

ECET 3810 – Practice Problem Set 2

1. Briefly explain what the following pattern object describes.

```
Pattern p = Pattern.compile("[_ ,\\d]+");
```

The preceding pattern object is used to match one or more occurrences of an underscore, a comma, or a digit.

2. Write a regular expression used to describe a phone number pattern with country code 1.

1-\\d{3}-\\d{3}-\\d{4}

3. Draw the GUI created by the following application. Assume that the “ok” button has been clicked. Include as much detail as possible.

```
import javax.swing.*; // Packages used
import java.awt.*;
import java.awt.event.*;
import java.io.*;
import java.util.Vector;

public class BasicButtons extends JFrame implements ActionListener
{
    public BasicButtons()
    {
        super( "Event Handling Example" );
        init();
    }

    public void actionPerformed((ActionEvent e)
    {
        String cmd = e.getActionCommand();
        if ( cmd.equals( hi ) )
            msg.setText( hi );
        else if ( cmd.equals( huh ) )
            msg.setText( huh );
        else if ( cmd.equals( ok ) )
            msg.setText( ok );
        else if ( cmd.equals( bye ) )
            System.exit( 0 );
    }

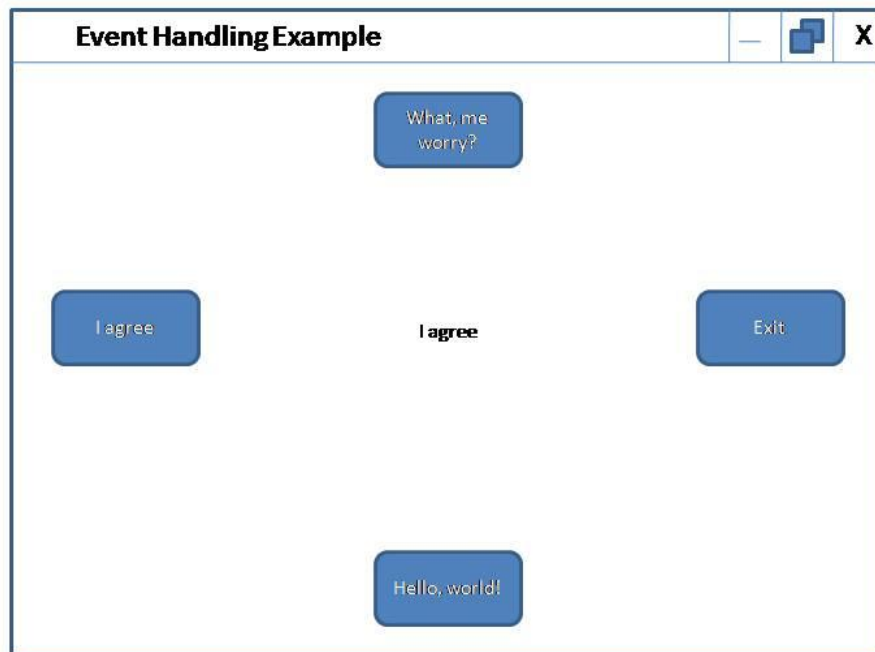
    private void init()
    {
        setLayout( new BorderLayout() );
        addButton( hi );
        addButton( huh );
        addButton( ok );
        addButton( bye );
        msg = new Label( " This is a label. " );
        add( "Center", msg );
    }

    private void addButton( String name )
    {
        Button b = new Button( name );
        b.addActionListener( this ); /*** BasicButton object
        switch (i)
        {
            case 0 : add( "South", b ); break;
```

```
        case 1 : add("North", b ); break;
        case 2 : add("West", b ); break;
        case 3 : add("East", b ); break;
    }
    i++;
}

private Label msg;
private int i = 0;
private static final String hi = " Hello, world! ";
private static final String huh = " What, me worry? ";
private static final String ok = "I agree";
private static final String bye = " Exit ";

public static void main(String[] args)
{
    BasicButtons buttonWin = new BasicButtons();
    buttonWin.setSize(300,300);
    buttonWin.setVisible(true);
}
}
```



4. Modify the source code in problem number #3 such that all of the buttons are displayed in a single column on the "East" side of the ContentPane.

```
private void init()
{
    setLayout( new BorderLayout() );
    buttonPanel.setLayout(new GridLayout(4,1));

    addButton( hi );
    addButton( huh );
    addButton(ok);
    addButton( bye );
    add("East", buttonPanel);

    msg = new Label( " This is a label. " );
    add("Center", msg );
}
private void addButton( String name )
{
    Button b = new Button( name );
    b.addActionListener( this ); /**** BasicButton object

    buttonPanel.add(b);
}

// Global variables declarations

JPanel buttonPanel = new JPanel();
```

5. Write the minimal number of lines of code necessary to: i) declare a new buffered-reader called "in," which is attached to a file named "test.dat," and ii) read from the buffer as long as input is present. Don't use a try-catch block.

```
BufferedReader in = new BufferedReader(new  
InputStreamReader(new FileReader("test.dat")));
```

```
String input = in.readLine();
```

```
while (input != null)  
{  
    // do something  
    Input = in.readLine();  
}
```