



Compsci230



Tutorials

Introduction

- ▶ **Seven tutorial sessions:**

- ▶ Mo 8:00am - 9:00am at 303S.I75 (Behzad)
- ▶ Mo 11:00am-12:00noon at 303S.G75 (Behzad)
- ▶ Mo 3:00pm-4:00pm at 303S.G75 (Behzad)
- ▶ We 9:00am-10:00am at 303S.G75 (Behzad)(Monica)
- ▶ Th 9:00am-10:00am at 303S.G75 (Monica)
- ▶ Th 10:00am-11:00am at 303S.G75 (Monica)
- ▶ Fr 10:00am-11:00am at 303S.G75 (Monica)

- ▶ **Two tutors:**

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Tutorial: Eclipse IDE

- ▶ The tutorial will give an introduction to Eclipse and basic information on how you can use it to assist you while programming in Java.
- ▶ **What is Eclipse?**
- ▶ It is an Integrated Development Environment (IDE) where you can create, edit, compile, run, and debug your projects.
- ▶ It supports not only Java but also C, C++ etc.
- ▶ It is an open source supported by IBM and can be run on any platform with Java Virtual Machine (JVM).
- ▶ <http://www.eclipse.org/downloads/>



Tutorial: Eclipse IDE

- ▶ **Why use Eclipse?**
- ▶ It makes the programmer's job easier.
- ▶ The features are provided in an integrated fashion which makes programming tasks easier in comparison to command utilities.
- ▶ Some important features include code generation, syntax error checking, formatting and indentation, spelling mistakes, ease of debugging, suggestions for errors fixing, etc.



Tutorial: Eclipse IDE

- ▶ **How to start Eclipse?**
- ▶ In CS labs, Eclipse is located at:
 - ▶ **Start> Program Files> Development> Development Environment> Eclipse**
- ▶ If you have installed it on your own machines at home (at C:\Program Files\Eclipse) then you need to double-click Eclipse icon in the **C:\Program Files\Eclipse** folder.
- ▶ Once you have started it, you may be prompted to select a workspace.
- ▶ Workspace is the place where your projects are created and stored.
- ▶ Choose an appropriate folder in your H: drive so you do not lose any work.



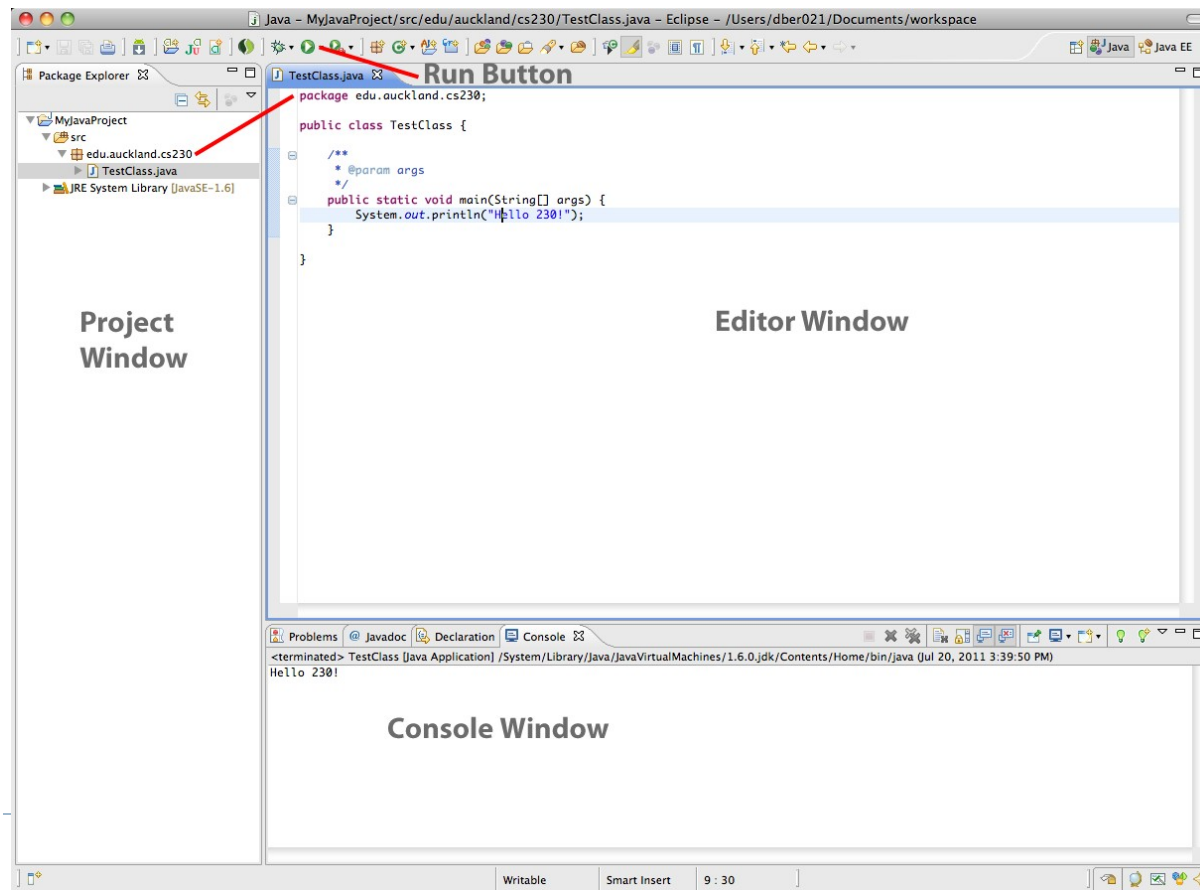
Tutorial: Eclipse IDE

- ▶ **How to create a Project?**
- ▶ To create a project:
 - ▶ File>New>Java Project OR
 - ▶ File>New>Project and choose 'Java Project' from the list.
- ▶ You can then either choose to: 'Create a new project in workspace'.
- ▶ Enter a name for your project and click 'Finish' OR 'Create project from existing source'.
- ▶ Enter a name for your project, browse to the folder where the project exists, select the project, and click 'Finish'.



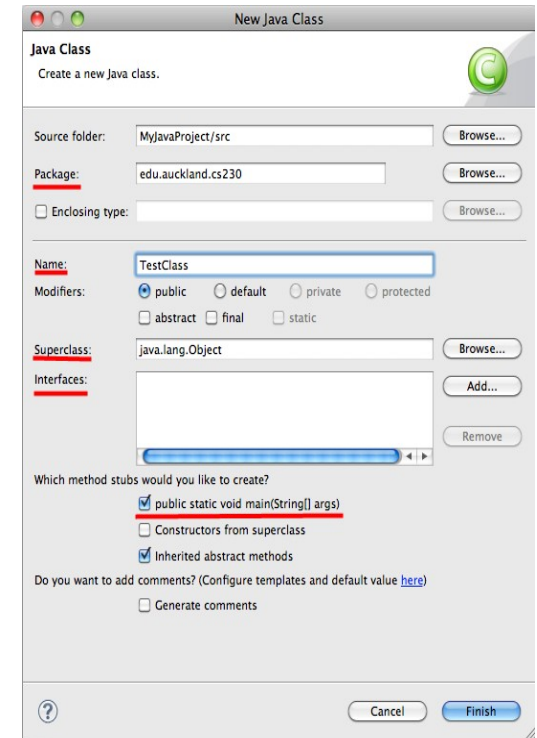
Tutorial: Eclipse IDE

- ▶ *Task 1: Create a new project for the purpose of this tutorial. Once you have created the project, your project will appear in the 'Package Explorer'.*



Tutorial: Eclipse IDE

- ▶ **How to add a new class?**
- ▶ Right click the appropriate package,
- ▶ Choose New>New Class.
- ▶ Choose appropriate options for your class i.e., you could have your class inherit from `java.lang.Object`, you could have your new class inherit from an existing class in your package in which case you could browse the superclass as well as inherit constructors from superclass by ticking 'Constructors from superclass' option, include a main method in your class by clicking 'public static void main (String[] args)', add interfaces that your class needs to implement, etc.
- ▶ Once you have selected your options, click Finish.



Tutorial: Eclipse IDE

- ▶ *Task 2. Create a new class in your newly created project. Give it a meaningful name, choose to inherit from `java.lang.Object`, and include main method in the class. Include a line of code in your class that prints your name. Note how when you are adding the code, Eclipse looks up appropriate methods and presents you the list to choose from. Also include a line of erroneous code and notice how Eclipse will find and display the errors. When you double click a displayed error, Eclipse opens the file containing the error and highlights the line of code that needs to be corrected.*



Tutorial: Eclipse IDE

- ▶ **How to run your project?**
- ▶ You can run your project by clicking the Run button located the top left side of the Eclipse IDE toolbar. You may want to choose Run As 'Java Application'.
- ▶ To **stop** a running project, click the red stop button located above the output pane. This button is enabled only when a project is running.
- ▶ *Task 3. Run your project to print your name to the output console.*



Tutorial: Eclipse IDE

- ▶ **What are packages?**
 - ▶ Packages are used in Java programming to organise the code.
 - ▶ The files are contained within the packages.
 - ▶ In genral, the class you created is contained within the **‘default package’**.
 - ▶ You can also create your own packages by clicking **New>Package** in Eclipse and then create your code files within the package.
 - ▶ The files contained within the package have the line **‘package <package_name>’** on their top.
 - ▶ You could also import other packages and files within other packages in your Java classes.
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