

# RationalRose-Tutorial1:UseCases

## 1. Introduction

The purpose of this tutorial is to help you create Use Cases in *Rational Rose*. This is an introductory high-level tutorial and does not explain all the advanced features of the Rational software tools in detail.

In this tutorial, you start up with functional steps of how to define a Use Case in Rational Rose, create a model in Rational Rose. An example is presented about a Use Case of scheduling meetings in a company through a computerized scheduling system.

## 2. RationalRose

Rational Rose is the world's leading visual modeling tool. Business analysts can use Rational Rose to model and visualize business processes and highlight opportunities to increase efficiency. Data analysts can model database designs in Rational Rose, improving their communication with developers. And when you model Use Cases in Rational Rose, you can be sure your solution is being built for the user. Rational Rose unifies business, systems and data analysts by enabling them to create and manage models in one tool with one modeling language.

## 3. Creating a Use Case in Rational Rose

1. Open Rational Rose, Start --> Programs --> Programming Tools --> Rational Suite Development Studio --> Rational Rose Enterprise Edition
2. You will be presented with a "Create Model" Screen, Cancel that and you will see something like this.

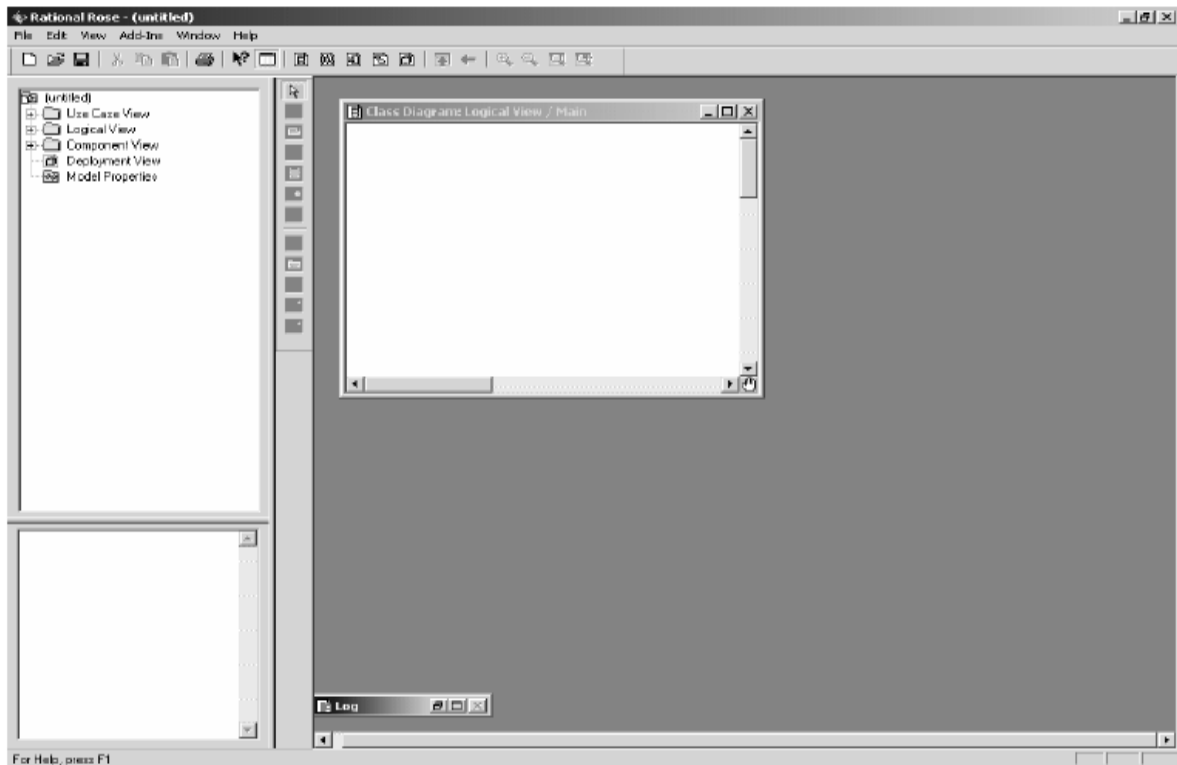
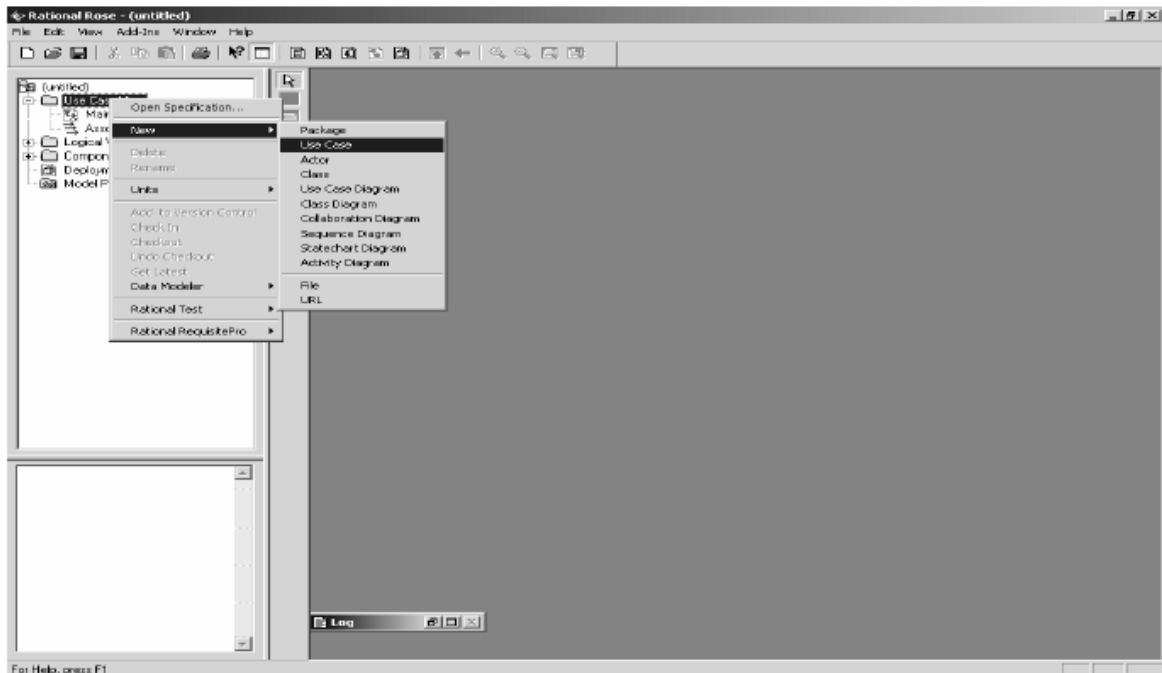


Figure 1: Rose Model file

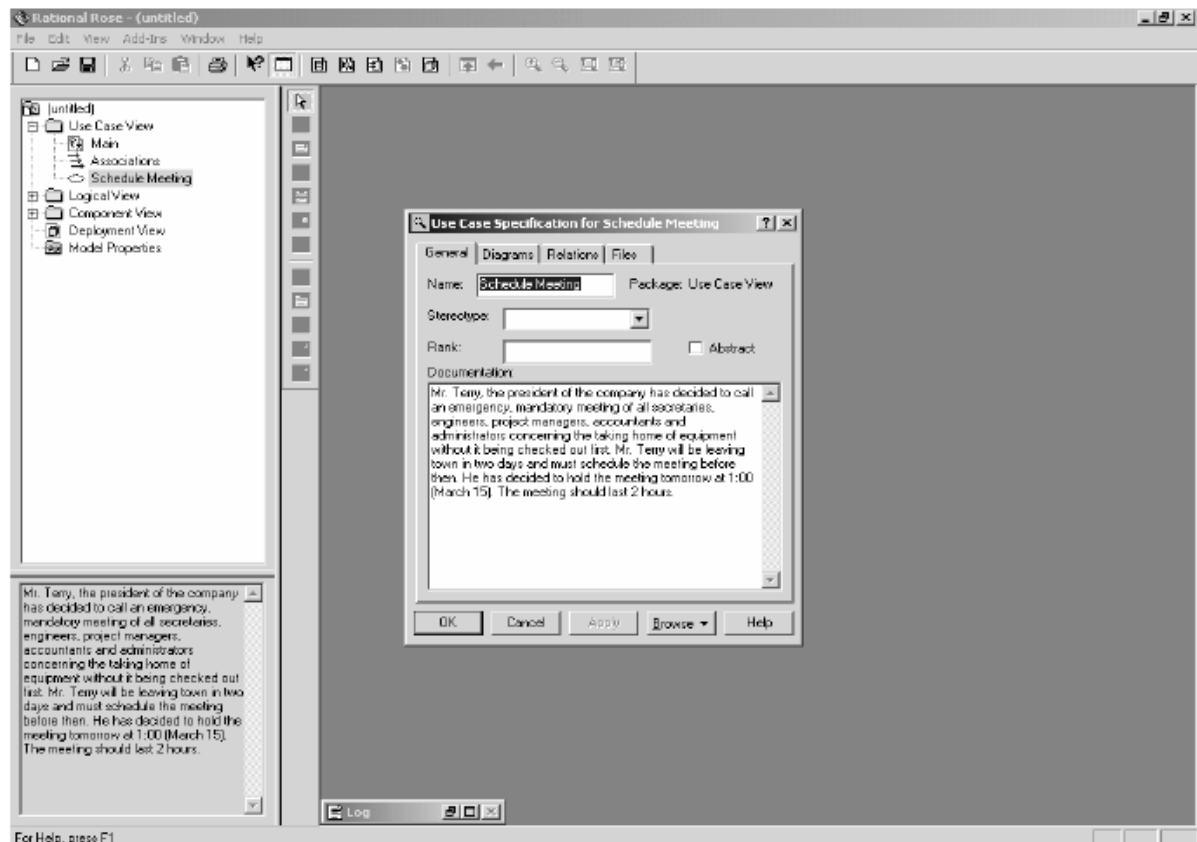
You can cancel the “Create Model” screen since you are not creating any particular type of model. However, once you have a model, you can open an existing model by selecting “Existing” tab from “Create New Model” screen.

3. Now since you are only interested in creating Use Cases, you would create a new “Use Case” by right-clicking on “Use Case View”, selecting “New” and then “Use Case” from the list of options (Make sure that you don’t select the Use Case Diagram option). Additional information about “Use Case View” package can be entered in “Open Specification” option.



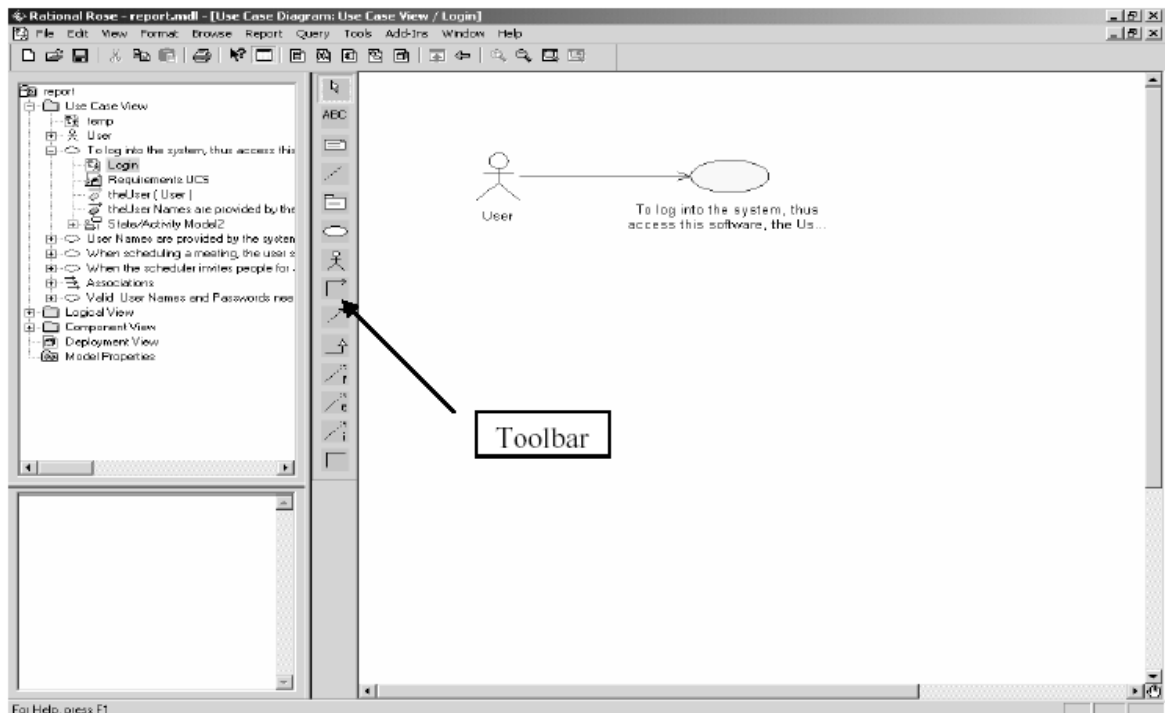
**Figure2: Creating a use case in Use case package**

4. Once you have opened a Use Case, enter "Enter System" as the name for the Use Case and then right-click on it, select "Open Specification". Enter the brief description of the Use Case in the "Documentation" area of the specification. Click Ok.



**Figure3:OpenSpecificationforacreatedusecase**

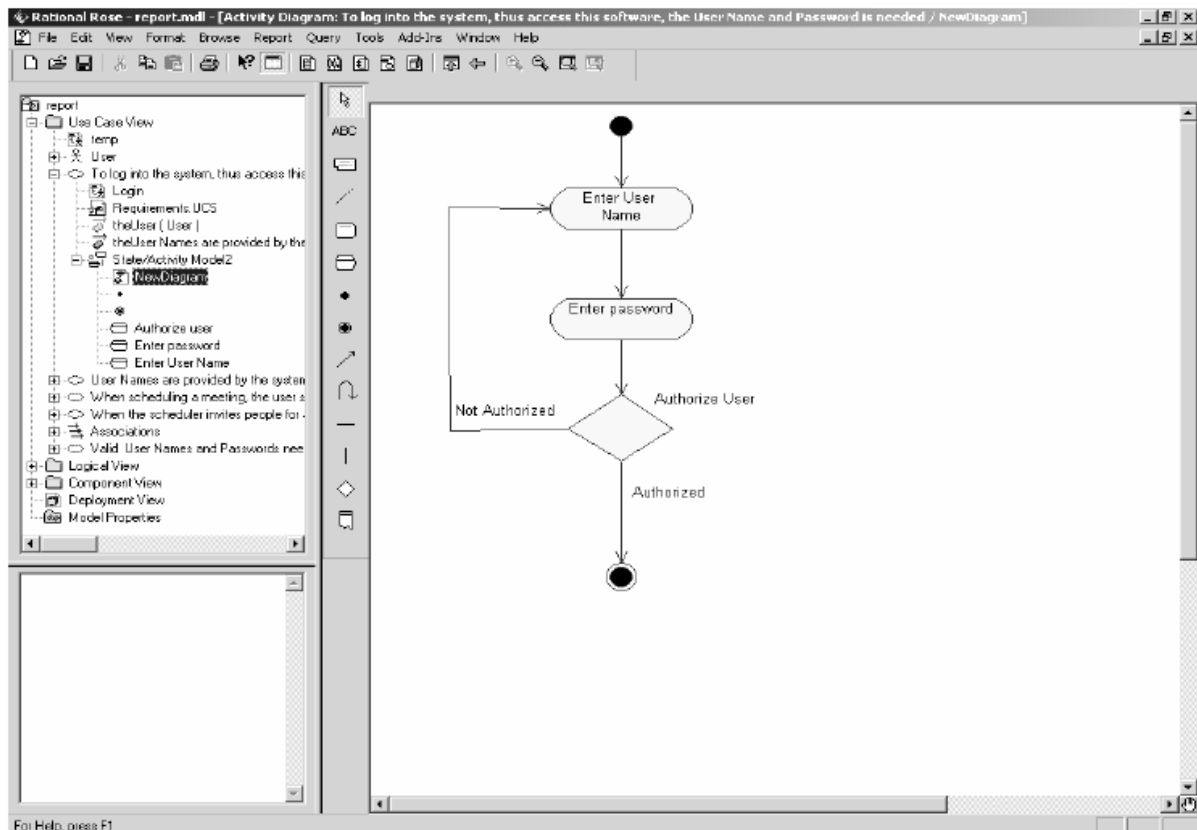
5. Once the specification is filled out, you can add any type of diagram to this particular Use Case. You can add Class Diagram, Use Case Diagram, Activity Diagram, State Diagram, etc. Here is an example, I have added a Use Case diagram which shows user of the computerized scheduling system trying to "login" the system by entering username and password.
6. To add a Use Case diagram, right-click on the use case name "EnterSystem" and select New Use Case Diagram. When the diagram sheet with its associated toolbox would appear in the right frame. Let us name this use case diagram as "Login". If a diagram sheet does not appear then double-click on the newly created Use case diagram.
7. **Optional Step:**  
If the symbol for drawing an actor does not appear on the toolbar (situated vertically in the middle of the screen), right-click on the toolbar and click on the Customizelink. The list box on the left contains the actor entity. Add it to the right hand side and click Close. Additionally all missing components can be added using the customize menu.
8. Next step is to draw the diagram. Select an actor and a Use case from the toolbox. The diagram should look like the following.



**Figure4: “Login” usecase diagram for “EnterSystem” usecase**

9. Once you have created a use case diagram you can perform activities in that use case. For that we have to create a use case (Select “EnterSystem”) and right-click on it to present you with a white state/activity diagram sheet. If the white sheet does not appear then double-click on the Toolbar.
 

<p>n also indicate what activities are performed in that use case. For that we have to create a use case (Select “EnterSystem”) and right-click on it to present you with a white state/activity diagram sheet. If the white sheet does not appear then double-click on the Toolbar.</p>	<p>n also indicate what activities are performed in that use case. For that we have to create a use case (Select “EnterSystem”) and right-click on it to present you with a white state/activity diagram sheet. If the white sheet does not appear then double-click on the Toolbar.</p>
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10. Draw an activity diagram that resembles the above activity diagram using the icons that are present on the toolbar.



**Figure 5: State/Activity diagram for use case diagram “Login”**

11. Once you are done with use case diagram, you can add even more use case diagrams to this “Login” use case and repeat the same procedure as described above. You can also add more use cases to the current model as described in step 3.
12. Next step is to save your Rose Model. For that, click on File > Save and store the model (.mdl file) in your project directory. It may display a message saying that there is not enough disk space to save the model. However, go ahead and click Yes.

#### 4. Relationships Among Use Cases

1. As mentioned earlier, you can have multiple use cases. Now you may want to specify relationships between those use cases. There are three types of relationships:

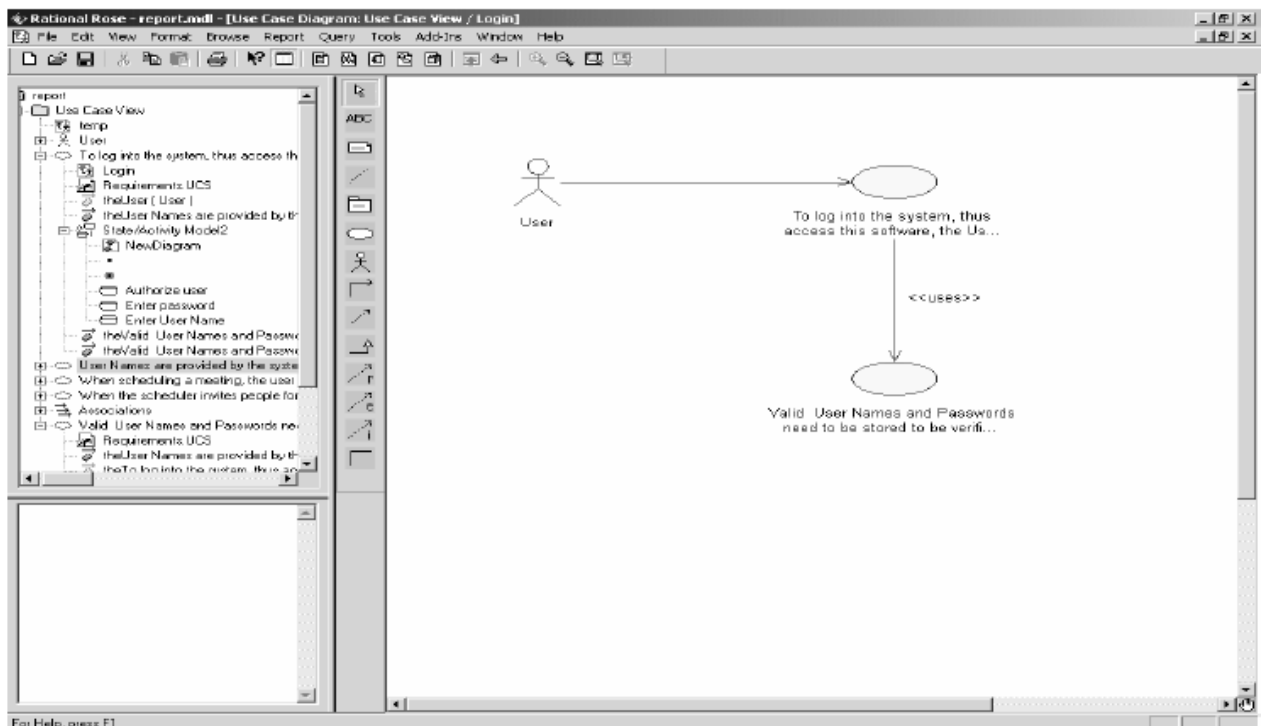
**Include:** An include relationship is a stereotyped relationship that connects a base use case to an inclusion use case. An include relationship specifies how behavior in the inclusion use case is used by the base use case.

**Extends:** An extend relationship is a stereotyped relationship that specifies how the functionality of one use case can be inserted into the functionality of another use case.

**Refine:** A refine relationship is a stereotyped relationship that connects two or more model elements at different semantic levels or development stages.

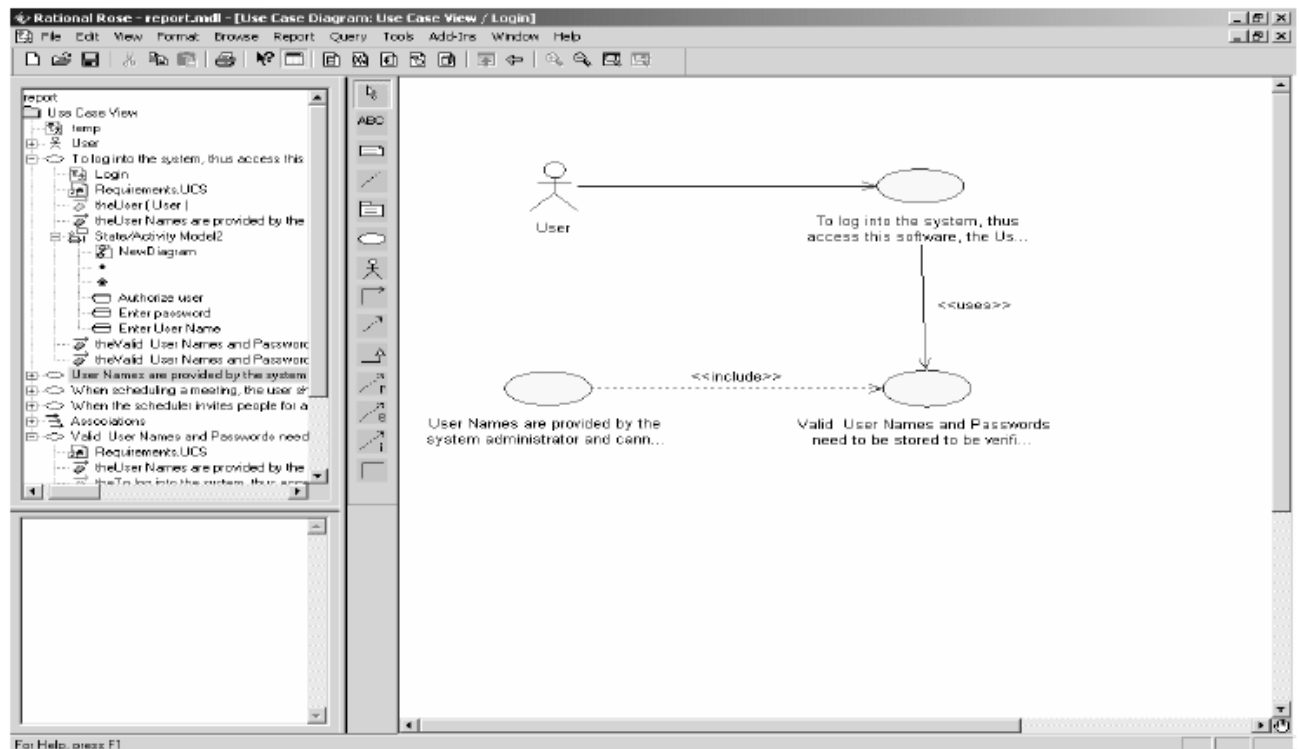
Other than these relationships you have a “ USES” generalization that indicates that one use case uses the functionality of another use case. I would like to explain how to set up relationships among use cases I have used an example of “Enter System” use case that we created earlier where user logs into computerized scheduling system.

- Now “Enter System” use case may need the services of other use case in which we have stored the valid usernames and passwords in a database. This use the generalization use case say “Valid Username and Password”, insert it into the use case diagram relationship from the toolbox.



**Figure 6: Adding “Valid Username.” use case to “Login” use case diagram**

- Furthermore, it may be the case that valid usernames are provided by system administrators and users cannot modify it. So our newly created use case of “Valid User Names and Password” includes the services of a use case where system administrator adds valid usernames to the database. So we have an include relationship.
- Now again create a new use case say “System Administrator” and drag it to our main use case diagram of “Login”. Also specify the include relationship from the toolbox. The include relationship can be obtained by customizing the toolbox.



**Figure7: Use case diagram “login” of Use Case “Enter System” with relationships**

## 5. References

1. Rational Website: [www.rational.com](http://www.rational.com)
2. BuiltIn help in Rational Rose.

### For help on use case and other diagrams:

Open Rational Rose, Start Programs Programming Unified Process and then select Tool Mentors follow

Tools Rational Suite Development Studio Rational 1  
 ed by Rational Rose from the left tab.