Working with WINDOWBUILDER:

Play around by doing a few examples:

(P.S: These will be counted as your class activity for today, email it before 15:00 at [zulqarnain@iqra.edu.pk](mailto:zulqarnain@iqra.edu.pk))

1. Start working with GUI.
2. Define a project and declare a class
3. Import javax.swing.\*
4. Use JOptionPane() to display some text.

**import** javax.swing.\*;

**public** **class** Mymain {

**public** **static** **void** main(String[] args) {

JOptionPane.*showMessageDialog*( **null**, "Starting project" );

}

}

1. Add another dialog box to take input from the user along with a text. Use JoptionPane.showInputDialog()

**import** javax.swing.\*;

**public** **class** Mymain {

**public** **static** **void** main(String[] args) {

JOptionPane.*showMessageDialog*( **null**, "Starting project" );

JOptionPane.*showInputDialog*("Enter your login ID");

}

}

1. Now try to make multiple dialog boxes (use JOptionPane.*showInputDialog())*
2. Take the input from user through dialog box
3. Use JOptionPane.showInputDialog() to take input from the user by assigning it to a variable
4. Use String.format() to display the value assigned to the variable (through dialog box)with some text.
5. Use JOptionPane.showMessageDialog() to display the message.

Example:

**import** javax.swing.\*;

**public** **class** Mymain {

**public** **static** **void** main(String[] args) {

String name =

JOptionPane.*showInputDialog*( "What is your name?" );

String message = String.*format*( "Welcome, %s, to Java Programming!", name );

JOptionPane.*showMessageDialog*( **null**, message );

}

}

1. Your task is to take 3 strings as input from the user and have to concatenate all of them in a single message to display as output.
2. Take 5 numbers as input from the user through dialog box, add first two and multiply last three numbers. Display both the values as different message as: Sum=*Value*, Product=*Value.* [Hint use integer.parseInt(Variable) for processing the input values. Example:

String firstNumber = JOptionPane.*showInputDialog*("Enter First Integer");

**int** number1 = Integer.*parseInt*( firstNumber);].

1. Working with JFrame:
2. To define the Frame import javax.swing\*:
3. Define a class and use:

JFrame gui = **new** JFrame(); //gui is a variable

1. Run your program ( Nothing will happen because default Frame visibility is OFF)
2. Turn on the visibility of your Frame by using:

gui.setVisible( **true** );

1. Run your program
2. Set the size of your Frame by using:

setSize(x\_coordinate,y\_coordinate);

For Example: gui.setSize(150,150);

1. Notice that your Frame is occupying memory although you have selected the close button on your frame but still process is live. In order to close the Frame (to free your memory) use:

gui.setDefaultCloseOperation( JFrame.EXIT\_ON\_CLOSE );

1. Using the drawLine(int x1, int y1, int x2, int y2) in Frame to draw a line:

Example:

**import** java.awt.Graphics;

**import** javax.swing.JPanel;

**public** **class** DrawPanel **extends** JPanel {

// Calls the UI delegate's paint method

**public** **void** paintComponent( Graphics g )

{

g.drawLine( 10, 20, 100, 400 );

}

}

**import** javax.swing.\*;

**import** java.awt.\*;

**public** **class** Mymain {

**public** **static** **void** main(String[] args) {

DrawPanel panel = **new** DrawPanel();

JFrame gui = **new** JFrame();

gui.setDefaultCloseOperation( JFrame.*EXIT\_ON\_CLOSE* );

gui.add( panel );

gui.setSize(100,510);

gui.setVisible( **true** );

}

}

1. Drawing other shapes:

Rectangle:

drawRect(int x,int y,int width,int height)

Oval:

drawOval(int x,int y,int width,int height)

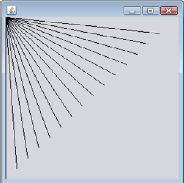
1. Drawing the cascade of shapes starting from the top-left corner.

Add a loop and use:

g.drawRect( 10 + i \* 10, 10 + i \* 10, 50 + i \* 10, 50 + i \* 10 );

Highlighted one’s are the padded parameters (x coordinate, y coordinate, width and height)

1. Try to give the following output:



Here you may find your Java working perfectly, now let’s move to Andriod Studio

INSTALLING ANDRIOD STUDIO

Most of you have already installed this studio (as it was discussed in the last class, those who faced problems may follow the steps:

Goto: <https://developer.android.com/studio/index.html> click download

Check I agree – agreement

Select all three options when prompted click next again

Select the path -> check recommended, click next and finish

Install Andriod SDK relevant to your OS

Select theme

Press Launch

Start New Andriod project

Name your application : for example MyPro or IuProject

Use a domain : like com.myapp.app or com.Iuapp.app then click next

Select phone and tablet API 4.0.3 ->  
select Blank activity -> Next -> name activity and click finish