

Laboratory 6: Package and Sequence Diagrams using ArgoUML

Name : _____

Student Number : _____

Laboratory Time : _____

Objectives

- Add Packages to a Class Diagram in ArgoUML
- Create a Sequence Diagram in ArgoUML
- Create a new baseline in CVS by using tags

Preamble

In the last lab we learned how to create Use Case Diagrams and Class Diagrams. In this lab, we will learn how to create Sequence Diagrams and Package Diagrams using ArgoUML. We will be discussing these diagrams in class and discussion, and you will be using them for Assignment 3.

Grading Checklist

By the end of the laboratory session, you need to demonstrate to the TA that you can do the following tasks. The TA will check off the items below that you have completed and collect this cover page from you.

- Package Diagram
- Initial Sequence Diagram (Steps 1-6)
- Completed Sequence Diagram
- Baseline in CVS using tags

TA Initials: _____

Instructions for the Laboratory

Task 0: Familiarize with the Case Study

We will work on a system to buy DVDs online. In the last lab, we created a Use Case Diagram for this system.

Customers, Delivery Men, and Administrators will use the system. They can perform the following actions in the system:

Customer:

- Add DVD to shopping cart (requires the user to log in)
- Remove DVD from shopping cart (requires the user to log in)
- Check out shopping cart (requires the user to log in)
- Review contents of shopping cart (requires the user to log in)
- Search DVDs by Title and Category (Some examples of categories are: Series, Movies, Music)

Delivery Man:

- Check online orders
- Change the status of the order to delivered

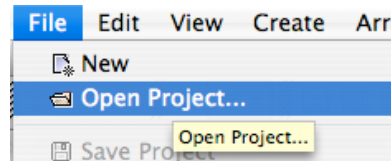
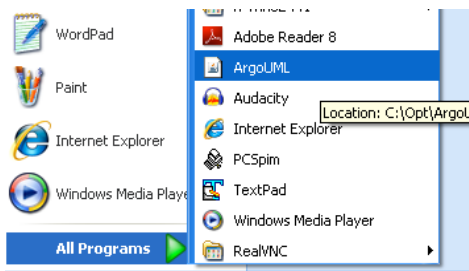
Administrator:

- Add DVD
- Update inventory of DVDs

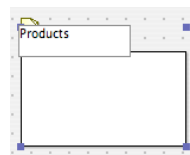
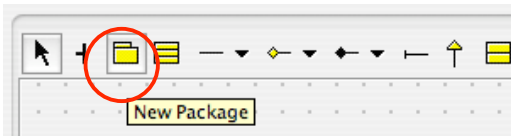
Task 1: Add Packages to a Class Diagram in ArgoUML

For this task, you will add Packages to the UML Class Diagram for the DVD Online Store provided to you.

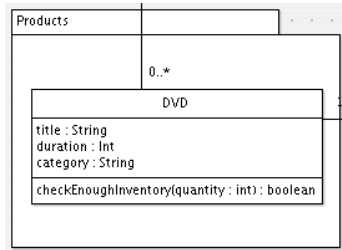
- a) Make sure you have the directory "UMLDiagrams" in your H directory. If not, create it.
- b) Download the Argo project Lab6.zargo from the instructor's web page (<http://www.ics.uci.edu/~michele/INF111/Informatics.html>) and save it in the H:\UMLDiagrams directory.
- c) Start ArgoUML and open the project Lab6.zargo that you just downloaded.



- d) Select the Class Diagram and create a Package called Products.



- e) Resize the Package you just created to make it bigger than the DVD class. Select the DVD class and drag and drop it inside the Products package.



- f) Create two packages more and organize the classes as following:

Package: Model

Classes:

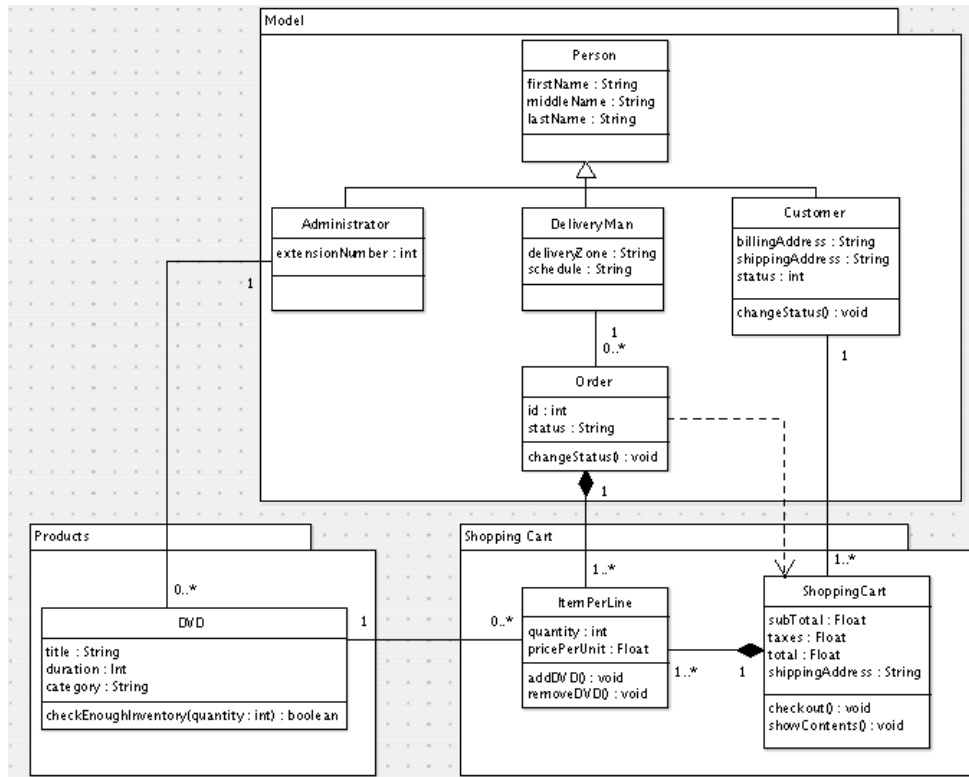
- Person
- Administrator
- Delivery Man
- Customer
- Order

Package: ShoppingCart

Classes:

- ShoppingCart
- ItemPerLine

- g) As a result, you should have a diagram similar to the following one:



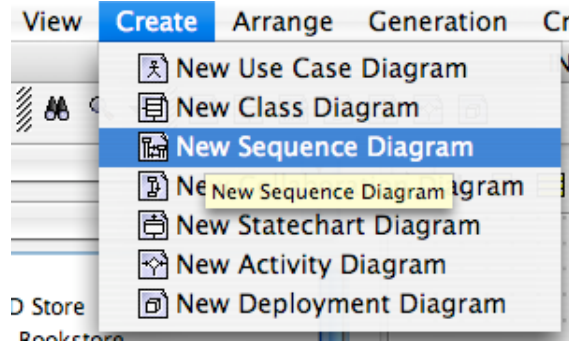
Note: The Package Diagrams can also be represented by Packages only without showing the classes inside them.

Task 2: Create a Sequence Diagram in ArgoUML

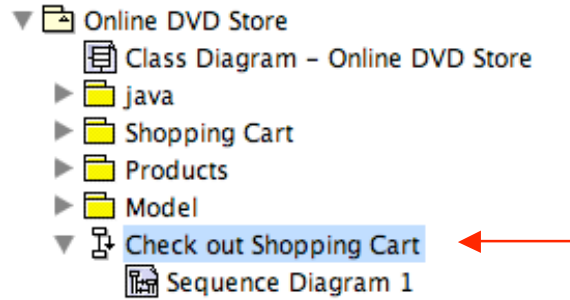
For this task, you will create a UML Sequence Diagram for the Use Case "Check out shopping cart" using ArgoUML. It will be based on the Use Case description provided below:

USE CASE 3	Check out shopping cart	
Goal in Context	Check out the shopping cart, enter the shipping and payment information and create the order	
Preconditions	The customer is registered in the system and the user is logged in	
Success End Condition	The order is placed	
Failed End Condition	The order is not placed	
Primary, secondary Actors	Customer Bank System	
Trigger	The Customer presses the "Check out " button	
DESCRIPTION	Step	Action
	1	The Customer presses the "Check out" button
	2	The system shows the contents of the shopping cart and asks for the Shipping Address
	3	The Customer enters the Shipping Address
	4	The system asks for credit card information
	5	The Customer enters credit card information
	6	The system sends the payment information to the Bank system
	7	The Bank system returns transaction OK
	8	The System creates the Order
	9	The System sends a notification to the Deliver man
	10	The System shows the Confirmation of Place Order page
EXTENSIONS	Step	Branching Action
SUB-VARIATIONS		Branching Action
	7	If the Bank system returns transaction NO OK, the system should show an Error Page explaining the reason of the failure.

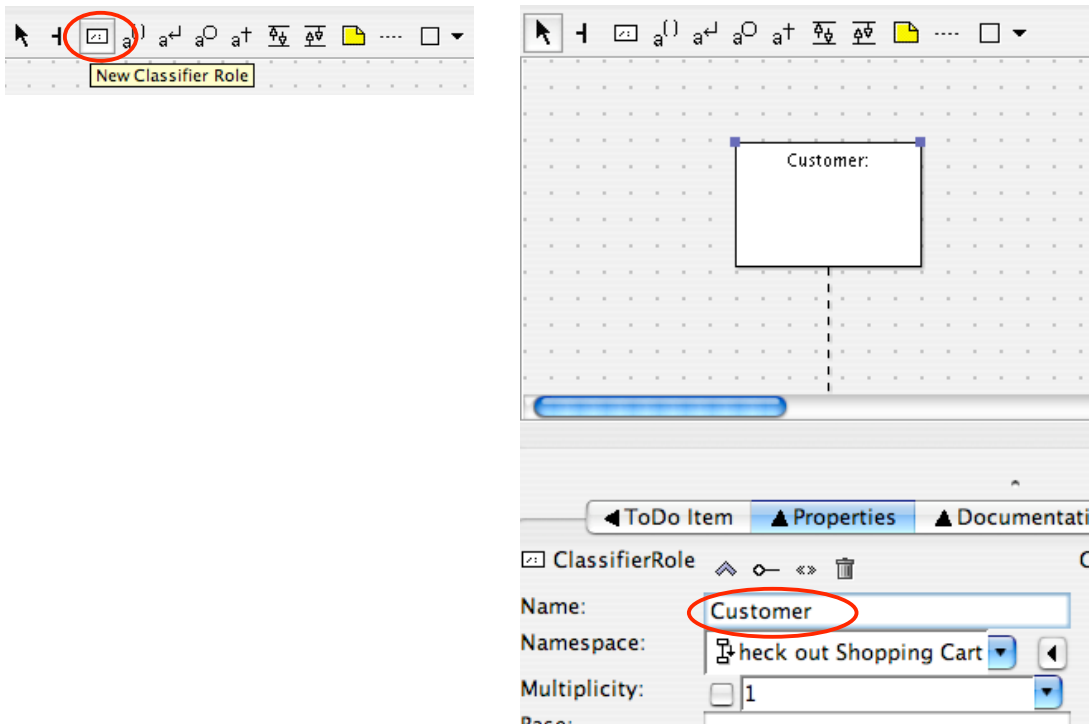
a) Create the Sequence Diagram in ArgoUML. Go to Create -> New Sequence Diagram



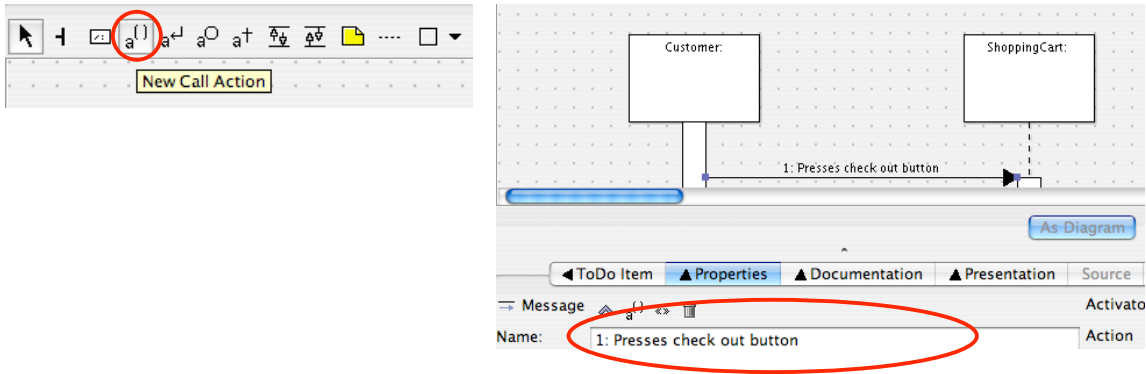
b) Change the name of the Collaboration created from "unattachedCollaboration" to "Check out Shopping Cart". Double click in Sequence Diagram 1.



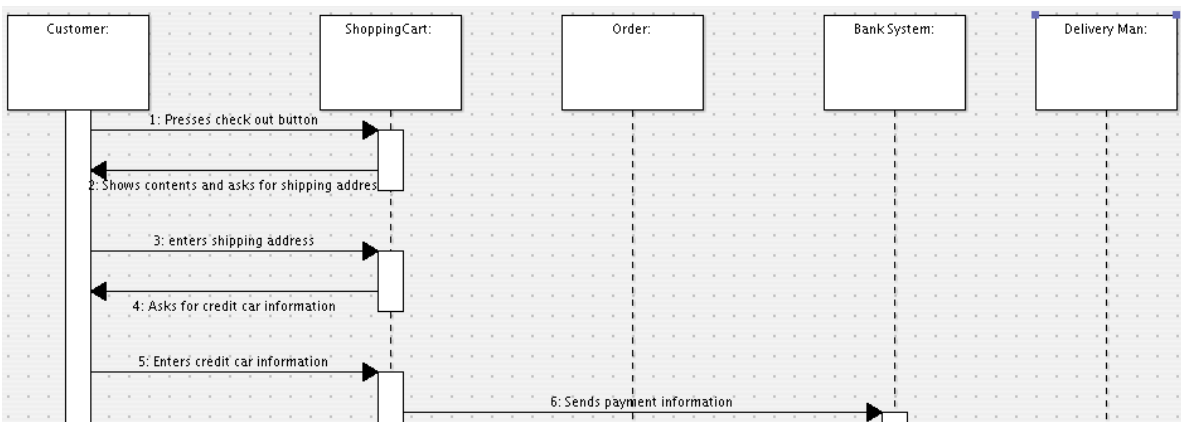
c) Create a New Classifier Role and change its name to "Customer."



- d) Create classifier roles for "ShoppingCart," "Order," "Bank System," and "Delivery man."
- e) Create a New Call Action. Drag the mouse from Customer to Shopping Cart. Rename the action "1: Presses Check Out button."

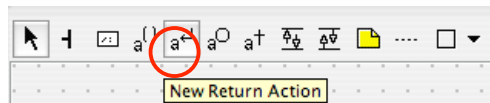


- f) The Sequence Diagram for the first 6 steps in the Main Scenario of the Extended Use Case Format will look similar to the following diagram:



Task 3: Complete all the steps in the Sequence Diagram

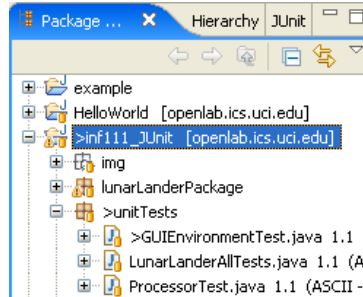
- a) Following the steps indicated in the Extended Format of the Use Case provided in the previous task, complete the steps 7-10 of the Main Scenario. Make sure to include a "Return Action" in step 7.



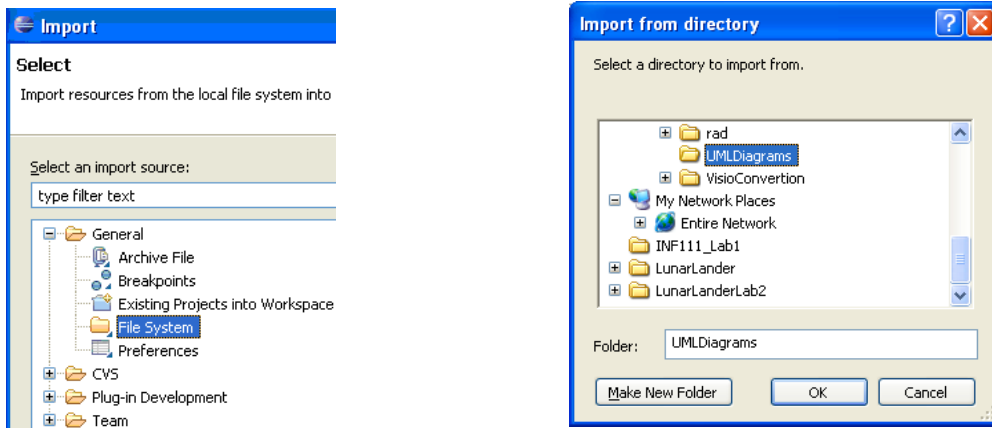
Task 4: Create a new baseline in CVS by using tags

Import the ArgoUML model and commit the project

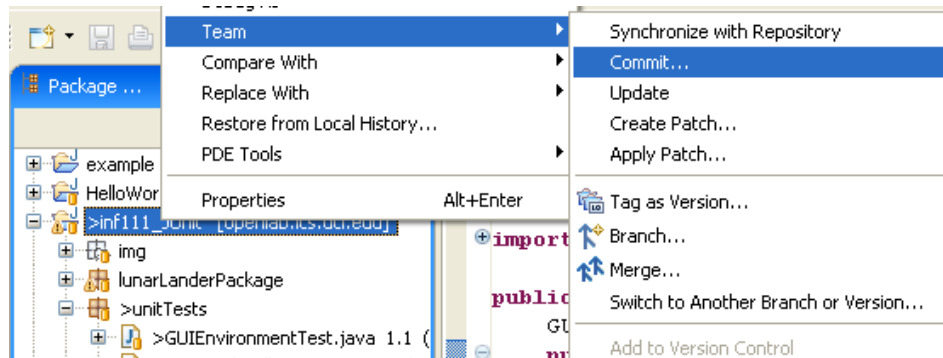
- a) Open Eclipse and go to the Java Perspective (Window -> Open Perspective -> Java)
- b) Using the Package Explorer, select the project you committed in CVS the last labs.



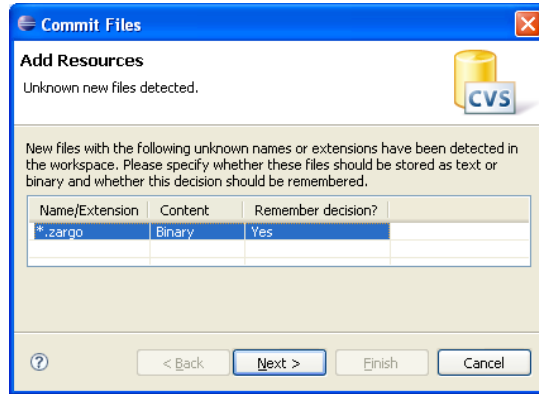
- c) Go to File -> Import and select File System. Click Next. Browse the directory where you saved the ArgoUML file (H:\UMLDiagrams) and click OK.



- d) Select the Lab6.zargo file and click Finish. You will see the file added to your project.
- e) Select the project in the Package Explorer. Right click on it and select Team -> Commit

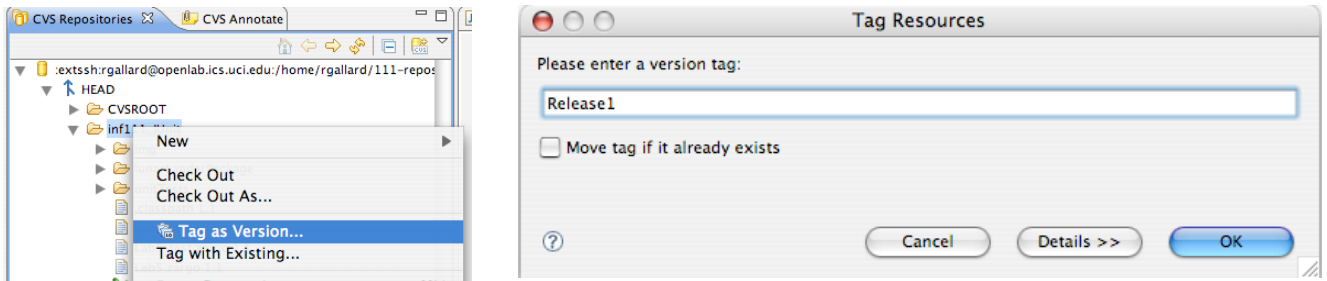


- f) In the "Add resource" Window, click Next. Enter the commit comment "Adding Package and Sequence Diagrams in ArgoUML". Click Finish. If you are prompted for your password, enter it.



Create a new baseline in CVS by using tags.

- g) Go to Window -> Open Perspective -> Other (CVS Repository Exploring). Select your project in the CVS Repositories view. Right click on it and select Tag as Version. Enter the version name "Release1" and press OK.



- h) Open the Versions folder, open the inf111_JUnit (project name) folder and you will see the folder for Release1.

