SLIIT
Discover Your Future

BSc (Hons) in Information Technology
Year 2
Data Structures and Algorithms – IT2070
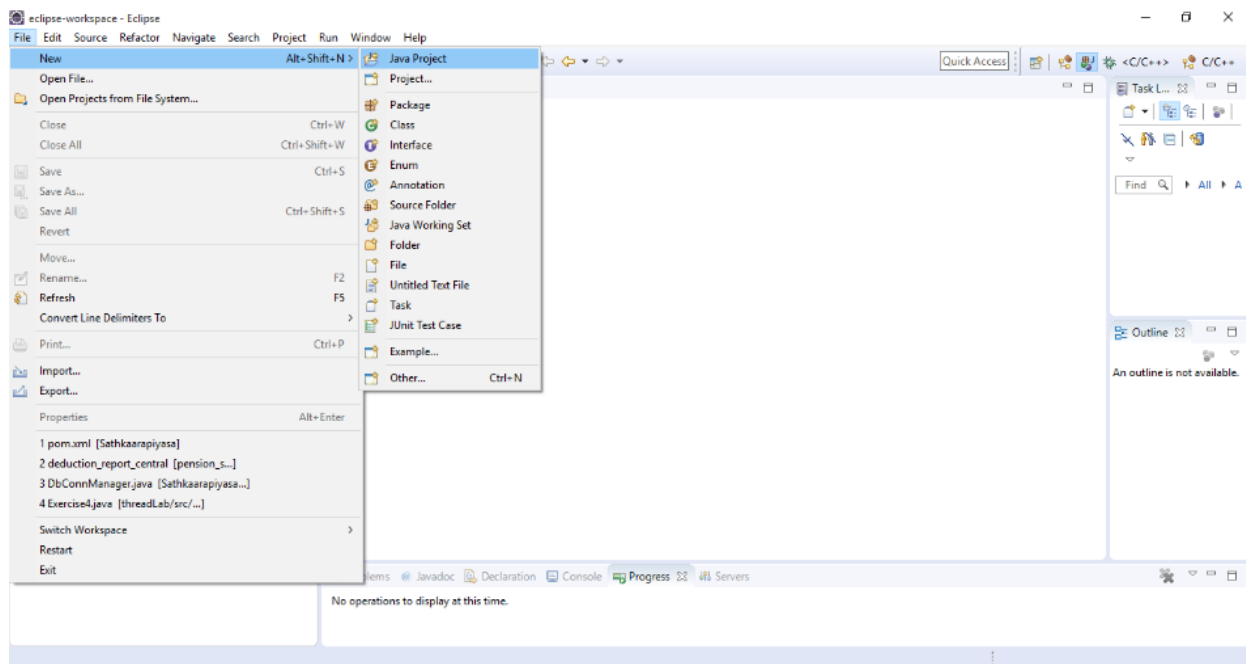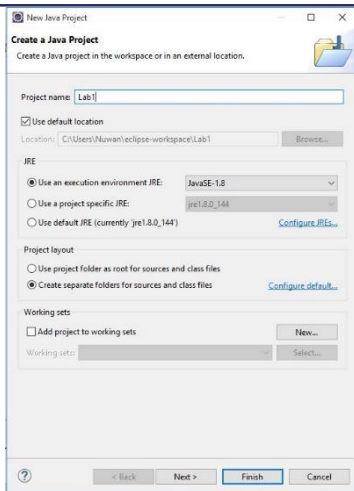
Lab Exercise 1 – Stacks   **2020**

Steps to create a Java Class in Eclipse IDE

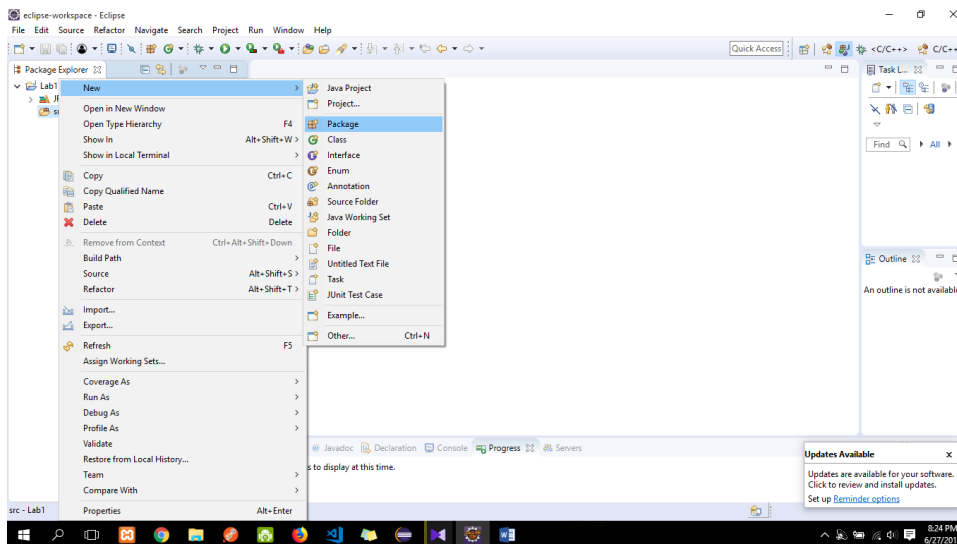**Step 1 : Open eclipse**

Step 2 : Create a new project

File ➡ New ➡ Java project

Lab Exercise 1 – Stacks   2020

Step 3: Create a new Package

Right click on src ⟹ New ⟹ Package

Step 4: Create a java class within the created package

Right click on created Pacakage ⟹ New ⟹ Class

Question

a) Implement Stack class to store characters. Identify the data members required and implement the below methods with the constructor.

   Push(), Pop(), Peek(), isEmpty() and isFull()

b) Develop an application to

   i)   Insert characters to the stack using push() method.

   ii) Remove the content of the stack and display them.

   iii) Comment on the order of insertion to the stack and the order of removal from the stack.

c) Use the stack class created above and check whether a user entered expression is correctly parenthesized.

   Ex: $3 + ((6 * 2) – 3)$ → valid
          $5 * 6 + (2 \ - 5$ → not valid