



Faculty : Mr. Tarek Mizan

Lab Instructor: Nazmul Alam Diptu

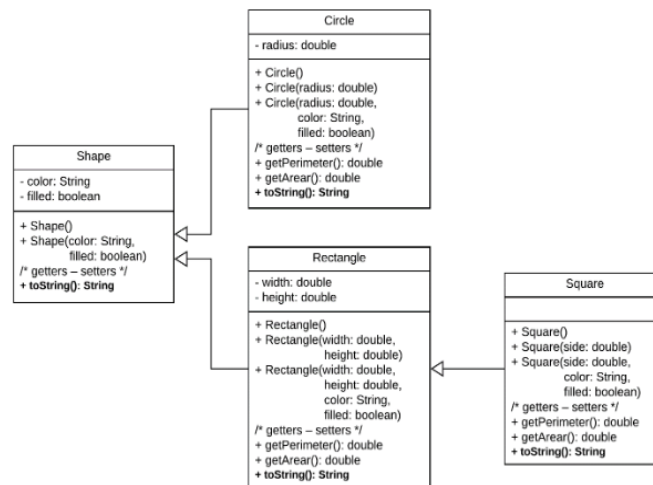
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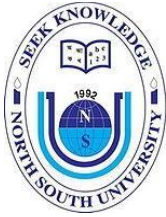
Class Timing: ST 1:00 PM – 2:30 PM (LIB-611)

Topic: Polymorphism

Tasks:

1. Implement the following UML diagram. In the main class create several object those declare type will be Shape, but the actual type will be Shape, Circle, Rectangle, Square respectively. Then call the toString() methods for each one of them to show the details. In toString() method display area, perimeter along with the attributes value.



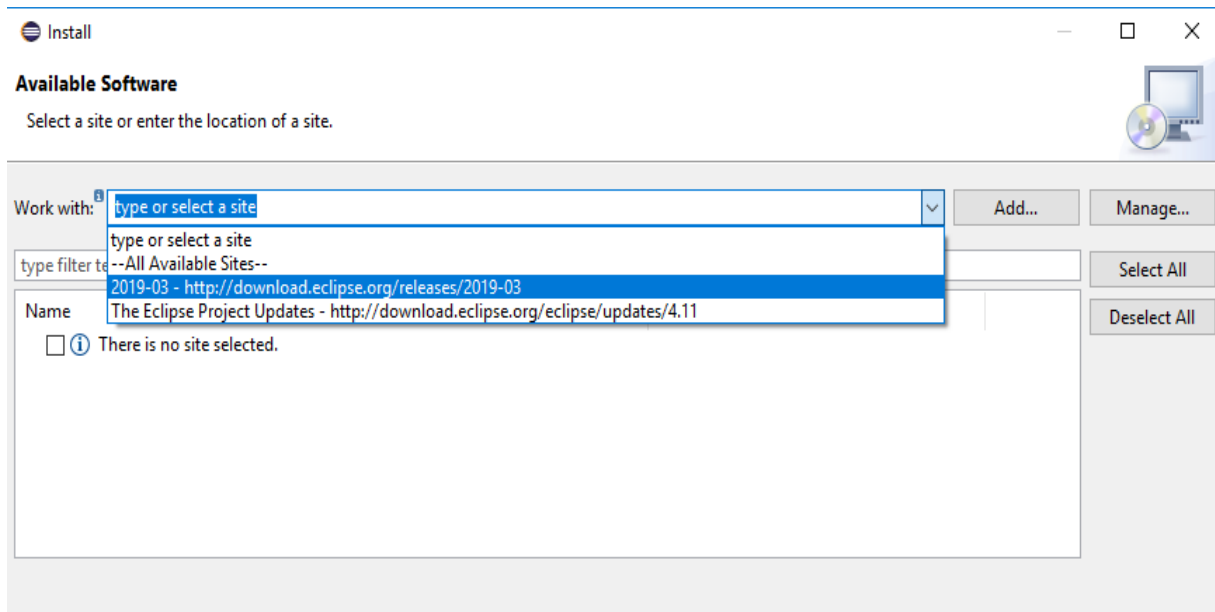
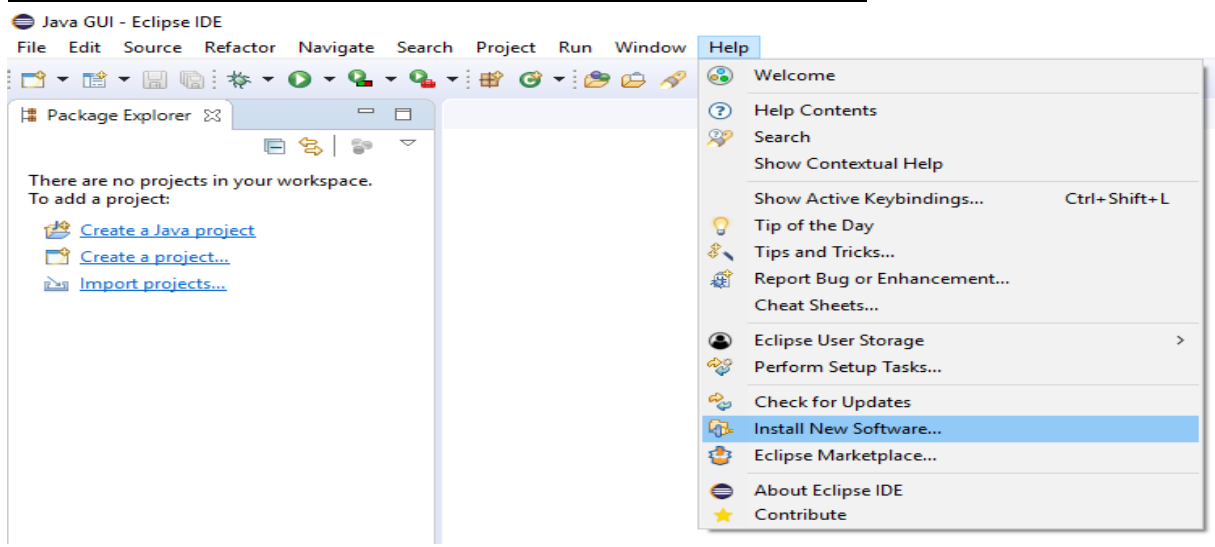


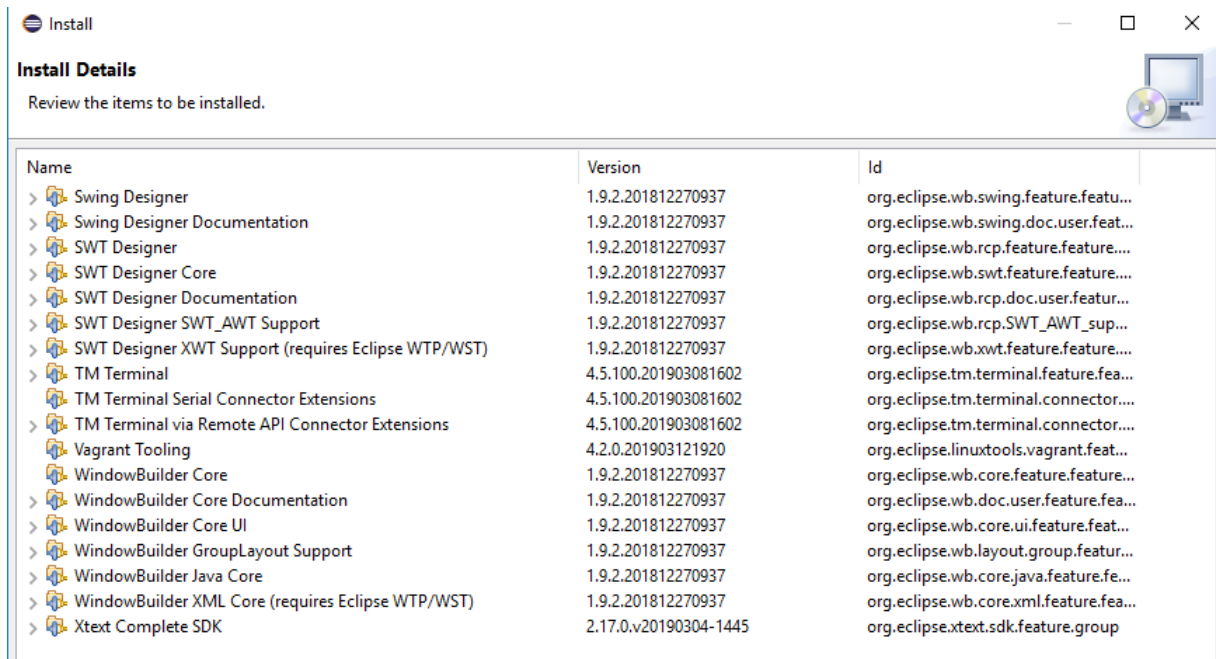
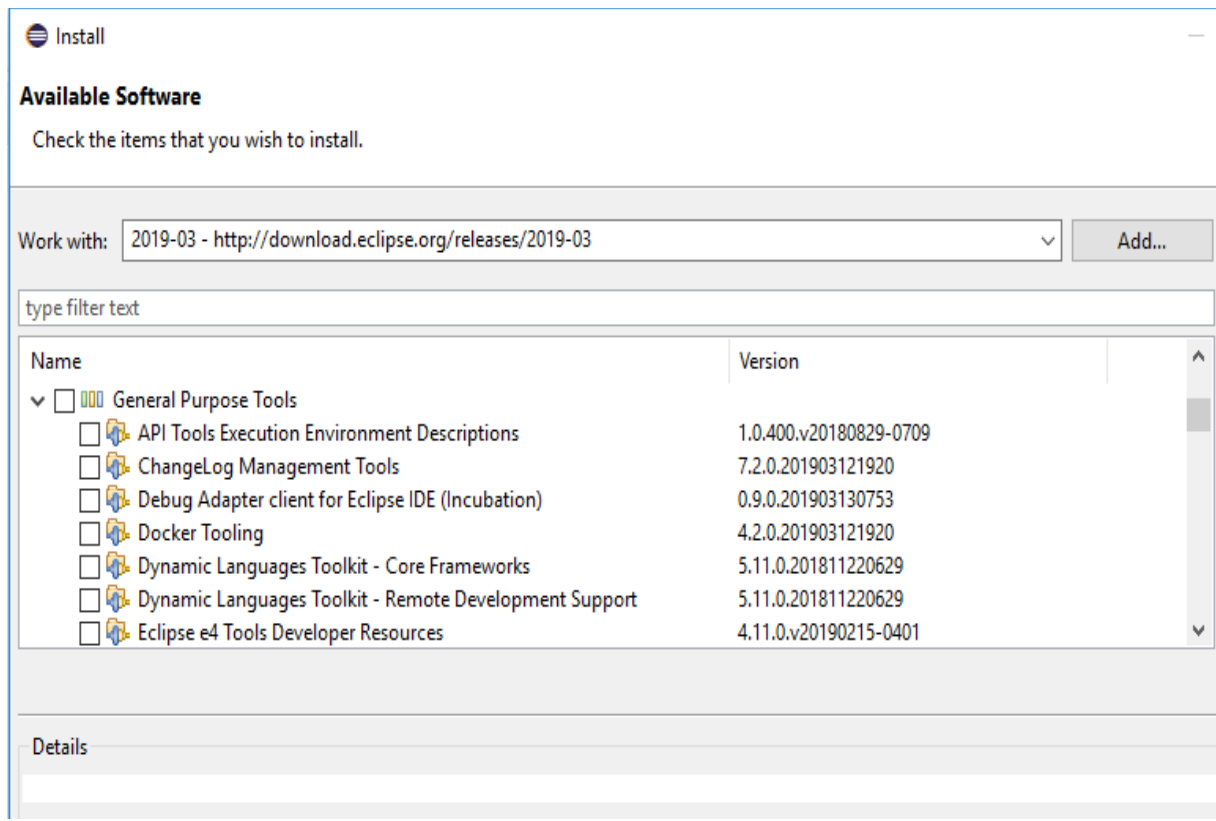
CSE 215L: Programming language II Lab
Nazmul Alam Diptu
Sec: 12
Lab-16 [GUI-01], Summer-2022

Objective:

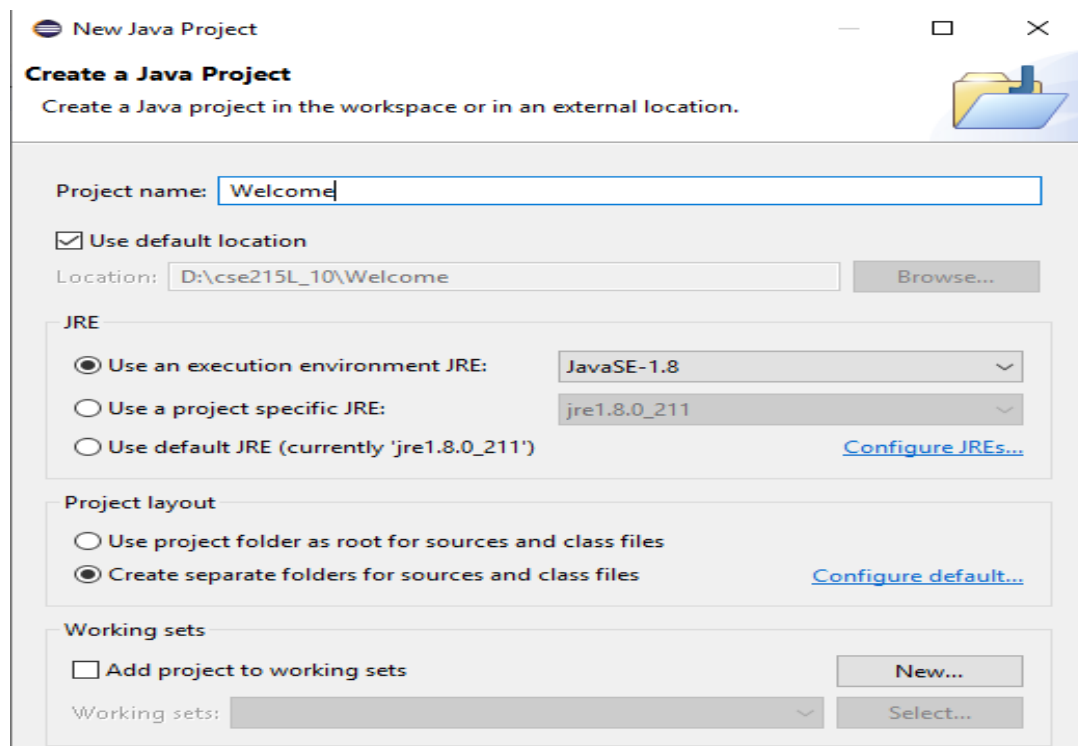
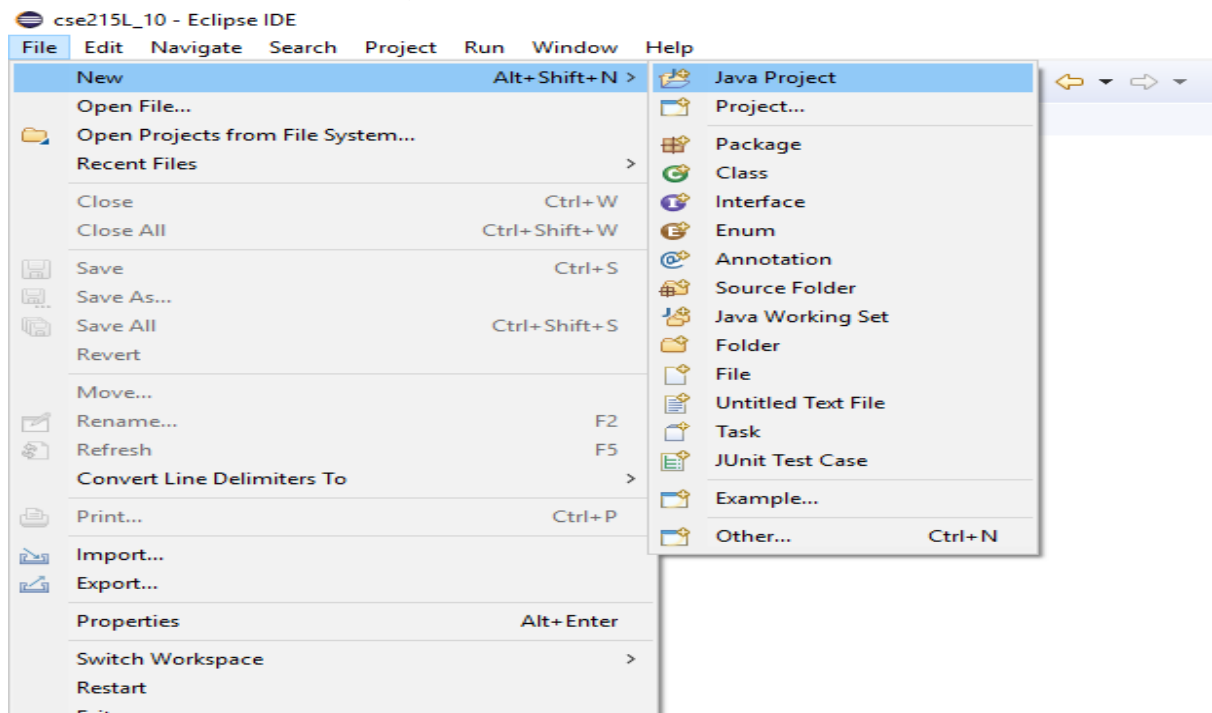
- To familiarize with the Eclipse WindowBuilder Plugin
- To develop simple applications using GUI

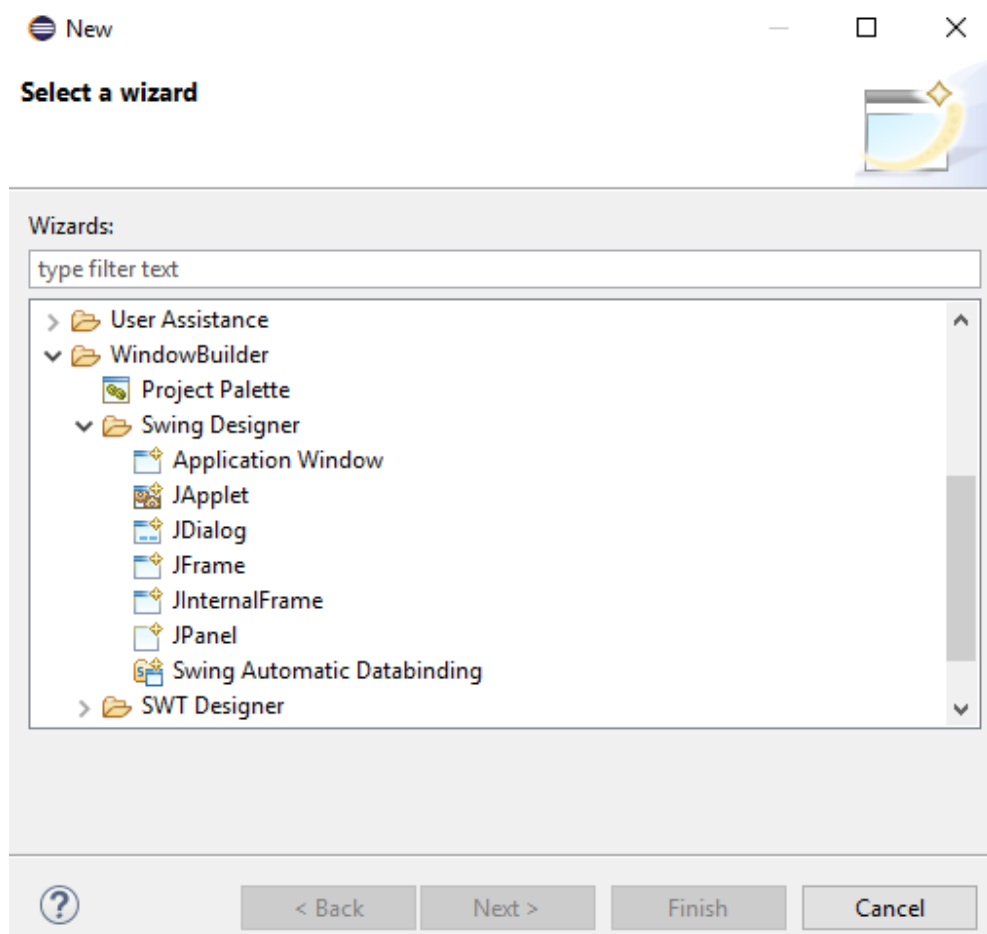
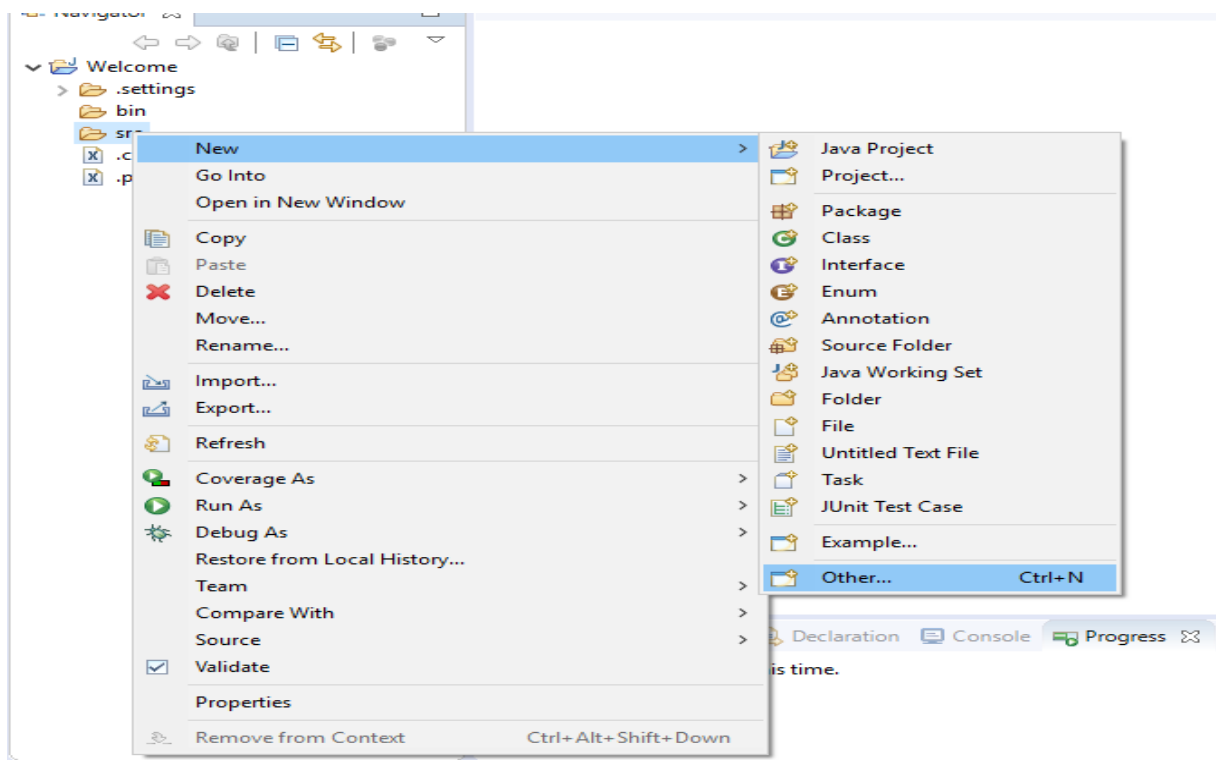
Installing WindowBuilder Plugin in ECLIPS:

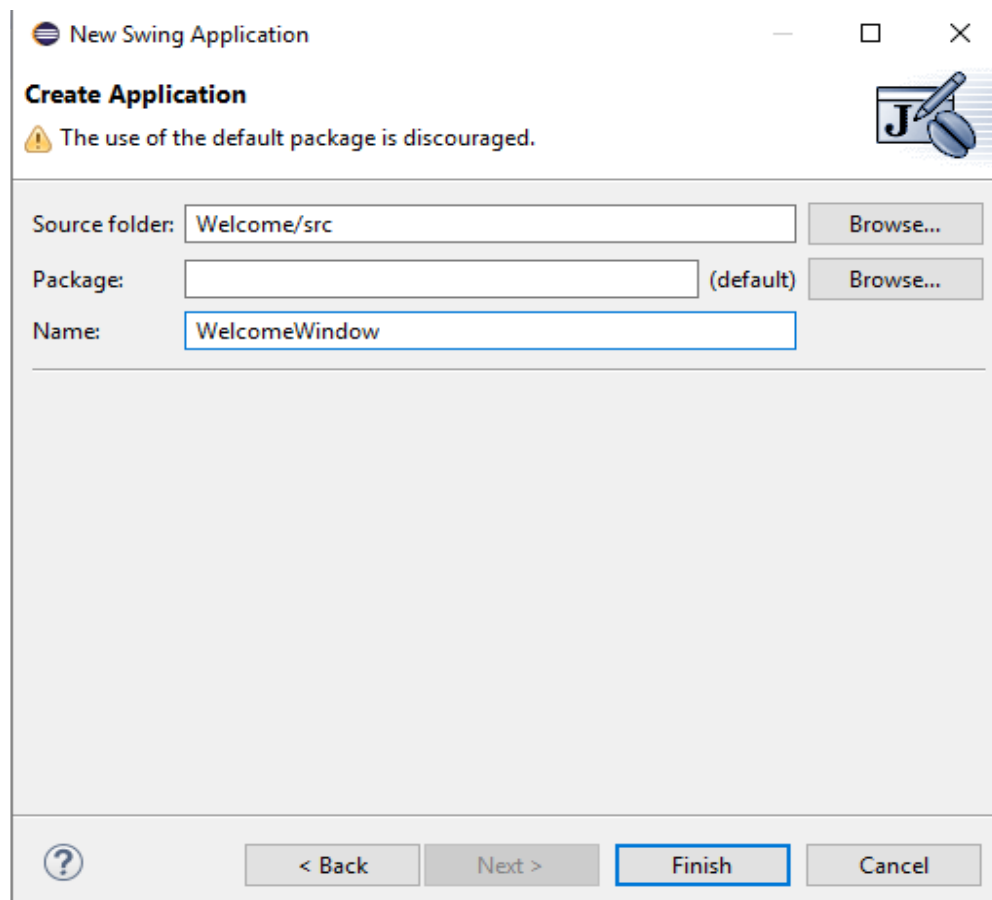
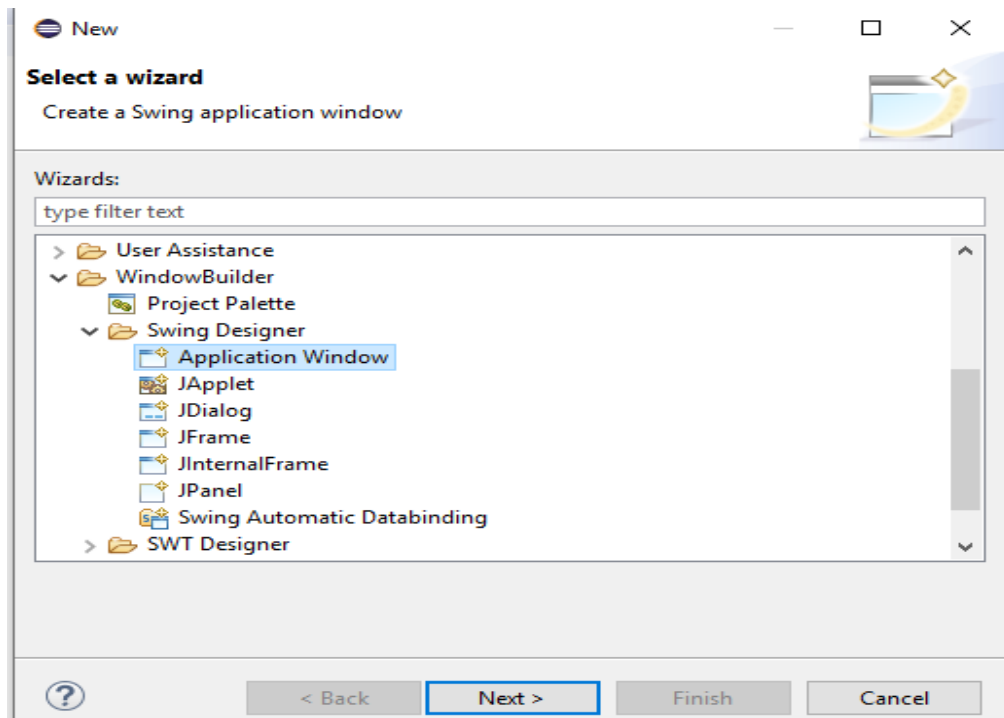




How to Create A Project:







```
import java.awt.Color;
import java.awt.Font;

import javax.swing.JFrame;
import javax.swing.JLabel;
import javax.swing.JPanel;
import javax.swing.SwingConstants;
import javax.swing.border.LineBorder;

public class Main {

    public static void main(String[] args) {

        // JFrame = a GUI window to add components to

        JFrame frame = new JFrame(); // creates a frame
        frame.setTitle("JFrame title goes here"); // sets title of frame
        frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE); // exit from application
        frame.setResizable(false); // prevent frame from being resized
        // frame.setSize(420, 420); // sets the width, and height of frame
        frame.setBounds(100, 100, 420, 420); // sets the x, y, width and height of a frame
        frame.setVisible(true); // make frame visible
        frame.getContentPane().setBackground(new Color(0x123456)); // change color of
background

        JPanel panel = new JPanel(); // creates a panel component
        panel.setBackground(new Color(0, 204, 153)); // sets background color
        panel.setBorder(new LineBorder(new Color(0, 0, 0), 2, true)); // a a border of 2
pixel black
        panel.setBounds(100, 100, 380, 380); // sets the width, and height of frame
        frame.getContentPane().add(panel); // add panel to Frame
        panel.setLayout(null); // absolute positioning

        JLabel lblNewLabel = new JLabel("Welcome Screen");
        lblNewLabel.setHorizontalAlignment(SwingConstants.CENTER);
        lblNewLabel.setForeground(new Color(204, 0, 153));
        lblNewLabel.setFont(new Font("Tahoma", Font.BOLD, 20));
        lblNewLabel.setBounds(84, 11, 238, 29);
        panel.add(lblNewLabel);

    }
}
```