

Lab 9: GRAPHICS PROGRAMMING in JAVA

Theory:

1. Write a program with a choice element from where user can select Rectangle or Circle. On choosing the

desired option, the respective polygon will be displayed in a separate frame. Add another option "Square"

in the choice menu and display square when selecting it.

```
public class ShapeChooserDemo extends Frame implements ItemListener  
{...
```

2. Write a program to demonstrate paint() and repaint() methods.

```
public class RepaintExample2.....
```

3. Write a class that extends a Frame. As a button , on clicking the button get the available font family names and display 10 of them in a text area.

```
public class FontFamilyDemo .....
```

4. Write a program to display Line 2D, Rectangle 2D, Ellipse 2D

5. Write a program to create a simple animation. Load a series of images, then display the images one at a time.

6. Write a program to display the flag of Nepal. Below the flag display text in blue color "Nepal Flag" in "Sans Serif" font with style ITALIC and size 20. Also, display the different font metrics with methods getAscent, getDescent, getLeading, getHeight.

FlagDemo.java

```
1  import java.awt.*;
2  class FlagDemo extends Frame
3  {
4      public FlagDemo(){
5          super("FlagDemo ");
6          setSize(150, 200);
7          setVisible(true);
8      }
9
10     int x[]={10,80,30,80,10};
11     int y[]={40,90,90,150,150};
12
13     public void paint(Graphics g){
14         //draw the body with red
15         g.setColor(Color.red);
16         g.fillPolygon(x,y,5);
17         //draw the border
18         g.setColor(Color.blue);
19         g.drawPolygon(x,y,5);
20         g.setColor(Color.white);
21         //draw the sun
22         g.fillOval(20,115,20,20);
23         //draw the moon
24         g.drawArc(20,60,20,20,0,-180);
25         //draw the pole
26         g.setColor(Color.green);
27         g.drawLine(10,150,10,190);
28     }
29
30     public static void main(String[] args){
31         new FlagDemo();
32     }
33 }
34
35
```

