

Tutorial 2

Today we will have a quick introduction to ArgoUML and how to use it, as well as look at some examples of class diagrams.

Quiz dates:

- **Quiz 1**, available from 9am Friday 13 Mar to 11:30pm Monday 16 Mar.
- **Quiz 2**, available from 9am Friday 3 Apr to 11:30pm Monday 6 Apr
- **Quiz 3**, available from 9am Friday 8 May to 11:30pm Monday 11 May
- **Quiz 4**, available from 9am Friday 29 May to 11:30pm Tuesday 2 Jun. Note: Monday 1 June is the Queen's Birthday holiday.

Review

Last week we looked at how to use Eclipse and an introduction to using Java. Try answering the following question about the Java `main()` method.

Q1: What do each of the keywords of the following method signature mean?

```
public static void main(String[] args) { ... }
```

public	
static	
void	
String[] args	

Tutor Contact Details

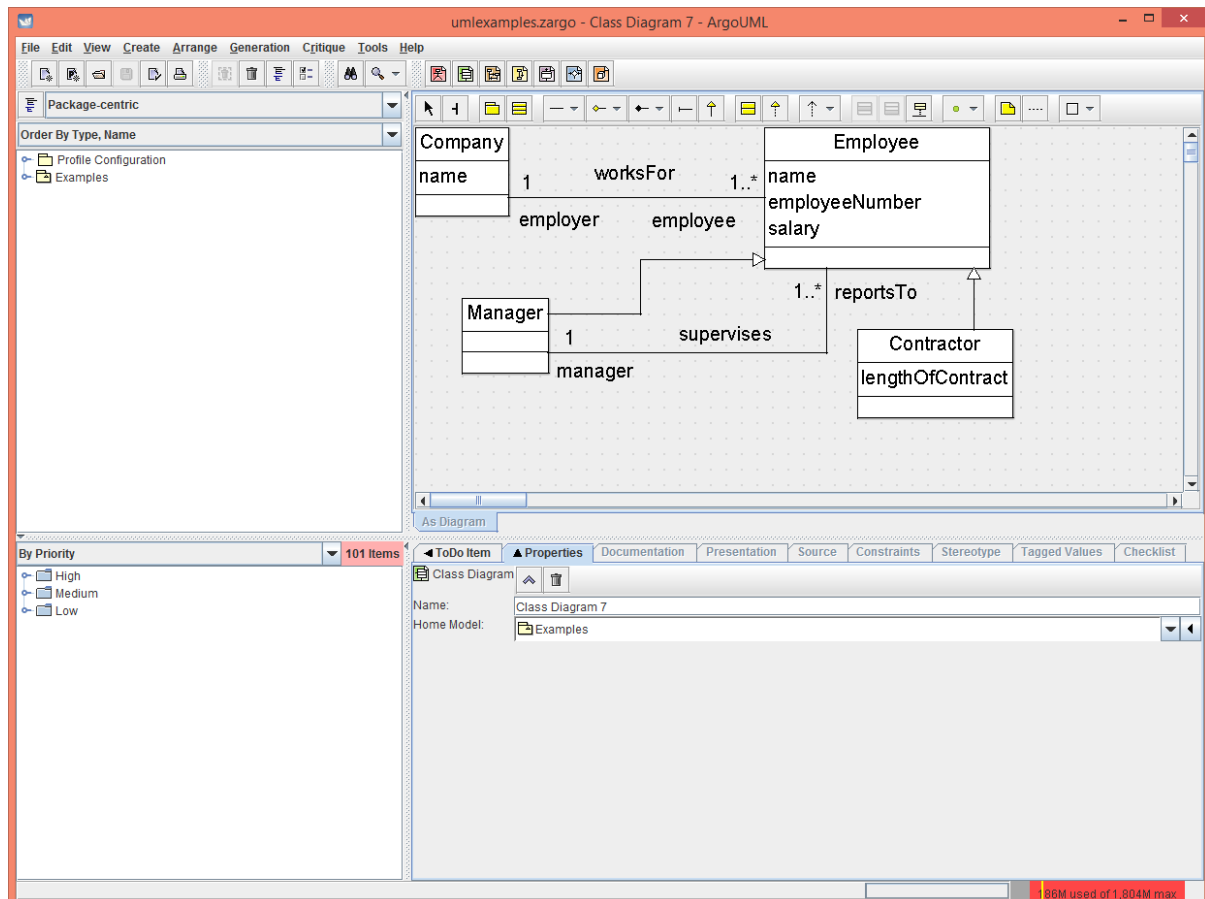
- **Freddy Hutchinson:** fhut994@aucklanduni.ac.nz
- **Monica Bian:** rbia002@aucklanduni.ac.nz

Part A – Installing & using ArgoUML

ArgoUML is a diagramming tool designed for creating and modifying UML diagrams. Its use is required by your first assignment in CS230.

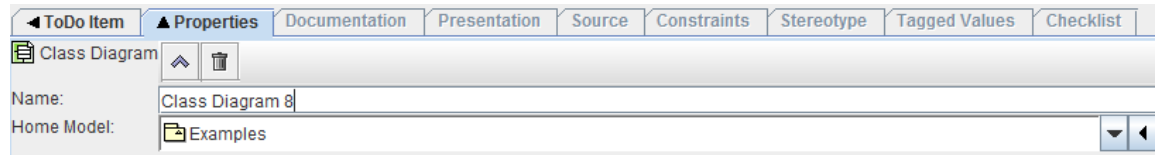
- **Step 1:** Go to <http://argouml-downloads.tigris.org/argouml-0.34/>
- **Step 2:** Download ArgoUML-0.34.zip - **Binary distribution (.zip format).**
- **Step 3:** Save it somewhere on your H:\ drive (or, alternatively your home computer or USB memory drive)
- **Step 4:** Unzip the .zip file.
- **Step 5:** Inside the extracted directory, open argouml.jar
 - ArgoUML should now launch
- **Step 6:** Download umlexamples.zargo from the course assignment page and save it as above
- **Step 7:** (In ArgoUML) use File > Open Project to open the above .zargo file.

You should now see something like this:

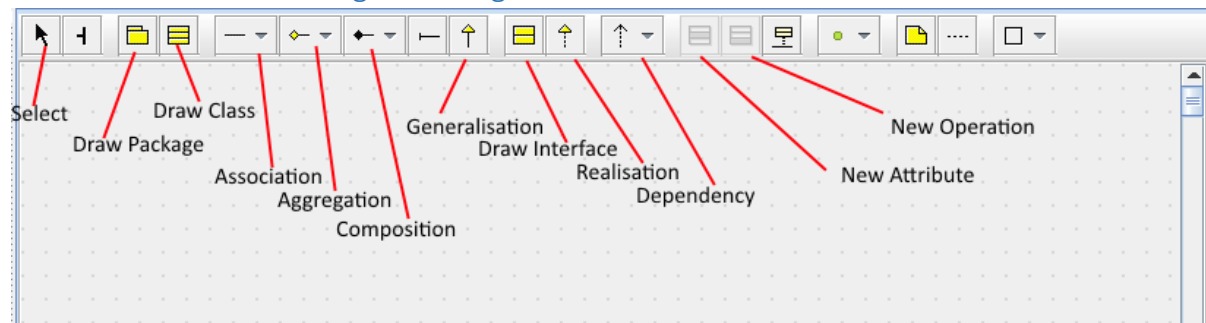


Part B - Class Diagrams

- **Step 1:** In ArgoUML go to Create > New Class Diagram
 - You should be presented with a blank canvas.
- **Optional Step 2:** In the properties pane, you can rename your diagram by modifying the Name field illustrated below.



How to use the Class Diagram Designer



Task 1:

Now that you have ArgoUML installed and a brief overview of its features, you now have the opportunity to practice. Use the above tools to draw the following Class Diagram.

Outline:

A local pet store has contracted you to design a system to keep track of their stock, orders and customers. Before you start work on any code, they want to see what your design looks like. Draw a simple UML Class Diagram that conveys the following basic concepts.

- An "Order" class to keep track of each order a customer makes. It needs to have (at minimum) the properties of "date", "price", "customer", and "animals" that were sold.
- An "Item" class that has a properties "type", "price" and "quantity" for items like Toys, birdcages and fishtanks.
- An "Animal" class that extends (or *generalises*) "Item", to keep track of each animal in their stock. An animal needs the further properties of "breed" and "isFed". It also needs the member (operation) of "Feed()"
- A "Customer" class to keep track of each customer, with the properties "name" and "address".

Think about the *types* the following variables would need to have if they were implemented as a class. The following are some type suggestions: float, boolean, String, Date.

Solution:

Part C – Use-Case Diagrams

- **Step 1:** using ArgoUML go to Create > New Use Case Diagram

Task 2:

For the example described above in part B, draw a use-case diagram to represent the following cases:

- A customer examining/petting an animal.
- A customer purchasing an animal.
- A staff member feeding the animals.

Solution: