

Starting with Eclipse

Java Lecture-2

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Latest Eclipse Installation

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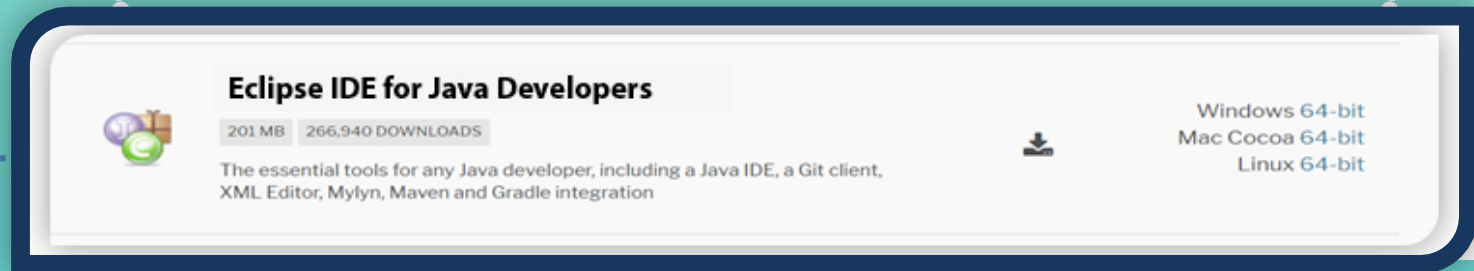
Quiz

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Homework



Eclipse can be downloaded from the url below
<https://www.eclipse.org/downloads/packages/>

A screenshot of the Eclipse IDE for Java Developers download page. The page has a white background with a dark blue border. On the left, there is a small icon of a box with a green checkmark. To its right, the text "Eclipse IDE for Java Developers" is displayed in bold. Below this, the file size "201 MB" and the number of downloads "266,940 DOWNLOADS" are shown. A description follows: "The essential tools for any Java developer, including a Java IDE, a Git client, XML Editor, Mylyn, Maven and Gradle integration". On the right side, there is a download icon (a downward arrow) and a list of supported operating systems: "Windows 64-bit", "Mac Cocoa 64-bit", and "Linux 64-bit".

Eclipse IDE for Java Developers

201 MB 266,940 DOWNLOADS

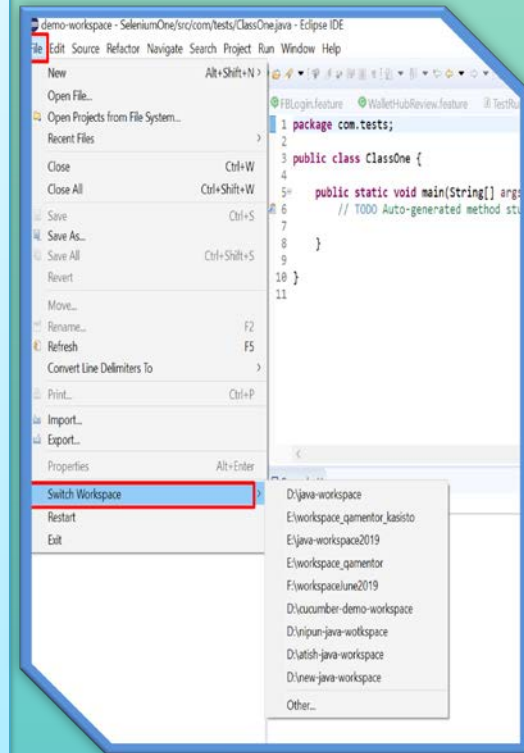
The essential tools for any Java developer, including a Java IDE, a Git client, XML Editor, Mylyn, Maven and Gradle integration

Windows 64-bit
Mac Cocoa 64-bit
Linux 64-bit

Always go for Eclipse IDE for Java and download
according to your system

Workspace in Eclipse

- ❏ In any **IDE**, **workspace** is the hard drive location where you will keep your Java projects
- ❏ We will create a workspace say “**java-workspace**” to maintain all our Java projects
- ❏ You can have more than one **workspace** for different **purposes**, suppose we have “**WorkspaceA**” for client “**X**” and “**WorkspaceB**” for client “**Y**”
- ❏ When you select **workspace** as **eclipse workspace**:
 - ❏ **Hidden directory** named “**.metadata**” is created in **workspace** by itself
 - ❏ There is a **configuration settings** file named “**version**” which has all the information details of eclipse
- ❏ We can **change** to new **workspace** from within eclipse:
 - ❏ Go to “**File**” menu and select “**Switch Workspace**”
 - ❏ Select the folder you want to **navigate**



Understanding Eclipse Views

01

Console view – similar to command prompt where output is shown

02

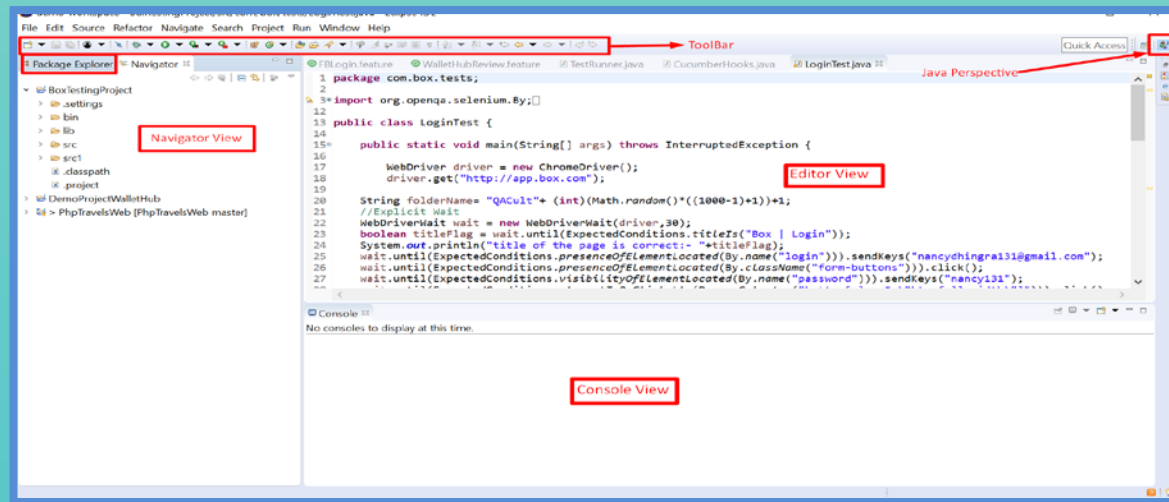
Working in java perspective – This is default perspective for java development

03

Understanding project or package explorer view – default view to create java project

04

Navigator View – where to locate class files



Setting Java Build Path in Preferences

01

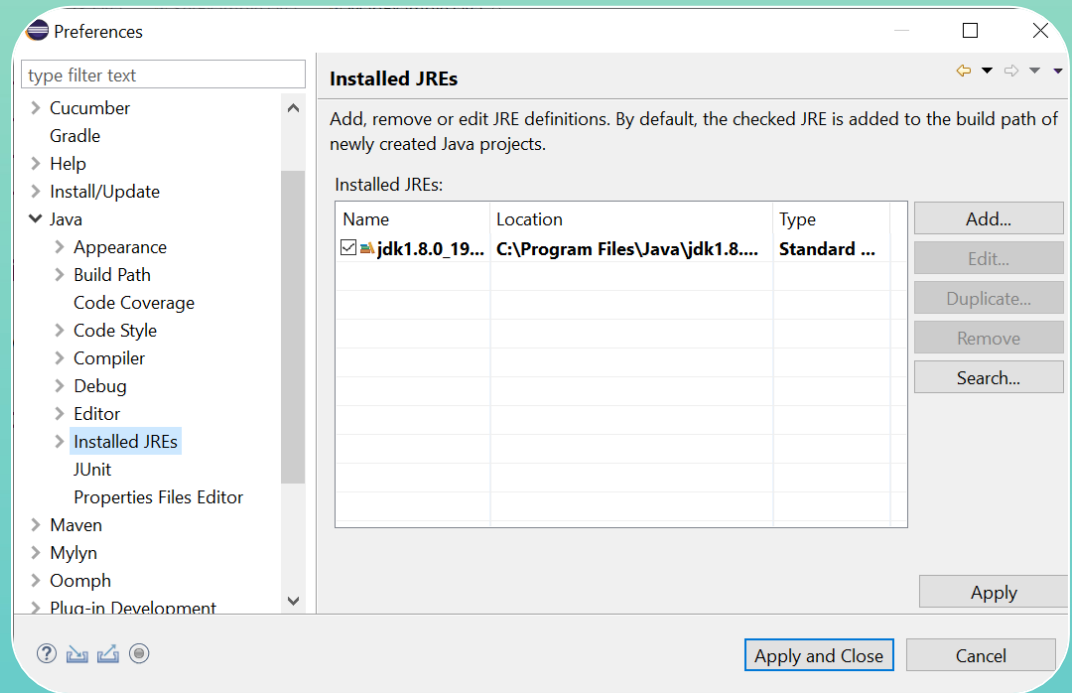
Locating preferences in Window menu

02

Getting to Java Build path – In Preferences window, expand java and click on Installed JRE's

03

Setting jdk path for all projects – Set your JDK installation path as a default jdk for all projects



Understanding Java Project Structure

1

Creating a simple java project in workspace

2

Understanding source folder “src” where java files are kept

3

Understanding java library and importance of runtime jar

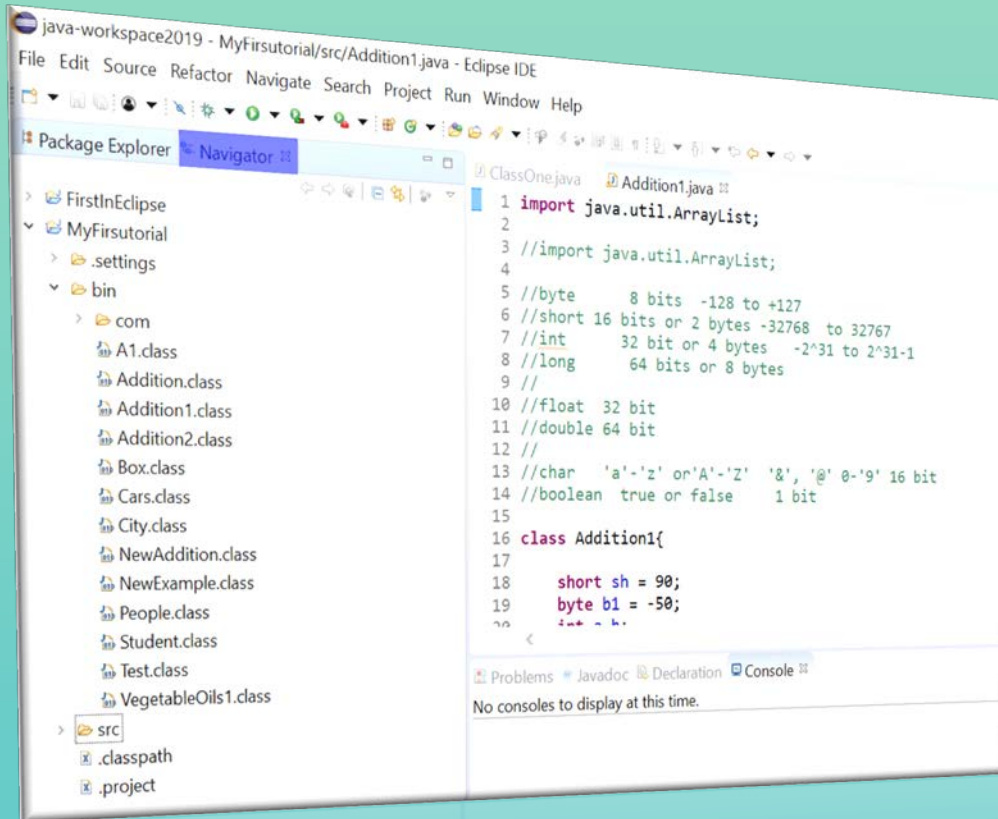
4

Creating simple java file for execution – It is to show the simple execution of java program

JavaOne

- ▼ JRE System Library [JavaSE-1.8]
 - > resources.jar - C:\Program Files\Java\jdk1.8.0_191\jre\lib
 - > rt.jar - C:\Program Files\Java\jdk1.8.0_191\jre\lib
 - > jsse.jar - C:\Program Files\Java\jdk1.8.0_191\jre\lib
 - > jce.jar - C:\Program Files\Java\jdk1.8.0_191\jre\lib
 - > charsets.jar - C:\Program Files\Java\jdk1.8.0_191\jre\lib
 - > jfr.jar - C:\Program Files\Java\jdk1.8.0_191\jre\lib
 - > access-bridge-64.jar - C:\Program Files\Java\jdk1.8.0_191\jre\lib\ext
 - > cldrdata.jar - C:\Program Files\Java\jdk1.8.0_191\jre\lib\ext
 - > dnsns.jar - C:\Program Files\Java\jdk1.8.0_191\jre\lib\ext
 - > jaccess.jar - C:\Program Files\Java\jdk1.8.0_191\jre\lib\ext
 - > jfxrt.jar - C:\Program Files\Java\jdk1.8.0_191\jre\lib\ext
 - > localedata.jar - C:\Program Files\Java\jdk1.8.0_191\jre\lib\ext
 - > nashorn.jar - C:\Program Files\Java\jdk1.8.0_191\jre\lib\ext
 - > sunec.jar - C:\Program Files\Java\jdk1.8.0_191\jre\lib\ext
 - > sunjce_provider.jar - C:\Program Files\Java\jdk1.8.0_191\jre\lib\ext
 - > sunmscapi.jar - C:\Program Files\Java\jdk1.8.0_191\jre\lib\ext
 - > sunpkcs11.jar - C:\Program Files\Java\jdk1.8.0_191\jre\lib\ext
 - > zipfs.jar - C:\Program Files\Java\jdk1.8.0_191\jre\lib\ext
- ▼ src
 - > (default package)

Understanding Class Files



How to see class files in eclipse – You can view them in “**Navigator**” view in “**bin**” folder.

What is the importance of class files in eclipse – Try to run java program in eclipse by changing just class name and not java file name.

We always work in “**Project Explorer**” view and try to avoid working with class files.

- ❏ **Classes and Objects are basic concepts of Object Oriented Programming which revolve around the real life entities.**
- ❏ **Class is a virtual entity – Explanation of class while comparing with real objects like tree or human.**
- ❏ **A class is a user defined blueprint or prototype from which objects are created. In java everything is within a class.**

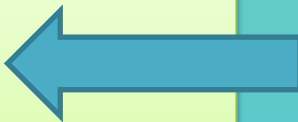
Class

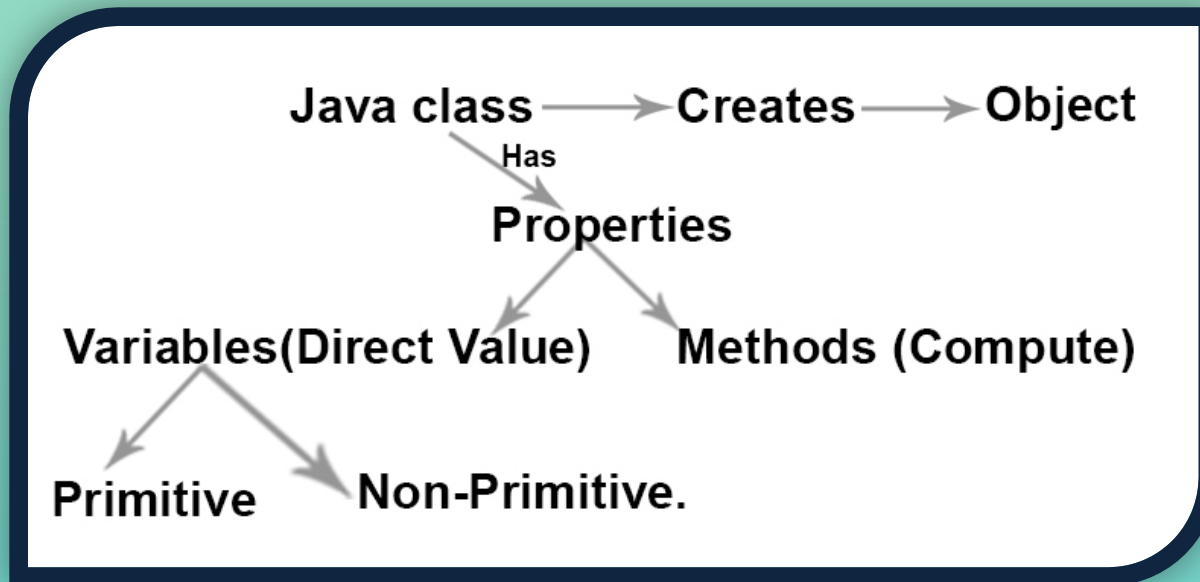
Tree class



has properties like
no. of leaves.
no. of branches
Height, width
Root-depth

To access these
properties, we need
Class object





- ❏ Class contains properties
- ❏ To access these properties we need an object of class
- ❏ Class properties – Methods and Variables
- ❏ Variables have their value stored in one of two types of memory - primitive and non-primitive
- ❏ Methods are something that need computation

Qus: How will you see **class files** within **eclipse**?

Ans: Within Eclipse, open “**Navigator**” view to see **class files** and **project structure**.

Qus: Where will you set the **Java path in eclipse** and which path will you set?

Ans: In **eclipse**, java path is set:

Window menu → **Prefrences** → **Java** → **Installed JRE** → **set path here**

We will set the path of our **JDK installation** in eclipse.

Qus: Why do we need an **object of a class**?

Ans: We need an **object of class** to **access** the properties of class which are **methods and variables**.

Qus: Can you explain the **properties of a class**?





Ans: Class is a **blueprint or virtual entity** which contains properties as **methods and variables**. **Variables** have their value **direct value** whereas **methods** needs some **computation**.

Qus: What are **variables in a class**?

Ans: **Variables** are the **properties of the class** and have **direct value** assigned to them. We have two kind of variables – **primitive and non primitive variables**.



HOMEWORK

-  **Set Up Eclipse**
-  **Create a simple java Project**
-  **Create a java class**
-  **Try to study about primitive data types**