

Object-Oriented Technology and UML

Experiment 4

Activity Diagram Modeling

Objectives

- Understand the role of the activity diagram
- Be familiar with the general process of modeling activity diagram
- Become more familiar with the use of UML tools such as Rational Rose, and master the representation of common modeling elements in activity diagram

Case one: Activities in Library management system (Personal work)

● Construct the corresponding activity diagram for the following cases

➤ 1.Book Registration

- Upon arrival of new books, librarian will login the system and check if book information is already exist, and then register and record the books

➤ 2.Borrow book

- Librarian will scan campus card, check if there are overdue books, if there is non-payment of fines, and if there exceeds the maximum loan amount. After confirming the above information, scan the barcode to complete the loan operation

➤ You can define reasonable detail activities

Case two: Activities in Research project management system (Personal work)

- Construct the corresponding activity diagram for the following cases

- 1. User registration

- Project applicants need to register through the system. The company's various departments need to identify the identity, credit, research and other aspects, the registration is completed only when above audits are adopted

- 2. Project audit

- Project applicants are required to apply to the company through the system. When the project passed the initial assessment, the project will enter the stage of expert review. After the review by experts, if the project is approved, the project will be implemented and will experience the mid-assessment and project concluding stage

- You can define reasonable detail activities

Please consider the following questions

- Which view could activity diagram be created in? What is the use of activity diagram?
- What is the use of swimlane? How to use the swimlane?
- If there are concurrent activities, how to express concurrent activities?
- An activity node may contain the details of complex activities, how to build a sub activity diagram?
- When building a software model, only one activity diagram?

Steps of Activity Diagram Modeling

- Define the scope of the activity diagram
- Add the initial node and final node
- Add the activity node
- Add the decision node
- Identify parallel activities
- Add the control flows

Experiment requirements

- Requirements of report and email
 - Email: seuuml@qq.com
 - Email title: "Student ID Name UML EX4 Activity diagram"
- Please submit your work before 7:00 PM on Saturday
- Attachment (Please do not compress)
 - Report name: "Student ID Name UML EX4 Activity diagram case name"
- Please be sure to send the report according to the specified rules, otherwise, we will not receive your report