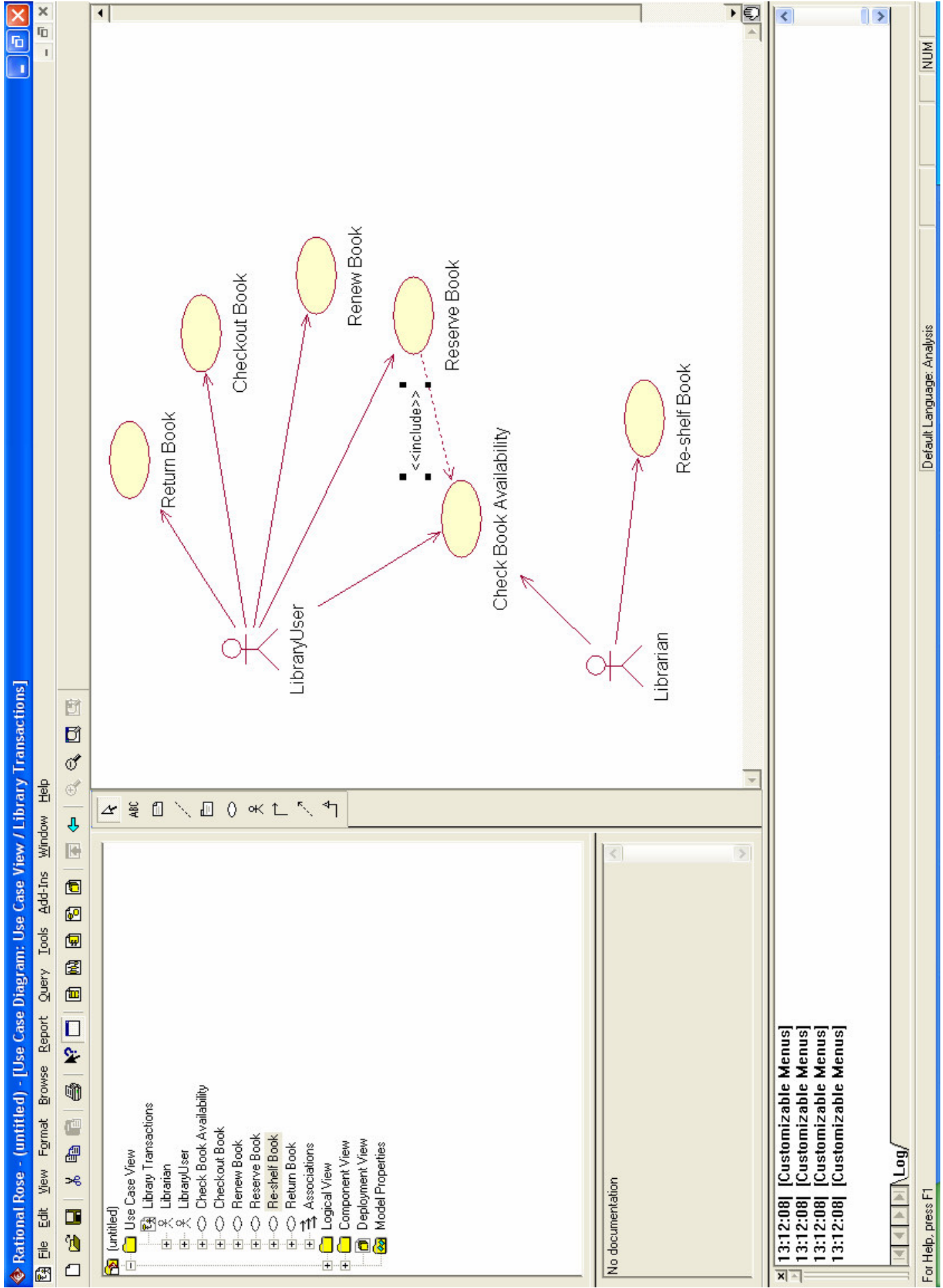
Stereotype: include

Documentation:

OK Cancel Apply Browse Help

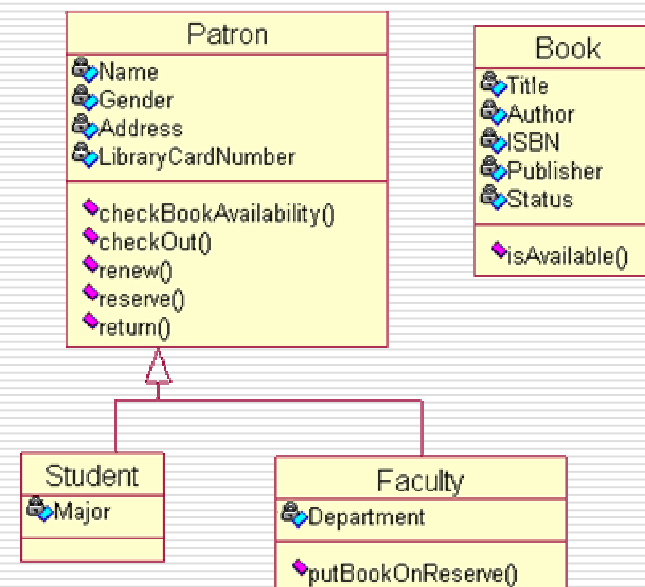
Then click OK



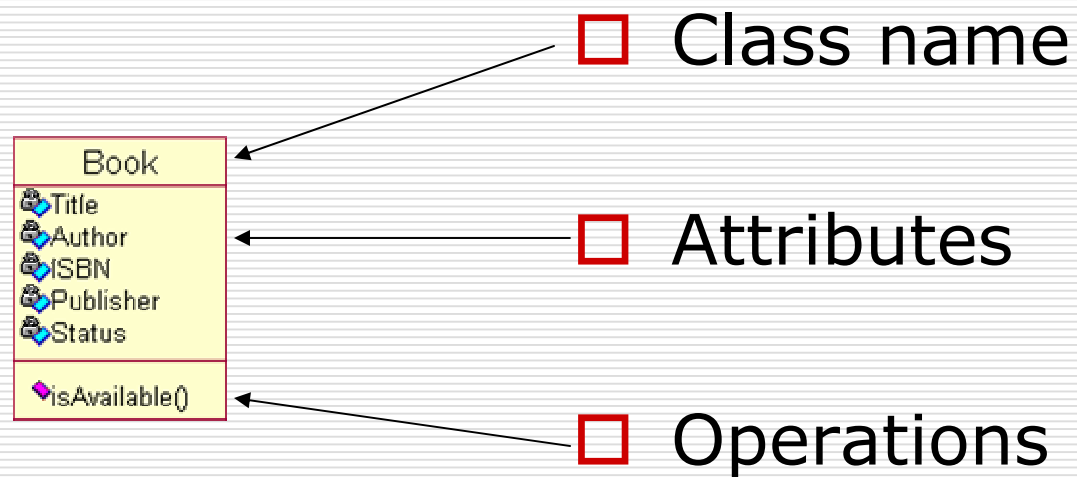


Class Diagram

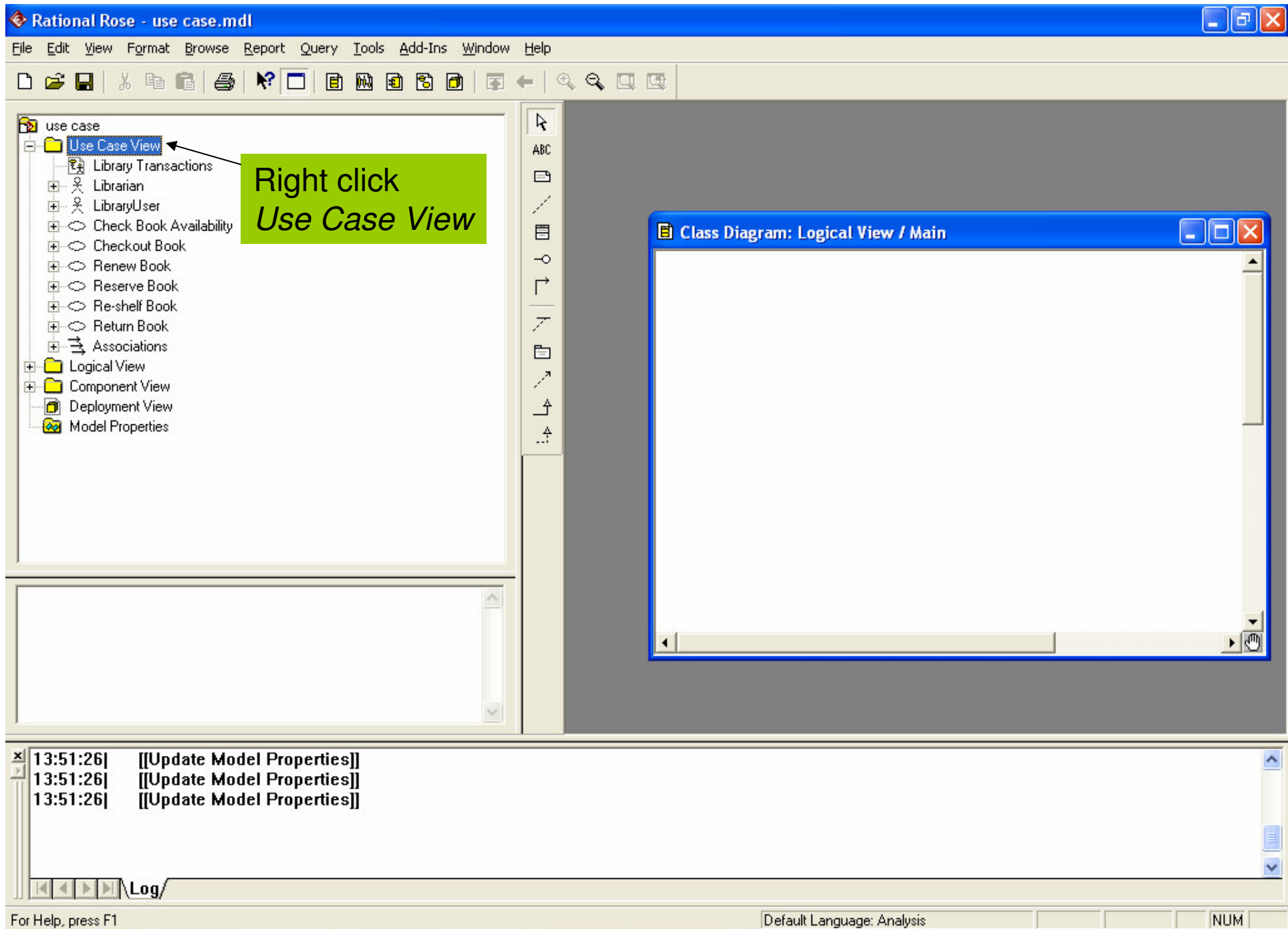
- Contain icons representing classes, interfaces and their relationship

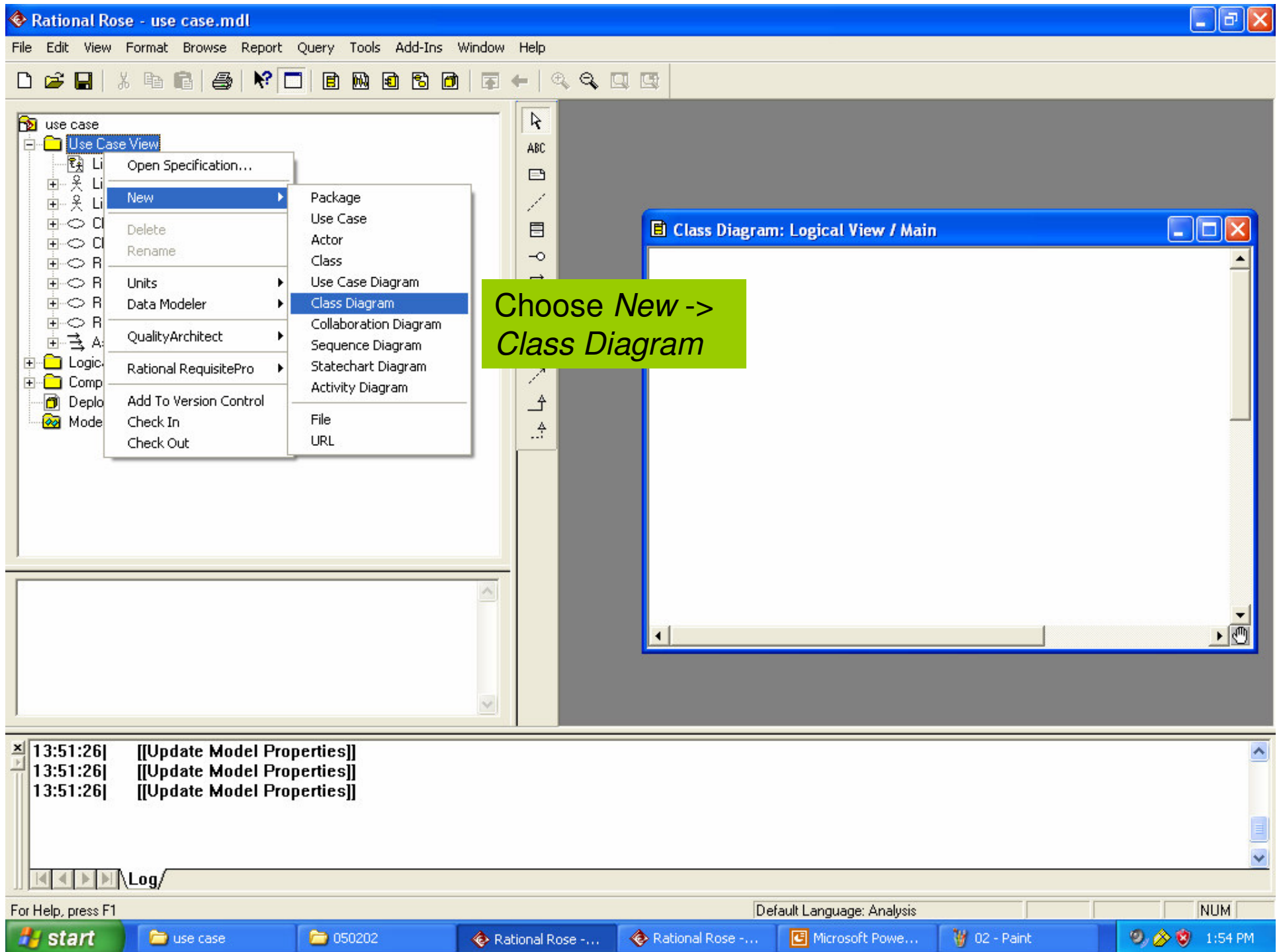


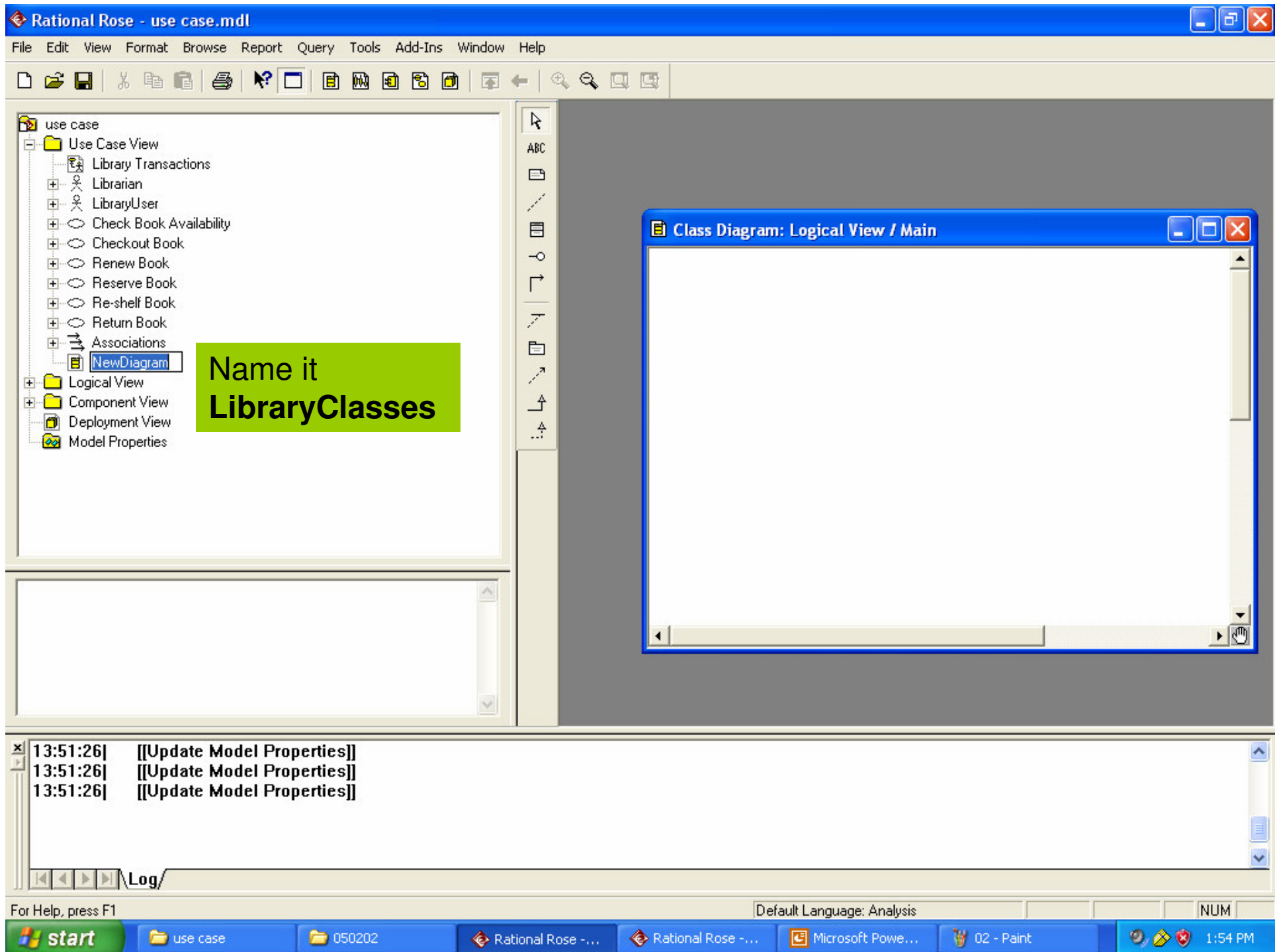
Class Diagram

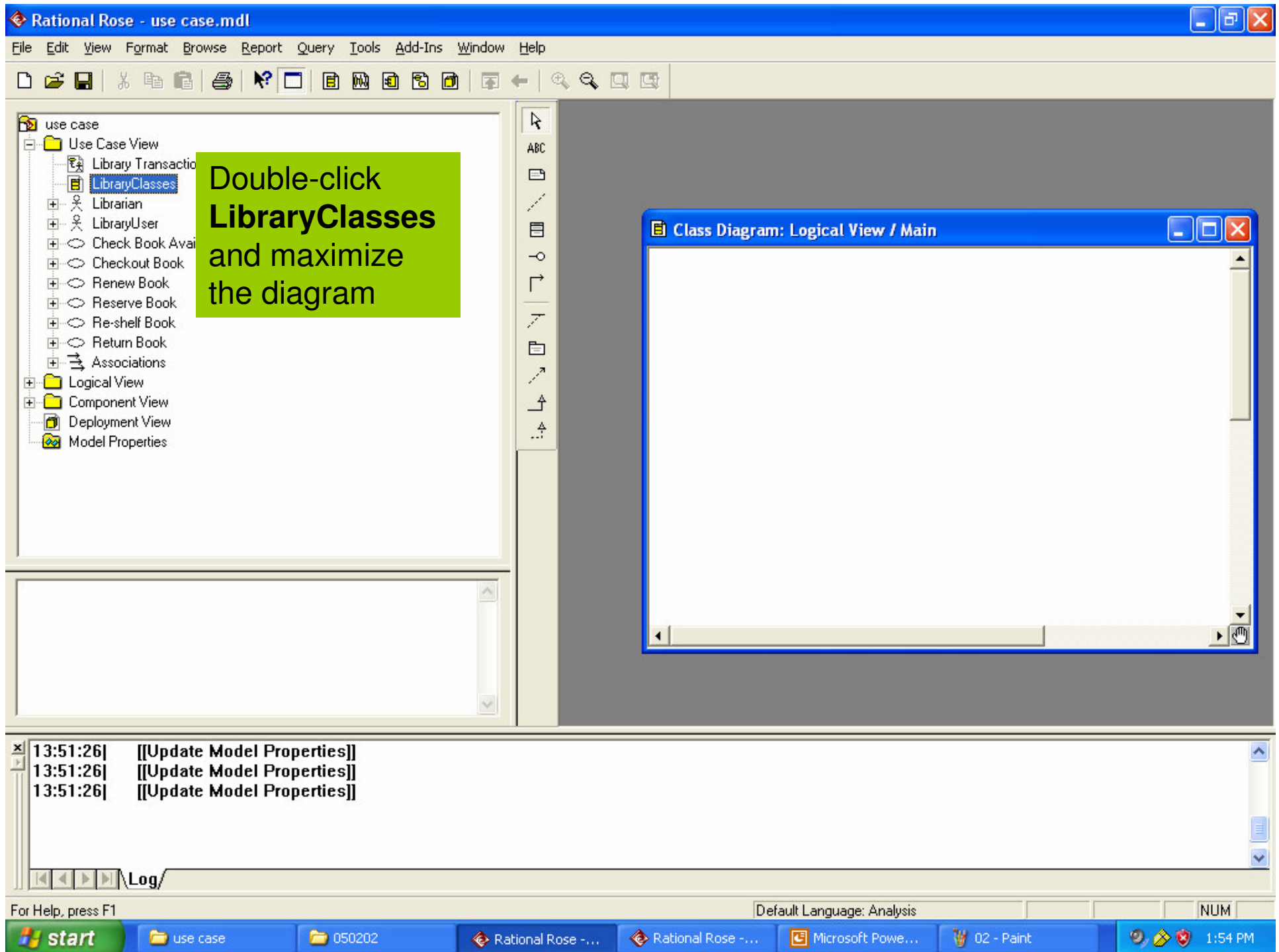


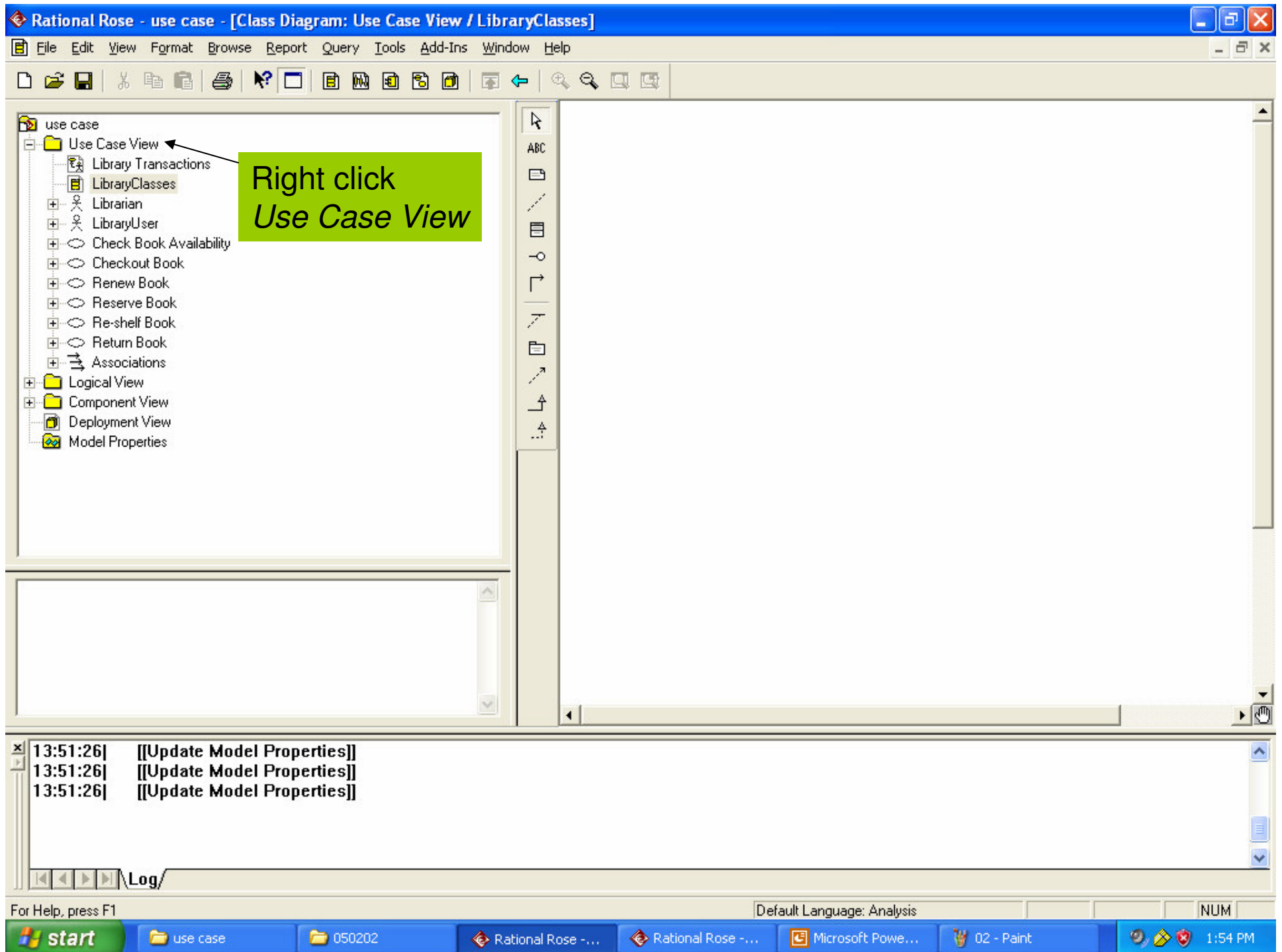
Creating a Class Diagram

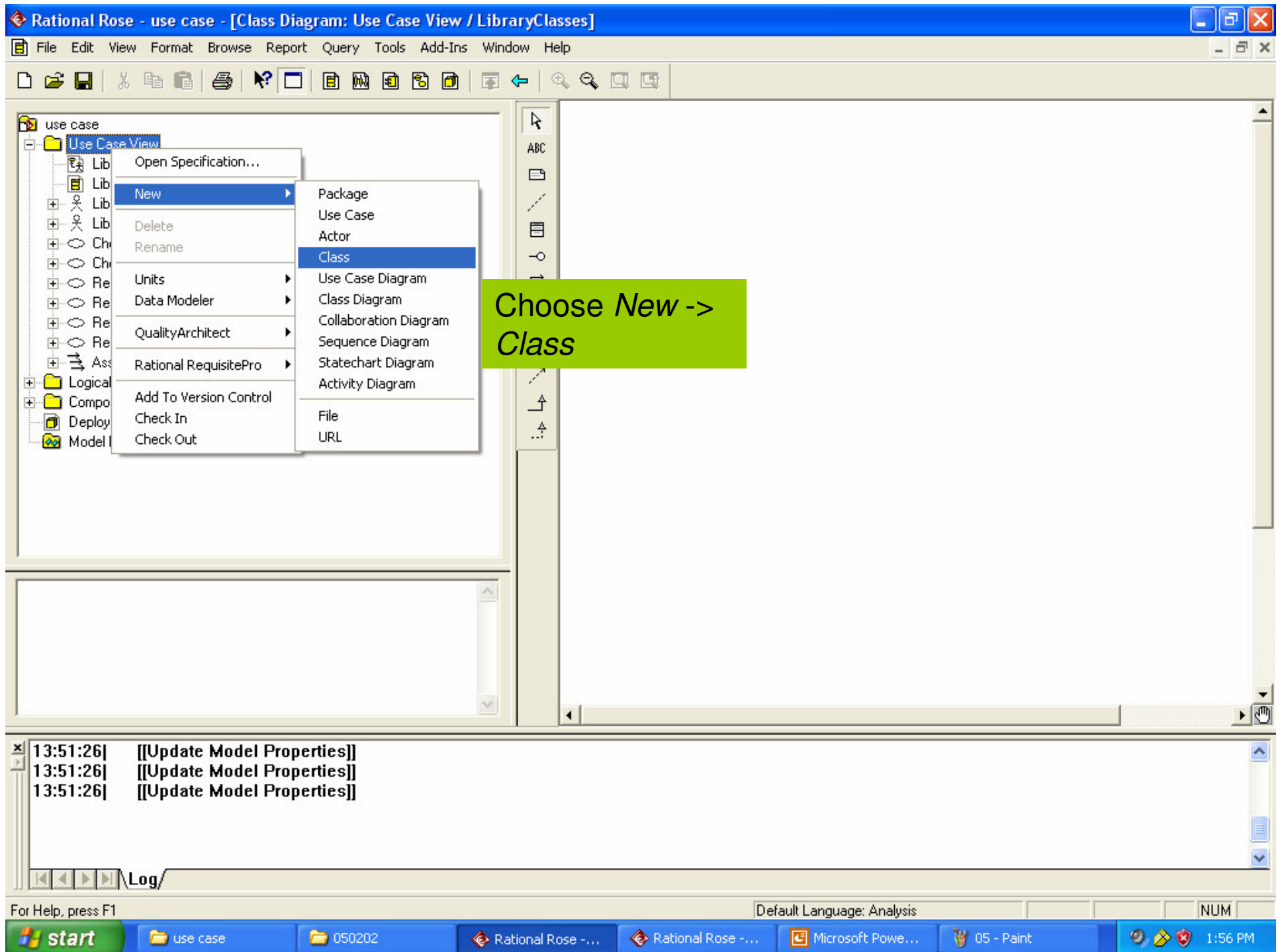


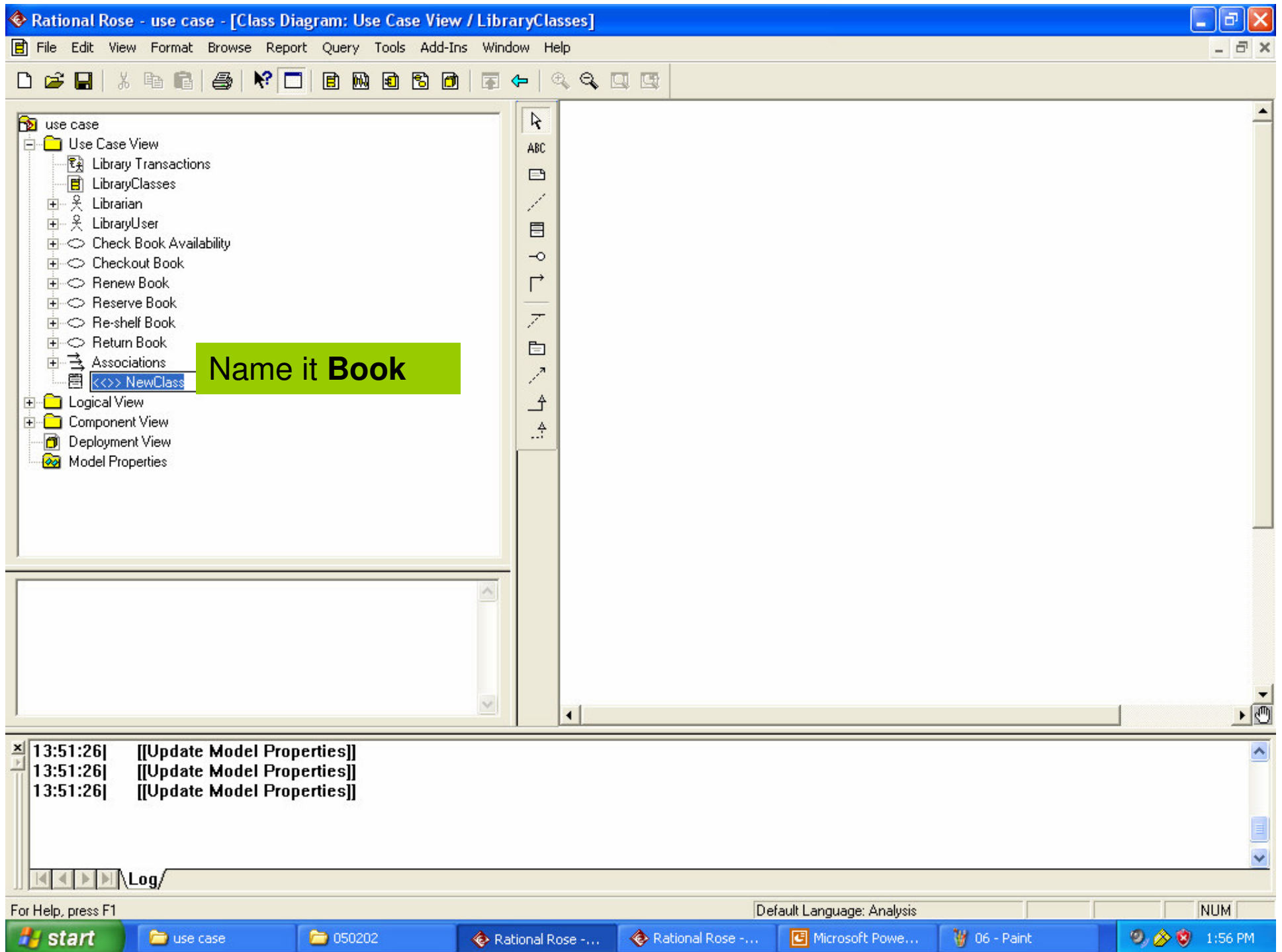












Rational Rose - use case - [Class Diagram: Use Case View / LibraryClasses]

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

use case

- Use Case View
 - Library Transactions
 - LibraryClasses
 - Librarian
 - LibraryUser
 - Check Book Availability
 - Checkout Book
 - Renew Book
 - Reserve Book
 - Re-shelf Book
 - Return Book
 - Associations
 - Book
- Logical View
- Component View
- Deployment View
- Model Properties

Do the same and create these classes:
Patron
Student
Faculty

13:51:26| [[Update Model Properties]]
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13:51:26| [[Update Model Properties]]

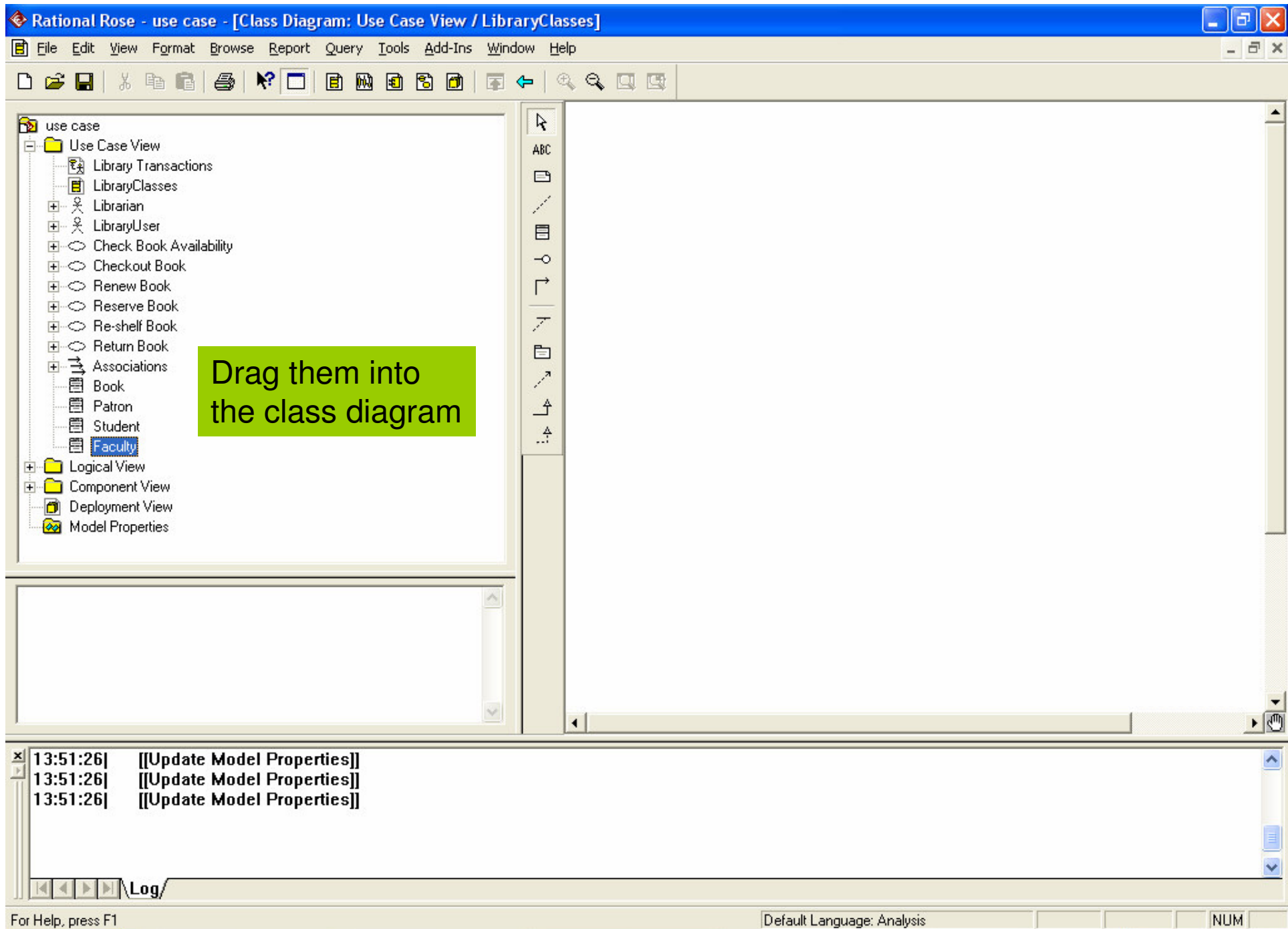
Log/

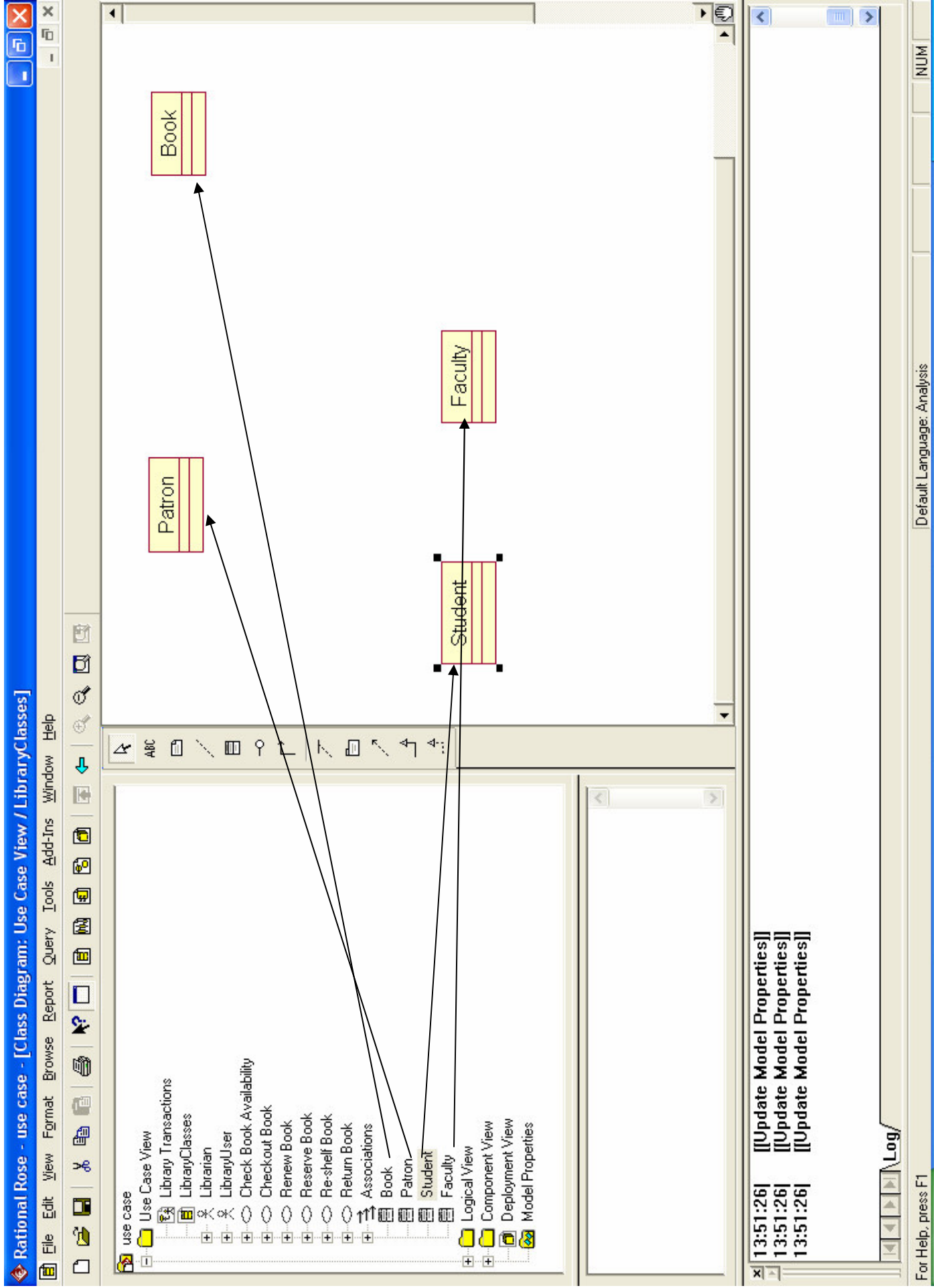
For Help, press F1

Default Language: Analysis

NUM

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Rational Rose - use case - [Class Diagram: Use Case View / LibraryClasses]

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

use case

- Use Case View
 - Library Transactions
 - LibraryClasses
 - Librarian
 - LibraryUser
 - Check Book Availability
 - Checkout Book
 - Renew Book
 - Reserve Book
 - Re-shelf Book
 - Return Book
 - Associations
 - Book
 - Patron
 - Student
 - Faculty
 - Logical View
 - Component View
 - Deployment View
 - Model Properties

Right-click **Book**,
Select *New Attribute*

Patron

Book

Student

Faculty

Open Specification...
Sub Diagrams
New Attribute
New Operation
Select In Browser
Relocate
Options
Format
Data Modeler
Quality Architect
Edit

13:51:26| [[Update Model Properties]]
13:51:26| [[Update Model Properties]]
13:51:26| [[Update Model Properties]]

Log/

For Help, press F1

Default Language: Analysis

NUM

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Rational Rose - use case - [Class Diagram: Use Case View / LibraryClasses]

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

use case

- Use Case View
 - Library Transactions
 - LibraryClasses
 - Librarian
 - LibraryUser
 - Check Book Availability
 - Checkout Book
 - Renew Book
 - Reserve Book
 - Re-shelf Book
 - Return Book
 - Associations
 - Book
 - Patron
 - Student
 - Faculty
- Logical View
- Component View
- Deployment View
- Model Properties

Patron

Book
Title

Name it Title

Student

Faculty

13:51:26| [[Update Model Properties]]
13:51:26| [[Update Model Properties]]
13:51:26| [[Update Model Properties]]

Log/

For Help, press F1

Default Language: Analysis

NUM

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