

# Introduction to Eclipse

CO7205 Advanced System Design

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Lab sheet and materials

<http://www.cs.le.ac.uk/srml/>



- Login into Ubuntu
  - Your password is different from CFS account,
    - (Note: default password for new account is 'changeme')
    - Use either GNOME or KDE desktop.
  - How to reset my Linux password?
    - Open a **Terminal window** from  
**Application->Accessories->Terminal** and type *passwd*
  - Ubuntu is a Debian based Linux distribution, it is free and open source, more information please visit <http://www.ubuntu.com/>
  -

# Eclipse



- Introduction to Eclipse
  - A multi-language software development environment comprising an IDE (Integrated Development Environment ) and a plug-in system to extend it.
  - Written primarily in Java and can be used to develop applications in various modelling and programming language
- Start Eclipse
  - Open a terminal window then type: **eclipse34**



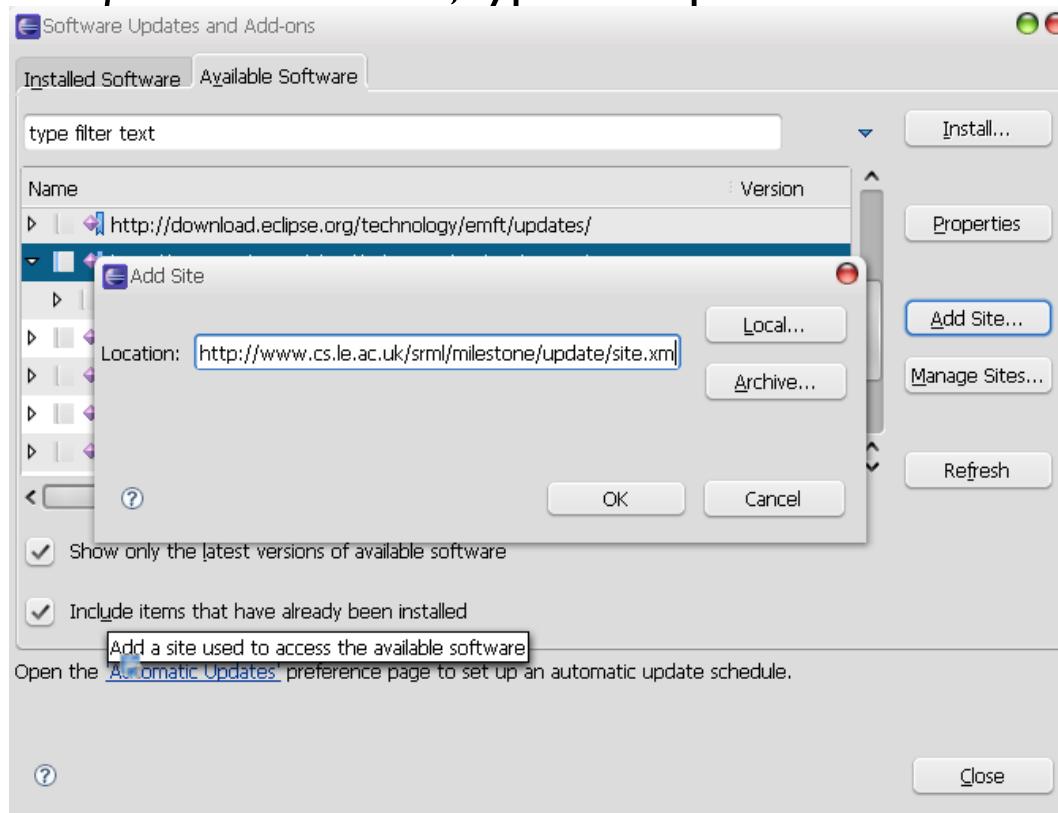
# Eclipse@home

- Q: How to install Eclipse on my Laptop?
  - **Step 1**
    - Install JDK (Java Development Kit) 1.6 from  
<http://java.sun.com/javase/downloads/index.jsp>,  
(Mac OS X user may skip this step as Mac OS X has build-in JDK installed.)
  - **Step 2**
    - Download Eclipse 3.4 from  
<http://www.eclipse.org/downloads/packages/release/ganymede/sr2>
    - Select this release : ***Eclipse Modeling Tools (includes Incubating components)***



# Eclipse@home

- Q: How to install Eclipse plugins?
  - A: Eclipse plugins can be installed from eclipse update sites. To add a update site to repository, goes to Menu->Help->Software Updates->Available Software->add Site, type the update site URL and click *install*.





# Eclipse@home

- Q: What plugins do I need for this module? Where are these update sites?
- A: You will need to install the following plug-ins for your eclipse:

**OpenArchitectureware 4.3.1**

<http://www.openarchitectureware.org/updatesite/milestone/site.xml>

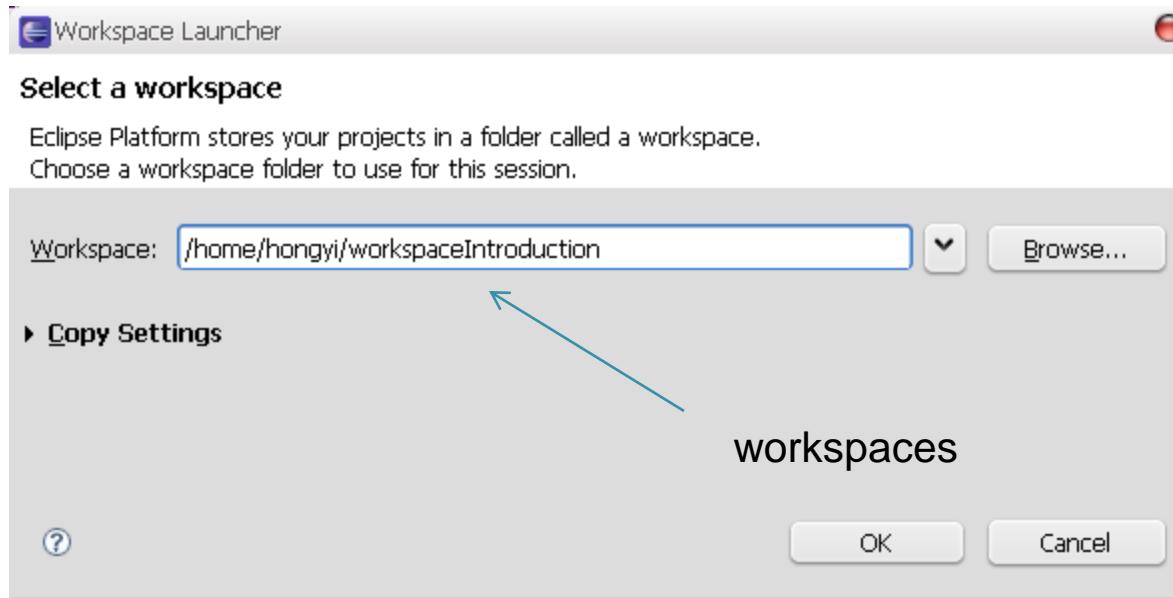
**SRML Modelling Environment 1.4.9**

<http://www.cs.le.ac.uk/srml/milestone/update/site.xml>

\*Please refer to appendix for installation guide

# Getting Start with Eclipse

- A workspace is an area allocated for someone to work in, a folder in which related software and data can be manipulated or developed in isolation from others.

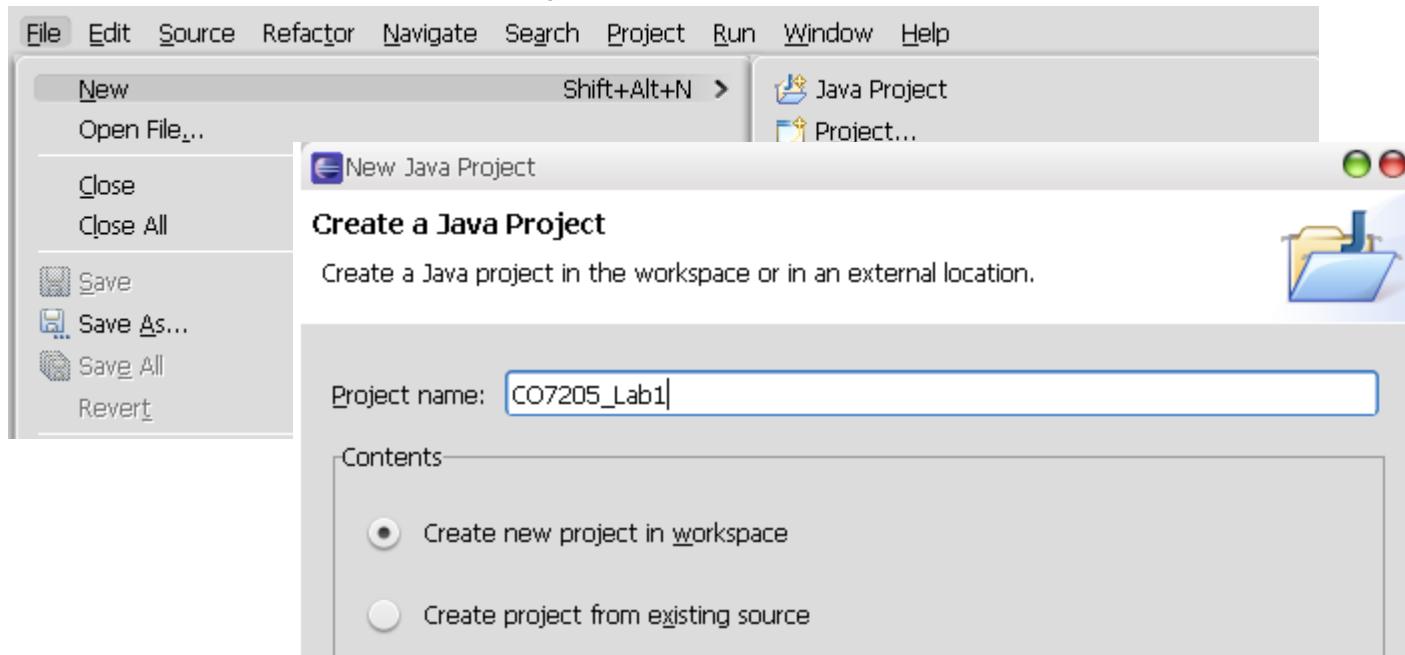


- e.g. “**workspacesIntroduction**”

# Create a New Project

We can use eclipse to create different kinds of projects  
(e.g. Java Project, UML Project, Plug-in Development Project, SRML Modelling Project etc.). Let's create a simple Java project :

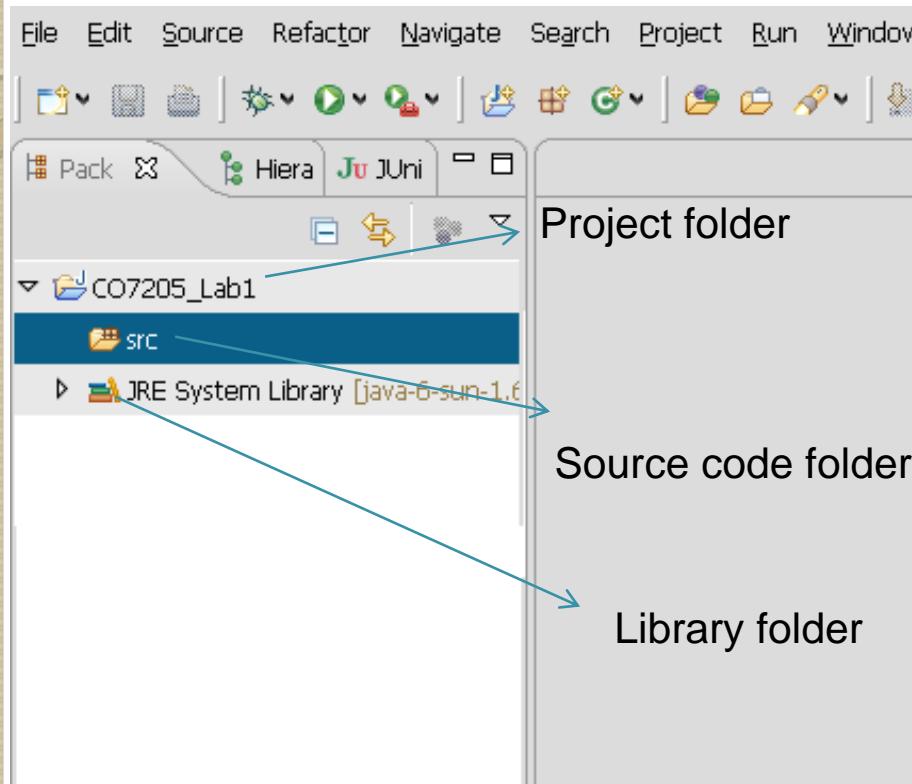
***File->New->Java project***



Use “**CO7205\_Lab1**” as project name



# Write a HelloWorld Java program with Eclipse



(1) Right click on **src** node (source code folder) and select  
**New->Class**

(2) Type **MyFirstEclipse** as class name and enter the following simple java code

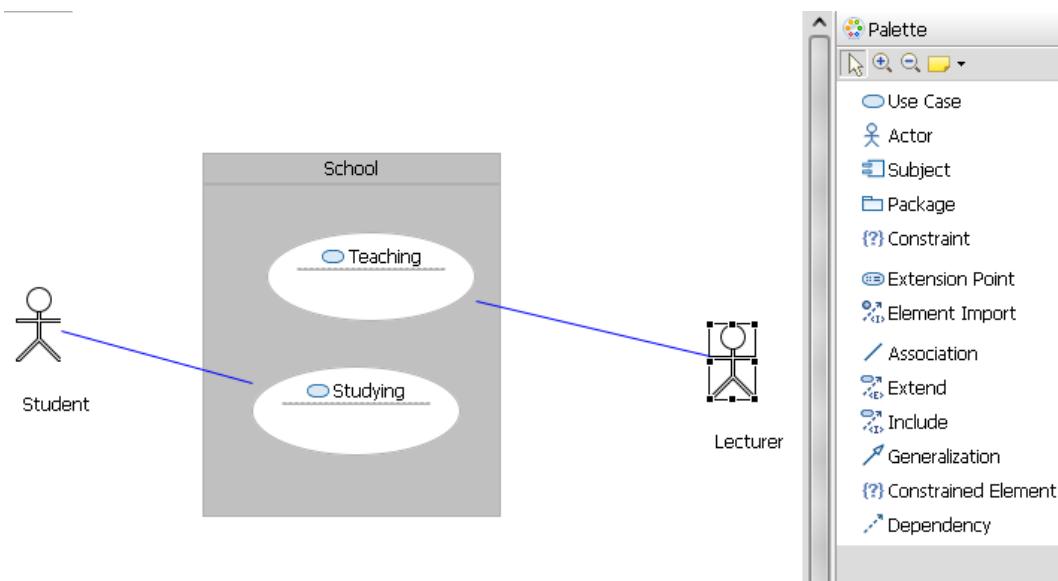
```
Public class MyFirstEclipse {  
  
    Public static void main(String[] args){  
        System.out.println("My first COT205 Lab")  
    }  
}
```

(3) Run the code from **Menu->Run->Run**, you should be able to see the output.



# Draw UML Diagram with Eclipse

- Eclipse UML2 plug-in can be used to draw UML diagram including:
  - UML Class diagram
  - UML Use Case diagram
  - UML Activity diagram
  - UML State machine



e.g. To draw a UML Use Case Diagram

*File->New->Other->UML UseCase Diagram*

# Eclipse Practices (Java)

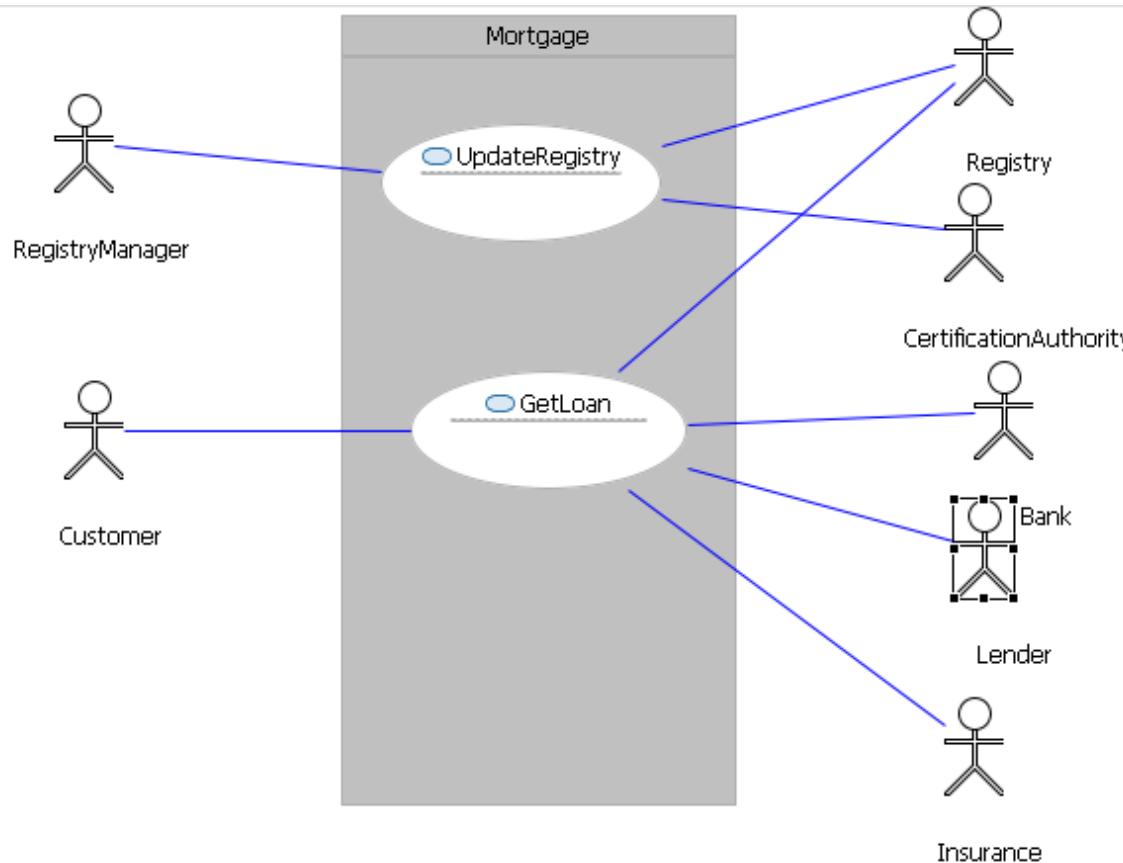
- Task 1: Use Eclipse IDE to write a simple Java console application which prints the sum of all prime numbers ranging from 1 to 100.

Question:  $2+3+5+7+11 \dots + 89+97 = ?$



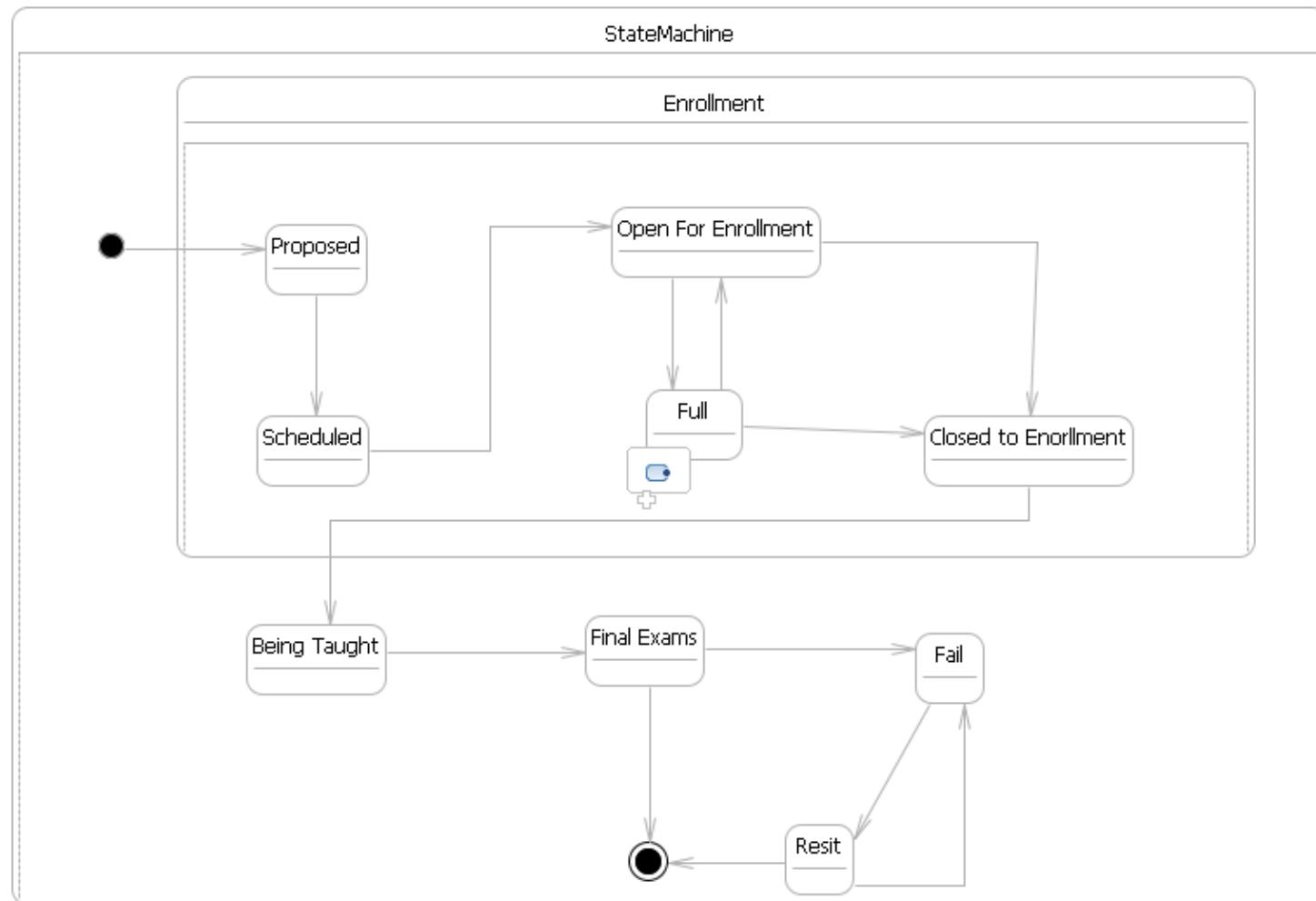
# Eclipse Practices (UML)

- Task I: Draw the following UML Use Case Diagram with Eclipse.



# Eclipse Practices (UML)

- Task 2: Draw the following UML State machine with Eclipse.





# Appendix

- Ubuntu Tutorial
  - <http://ubuntu-tutorials.com/>
- Eclipse Online Tutorial
  - <http://www.vogella.de/articles/Eclipse/article.html>
- Eclipse FAQ
  - [http://wiki.eclipse.org/index.php/Eclipse\\_FAQs](http://wiki.eclipse.org/index.php/Eclipse_FAQs)



# SRML Modelling Environment Installation

**SRML Modeling Environment is an Eclipse plugin thus can be installed and run on any platforms (windows/Linux)**

- **Step 1** download Eclipse 4.3 from  
(Eclipse 3.4 SR2 (Ganymede))
- <http://www.eclipse.org/downloads/packages/release/ganymede/sr2>  
\* Please download this release: "Eclipse Modeling Tools (includes Incubating components) )
- **Step 2** install openArchitectureWare 4.3.1 for Eclipse 3.4/SDE from  
<http://www.openarchitectureware.org/updatesite/milestone/site.xml>  
(Menu: Help->Software Updates->Available Software->add Site)



# SRML Modelling Environment Installation

- **Step 3 install SRML Modeling Environment from <http://www.cs.le.ac.uk/srml/milestone/update/site.xml>**
- (Menu: Help->Software Updates->Available Software->add Site)

