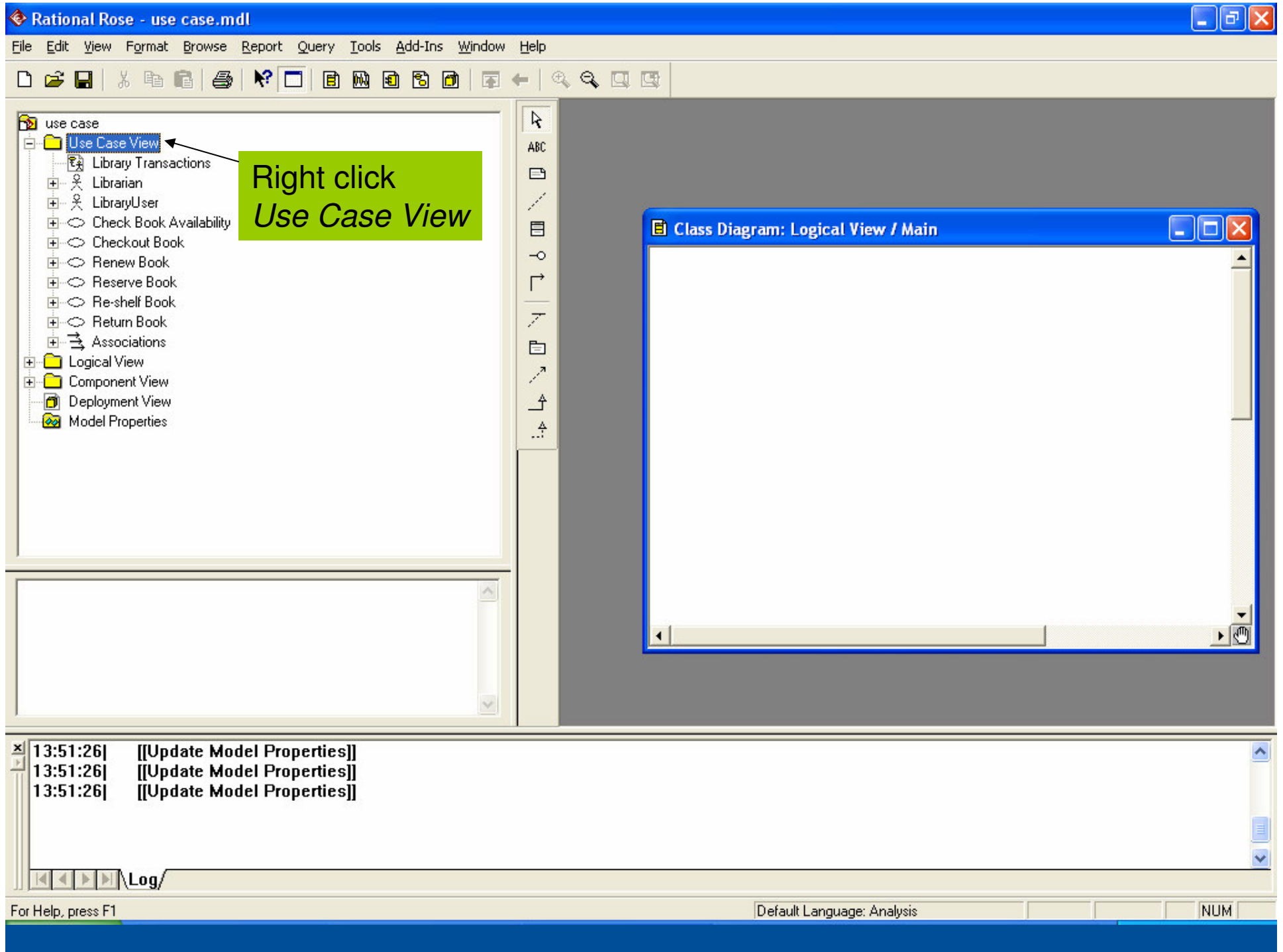
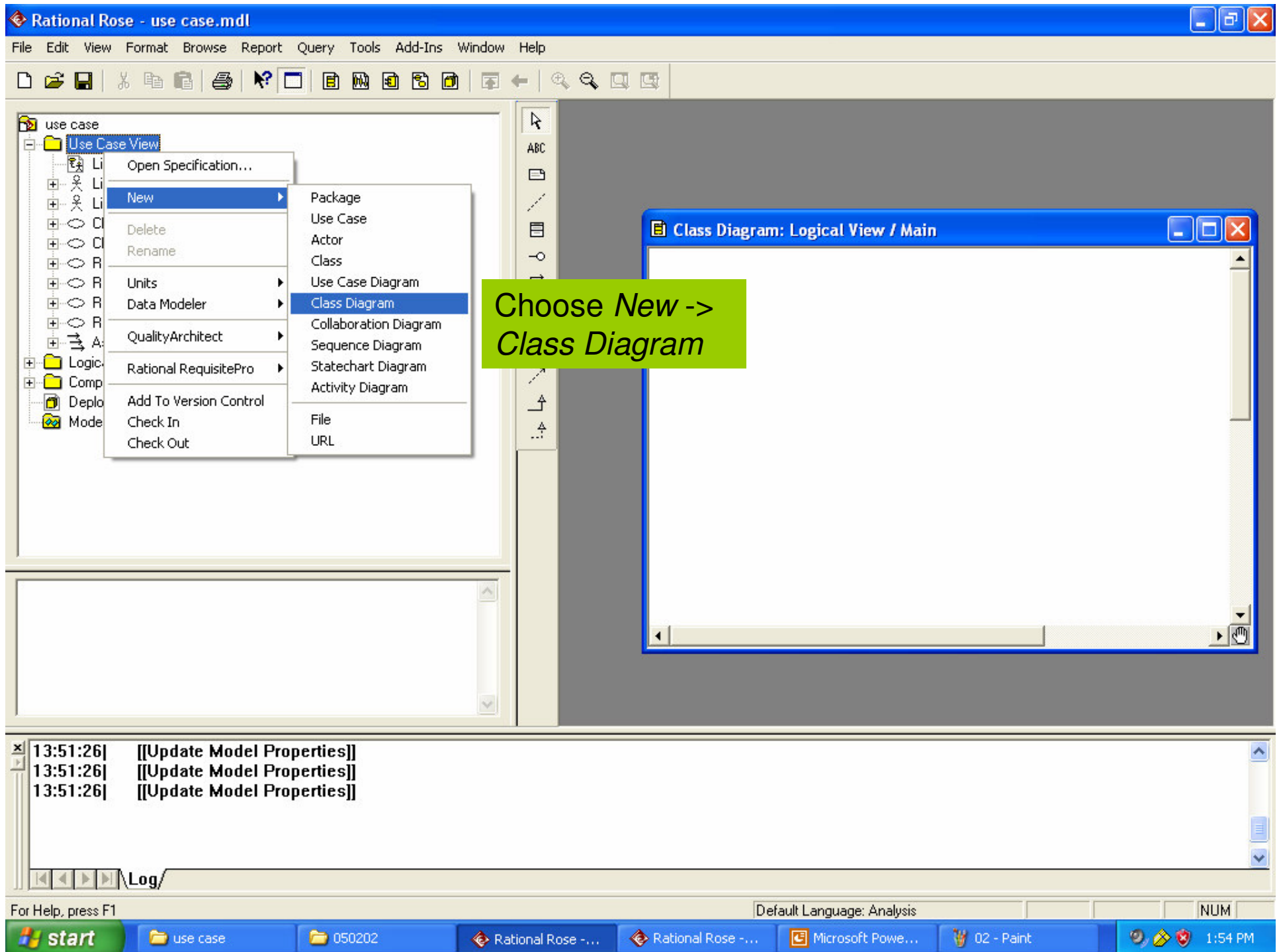
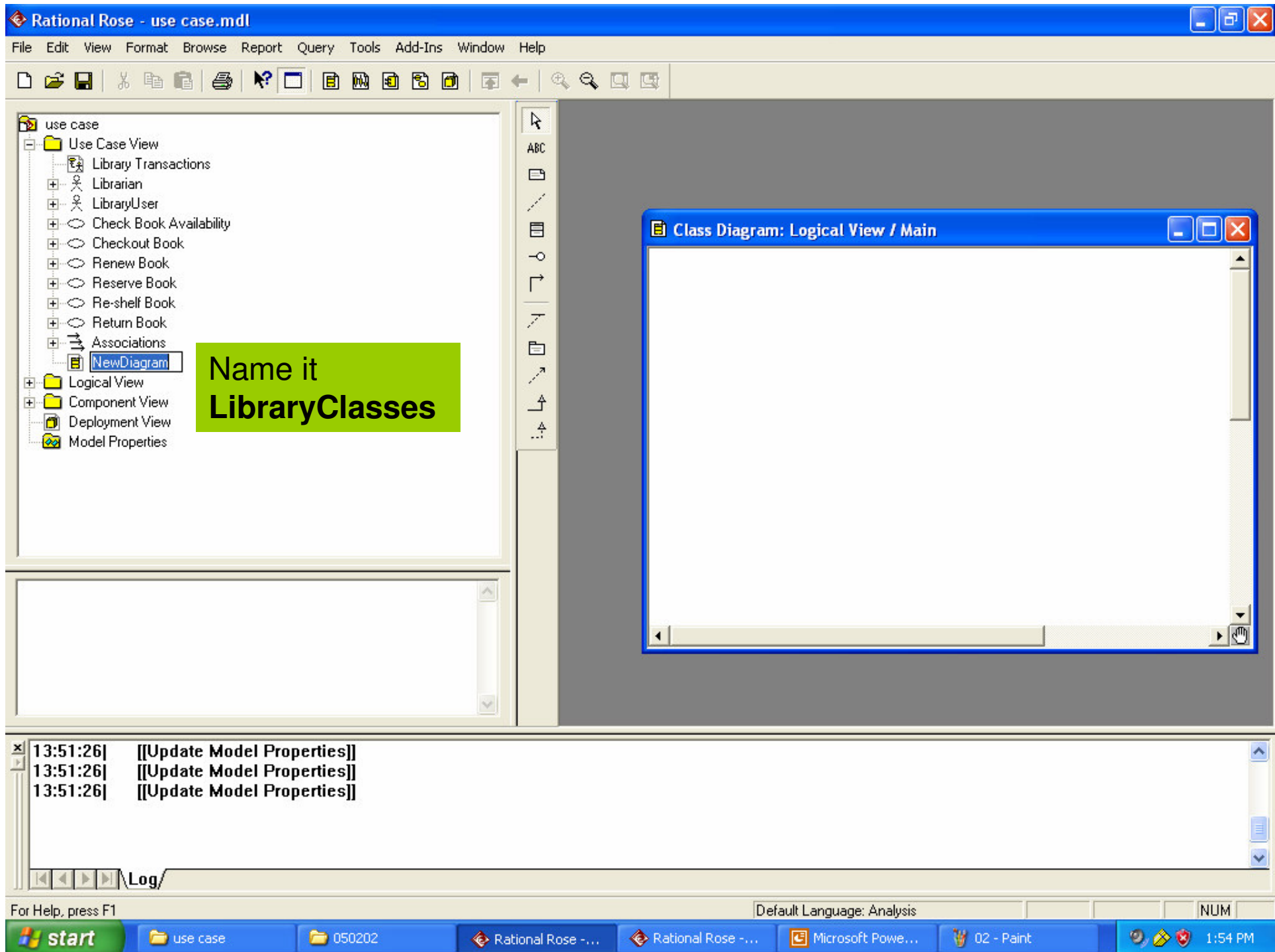


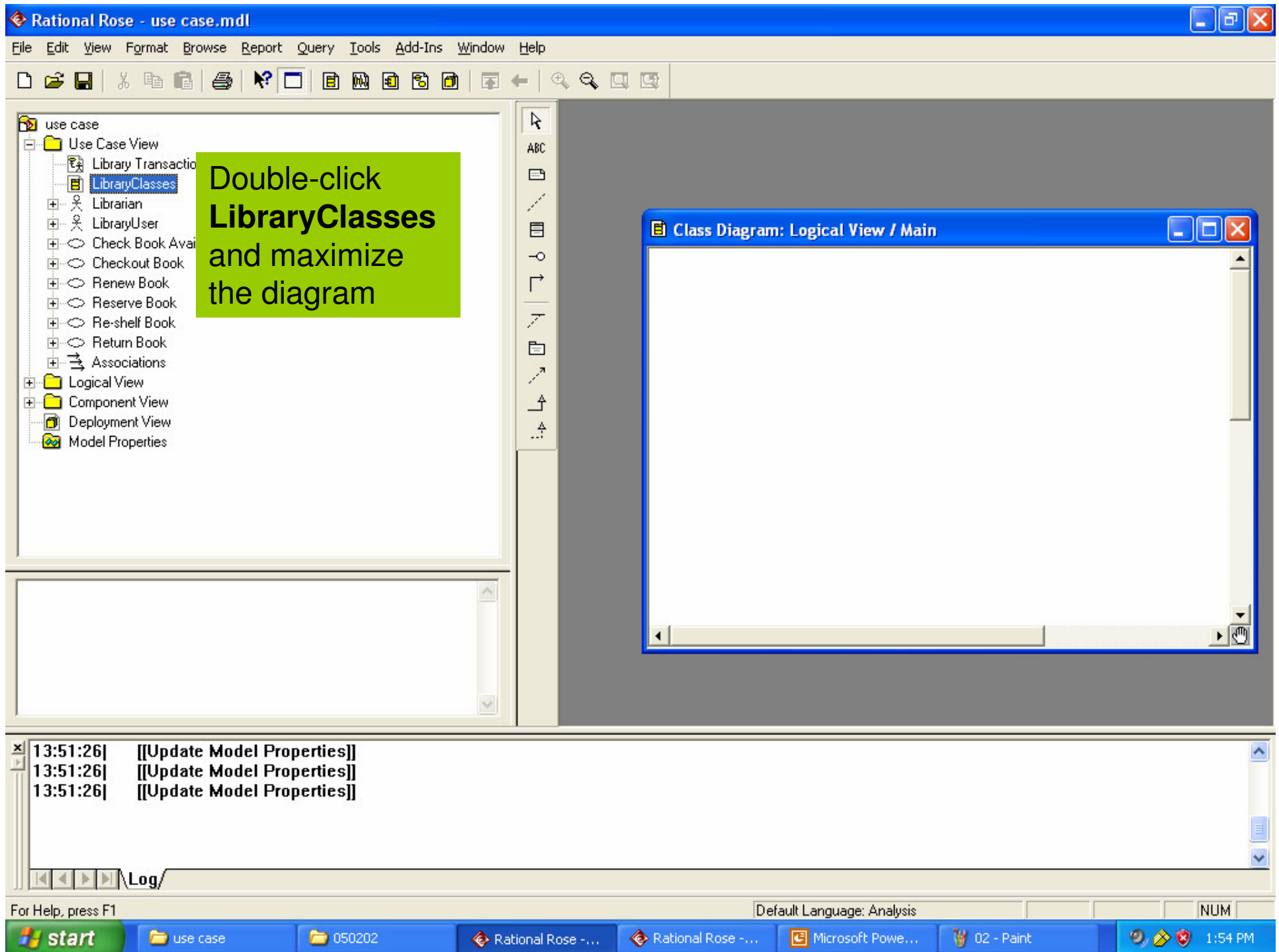
# Class Diagram Examples

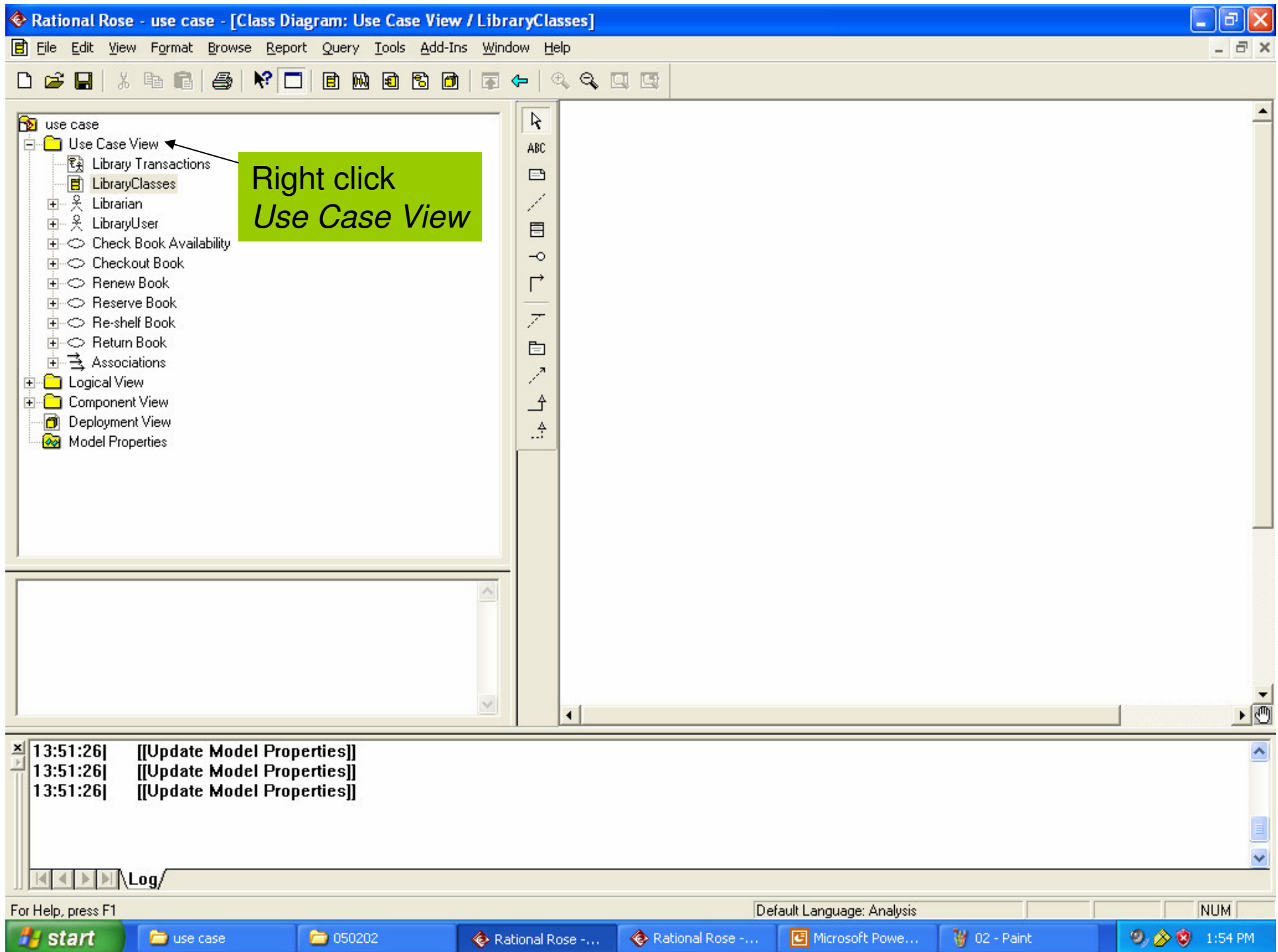


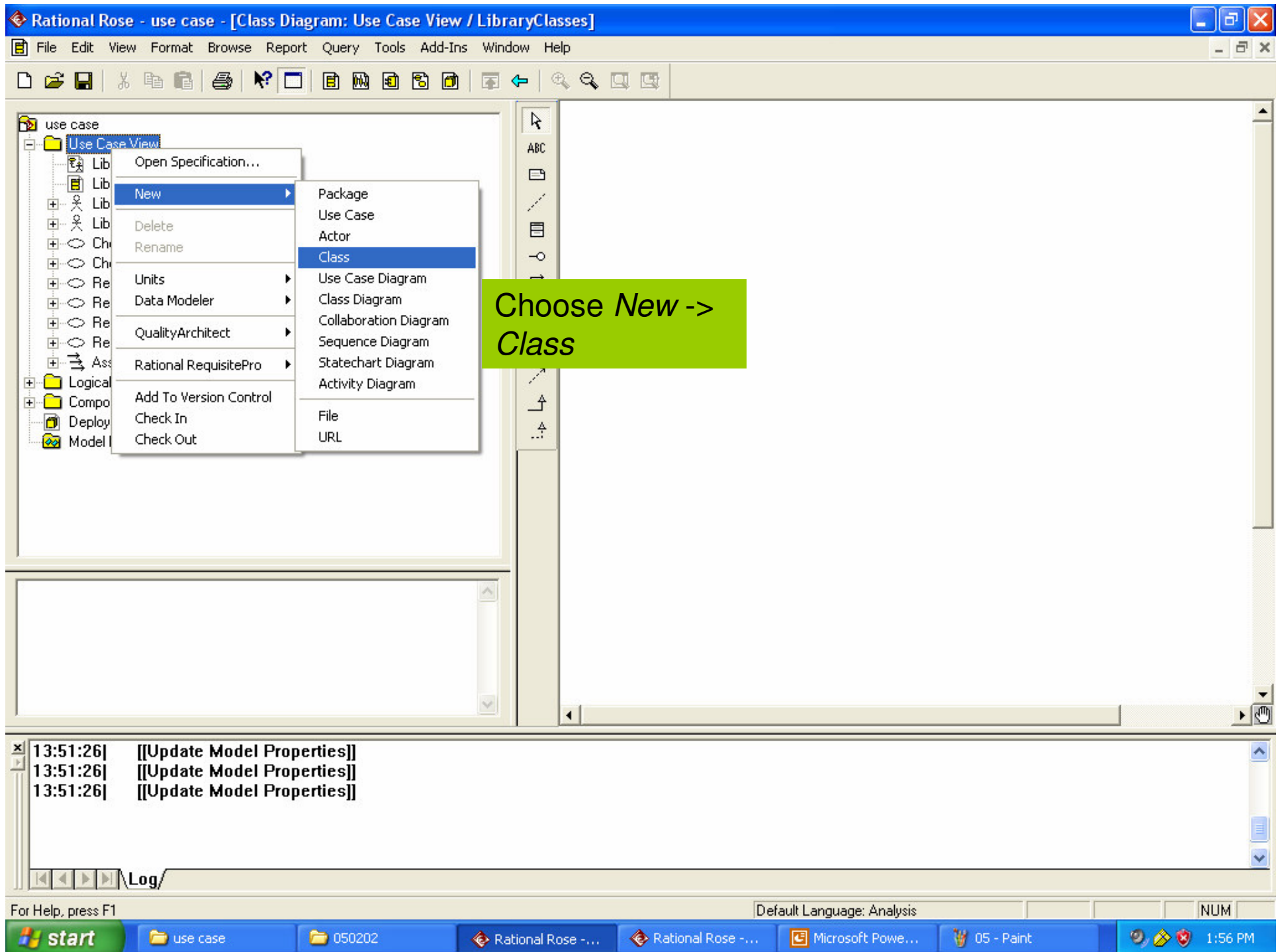


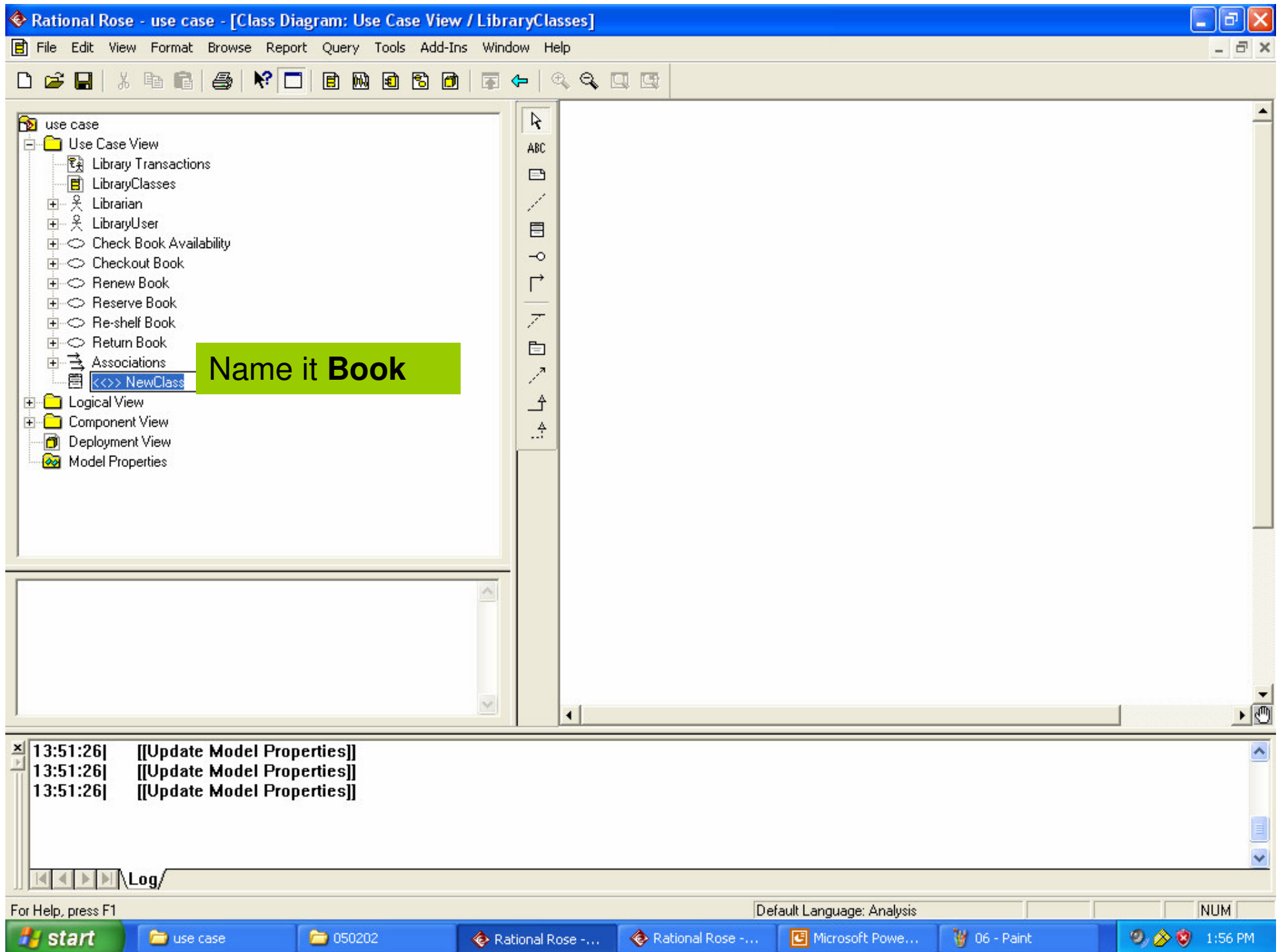


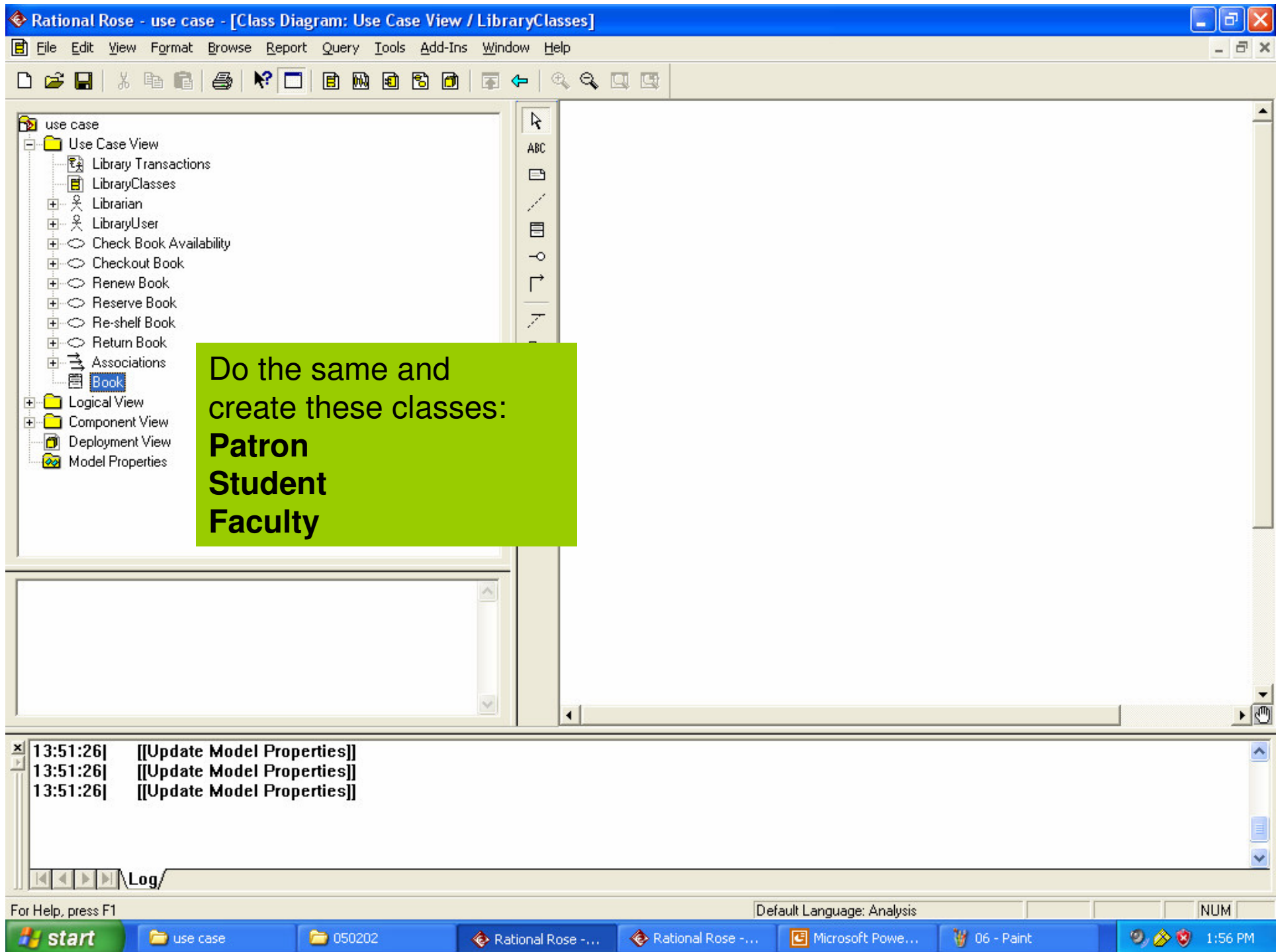


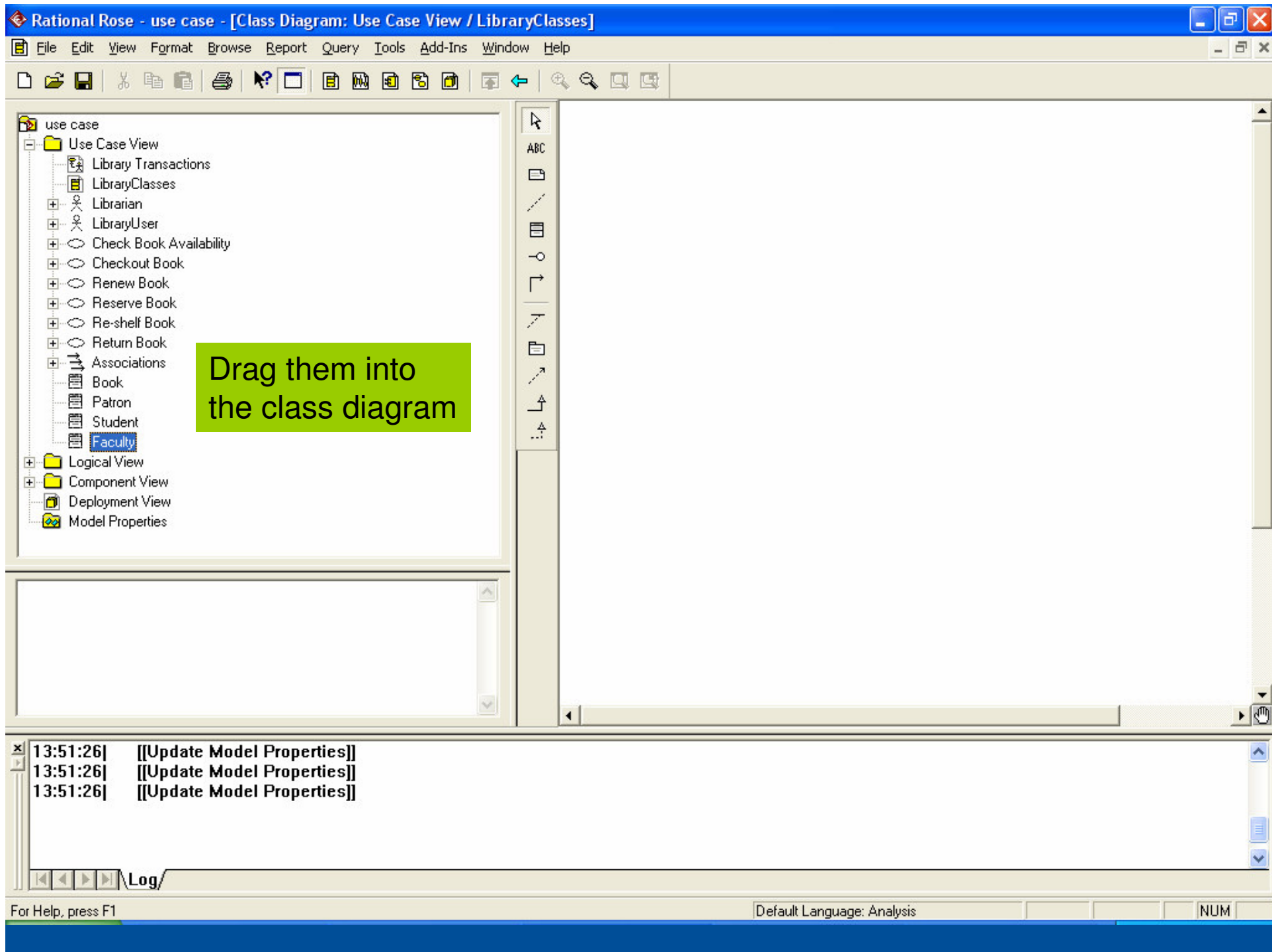




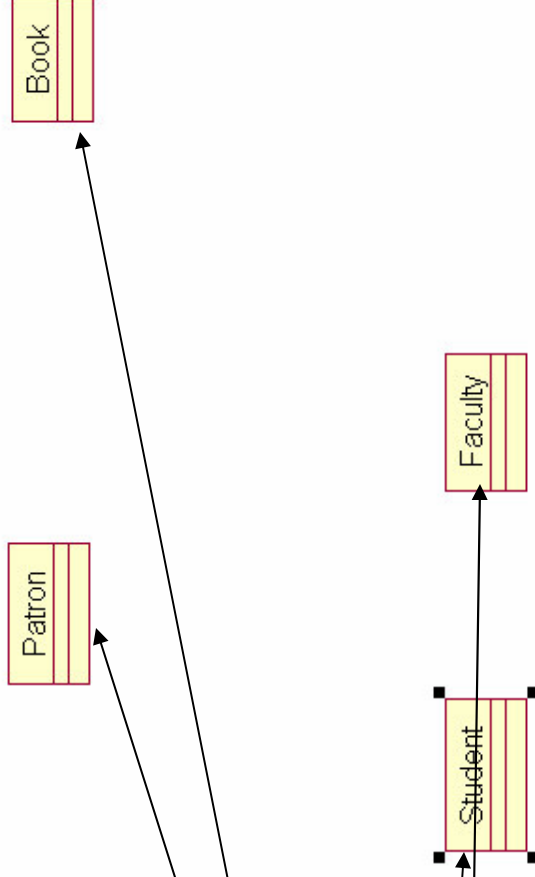












13:51:26| [[Update Model Properties]]  
13:51:26| [[Update Model Properties]]  
13:51:26| [[Update Model Properties]]

Log

For Help, press F1

Default Language: Analysis

NUM

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

start use case 050202 Rational Rose - use ... Rational Rose - libra... 10 - Paint 1:59 PM



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

start

use case

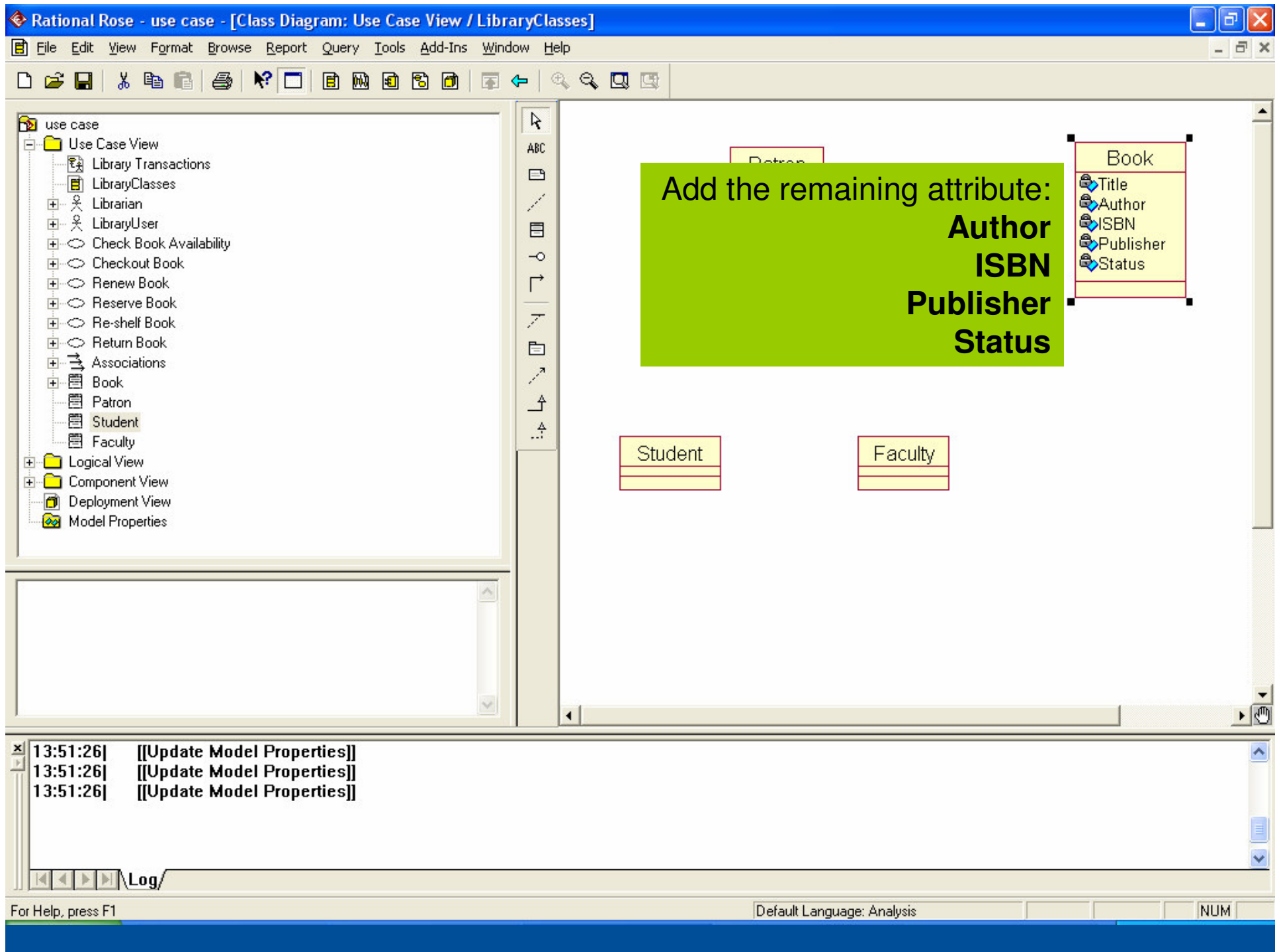
050202

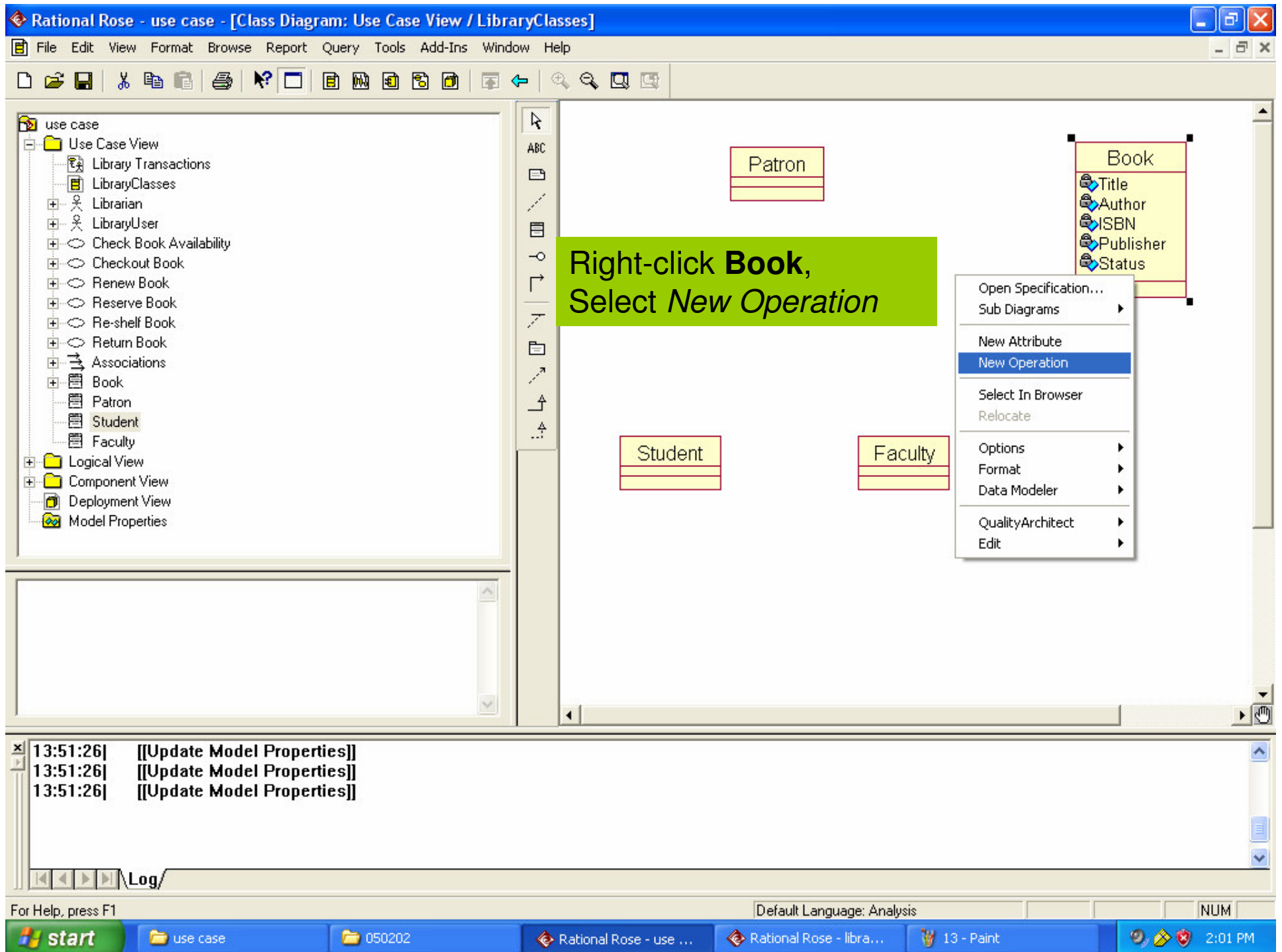
Rational Rose - use ...

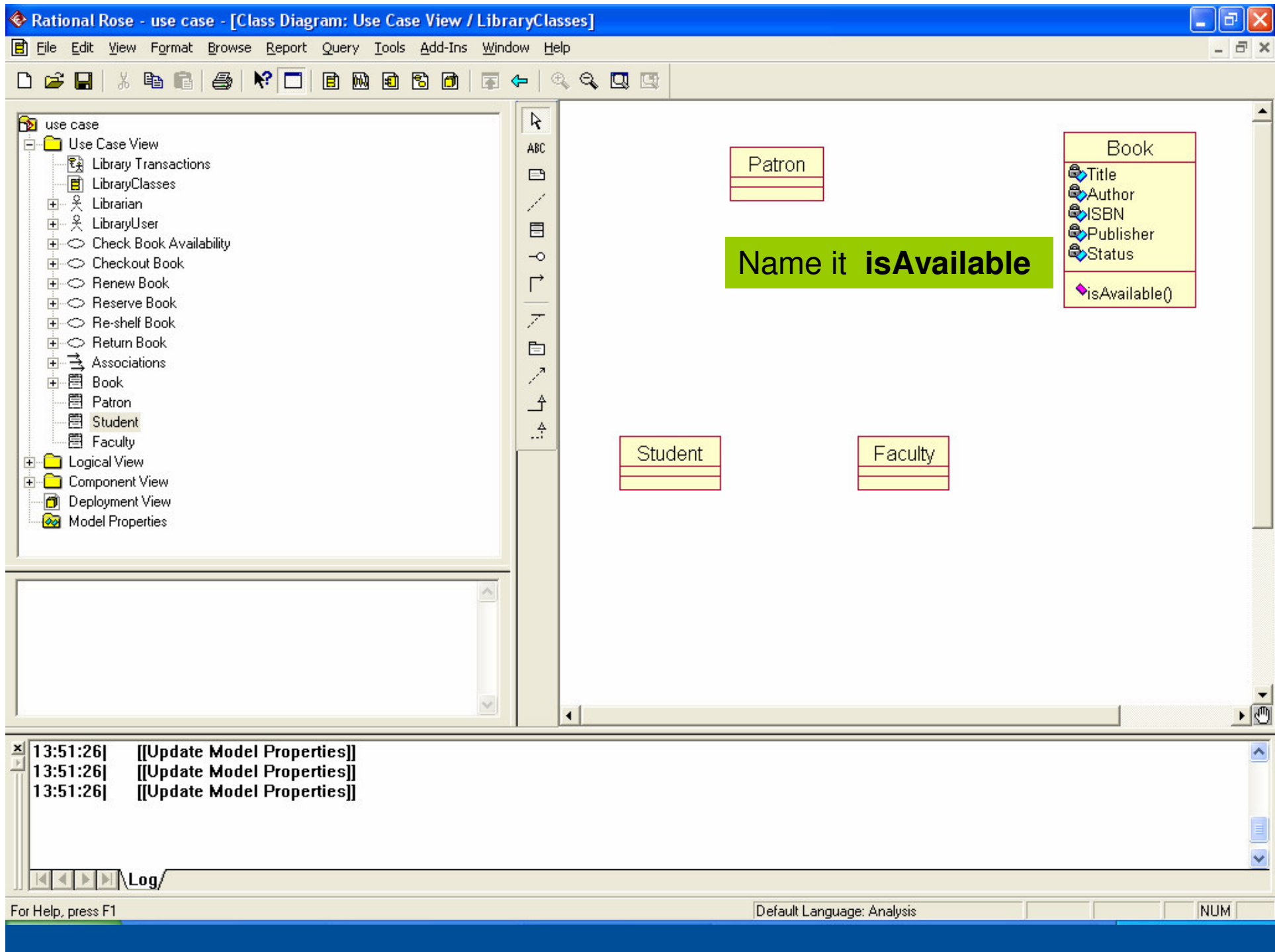
Rational Rose - libra...

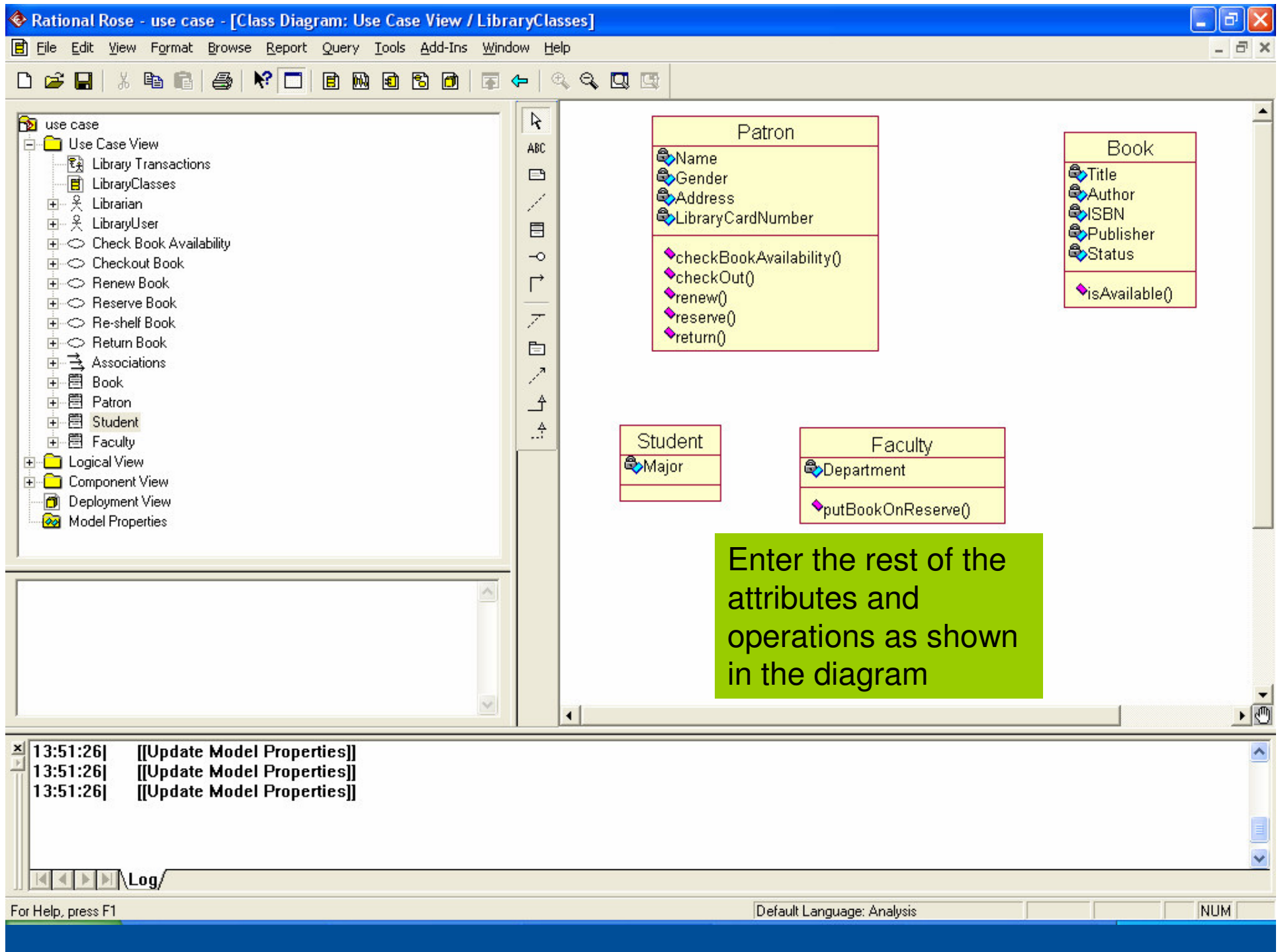
10 - Paint

1:59 PM

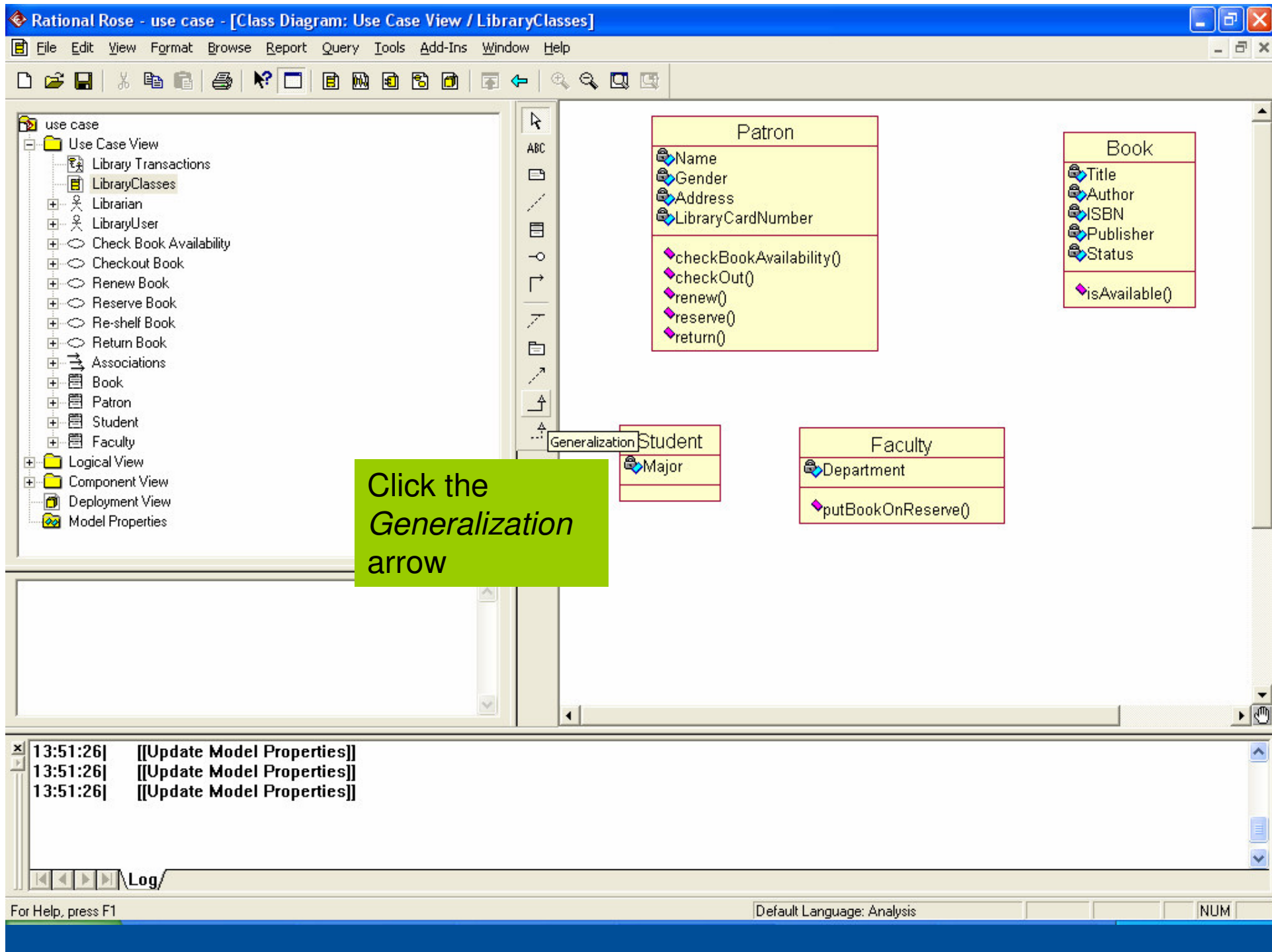


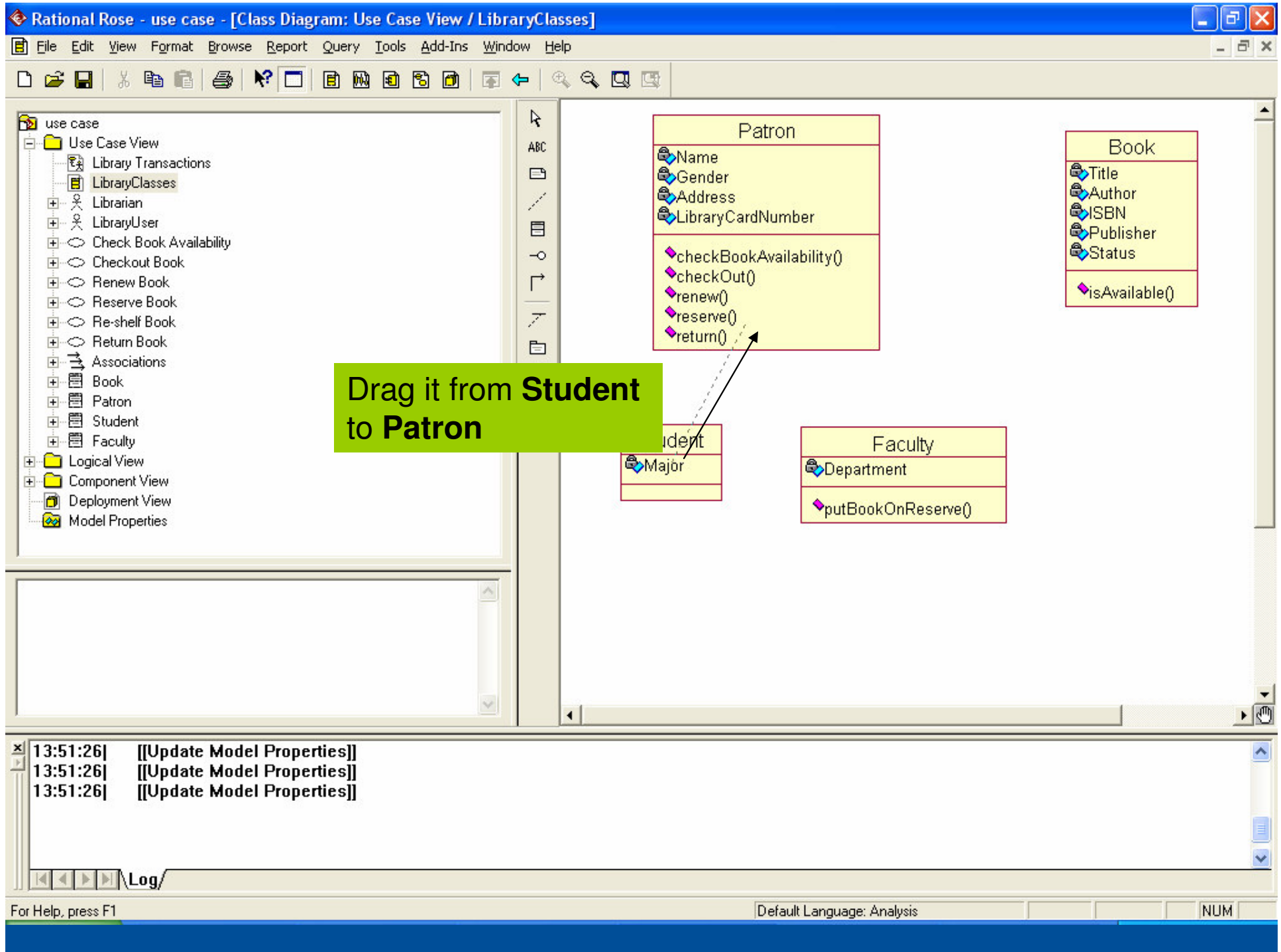


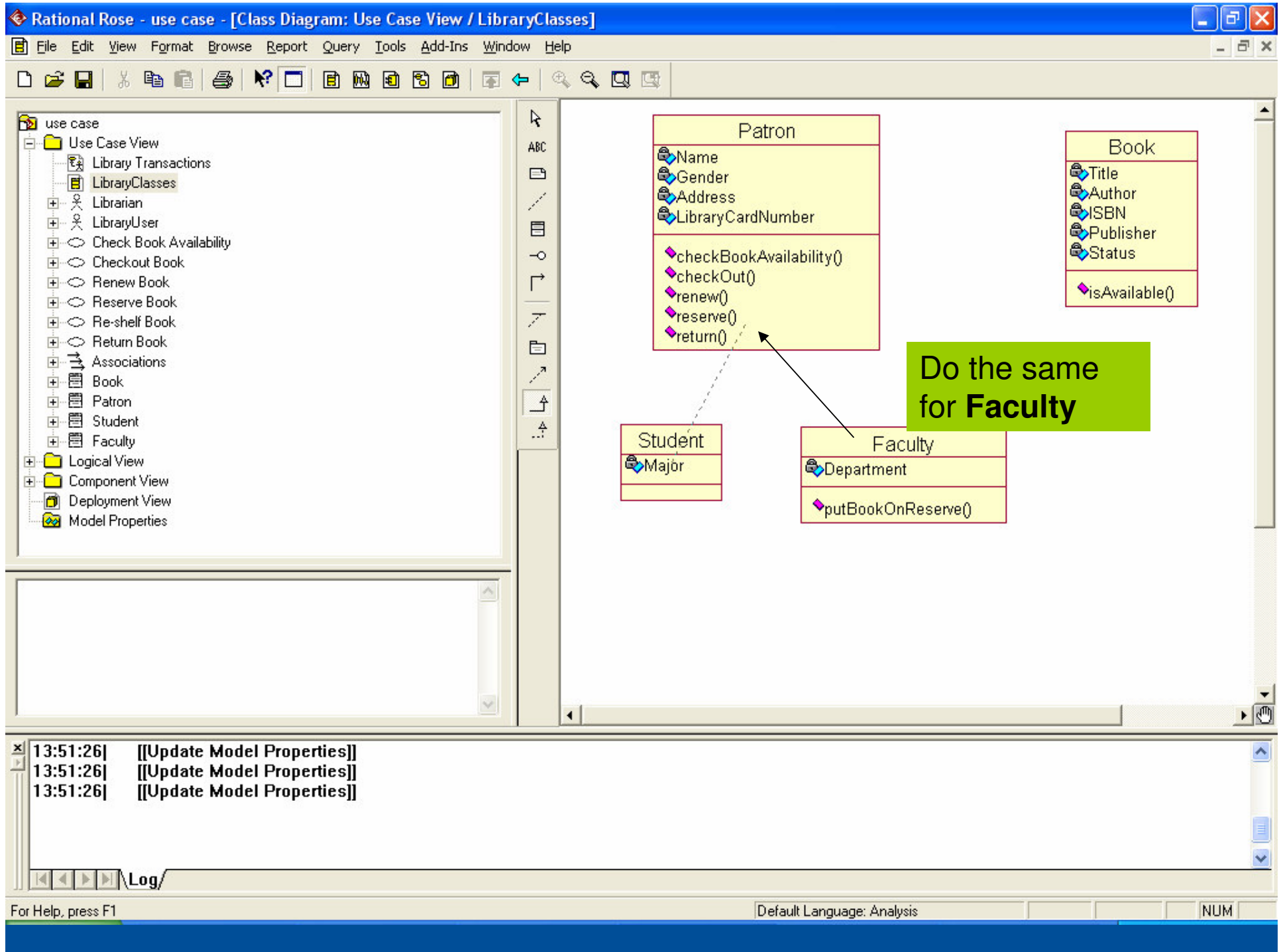




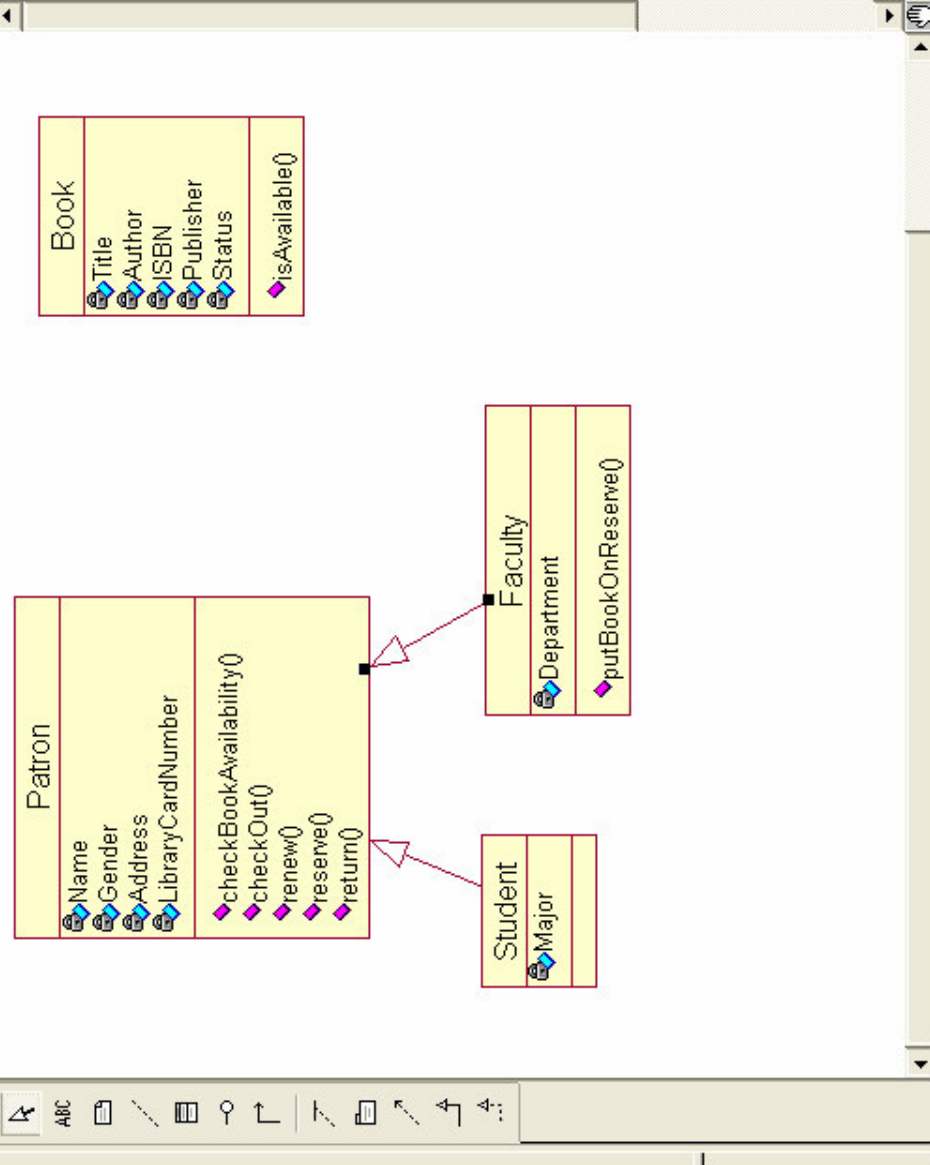
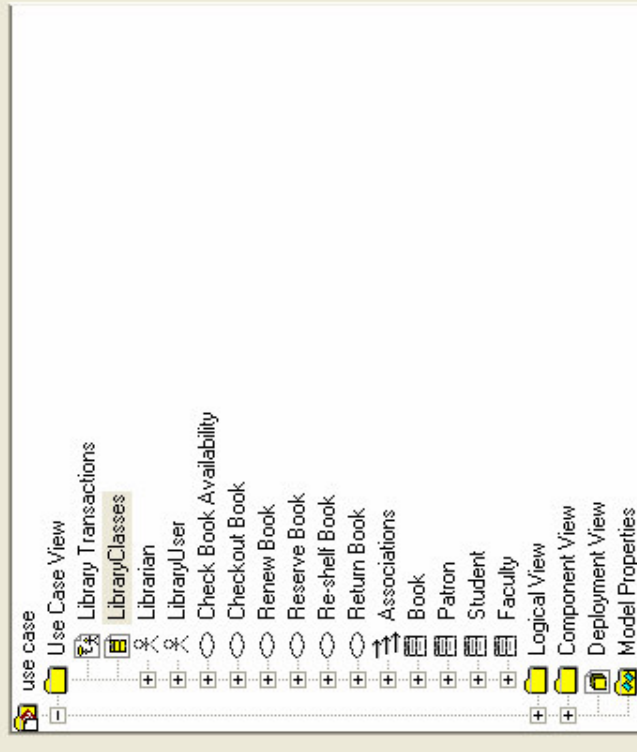












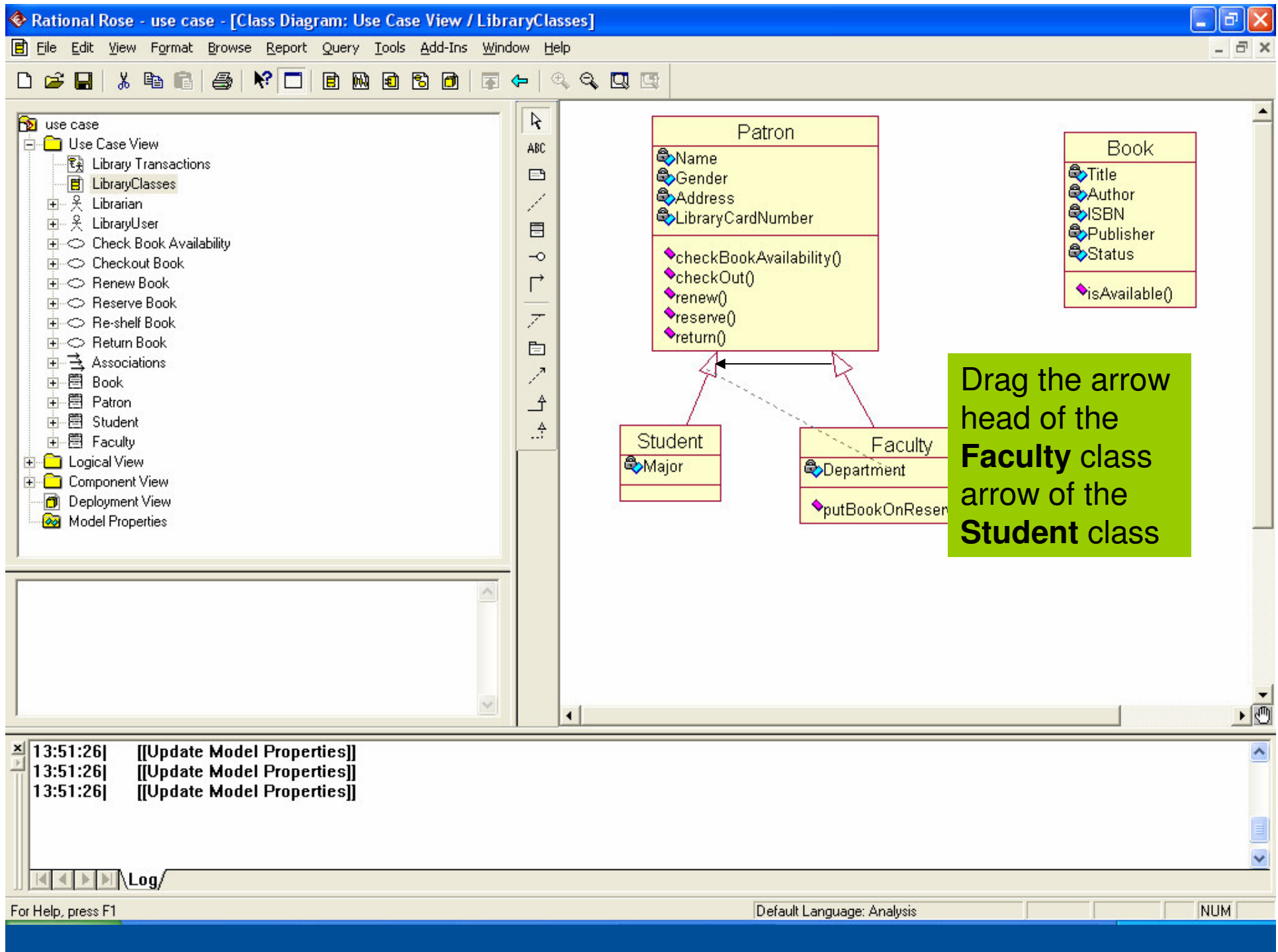
13:51:26] [[Update Model Properties]]  
 13:51:26] [[Update Model Properties]]  
 13:51:26] [[Update Model Properties]]

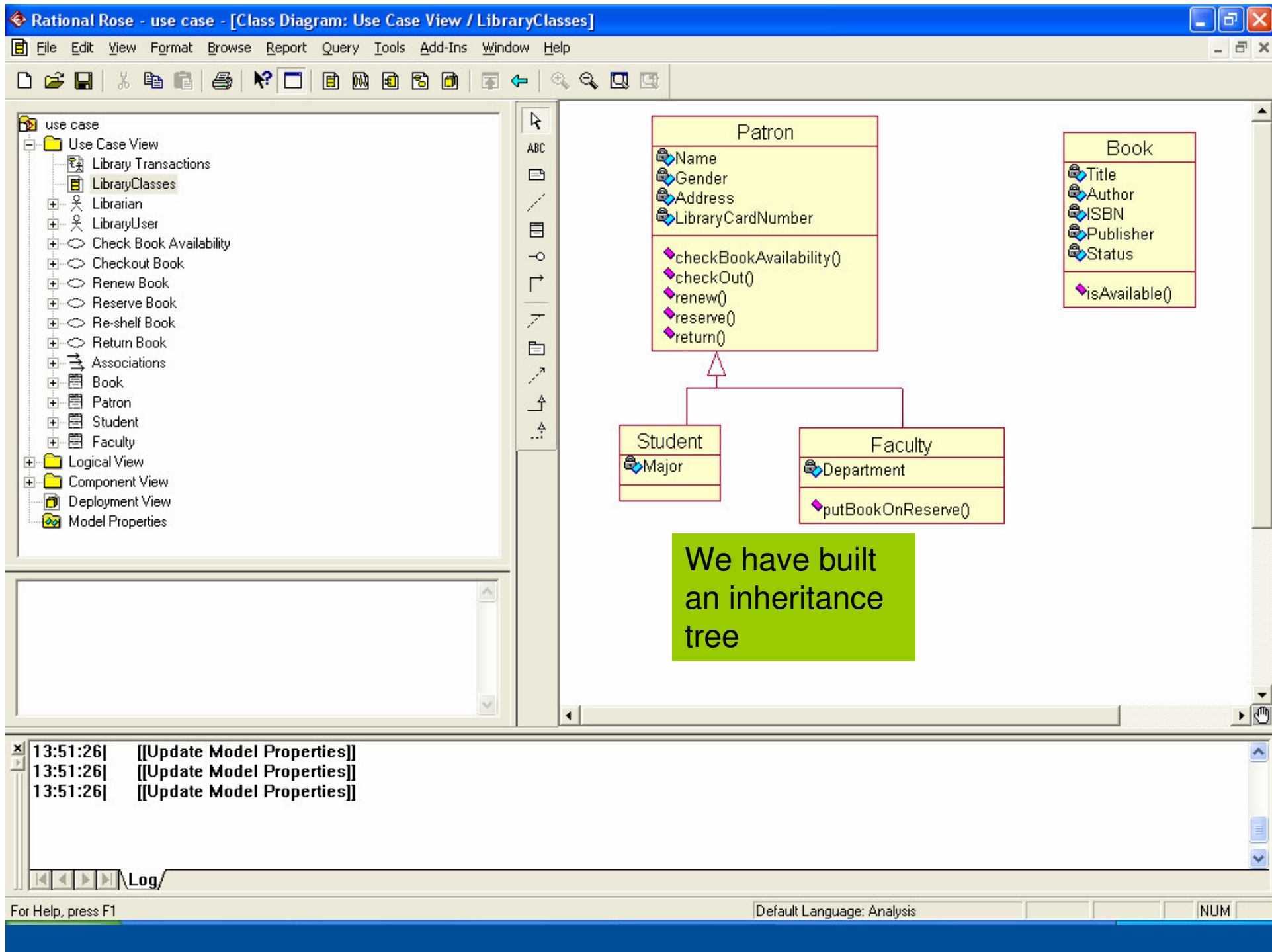
Log

For Help, press F1

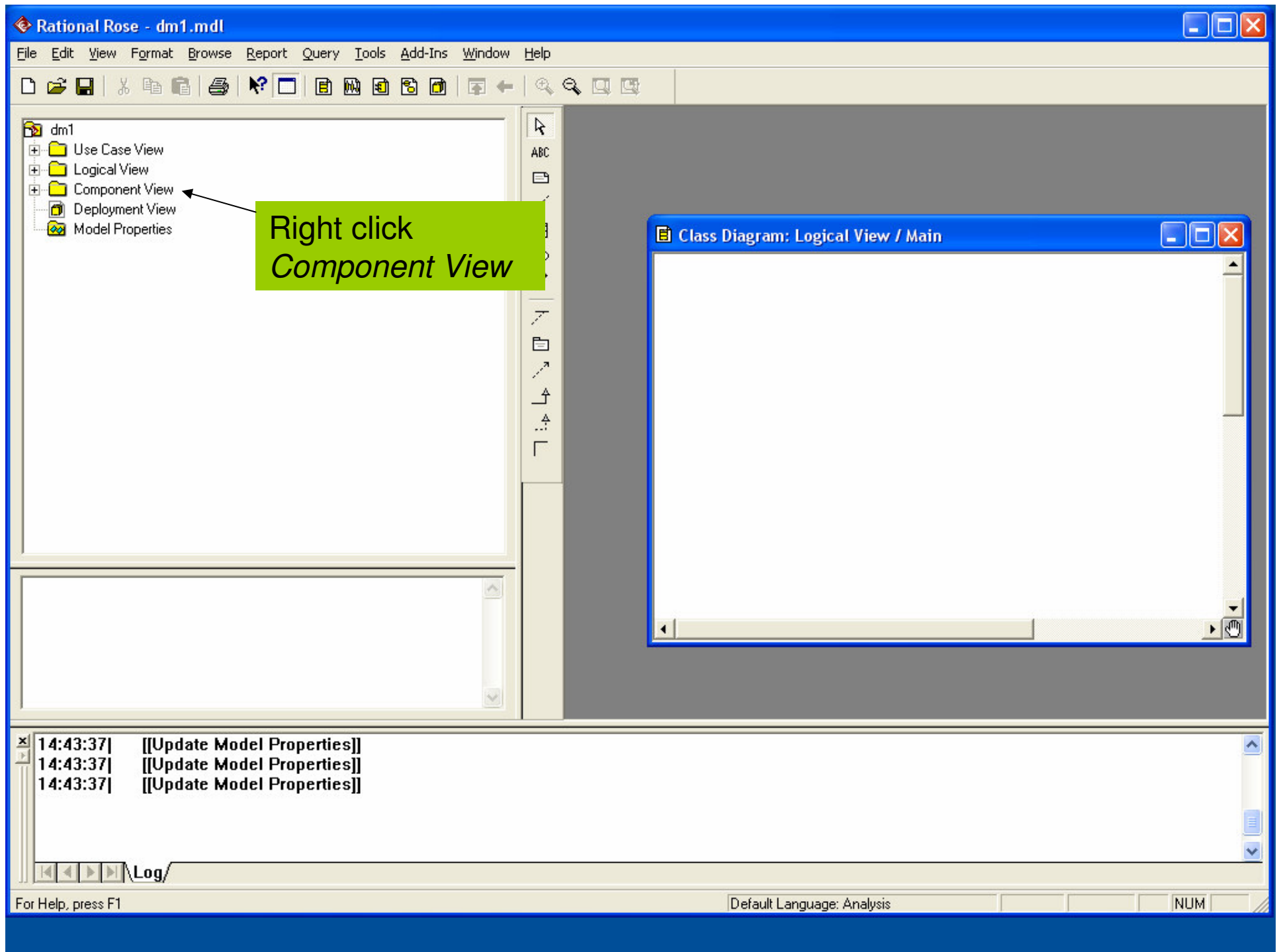
Default Language: Analysis

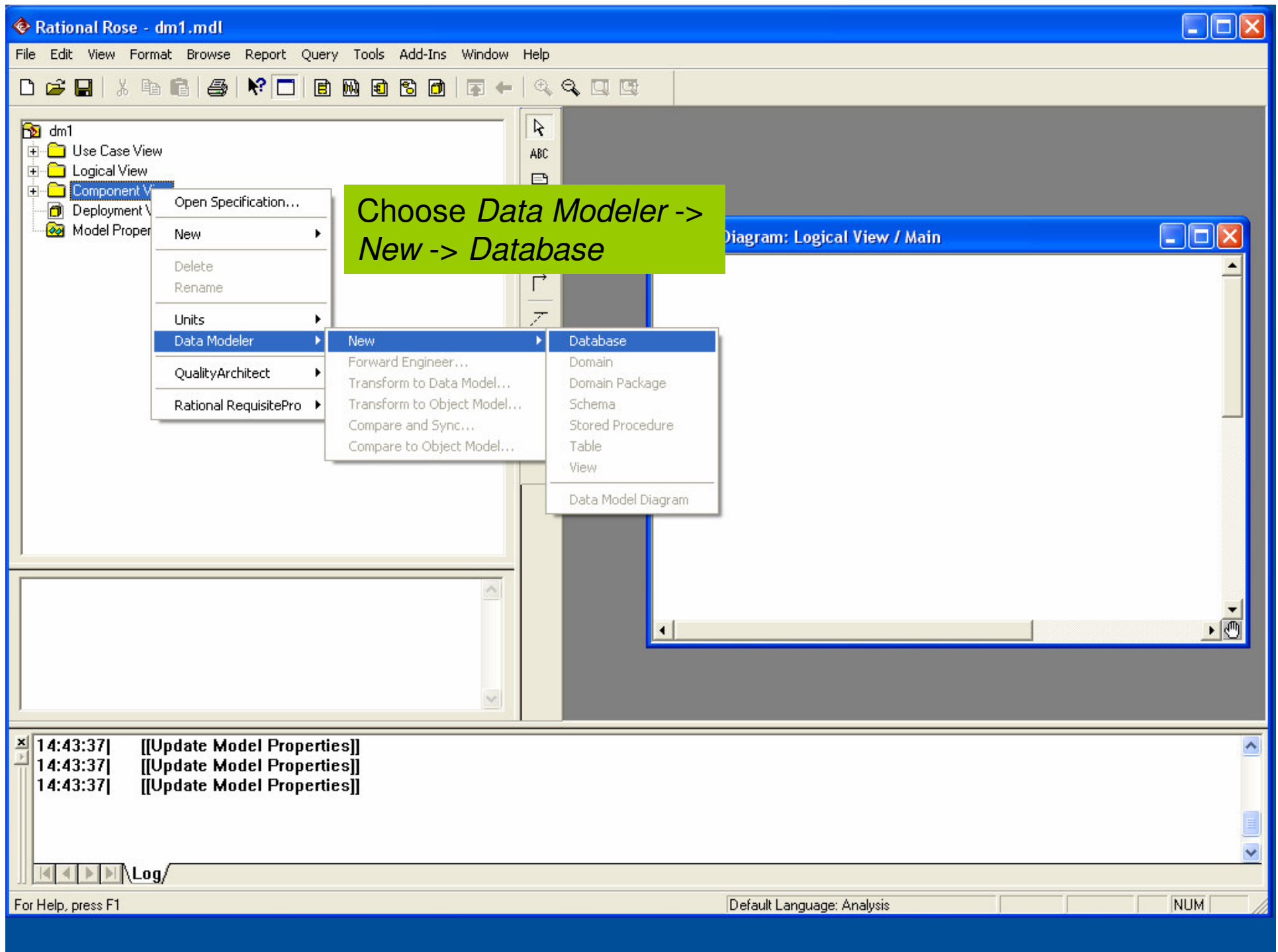
NUM

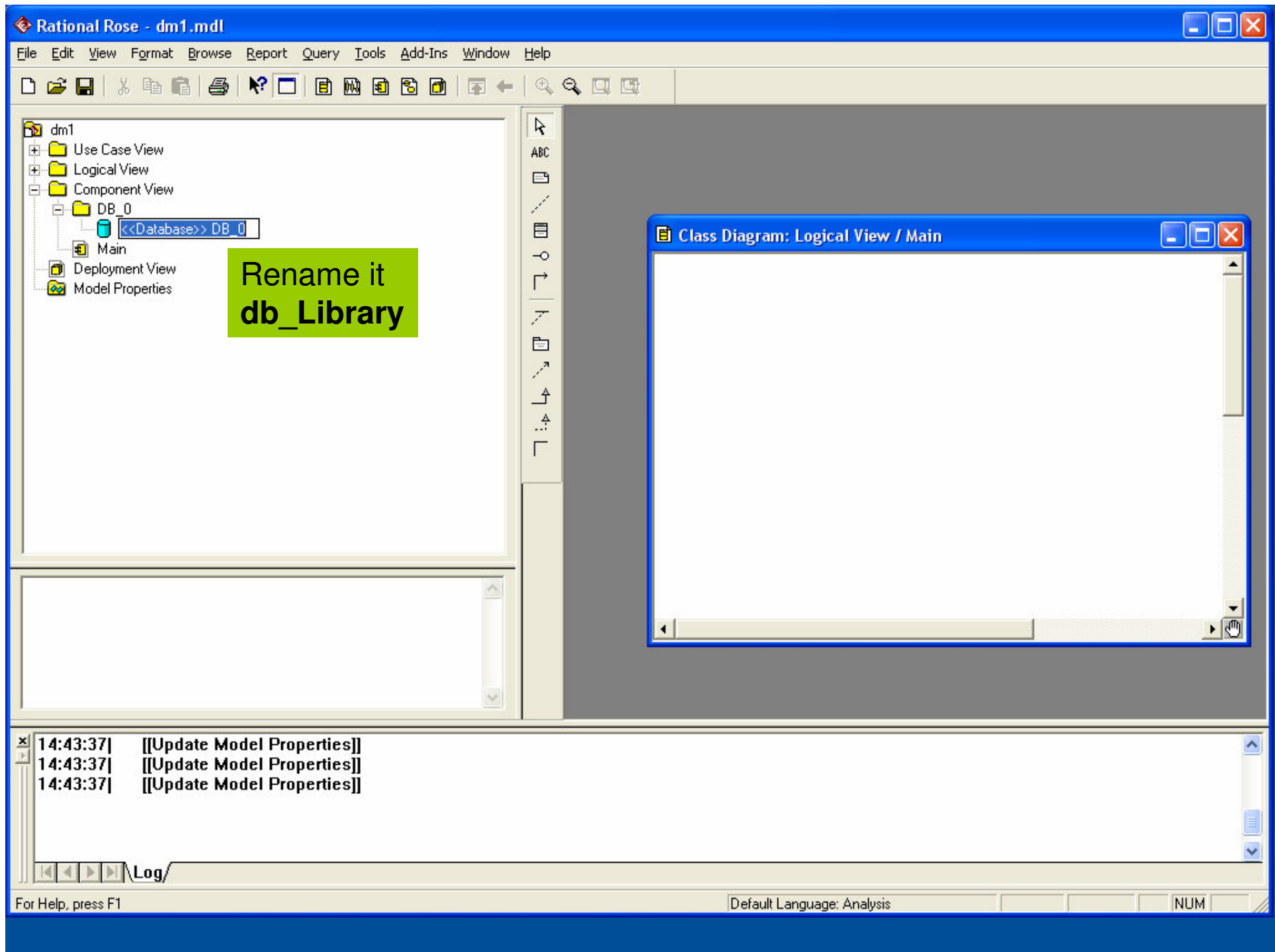




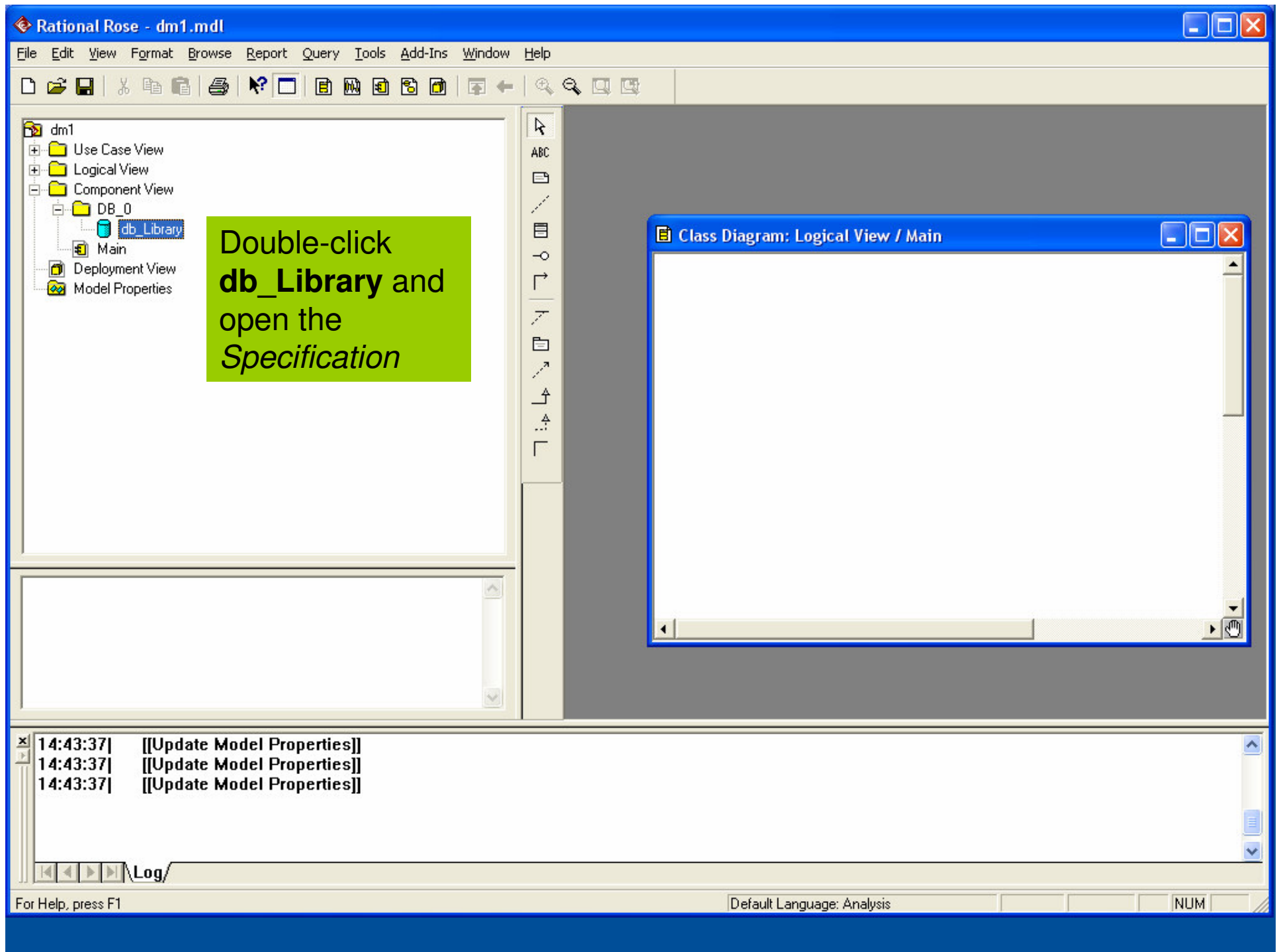
# Data Modeler Examples













Database Specification for db\_Library

General

Name: db\_Library

SQL Name:

Target: ANSI SQL 92

Comment:

OK Cancel Apply Help

Click the drop-down box

Database Specification for db\_Library

General

Name: db\_Library

SQL Name:

Target: ANSI SQL 92

Comment:

- ANSI SQL 92
- IBM DB2 5.x
- IBM DB2 6.x
- IBM DB2 7.x
- IBM DB2 OS390 5.x
- IBM DB2 OS390 6.x & 7.x
- Microsoft SQL Server 6.x
- Microsoft SQL Server 7.x

OK Cancel Apply Help

Select IBM DB2 7.x

Database Specification for db\_Library

General

Name: db\_Library

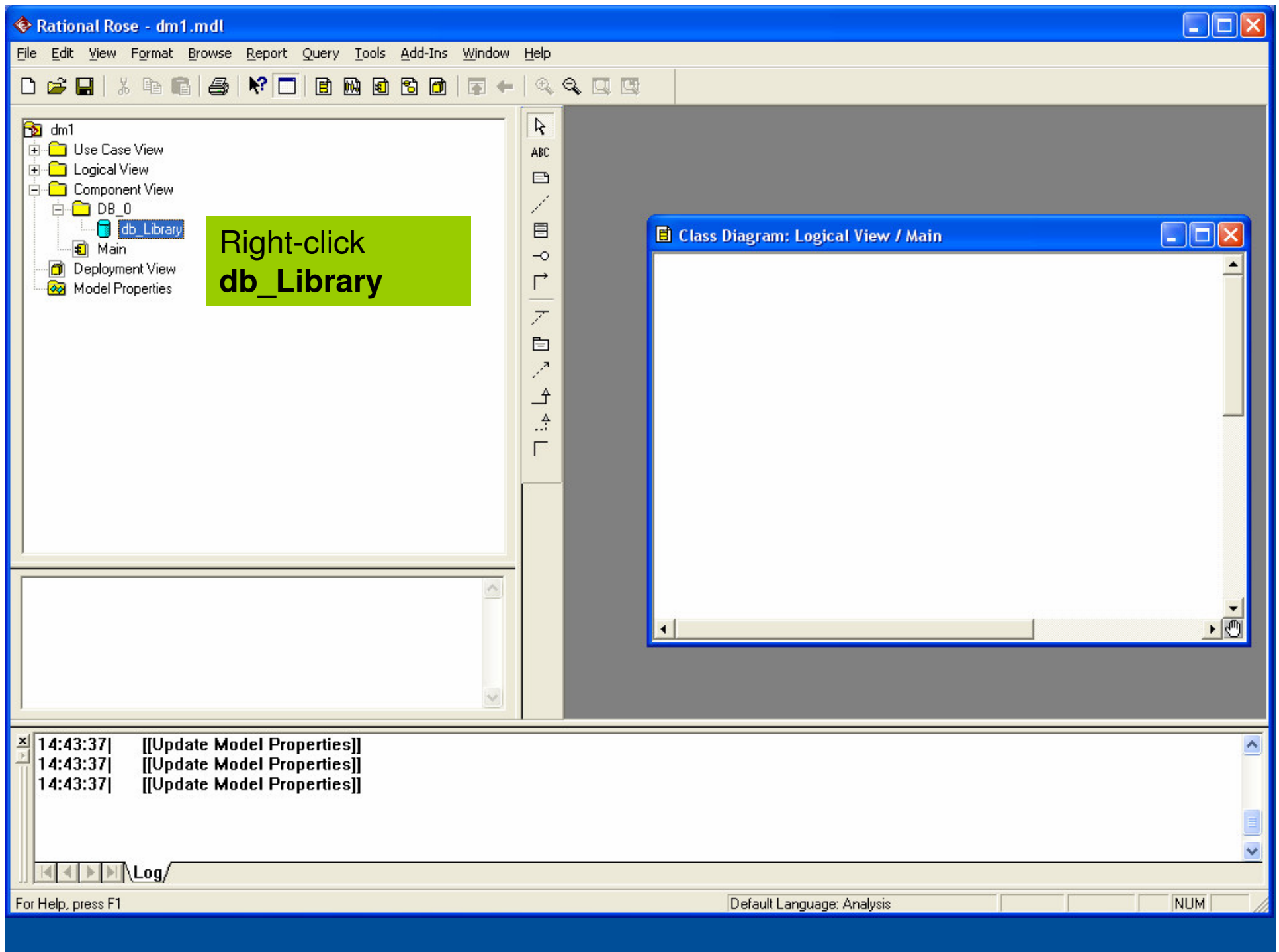
SQL Name:

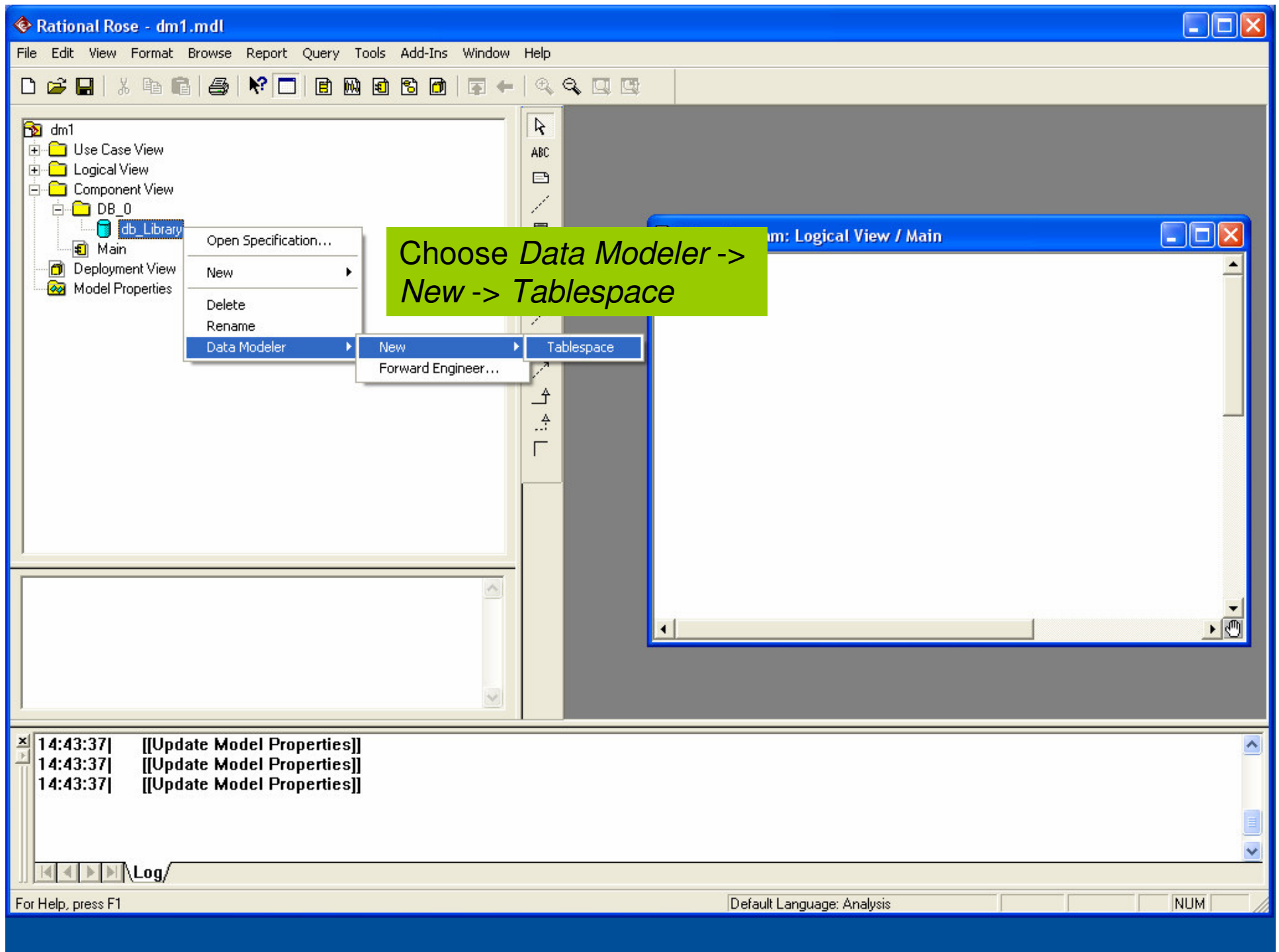
Target: IBM DB2 7.x

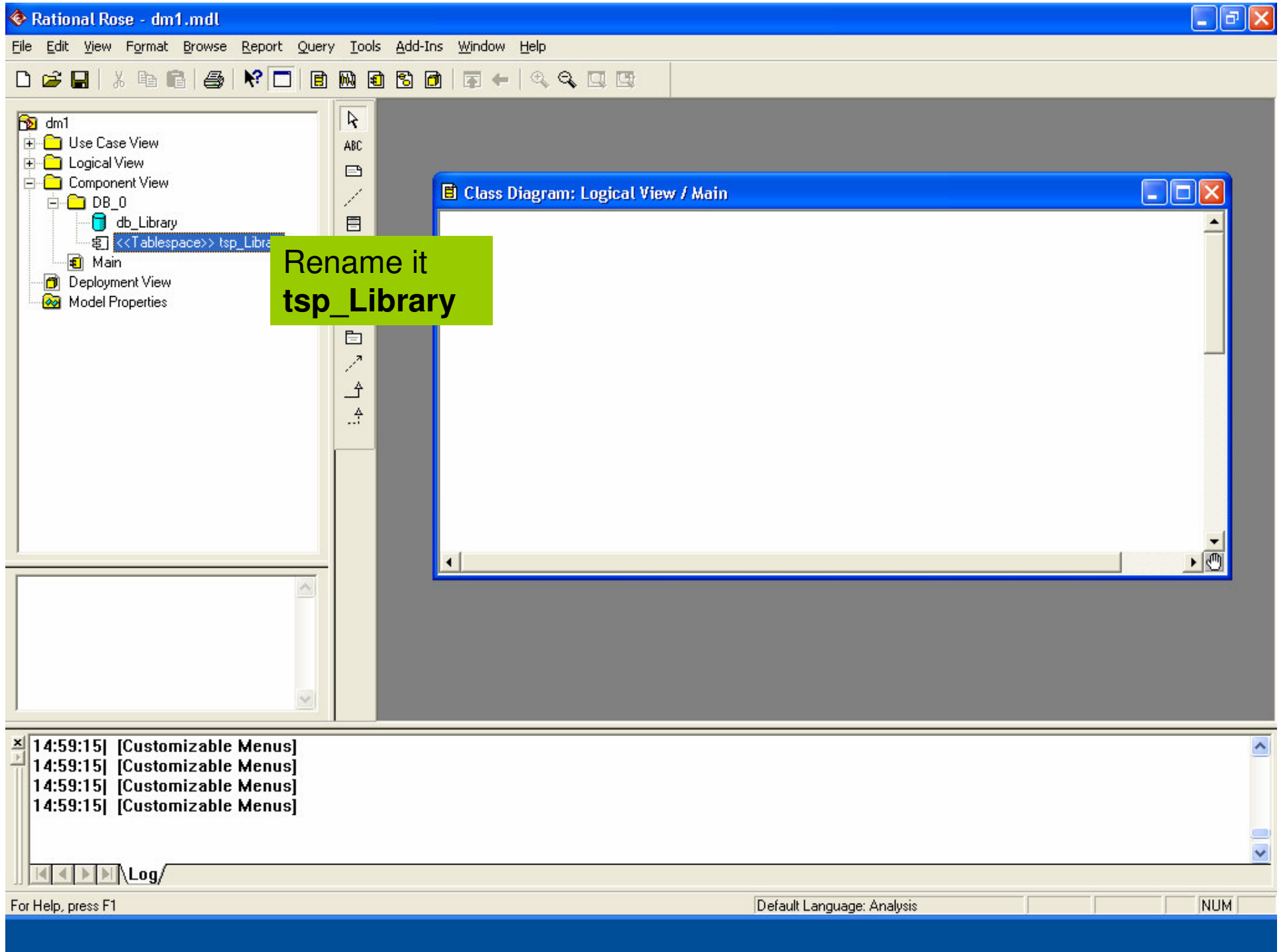
Comment:

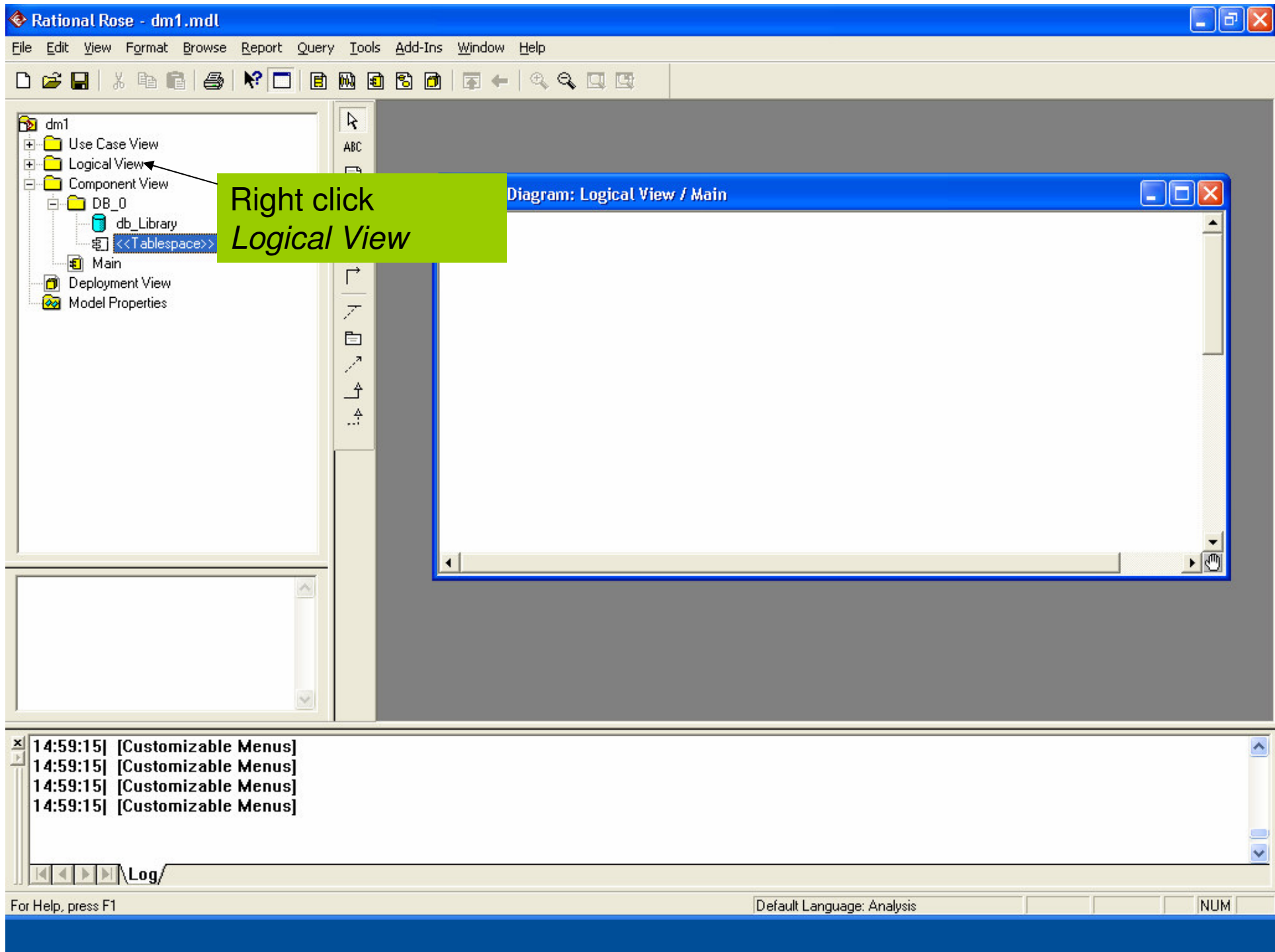
OK

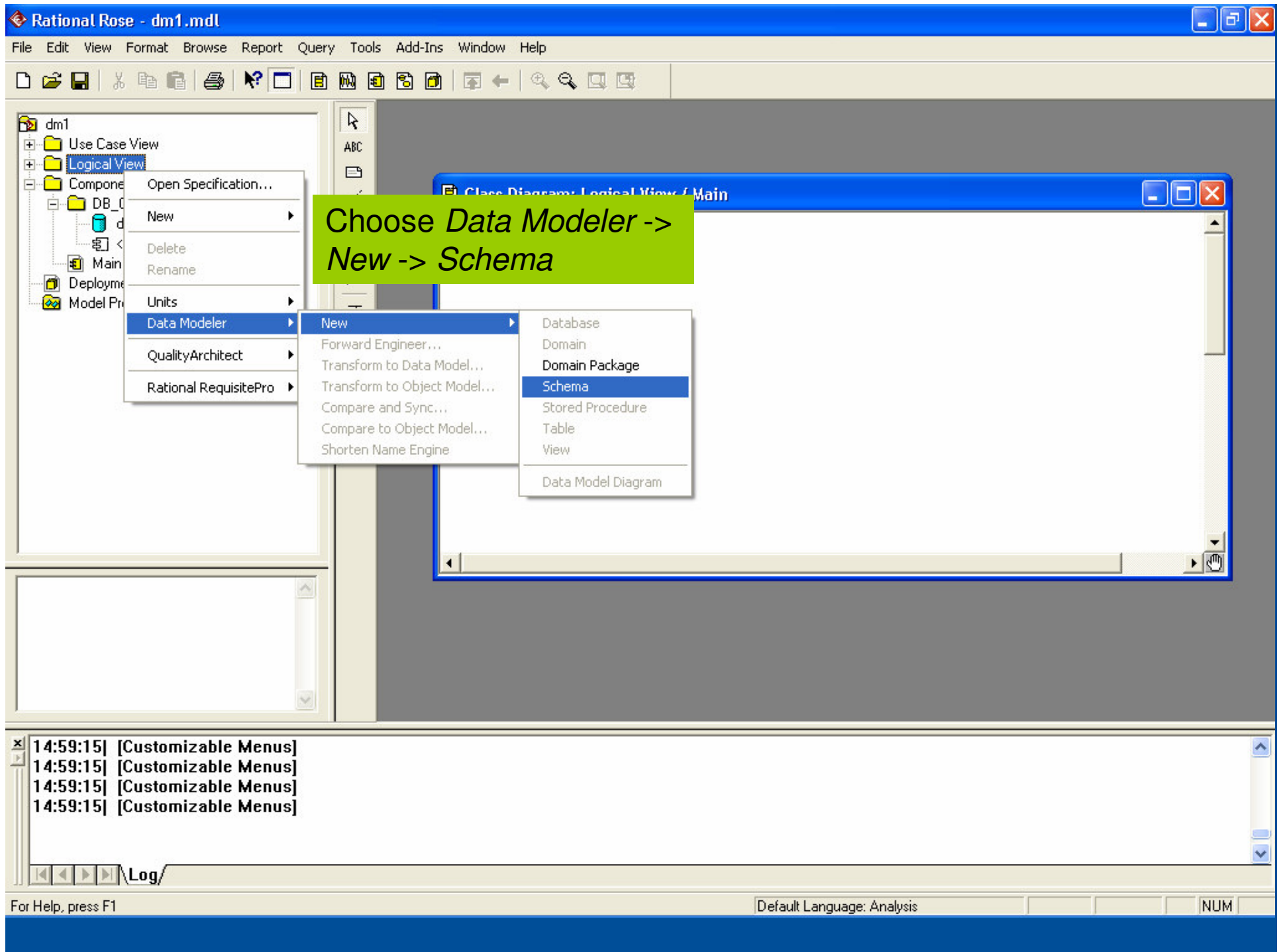
Then click *OK*



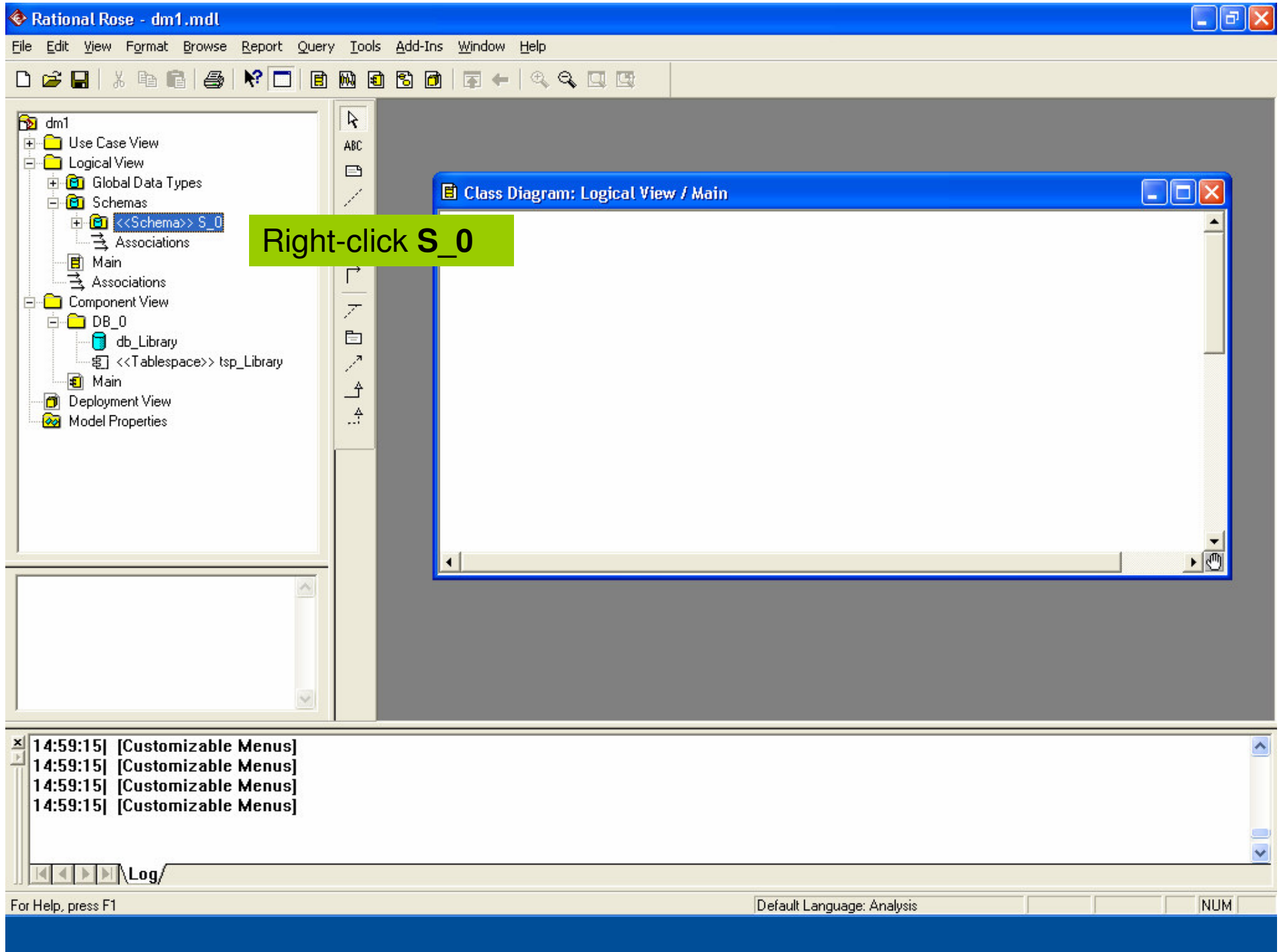


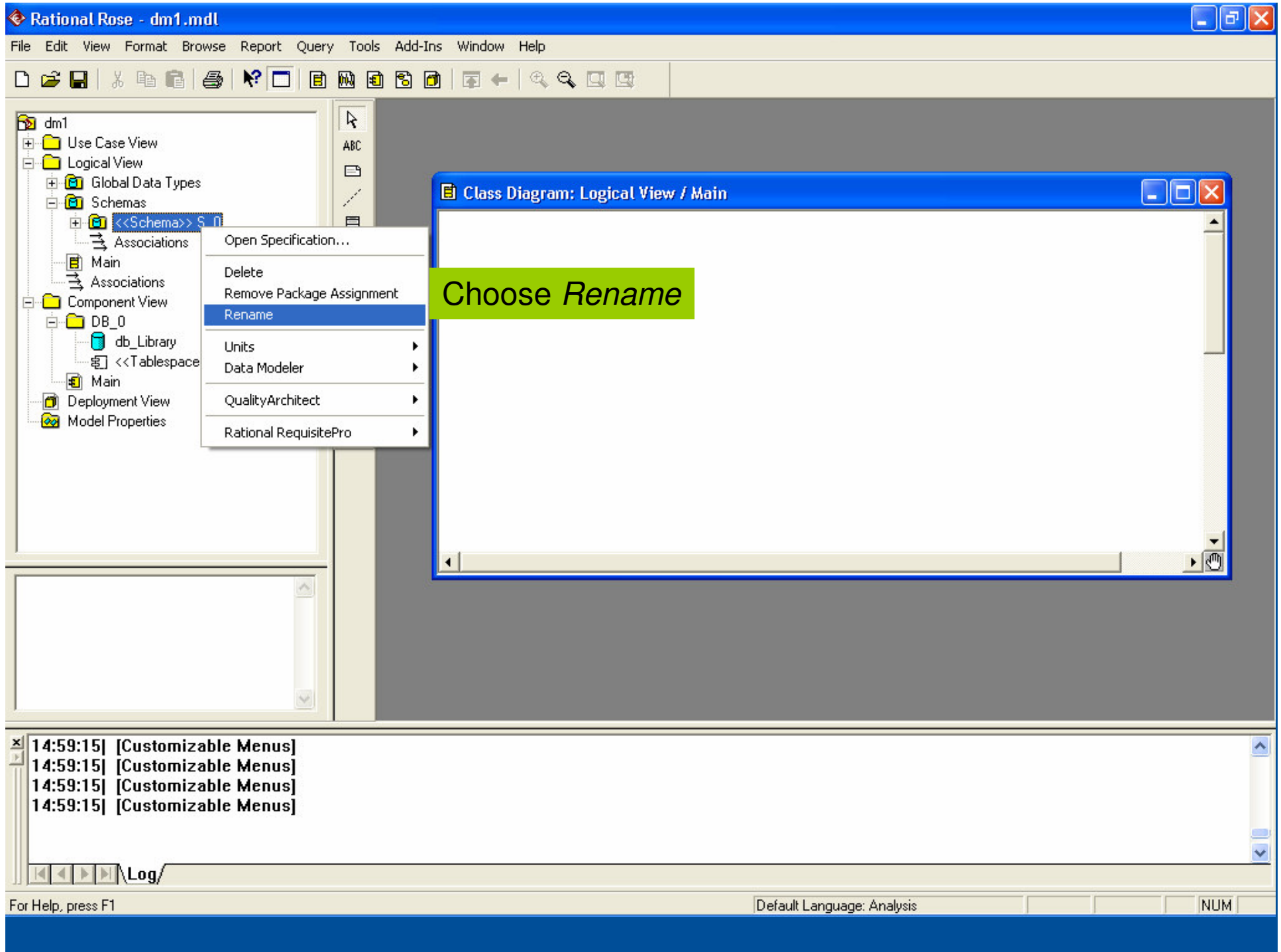


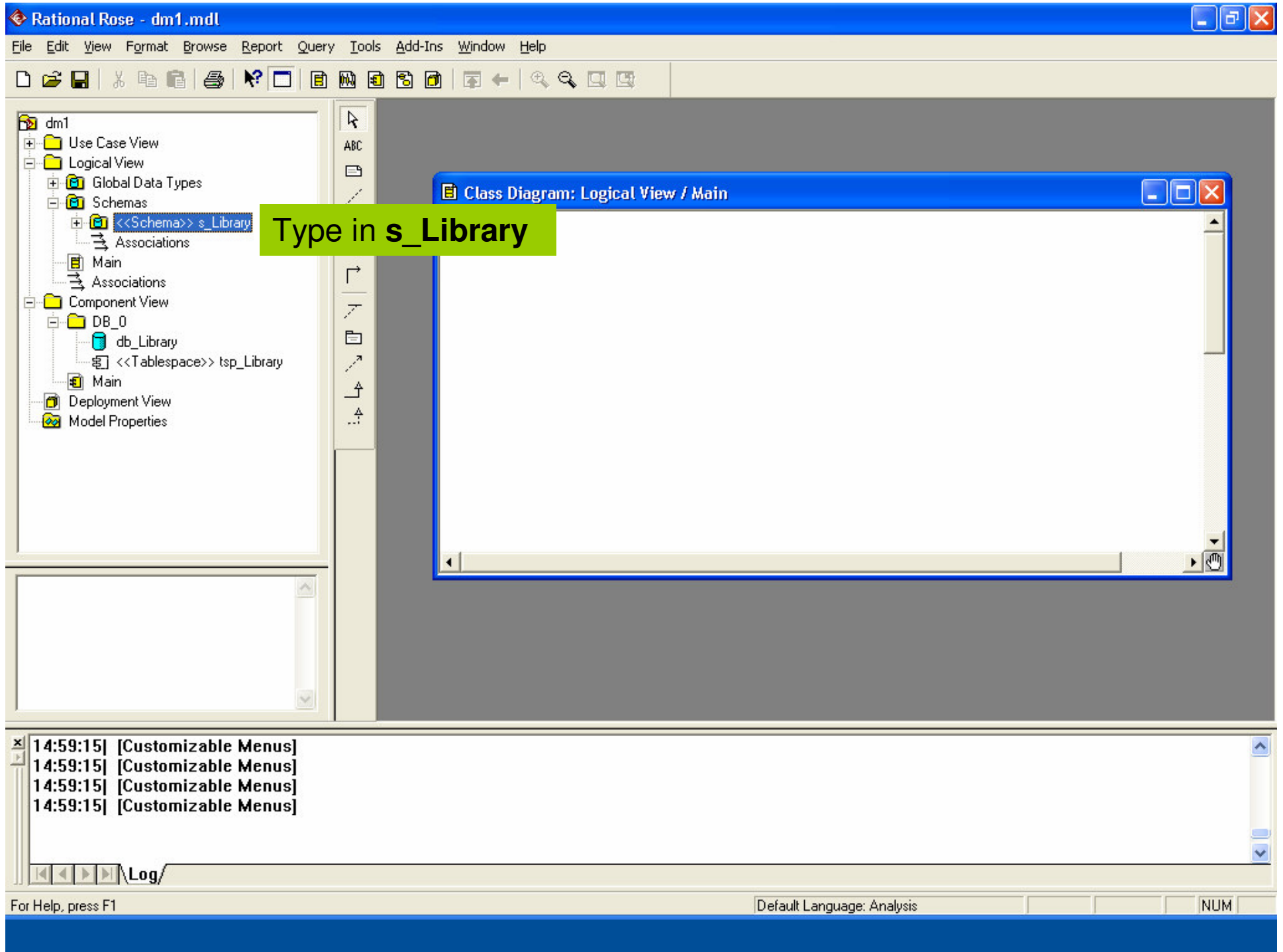


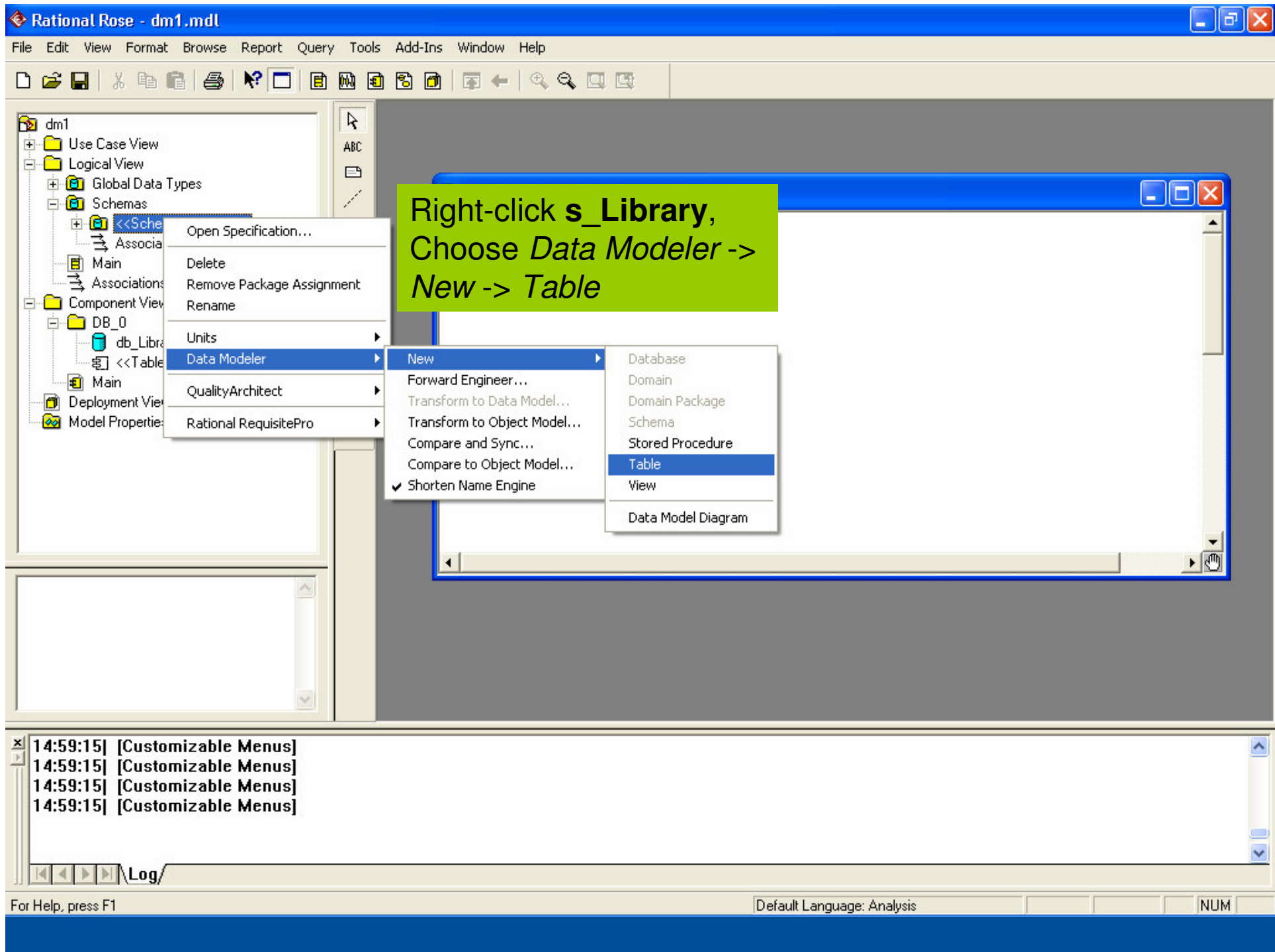


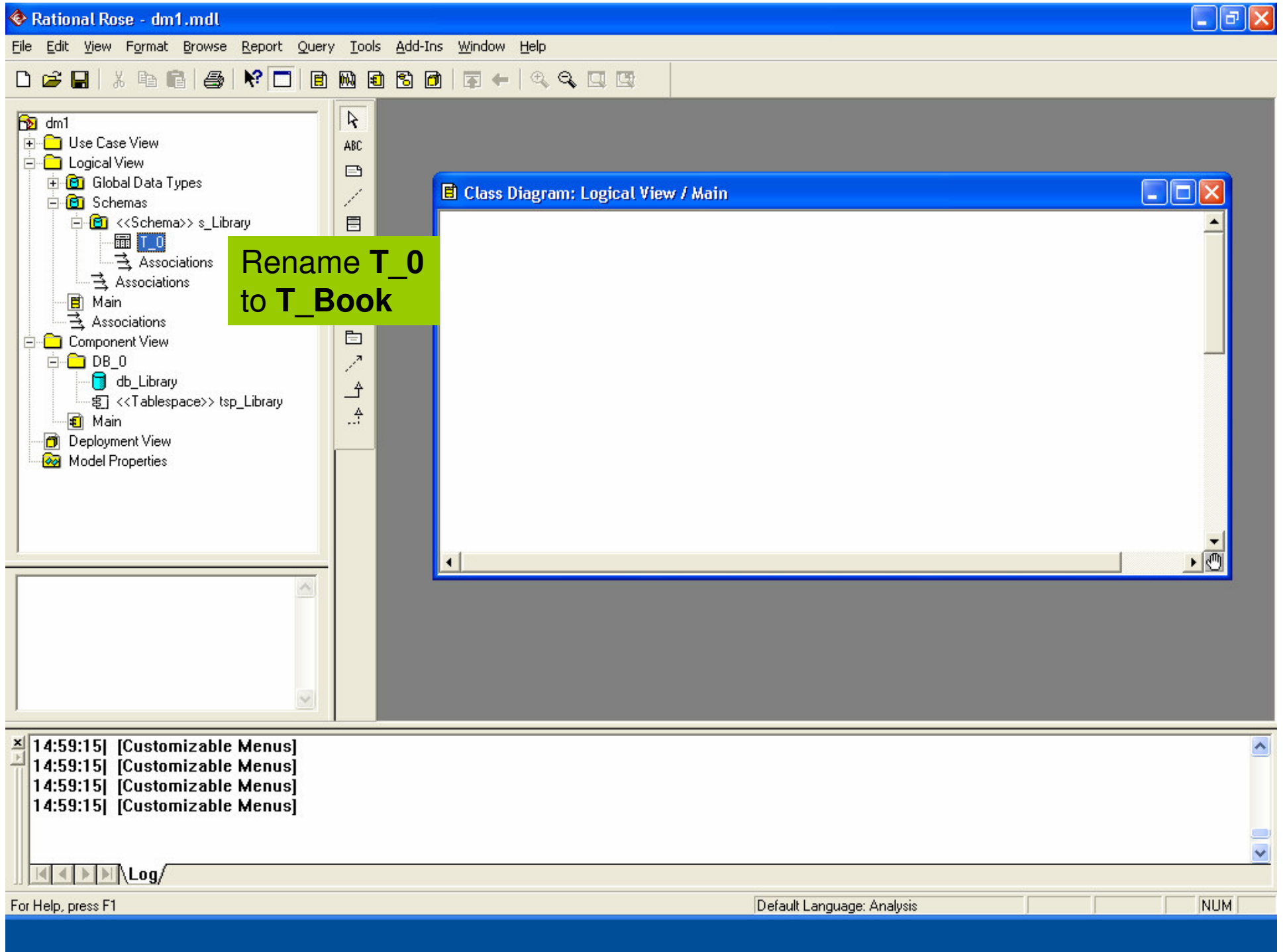












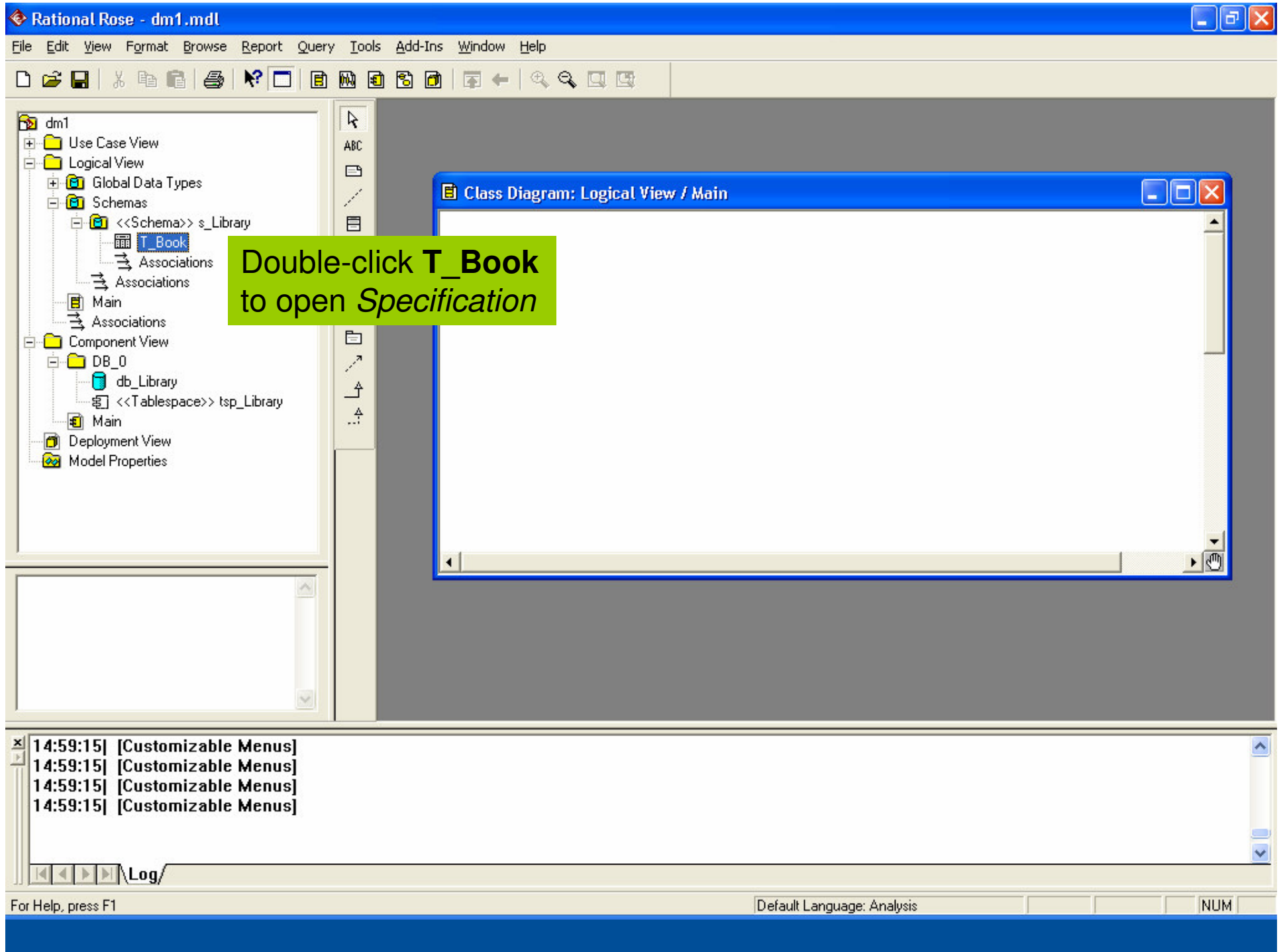


Table Specification for T\_Book

General Columns Indexes Key Constraints Check Constraints Triggers Relationships

Name: T\_Book Schema: s\_Library

Comment:

OK Cancel Apply Help

Select the *Columns* tab

Table Specification for T\_Book

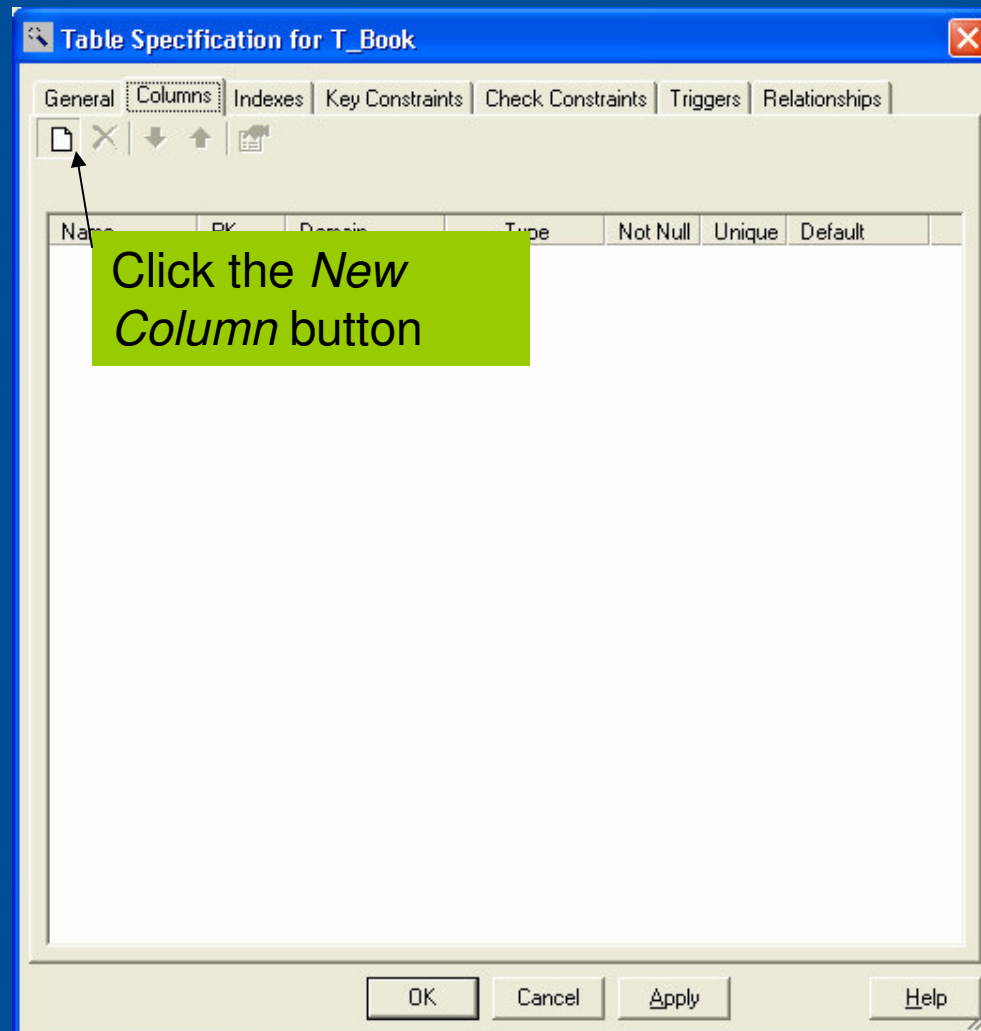
General Columns Indexes Key Constraints Check Constraints Triggers Relationships

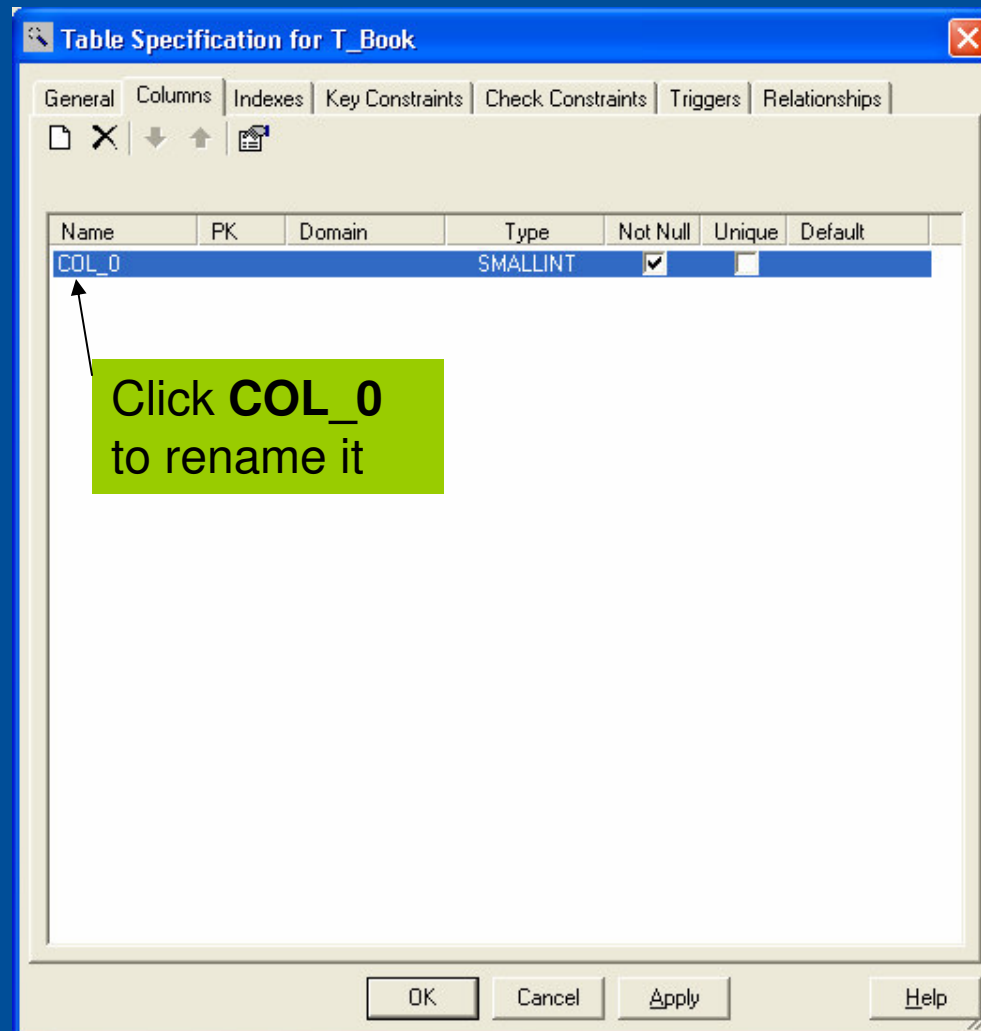
File Undo Redo Print

Name	PK	Domain	Type	Not Null	Unique	Default
------	----	--------	------	----------	--------	---------

OK Cancel Apply Help







**Table Specification for T\_Book**

General Columns Indexes Key Constraints Check Constraints Triggers Relationships

✗ ⬇ ⬆

Name	PK	Domain	Type	Not Null	Unique	Default
COL_0			SMALLINT	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

**Enter Title**

OK Cancel Apply Help

Table Specification for T\_Book

General Columns Indexes Key Constraints Check Constraints Triggers Relationships

File Edit View Options

Name	PK	Domain	Type	Not Null	Unique	Default
Title			SMALLINT	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

Click **SMALLINT** to change the type

OK Cancel Apply Help

Table Specification for T\_Book

General Columns Indexes Key Constraints Check Constraints Triggers Relationships

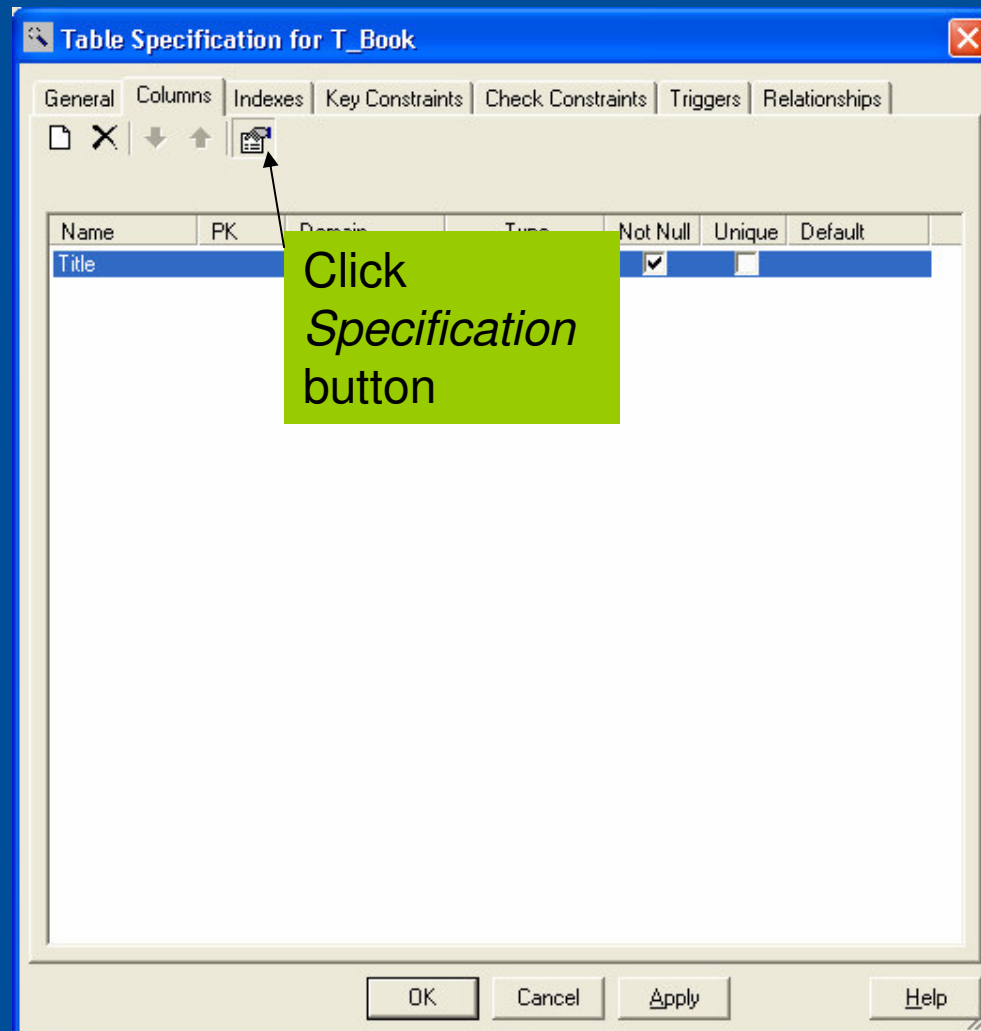
↓ ↑

Name	PK	Domain	Type	Not Null	Unique	Default
Title			VARCHAR	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

INTERVAL  
REAL  
SMALLINT  
TIME  
TIME WITH  
TIMESTAMP  
TIMESTAMP  
VARCHAR

Select VARCHAR

OK Cancel Apply Help



Column Specification for Title

General Type Check Constraints

Name: Title Table: T\_Book

SQL Name:

Mapped From:

Comment:

Click *Type* tab

OK Cancel Apply Help

Column Specification for Title

General Type Check Constraints

☒ Data Column

Domain:

Datatype: VARCHAR

Length: 1

☐ Unique Constraint

☐ Primary Key

☒ Not Null

Default Value:

☐ Computed Column

Expression:

OK Cancel Apply Help

Change the  
length to 80



Column Specification for Title

General Type Check Constraints

☒ Data Column

Domain:

Datatype: VARCHAR

Length: 80

☐ Unique Constraint ☐ For Bit Data

☐ Primary Key ☐ Identity

☒ Not Null

Default Value:

☐ Computed Column

Expression:

OK Cancel Apply Help

Click *OK*

**Column Specification for Title**

**General** | **Type** | **Check Constraints**

☒ **Data Column**

Domain:

Datatype: VARCHAR

Length: 80

☐ Unique Constraint

☐ Primary Key

☒ Not Null

Default Value:

☐ For Bit Data

☐ Identity

☐ **Computed Column**

Expression:

Table Specification for T\_Book

General Columns Indexes Key Constraints Check Constraints Triggers Relationships

↓ ↑

Name	PK	Domain	Type	Not Null	Unique	Default
Title			VARCHAR	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Author			VARCHAR	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
ISBN			VARCHAR	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Publisher			VARCHAR	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Status			VARCHAR	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

Add the remaining column as shown in the screen, with these be the length of the columns:  
**Author: VARCHAR(50)**  
**ISBN: VARCHAR(10)**  
**Publisher: VARCHAR(30)**  
**Status: VARCHAR(20)**

OK Cancel Apply Help

Table Specification for T\_Book

General Columns Indexes Key Constraints Check Constraints Triggers Relationships

Table Specification for T\_Book

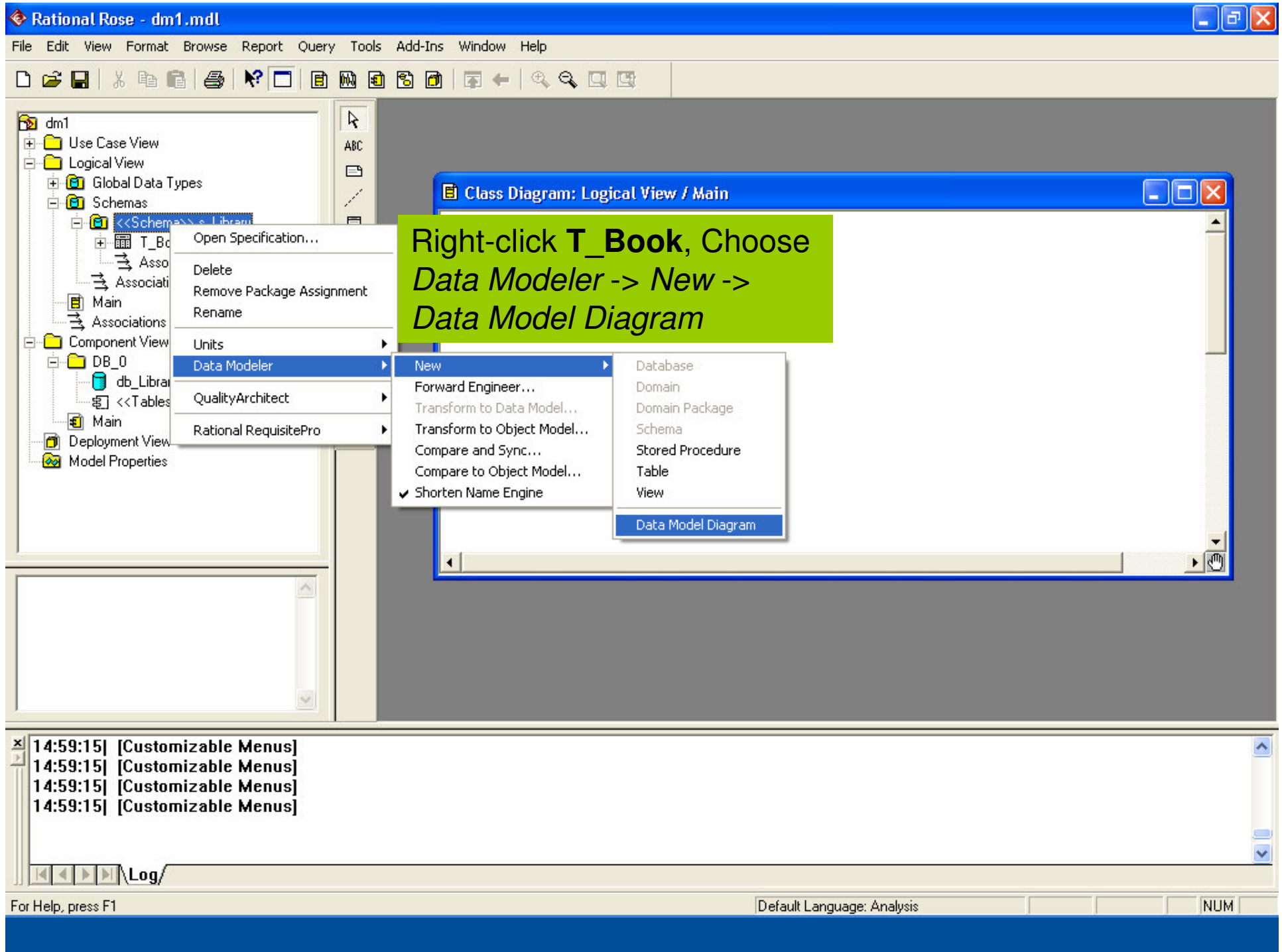
Name	PK	Domain	Type	Not Null	Unique	Default
Title			VARCHAR	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Author			VARCHAR	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
ISBN	PK		VARCHAR	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Publisher			VARCHAR	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Status			VARCHAR	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

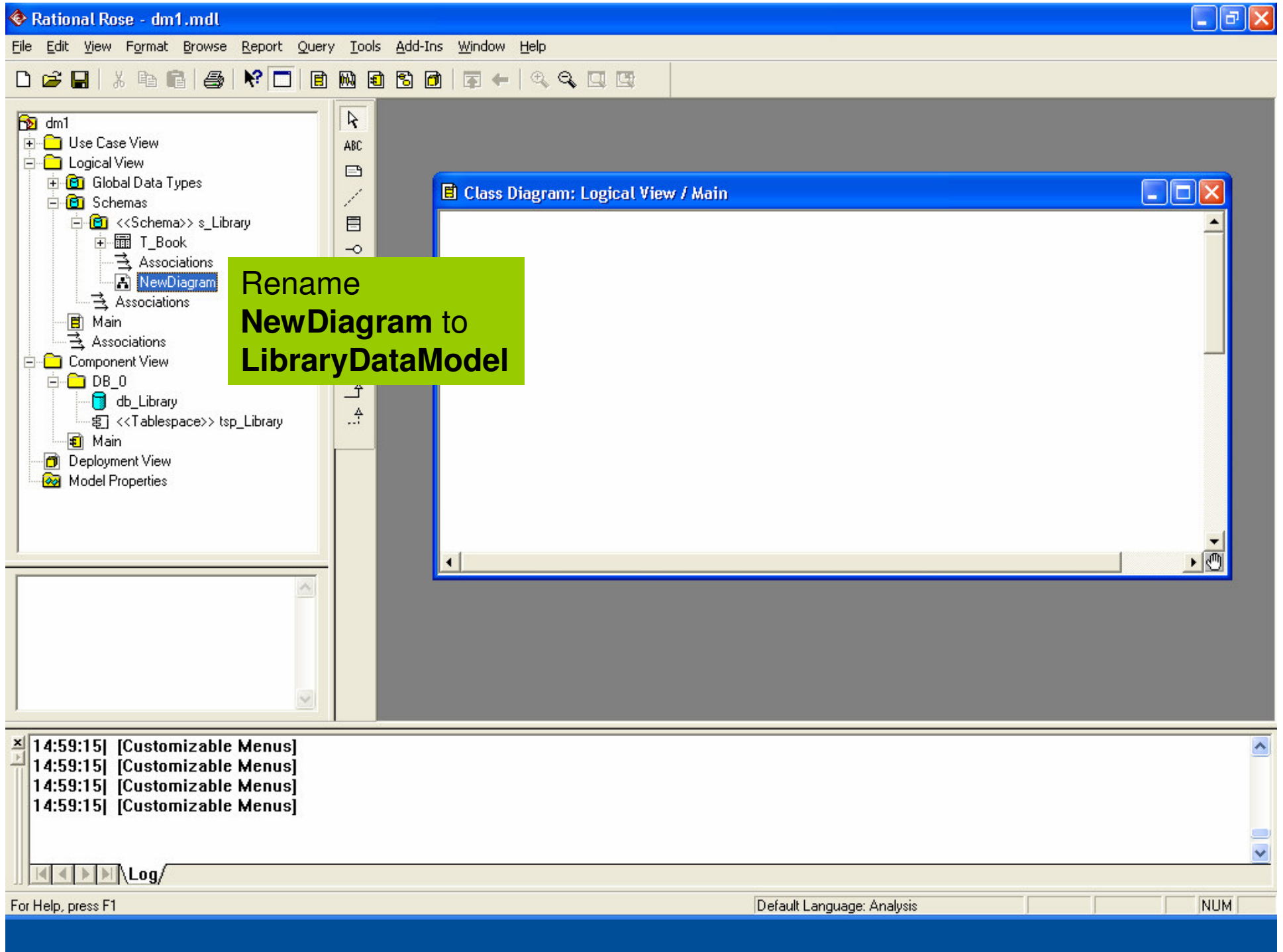
OK Cancel Apply Help

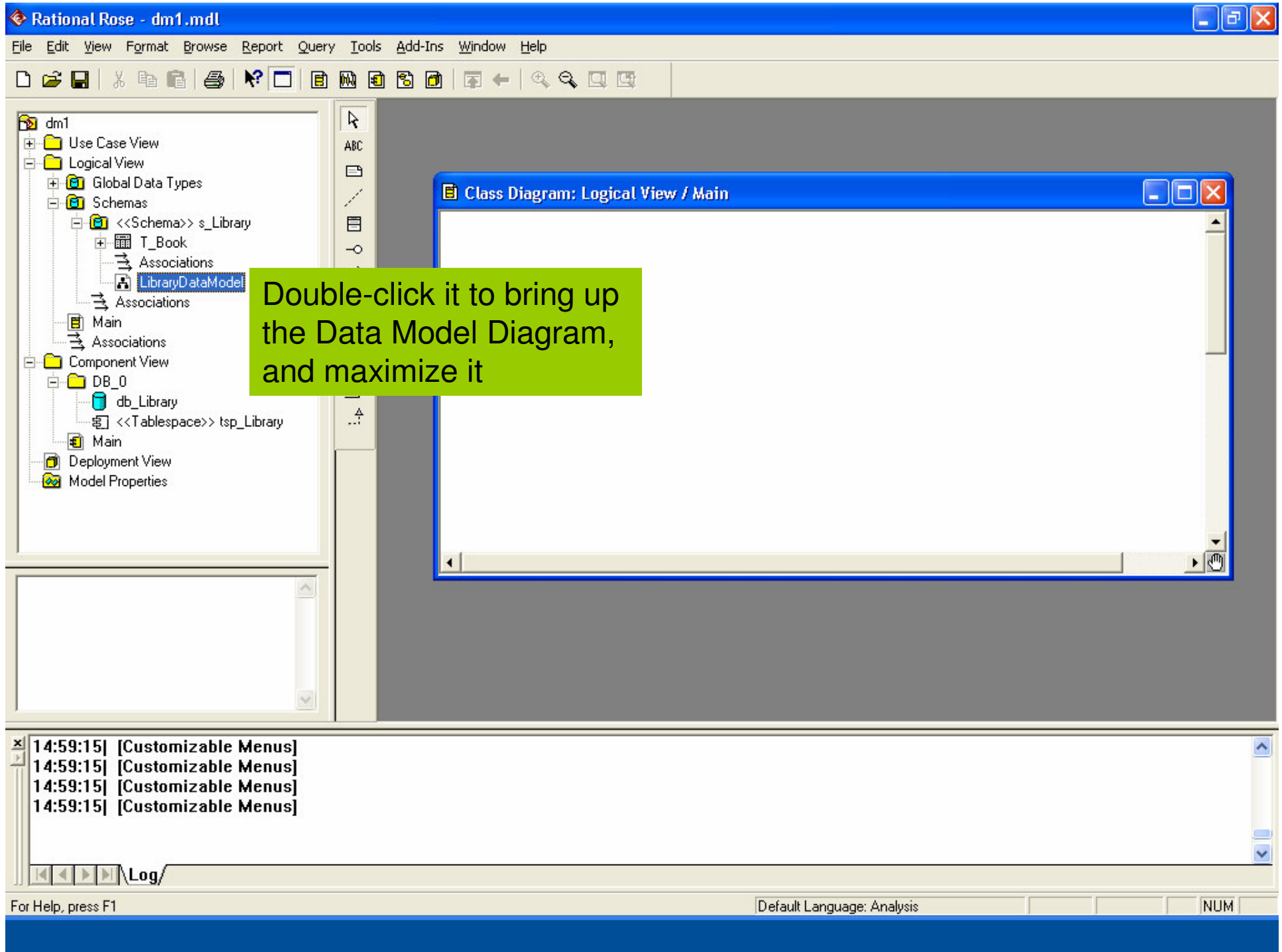
Click here and select **PK** (Primary Key) in the dropdown for the **ISBN** column

Check the *Unique* box

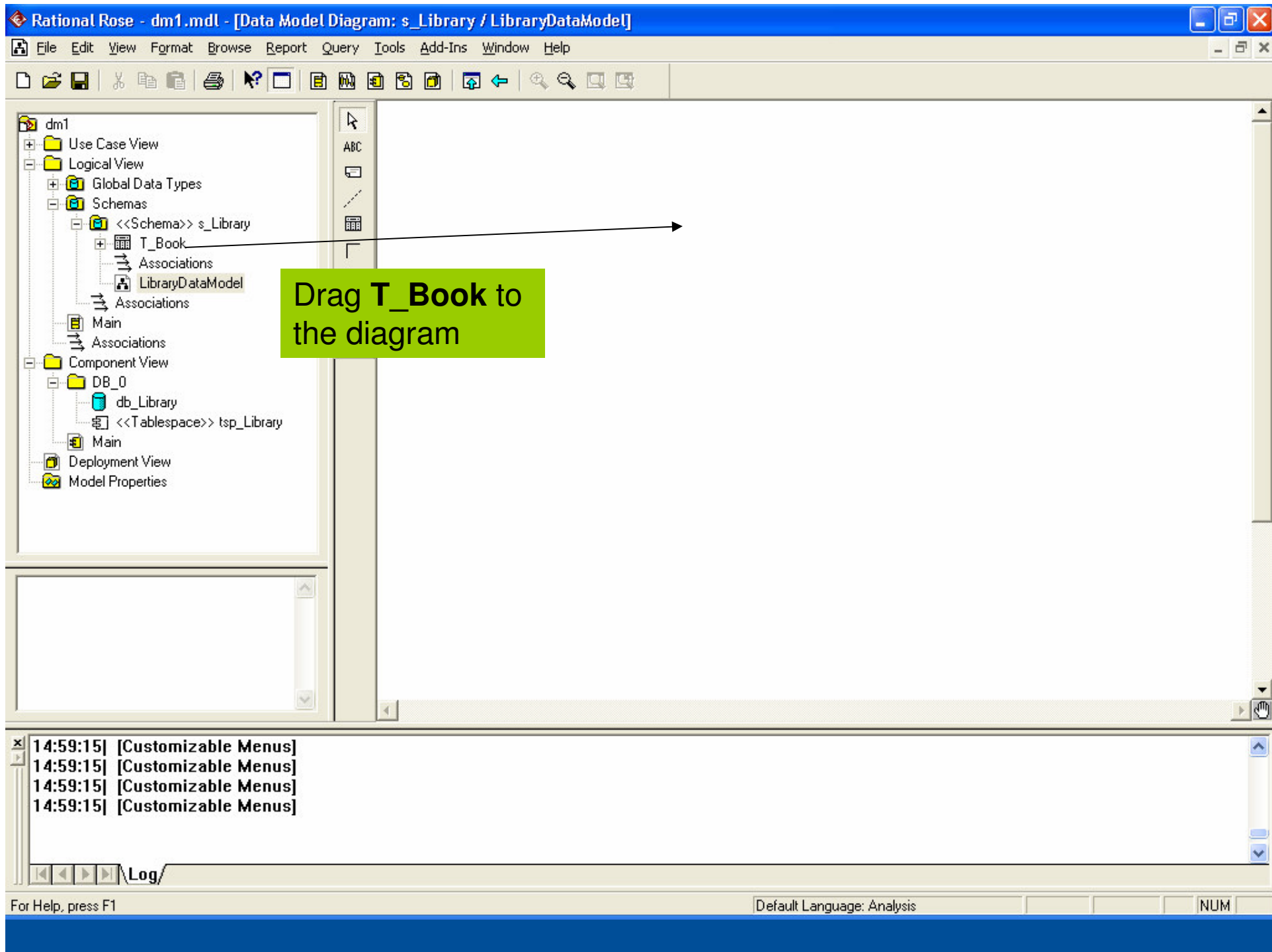
Then click **OK**

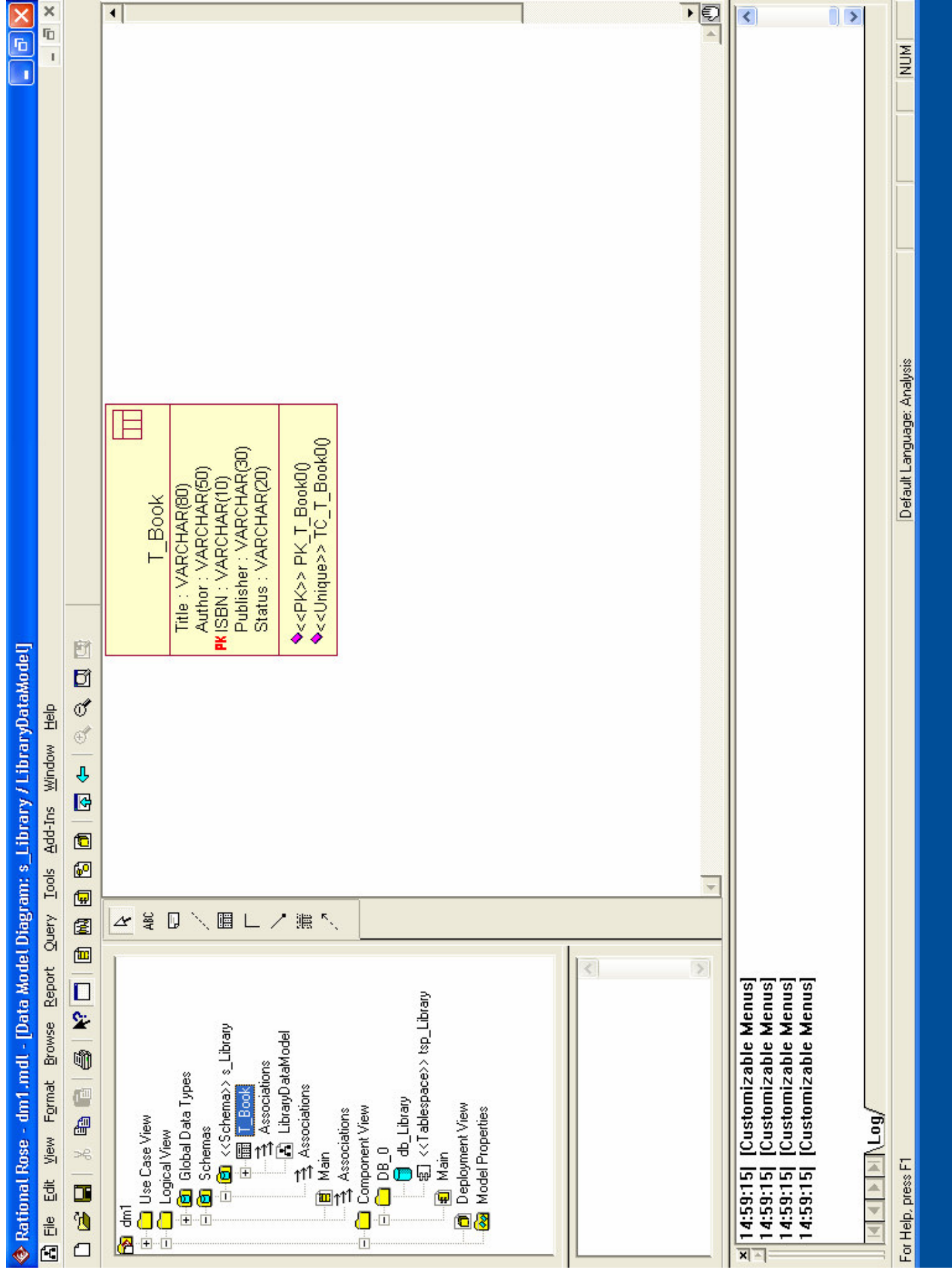












Rational Rose - dm1.mdl - [Data Model Diagram: s\_Library / LibraryDataModel]

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

dm1

- Use Case View
- Logical View
  - Global Data Types
  - Schemas
    - <<Schema>> s\_Library
      - T\_Book
      - Associations
      - LibraryDataModel
      - T\_Patron
      - Associations
    - Main
    - Associations

**T\_Book**

Title : VARCHAR(80)  
Author : VARCHAR(50)  
**PK** ISBN : VARCHAR(10)  
Publisher : VARCHAR(30)  
Status : VARCHAR(20)

<<PK>> PK\_T\_Book0()  
<<Unique>> TC\_T\_Book0()

**T\_Patron**

Name : VARCHAR(50)  
Gender : VARCHAR(1)  
Address : VARCHAR(100)  
**PK** LibraryCardNumber : VARCHAR(10)

<<PK>> PK\_T\_Patron1()  
<<Unique>> TC\_T\_Patron1()

Follow the steps of creating T\_Book to create another table T\_Patron

**Name: VARCHAR(50)**  
**Gender: VARCHAR(1)**  
**Address: VARCHAR(100)**  
**LibraryCardNumber: VARCHAR(10)**  
**PK, Unique**

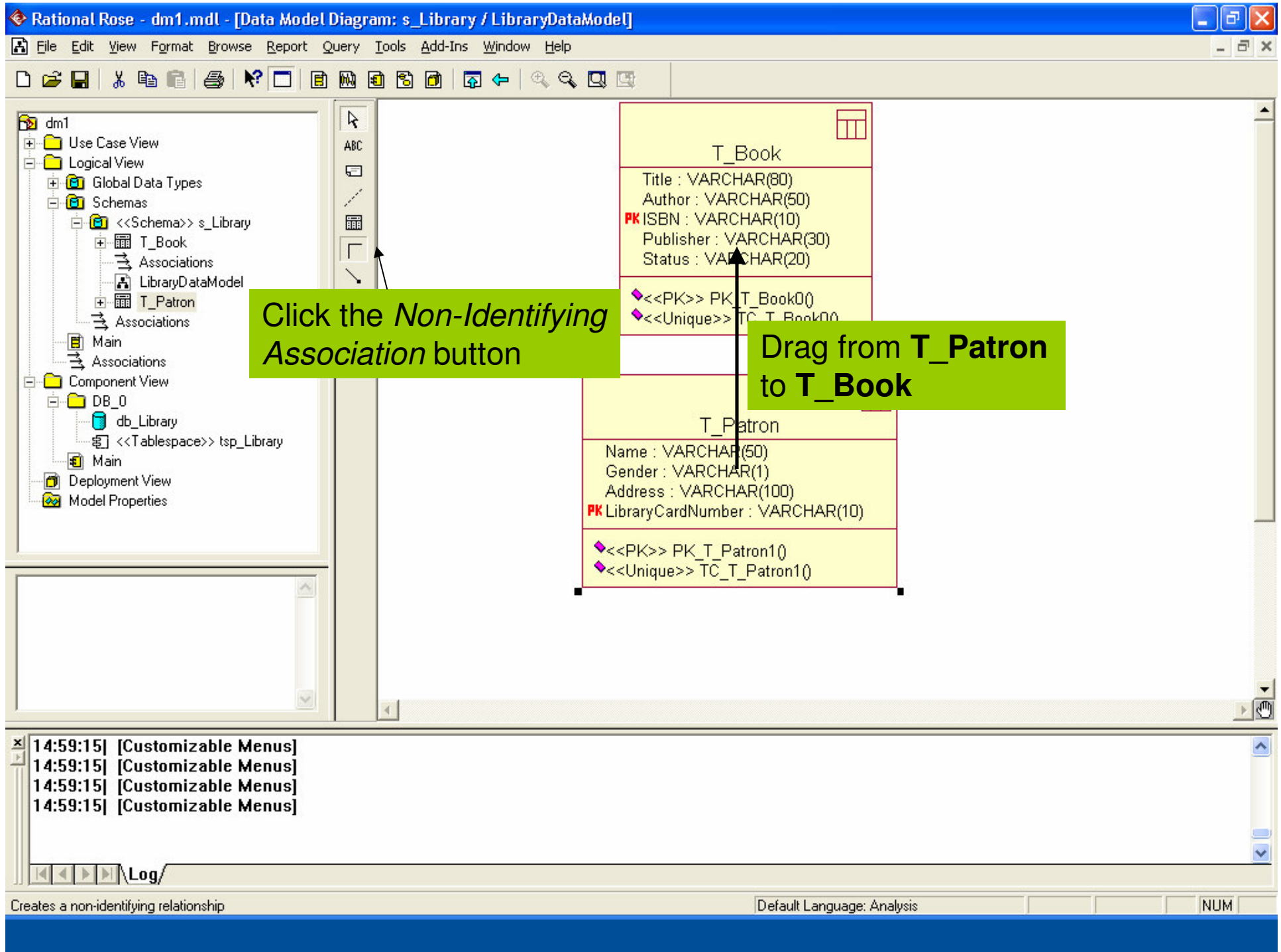
14:59:15| [Customizable Menus]  
14:59:15| [Customizable Menus]  
14:59:15| [Customizable Menus]  
14:59:15| [Customizable Menus]

Log/

For Help, press F1

Default Language: Analysis

NUM



Rational Rose - dm1.mdl - [Data Model Diagram: s\_Library / LibraryDataModel]

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

Click *Format* Menu

dm1

- Use Case View
- Logical View
  - Global Data Types
  - Schemas
    - <<Schema>> s\_Library
      - T\_Book
      - Associations
      - LibraryDataModel
      - T\_Patron
      - Associations
    - Main
    - Associations
  - Component View
    - DB\_0
      - db\_Library
      - <<Tablespace>> tsp\_Library
    - Main
  - Deployment View
  - Model Properties

T\_Book

Title : VARCHAR(80)  
Author : VARCHAR(50)  
**PK** ISBN : VARCHAR(10)  
Publisher : VARCHAR(30)  
Status : VARCHAR(20)  
**FK** LibraryCardNumber : VARCHAR(10)

<<PK>> PK\_T\_Book00  
<<Unique>> TC\_T\_Book00  
<<FK>> FK\_T\_Book30

0..1

T\_Patron

Name : VARCHAR(50)  
Gender : VARCHAR(1)  
Address : VARCHAR(100)  
**PK** LibraryCardNumber : VARCHAR(10)

<<PK>> PK\_T\_Patron10  
<<Unique>> TC\_T\_Patron10

14:59:15| [Customizable Menus]  
14:59:15| [Customizable Menus]  
14:59:15| [Customizable Menus]  
14:59:15| [Customizable Menus]

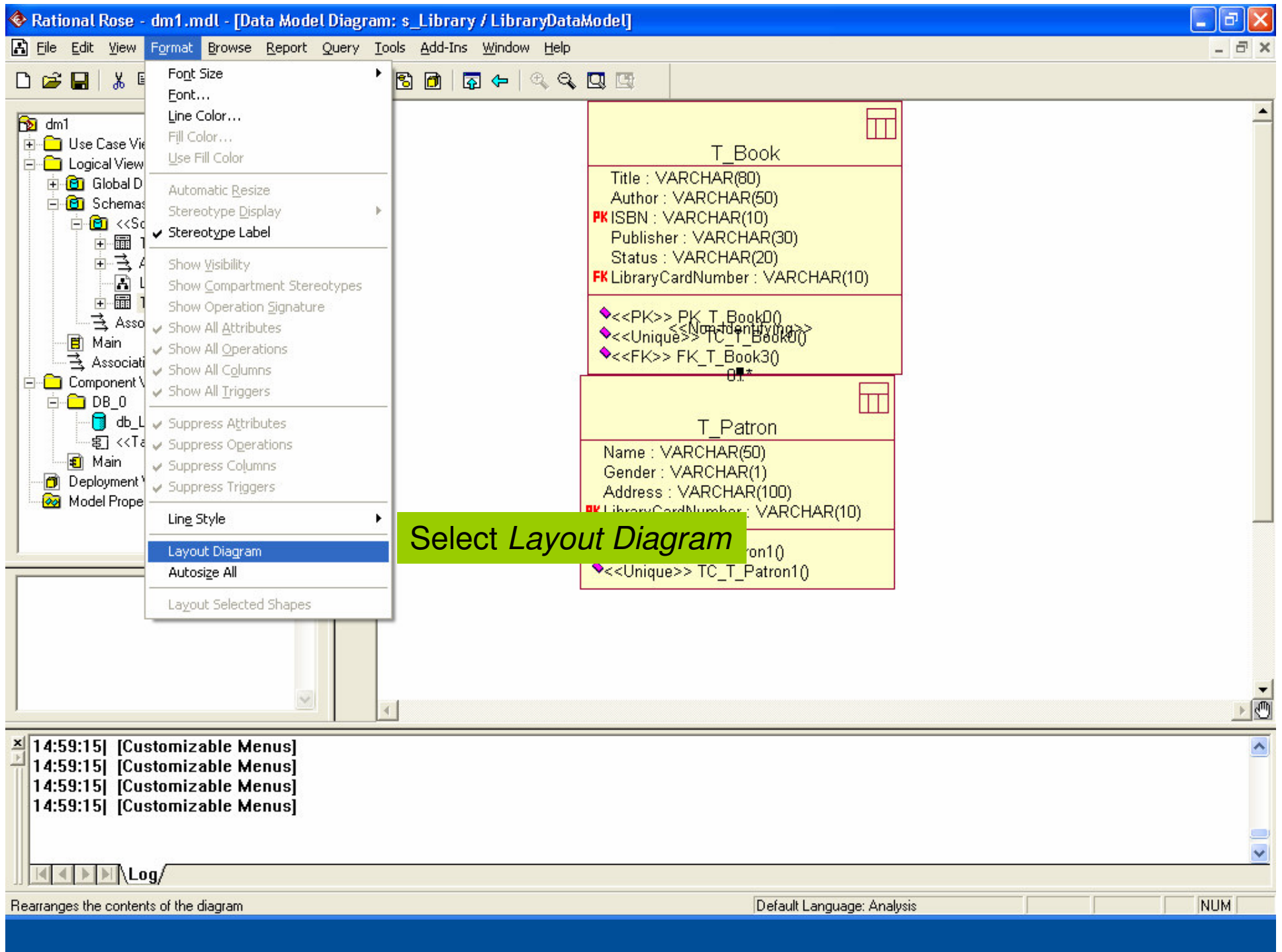
Log/

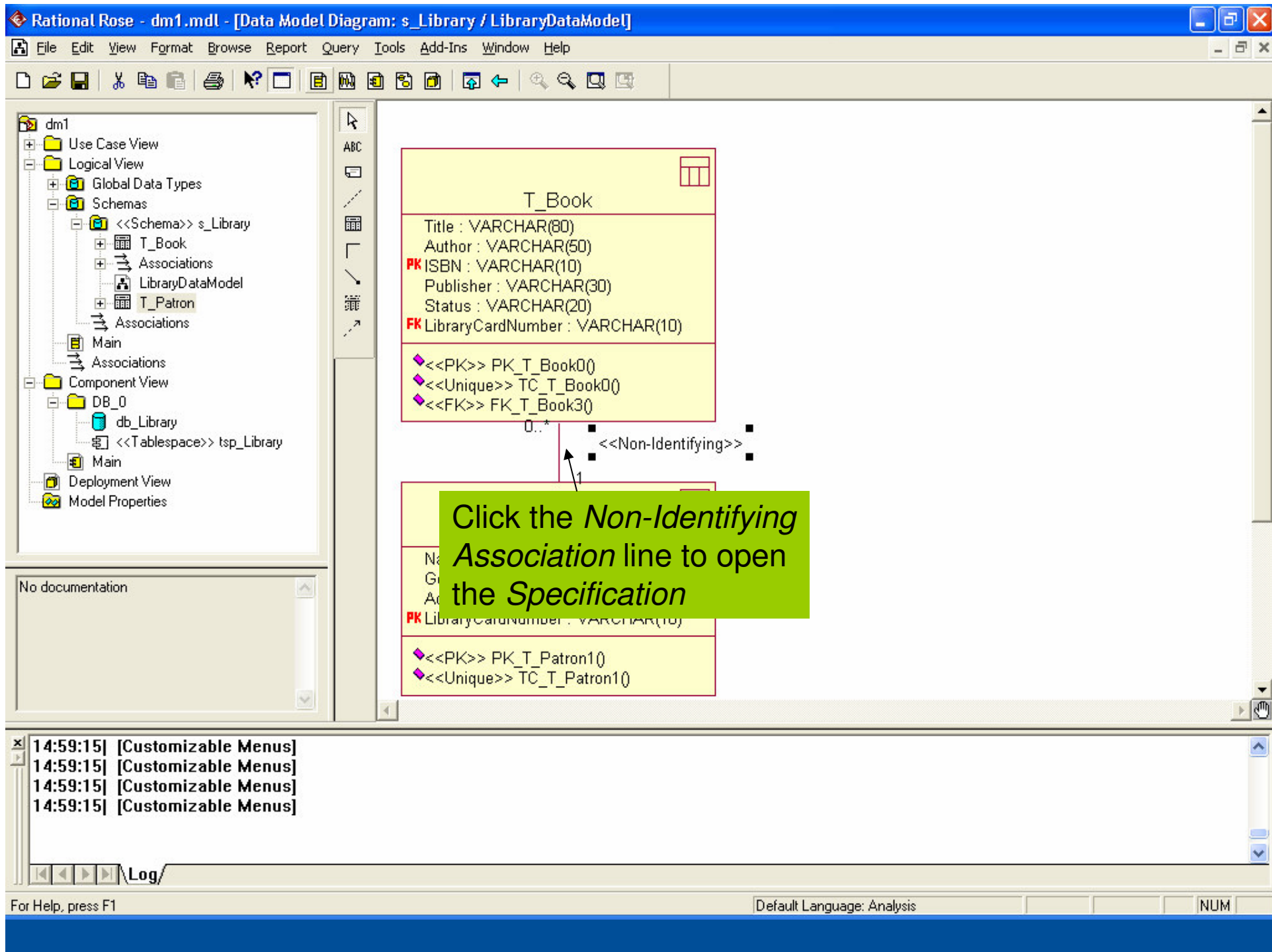
For Help, press F1

Default Language: Analysis

NUM









**Relationship Specification for**

General Migrated Keys RI

Name: Schema: s\_Library

Type: Non-Identifying

Parent

Role:

Cardinality: 1

Child

Role:

Cardinality: 0..n

Comment:

OK Cancel Apply Help

Select **0..1** in the  
*Cardinality* dropdown

**Relationship Specification for**

General | Migrated Keys | RI

Name:  Schema: s\_Library

Type: Non-Identifying

Parent

Role:

Cardinality: 0..1 ( Foreign Key allows Null )

Child

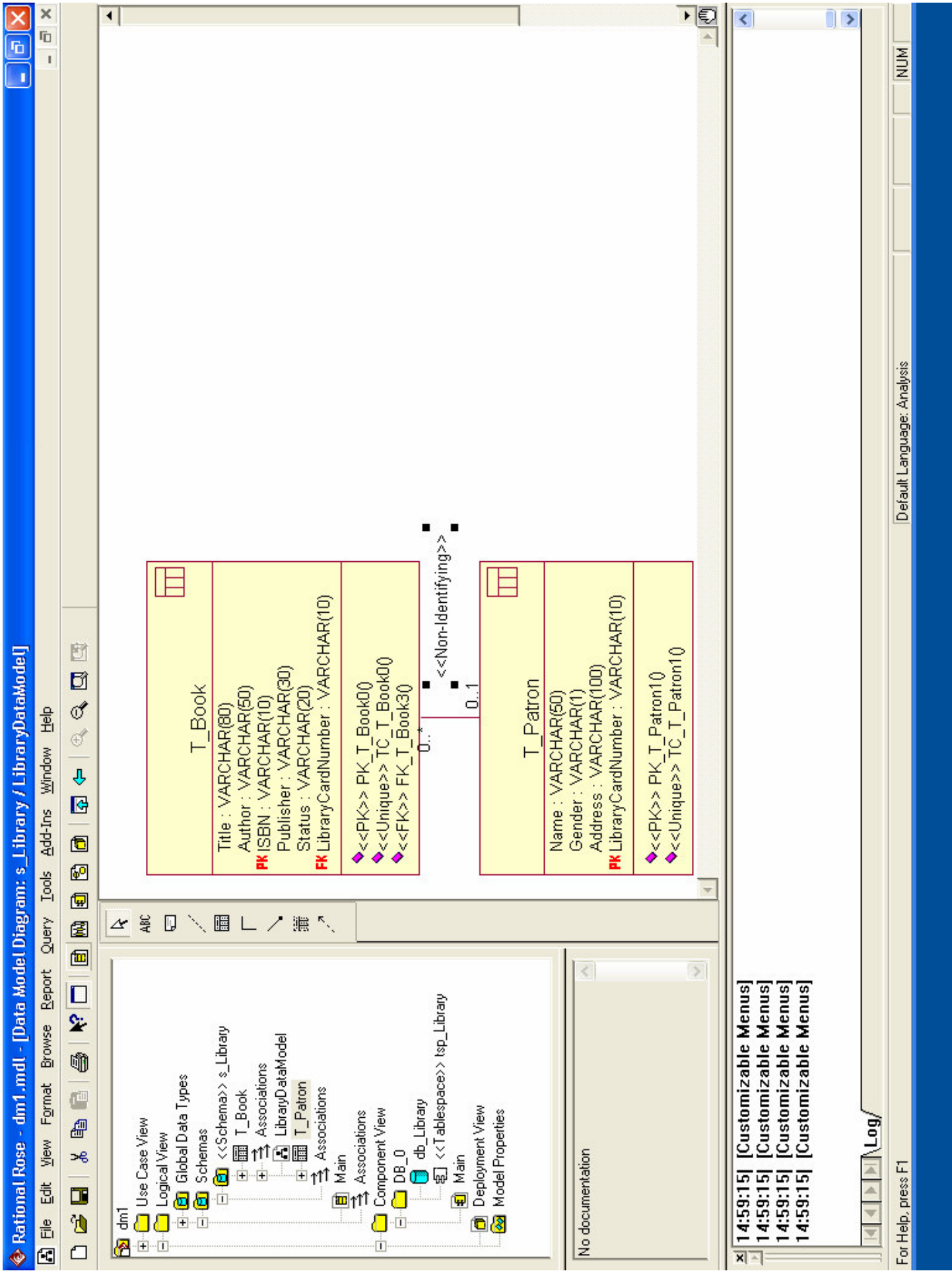
Role:

Cardinality: 0..n

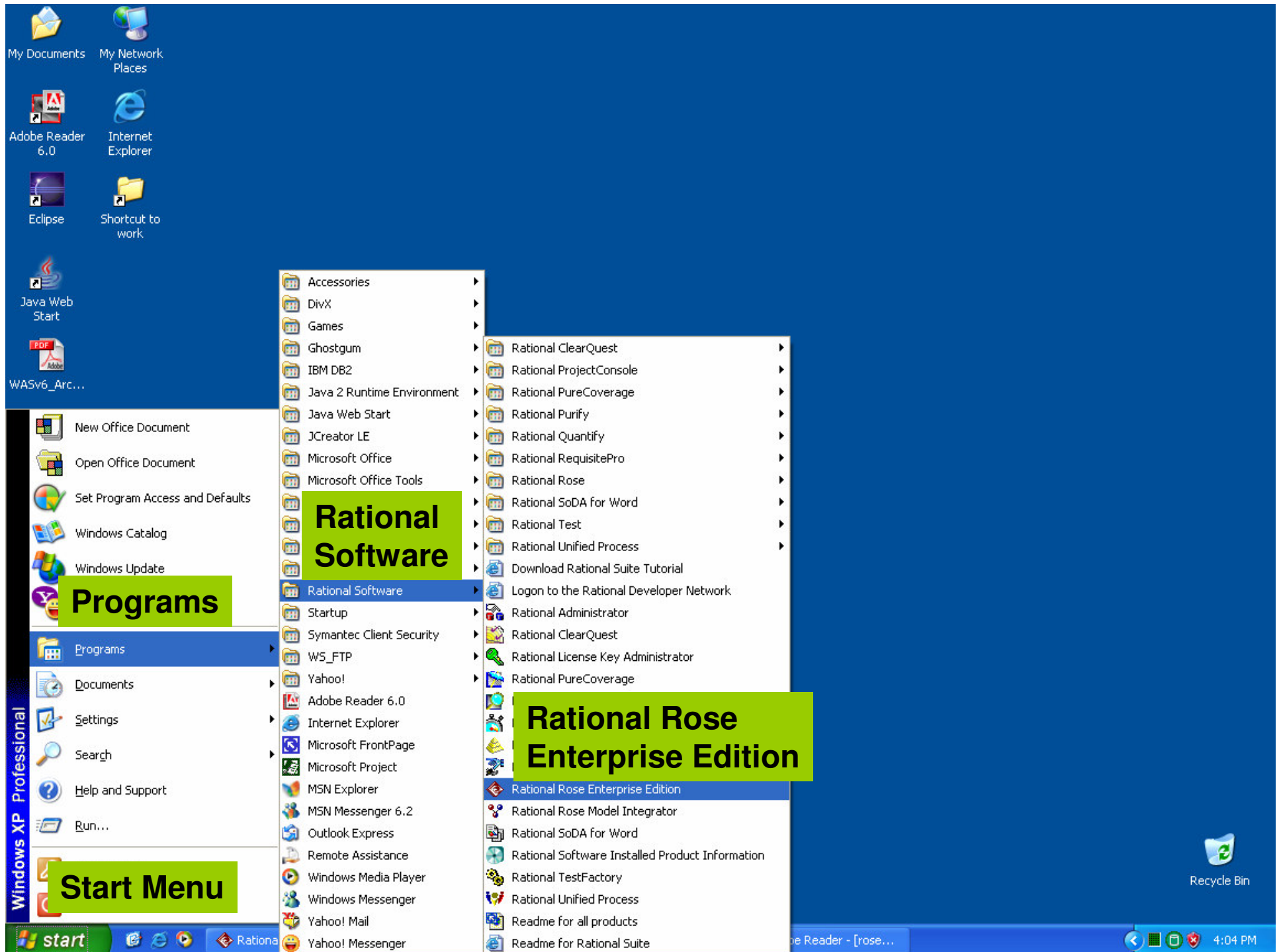
Comment:

OK Cancel Apply Help

Click *OK*

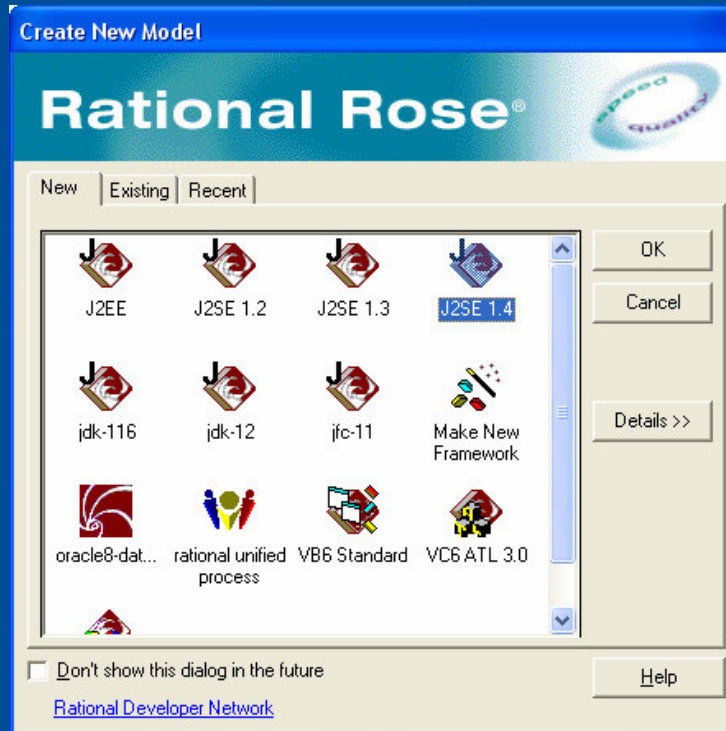


# Use Case Examples

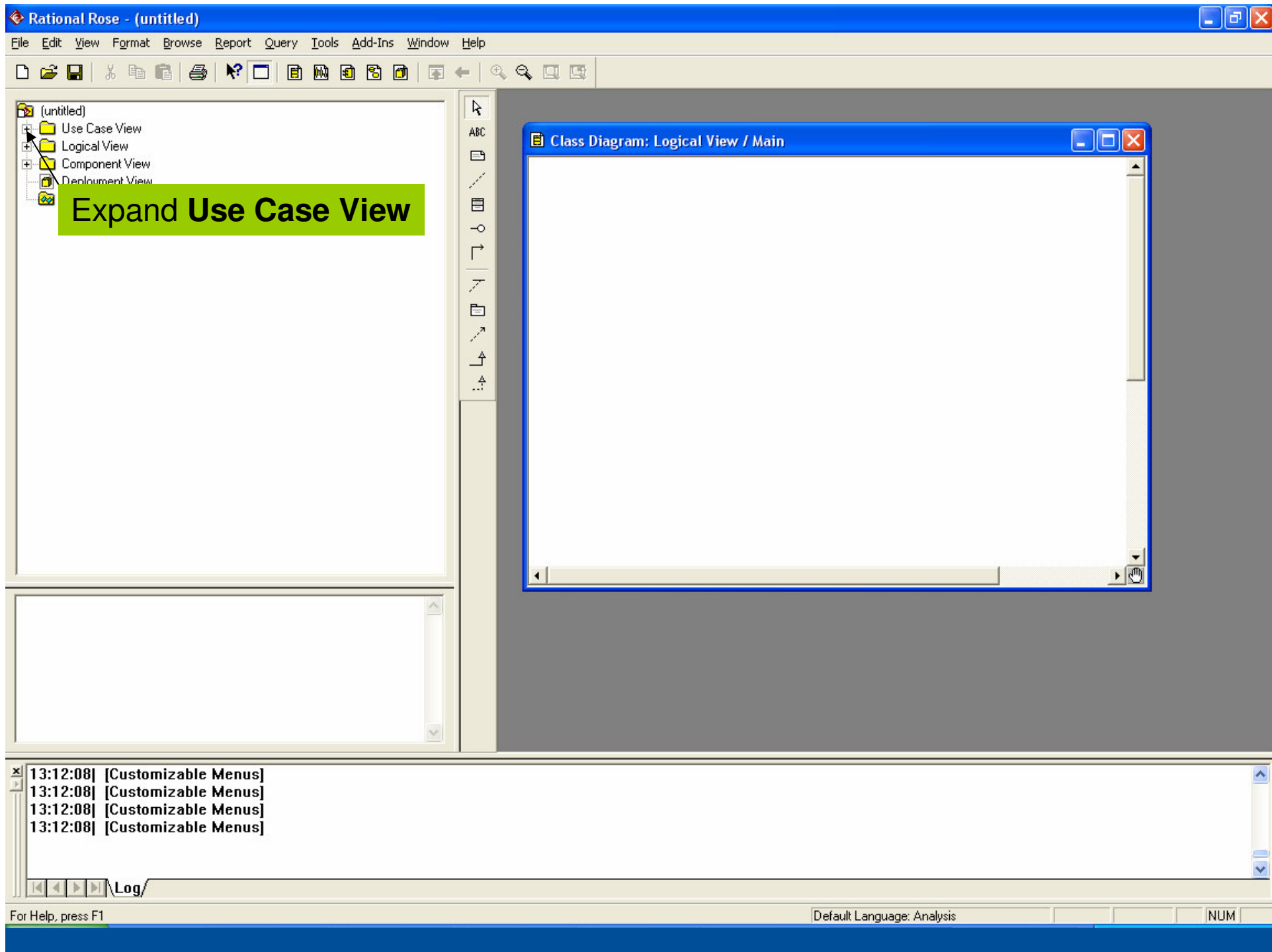




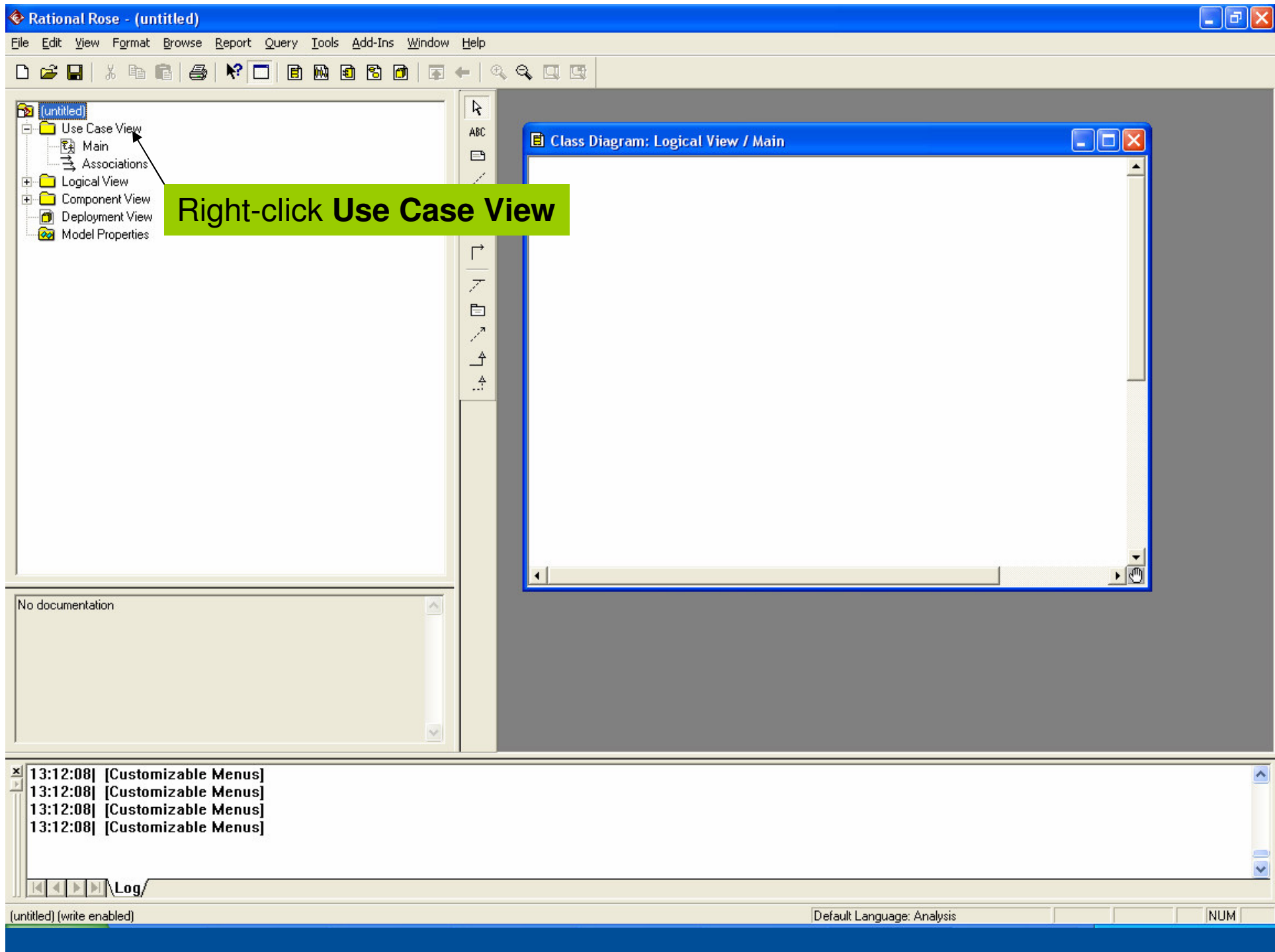
Loading . . .

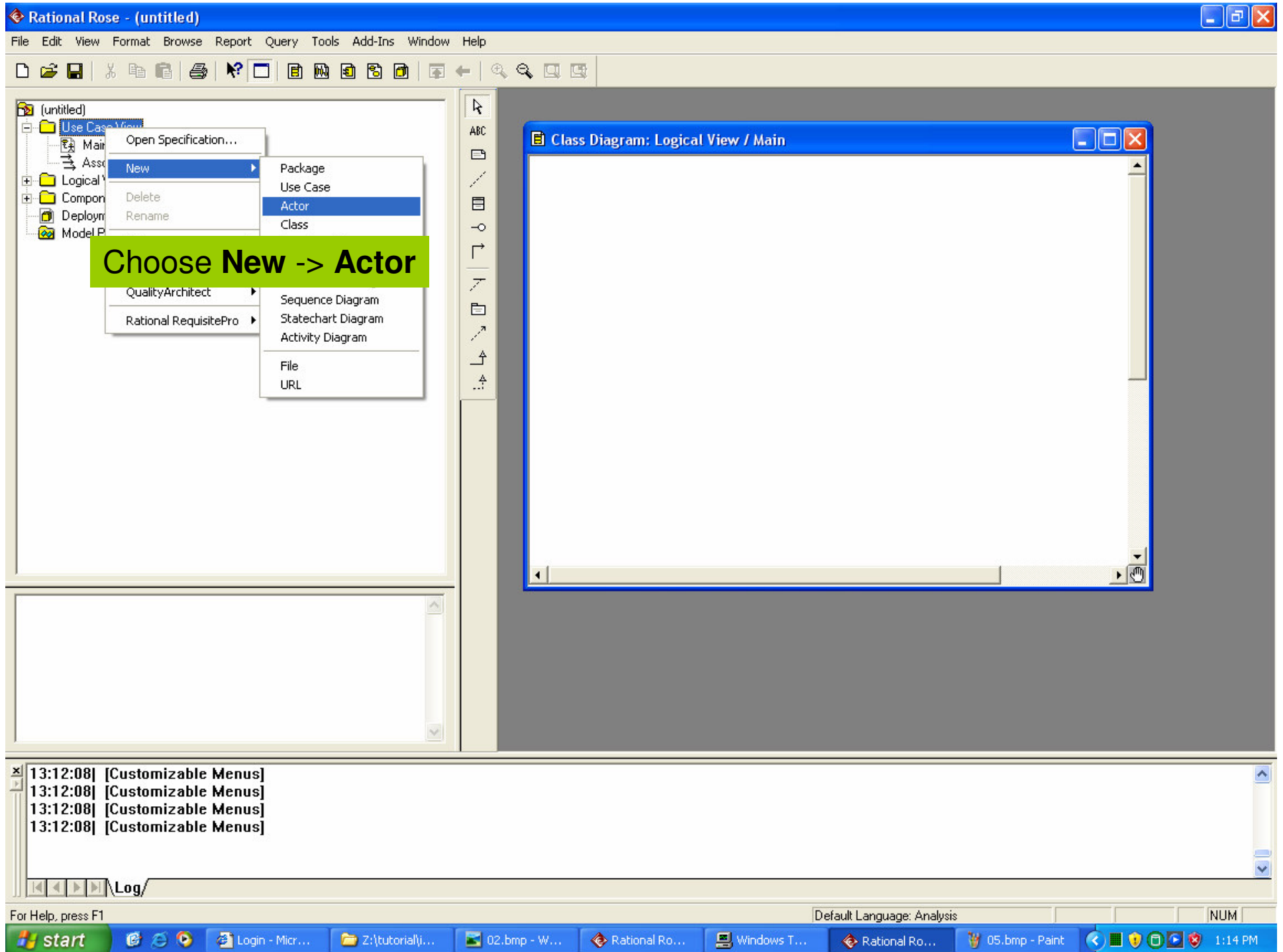


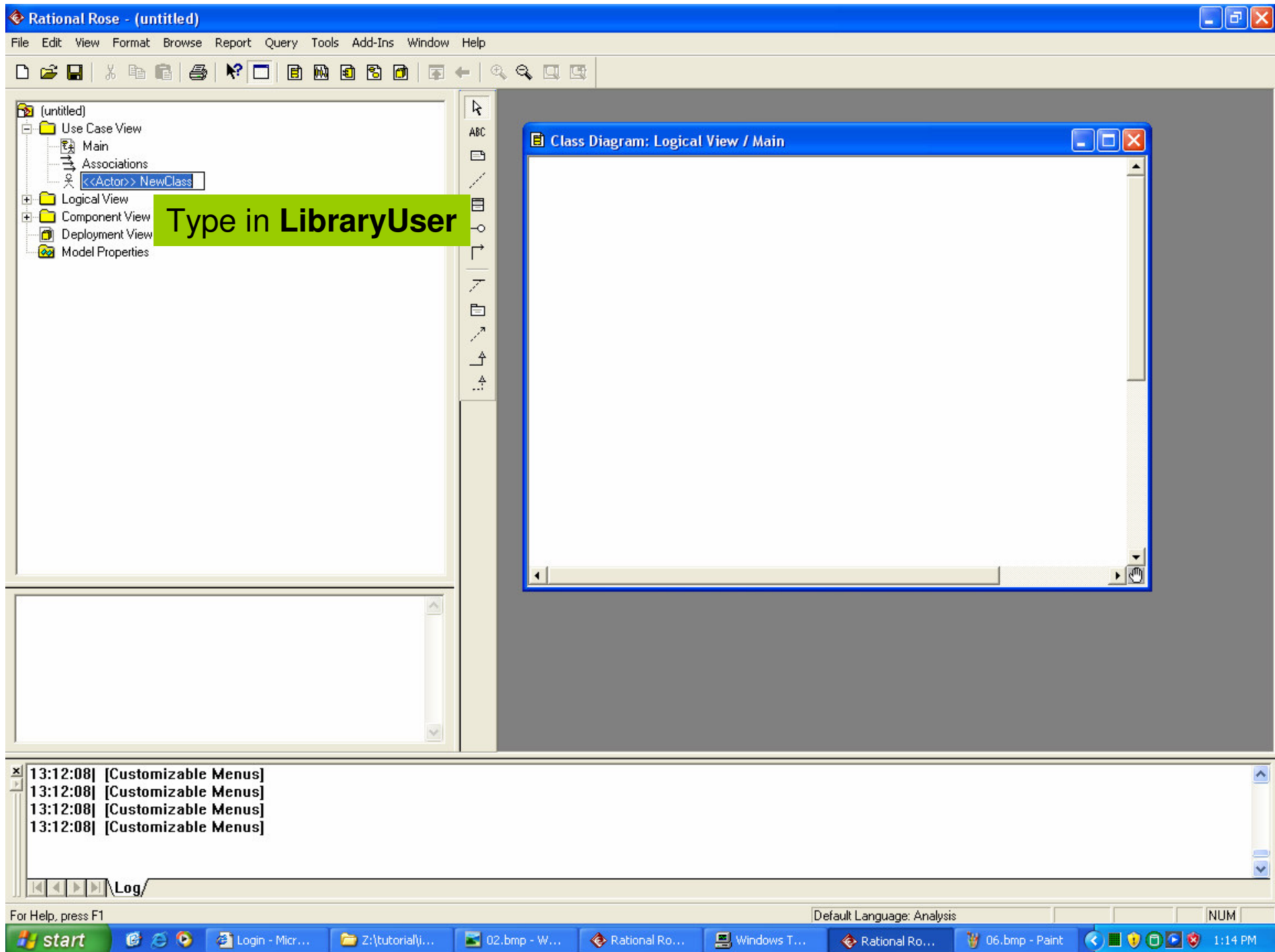
Click **Cancel**

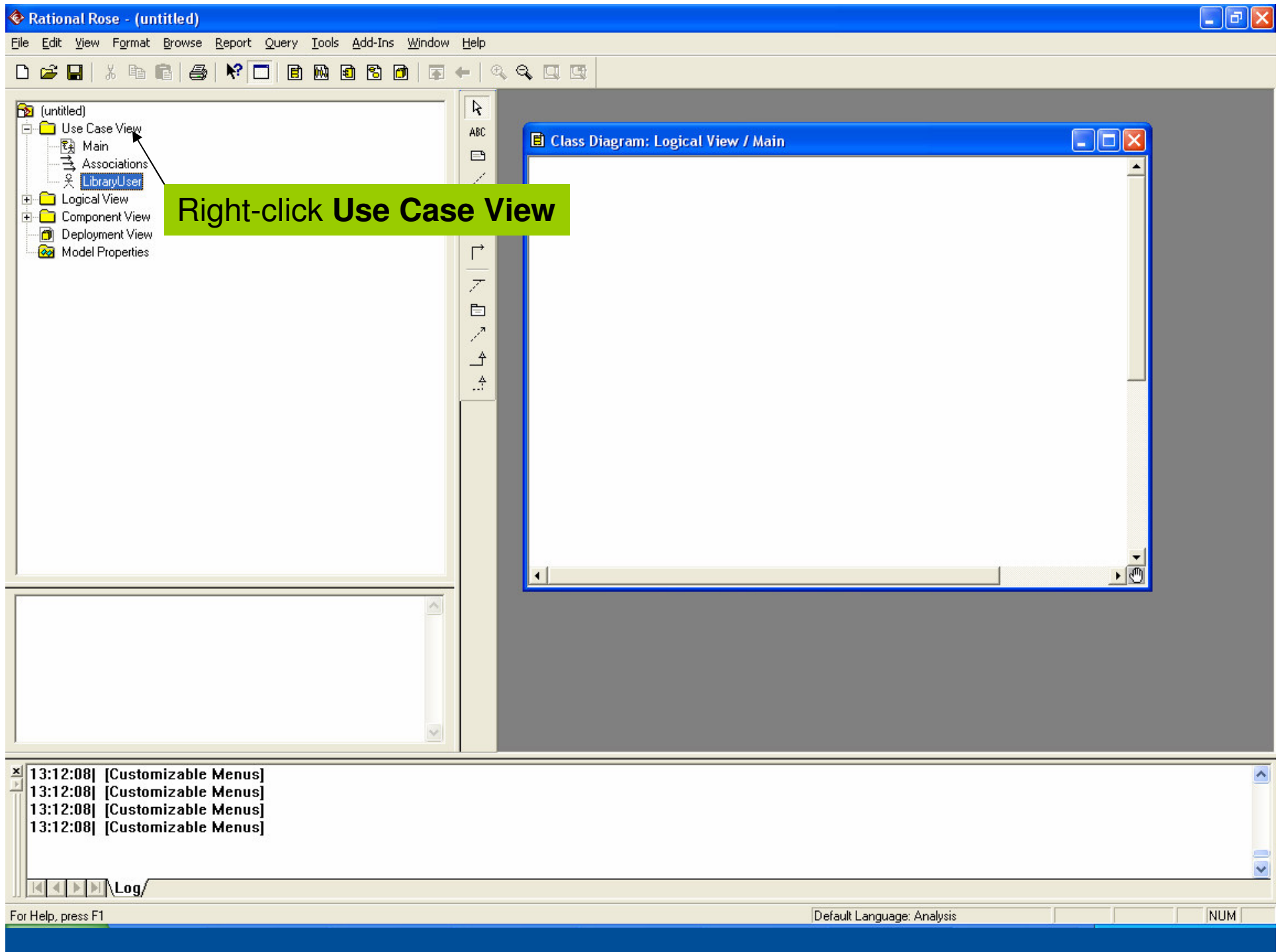


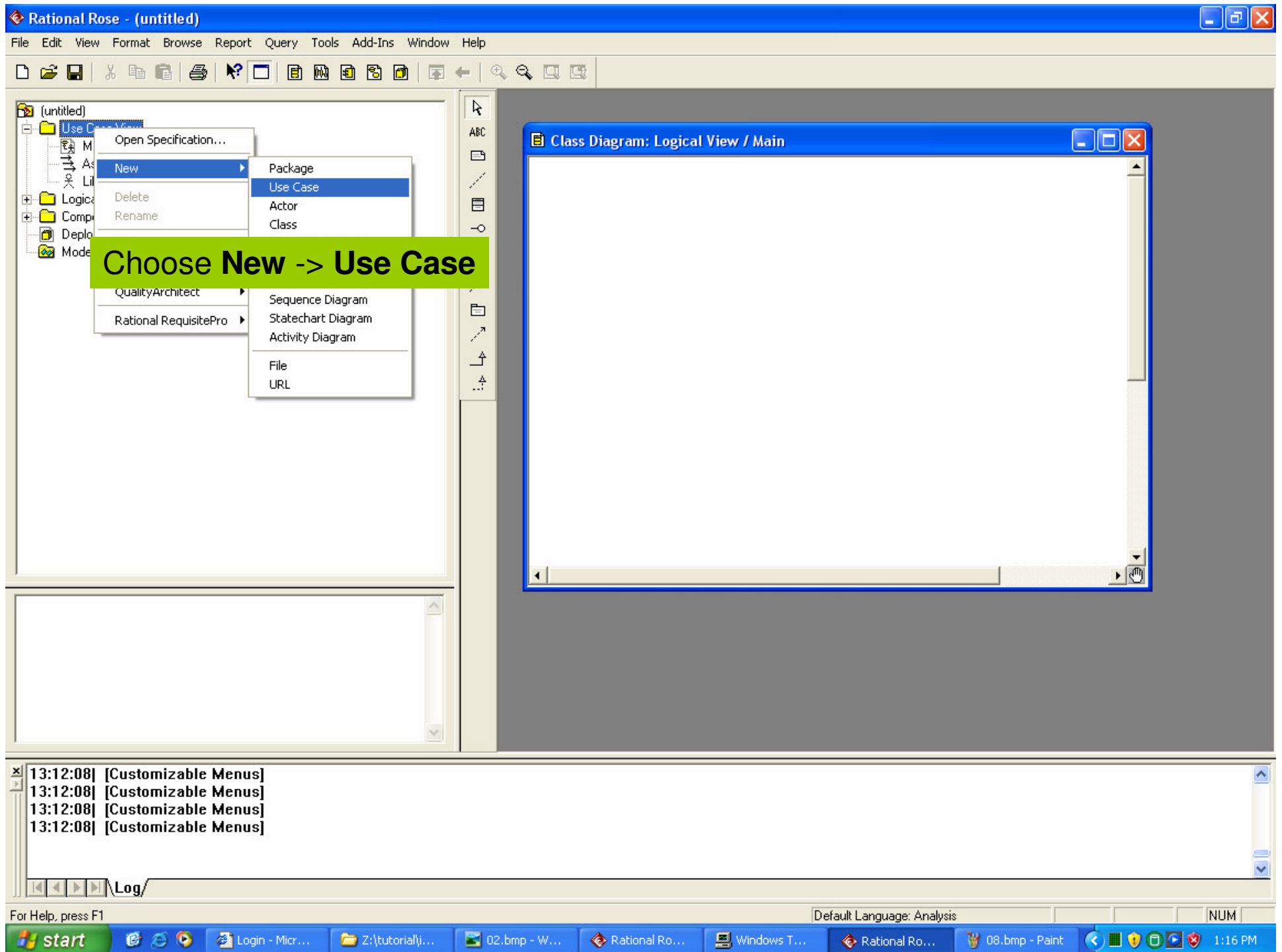


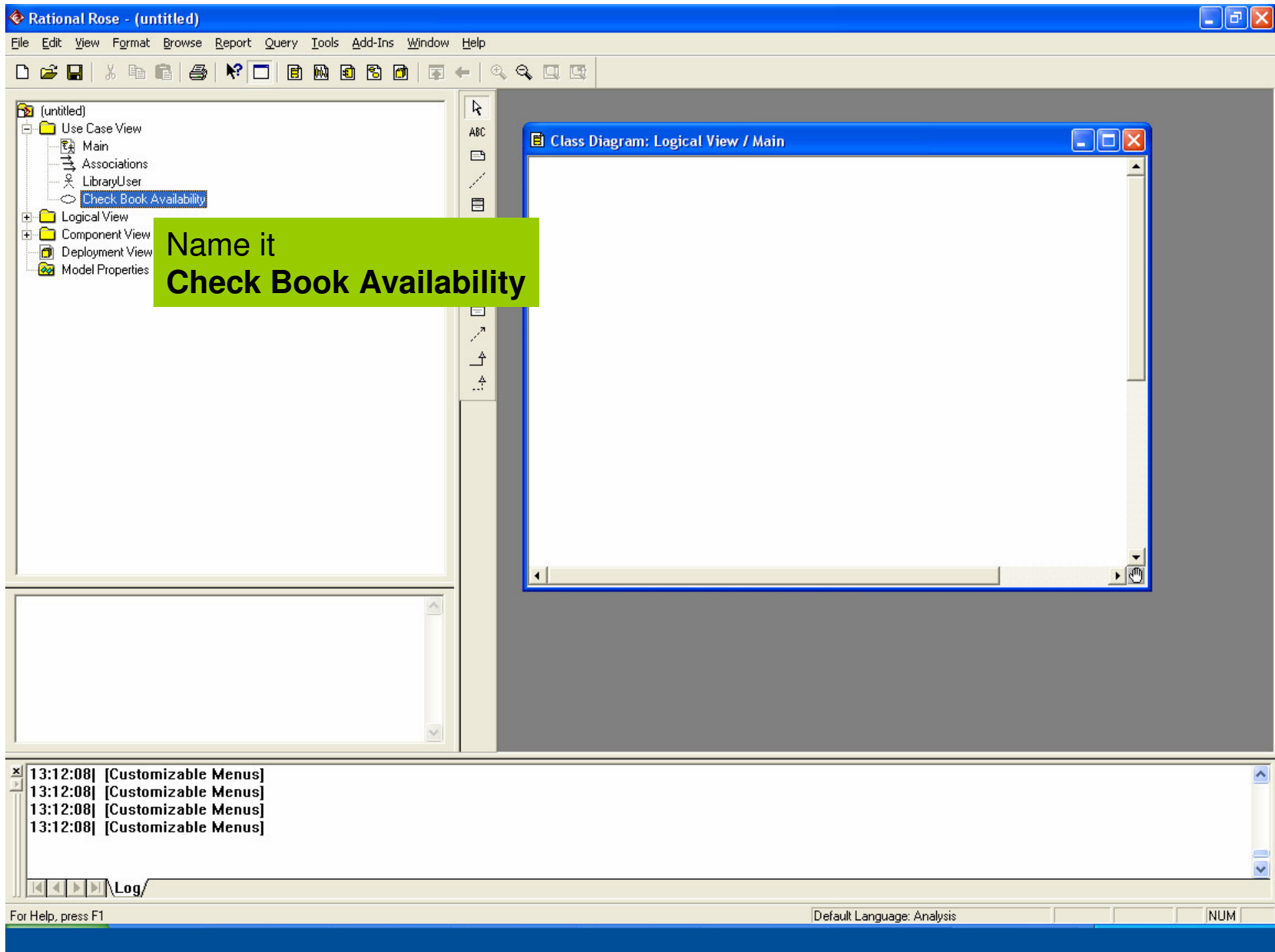


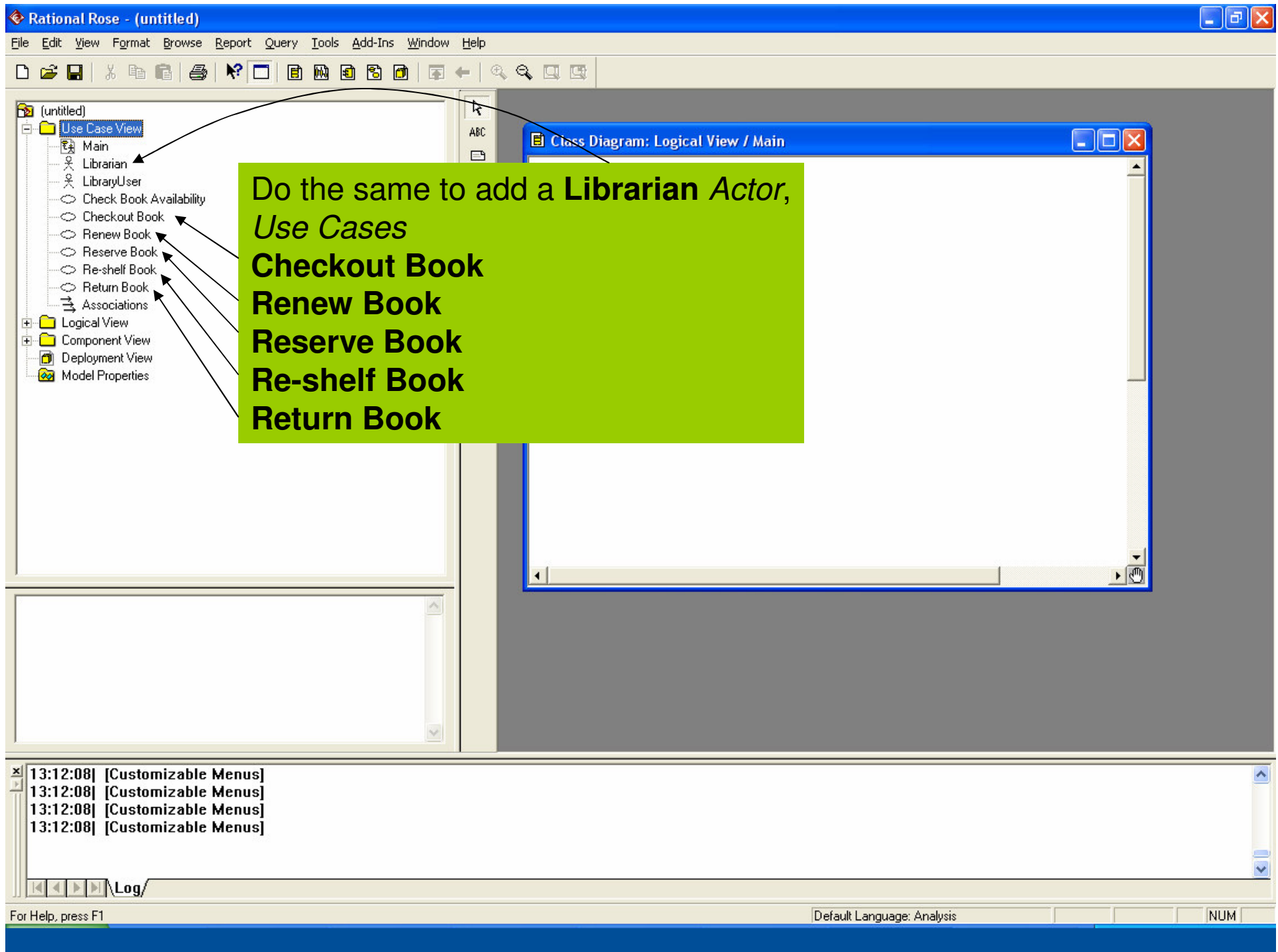


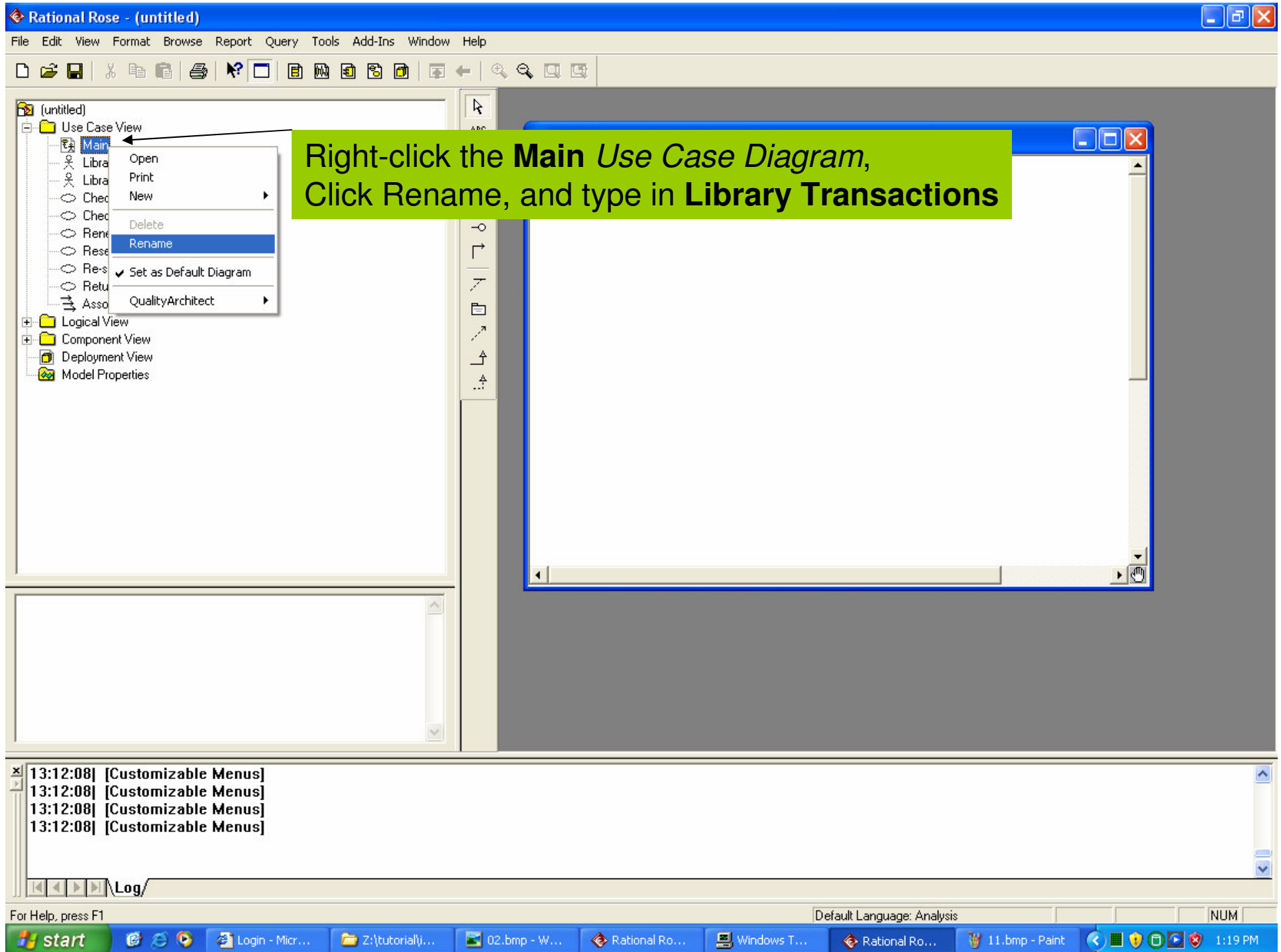




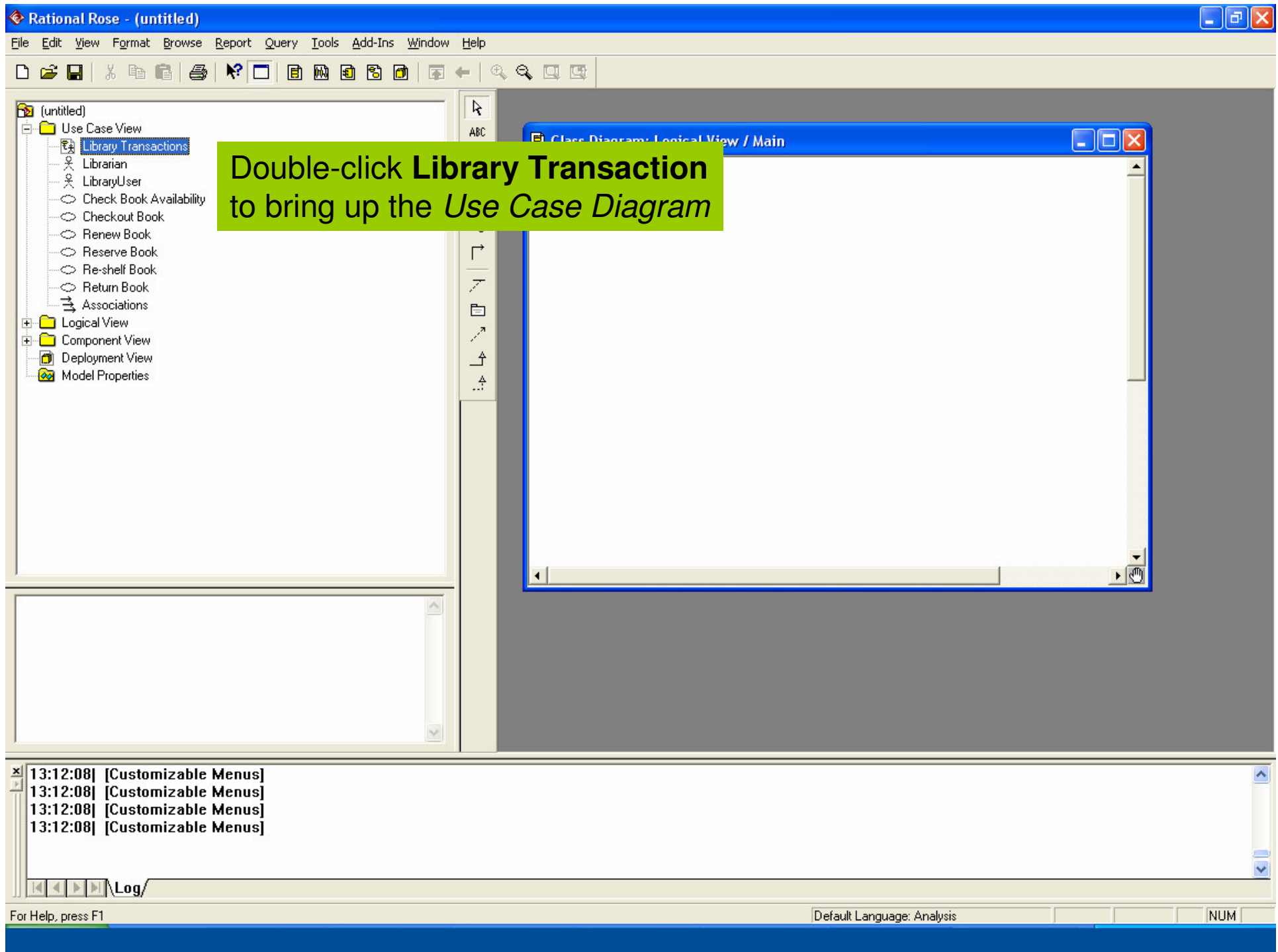


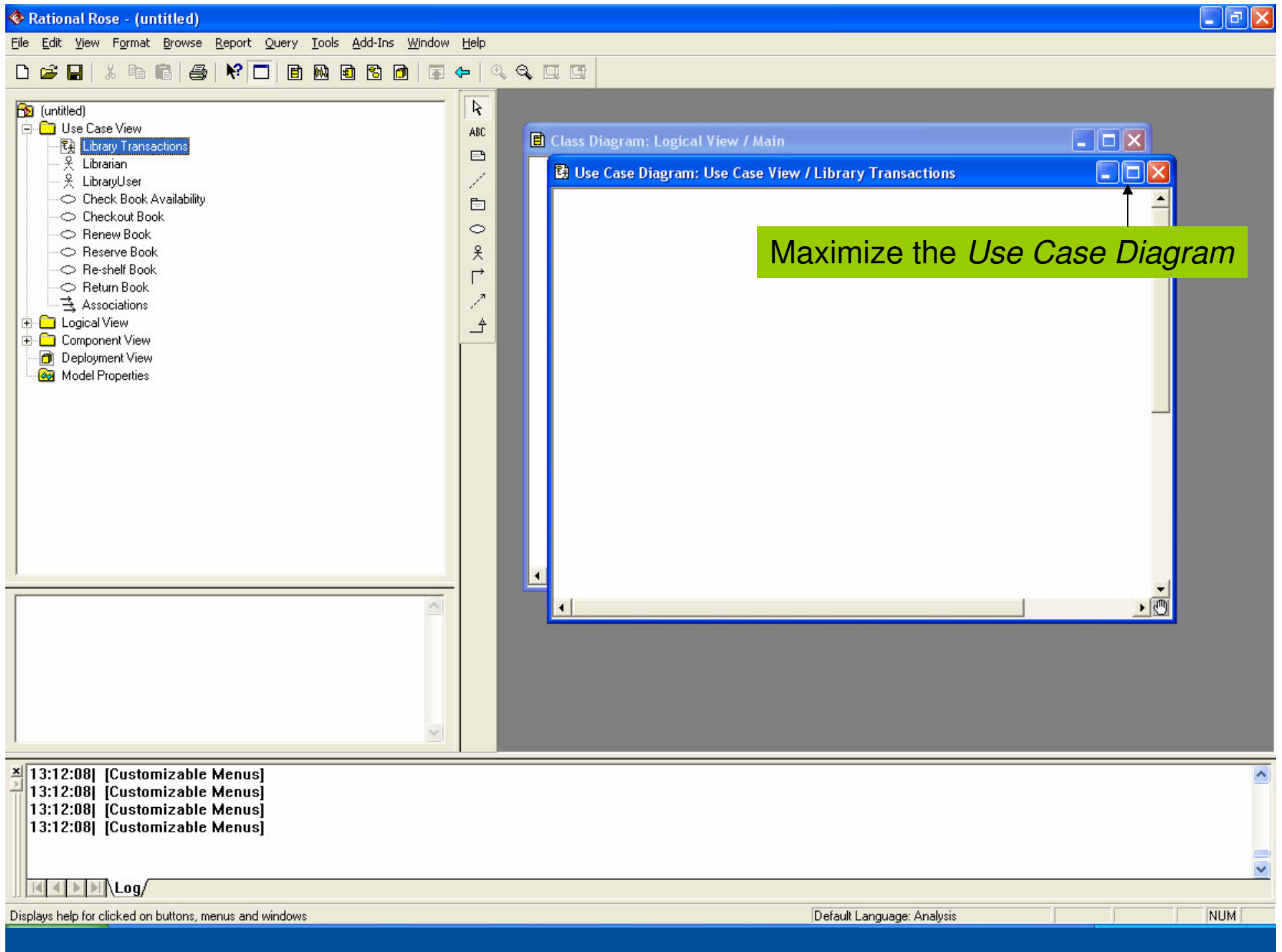


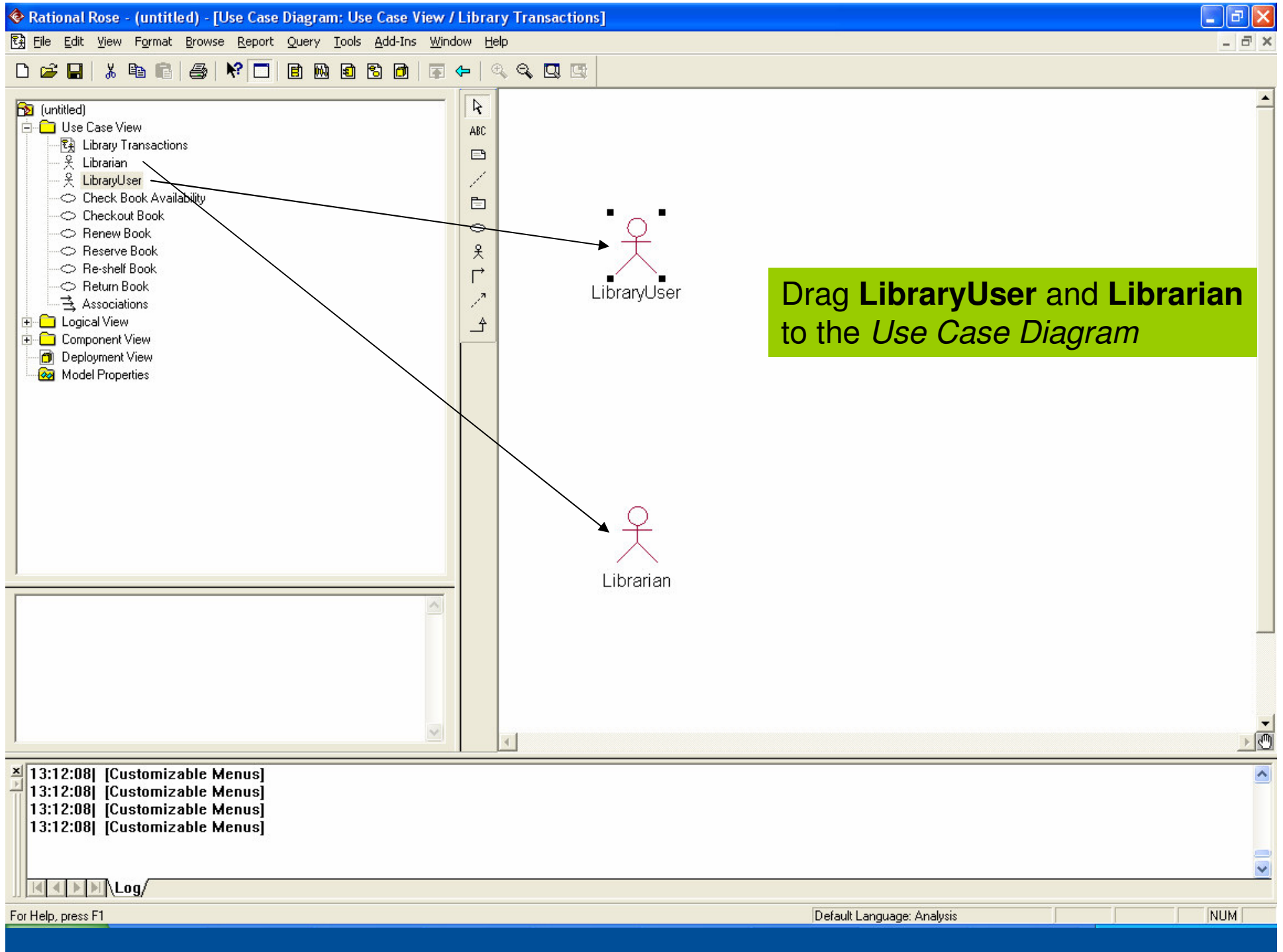


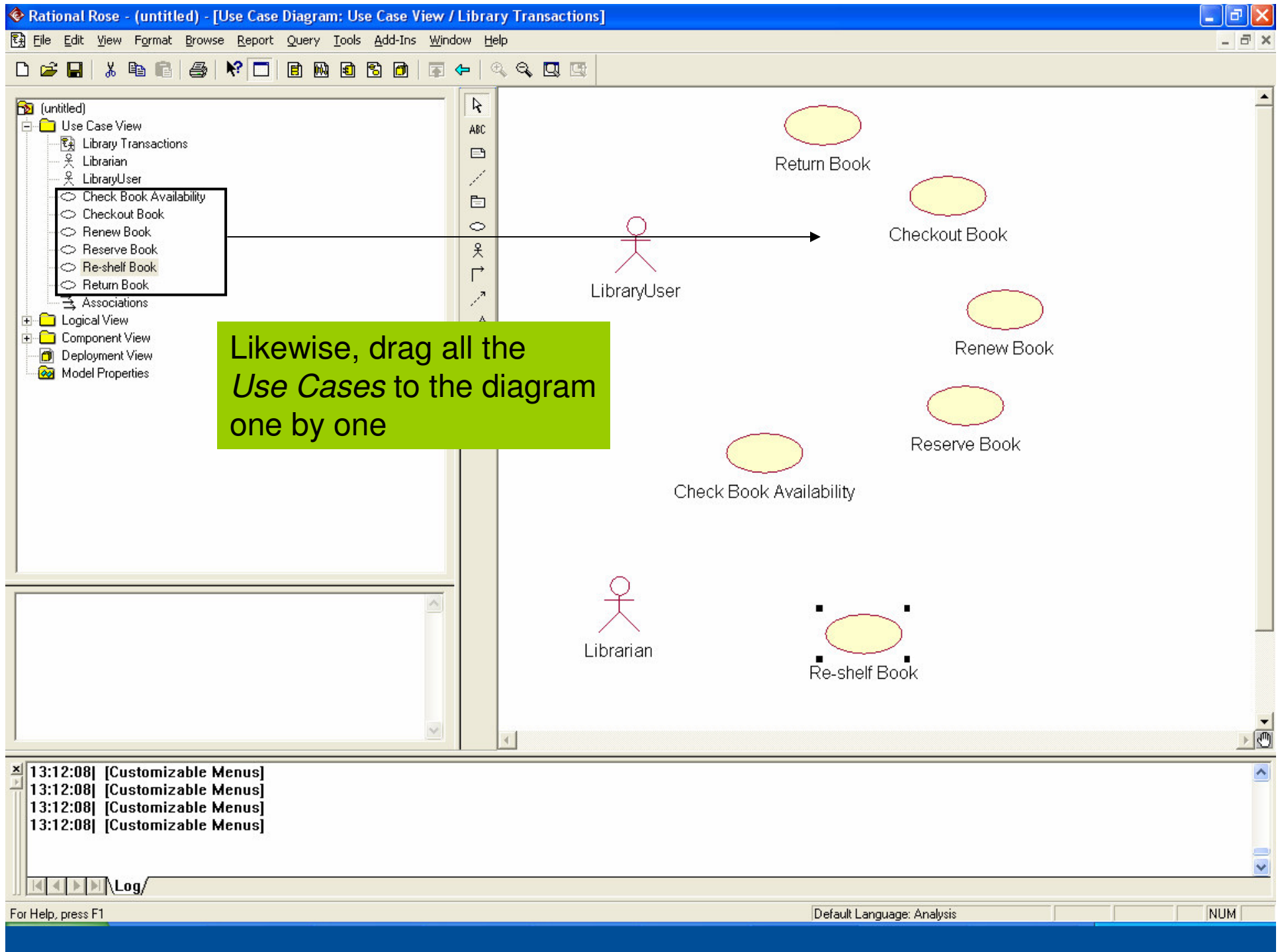


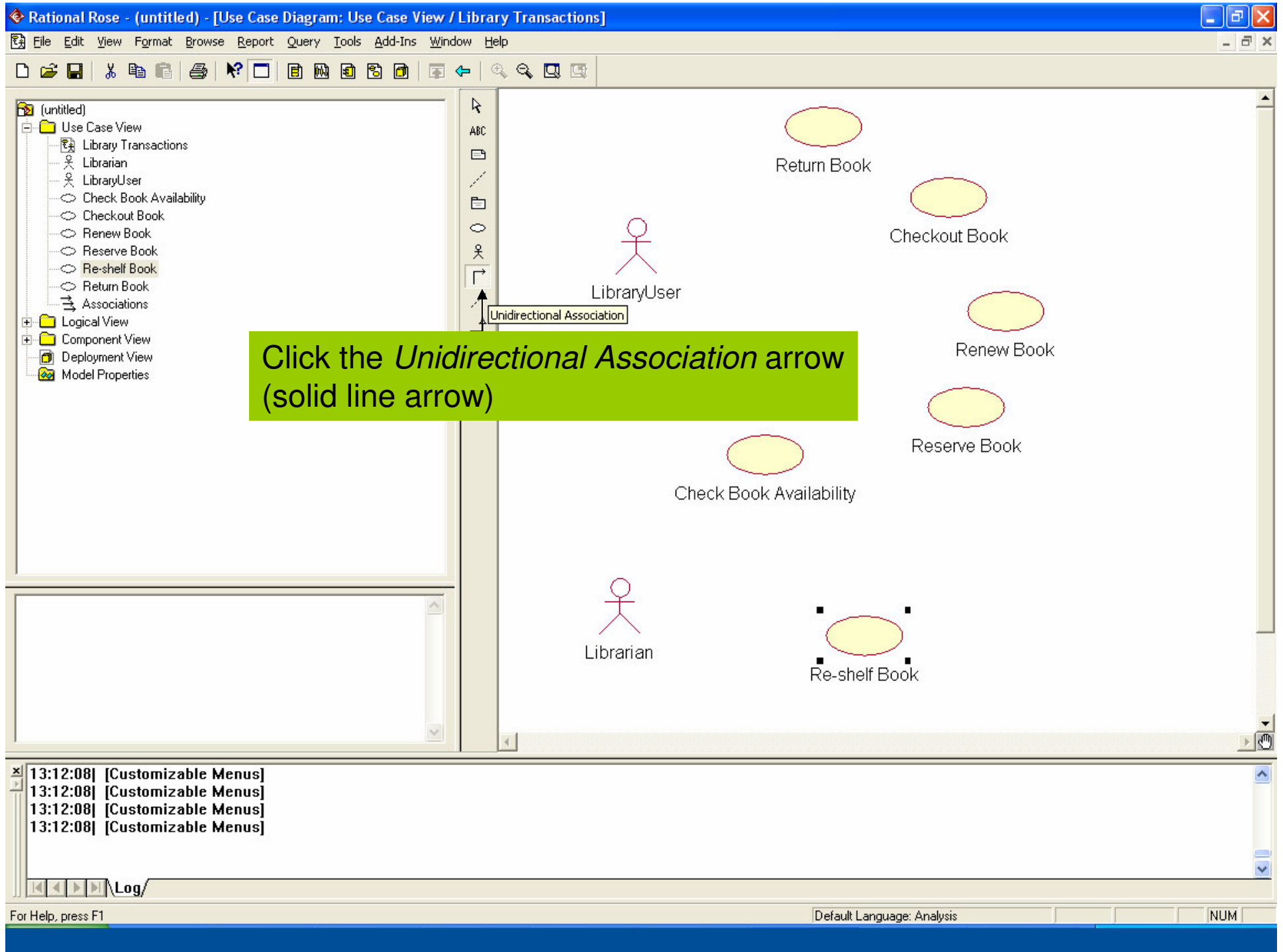


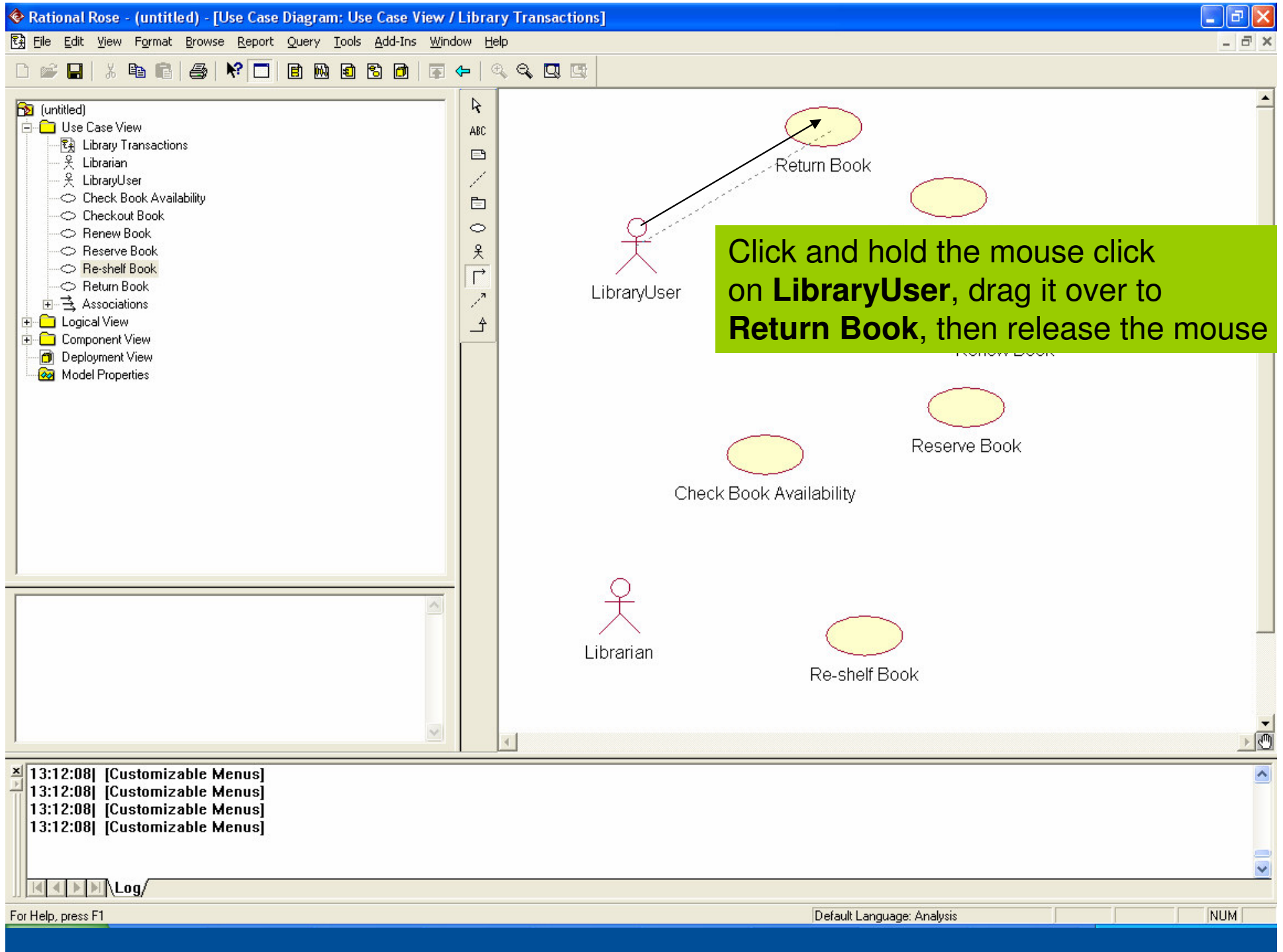


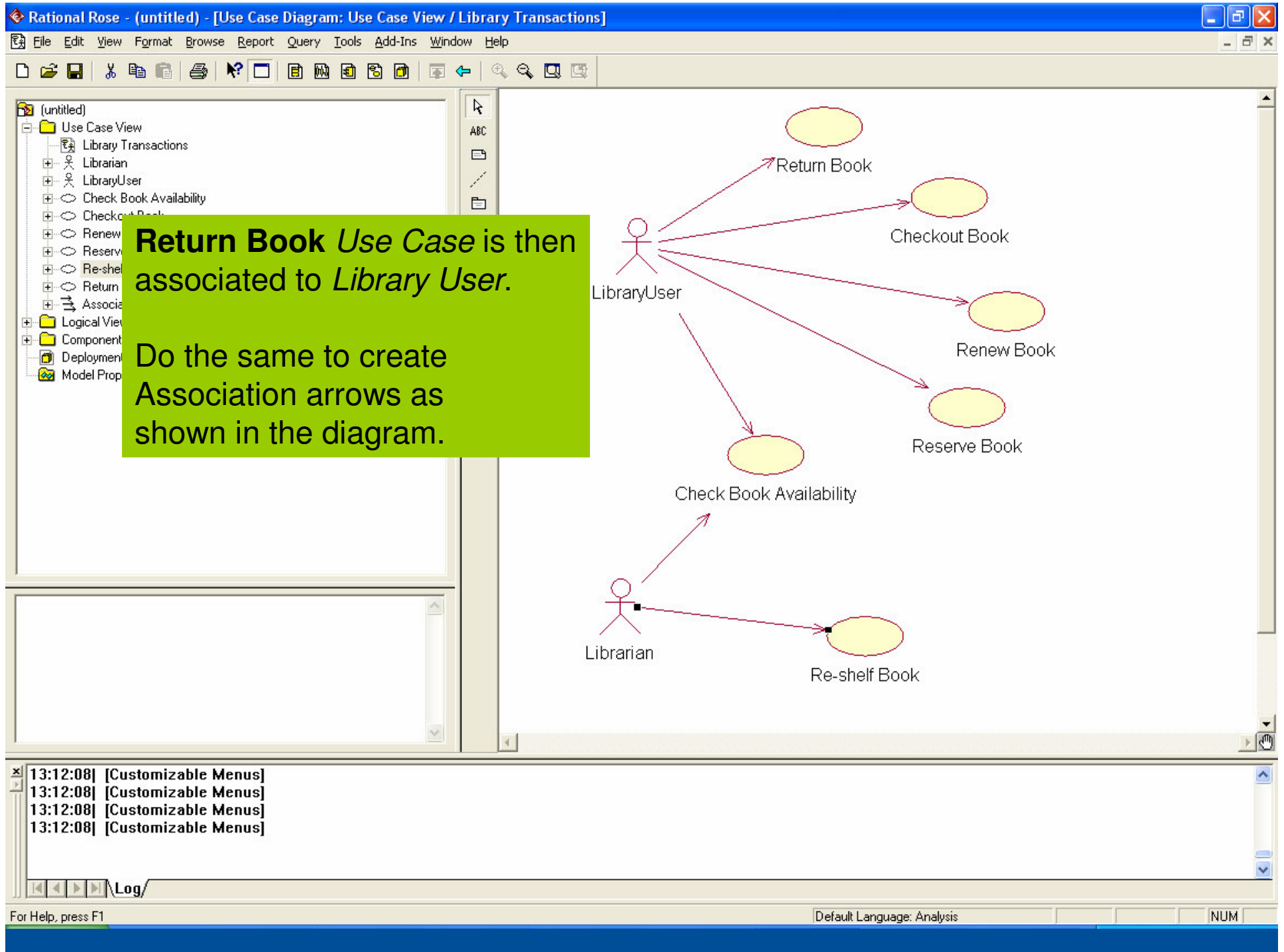




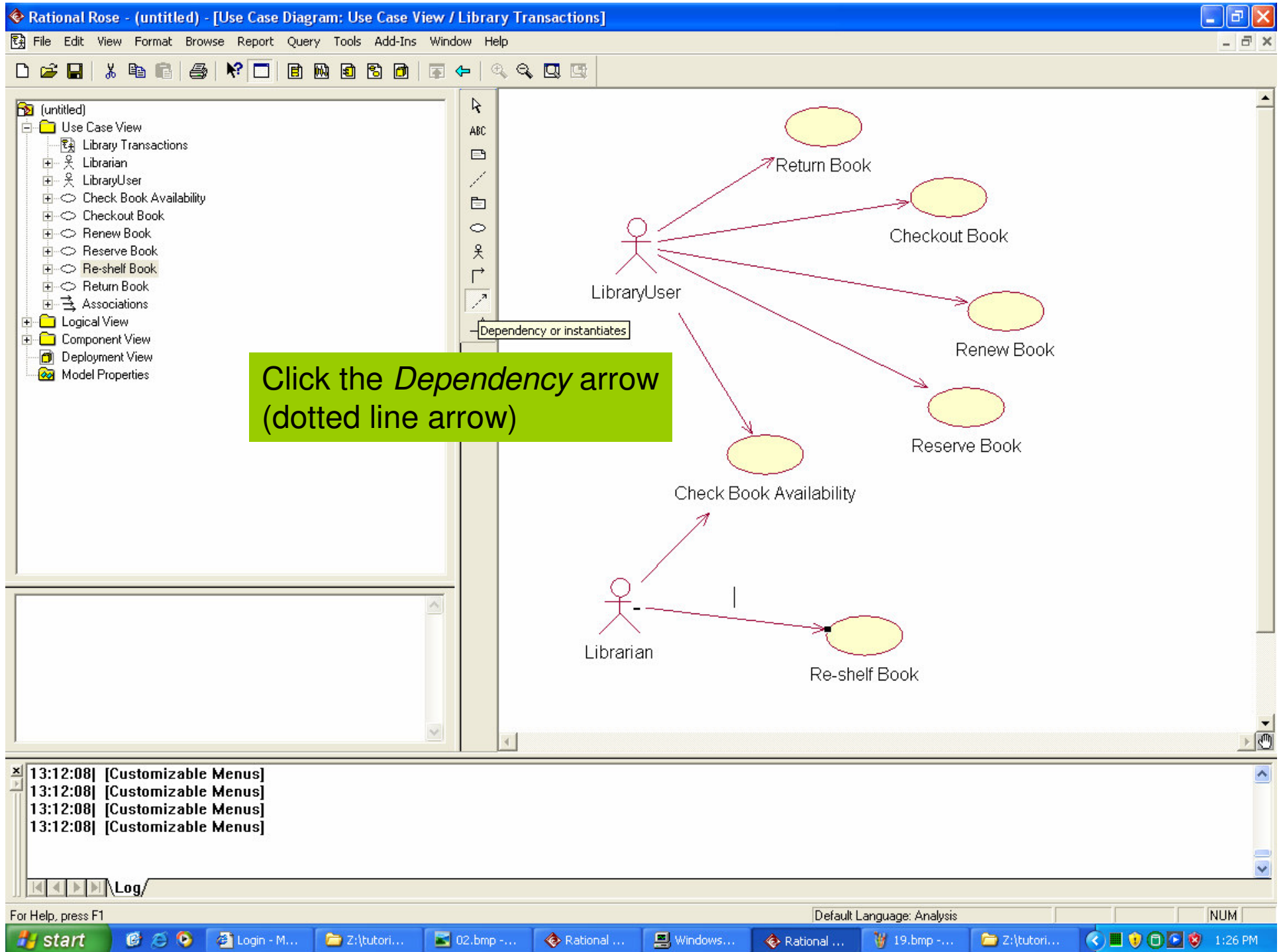




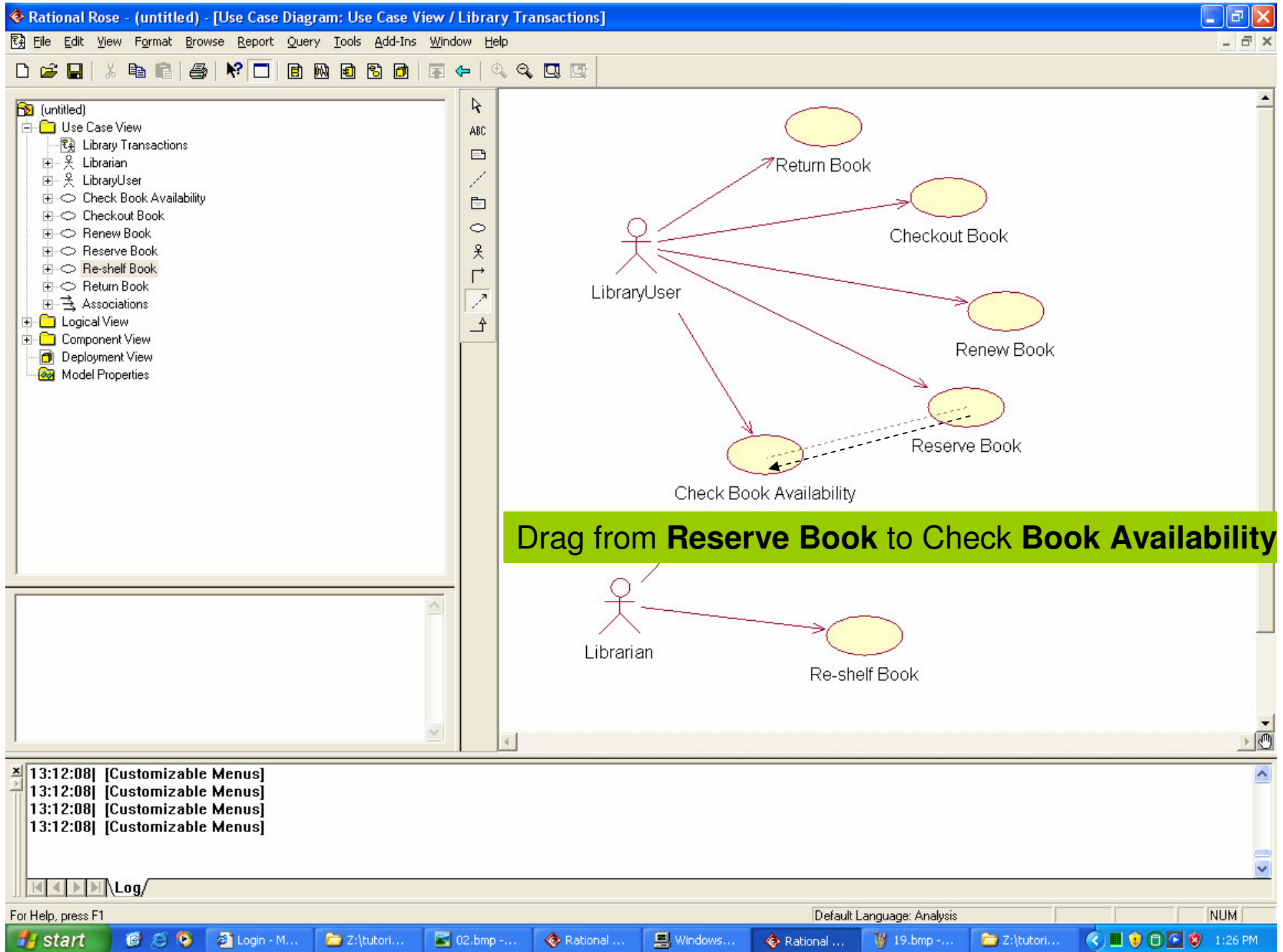


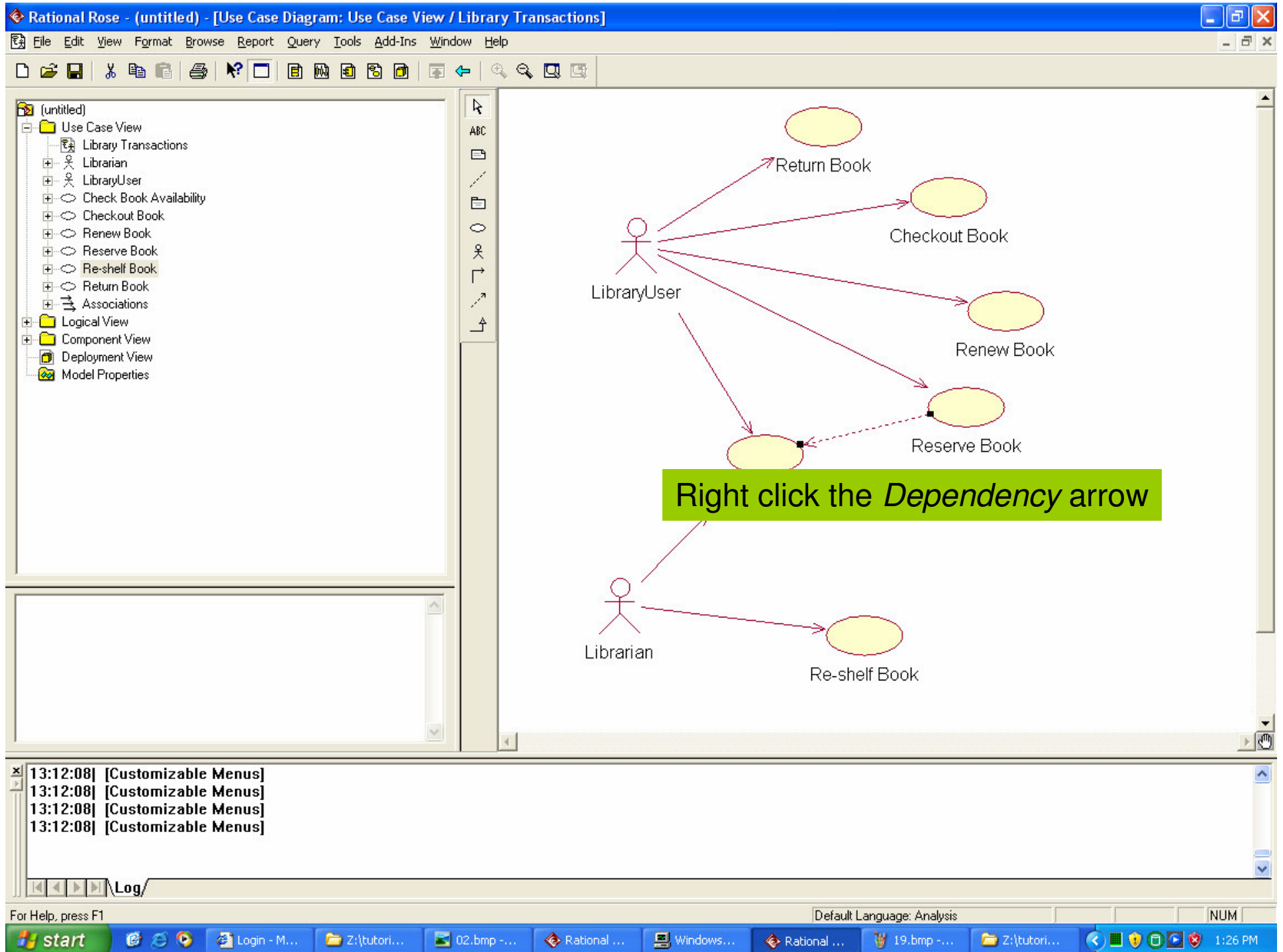


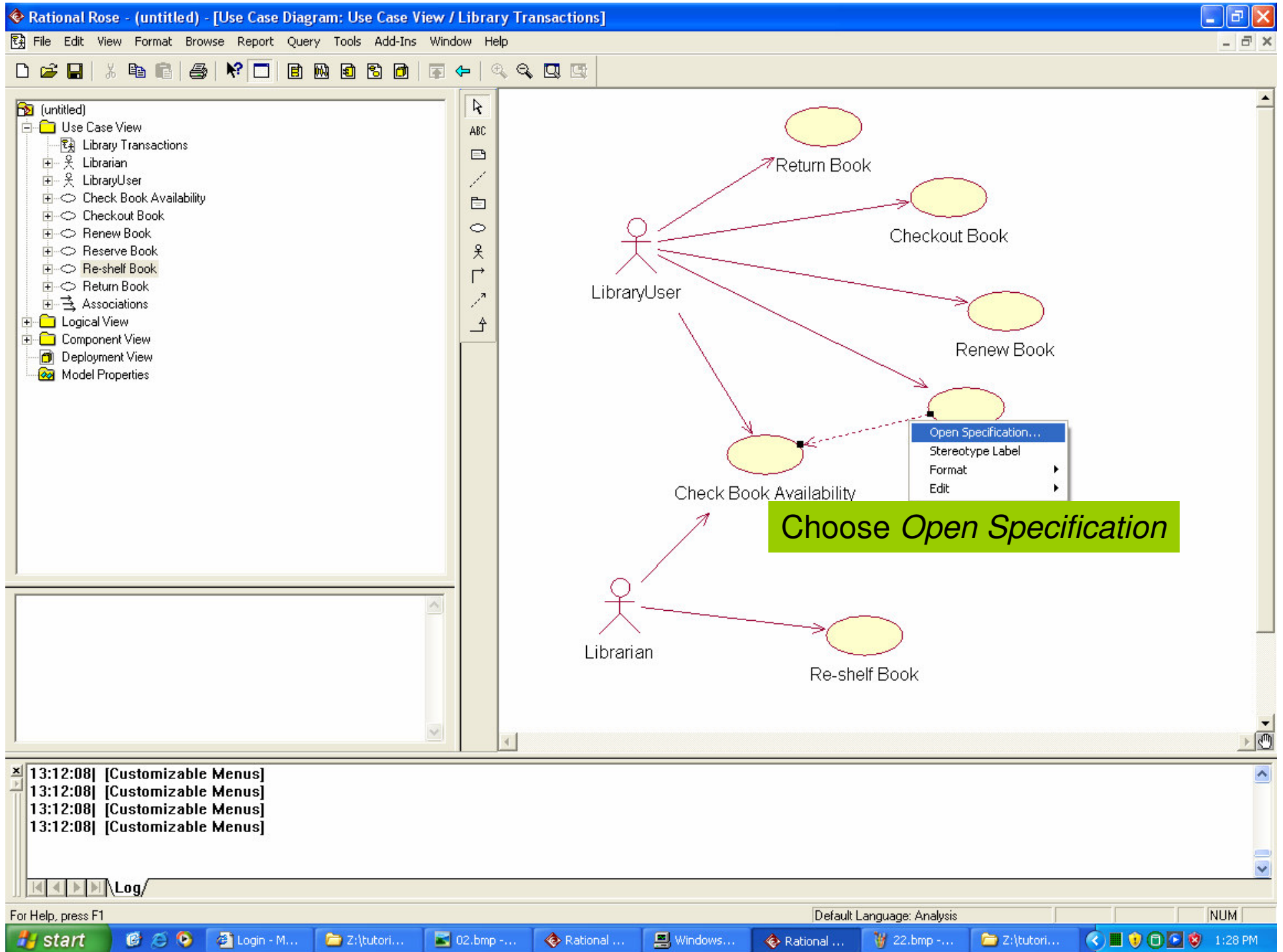












Dependency Specification for Untitled

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

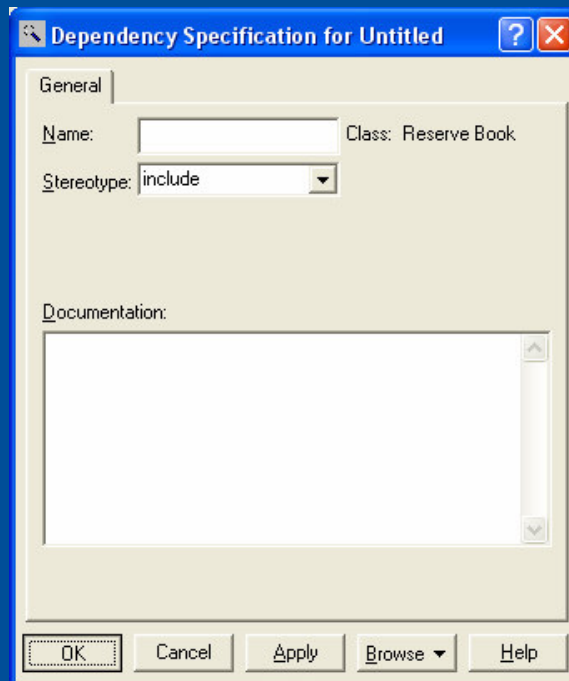
Stereotype:

- derive
- extend
- include
- owner
- refine

Documentation:

OK Cancel Apply Browse Help

Choose *Include*



The image shows a standard Windows-style 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:" text box, a "Class: Reserve Book" label, and a "Stereotype:" dropdown menu currently set to "include". The "Documentation" section contains a large, empty text area. At the bottom, there are five buttons: "OK", "Cancel", "Apply", "Browse" (with a dropdown arrow), and "Help".

Dependency Specification for Untitled

General

Name:  Class: Reserve Book

Stereotype: include

Documentation:

OK Cancel Apply Browse Help

Then click OK

