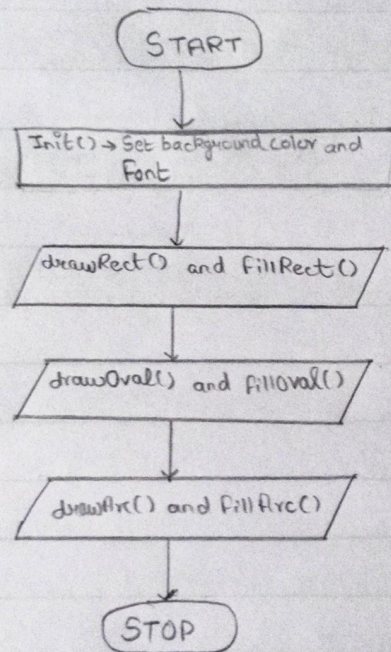


Practical No 16

Aim : Create, debug and run java programs based on graphics to draw, fill, different shape.

Flowchart :



Aim: Create, debug and run Java programs based on graphics to draw, fill, different shapes.

Theory:

Java.awt.Graphics class provides many methods for graphics programming.

The methods commonly used from the Graphics class are:

1. public abstract void drawString(String str, int x, int y);
2. public void drawRect(int x, int y, int height, int width);
3. public abstract void fillRect(int x, int y, int width, int height);
4. public abstract void drawOval(int x, int y, int width, int height);
5. public abstract void fillOval(int x, int y, int width, int ^{height} ~~size~~);
6. public abstract void drawLine(int x₁, int y₁, int x₂, int y₂);
7. ~~public abstract void~~ public abstract boolean drawImage(Image img, int x, int y, ImageObserver observer);
8. public abstract void drawArc(int x, int y, int width, int height, int startAngle, int arcAngle);
9. public abstract void fillArc(int x, int y, int width, int height, int startAngle, int arcAngle);
10. public abstract ~~void~~ void setColor(Color c);
11. public abstract void setFont(Font font);

Ques: Write a Java program to draw a circle with radius 50 units and fill it with yellow color.

Ans:

```
import java.awt.*;
import javax.swing.*;
```

```
public class Circle {
    public static void main(String[] args) {
        JFrame f = new JFrame("Circle");
        f.setSize(300, 300);
        f.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
        f.setBackground(Color.YELLOW);
        f.setVisible(true);
    }
}
```

```
Output:
A yellow circle is displayed on the screen.
```

Conclusion:

Hence, I created, debugged and executed Java programs based on graphics to draw, fill, different shapes.

Code:

Practical16.java

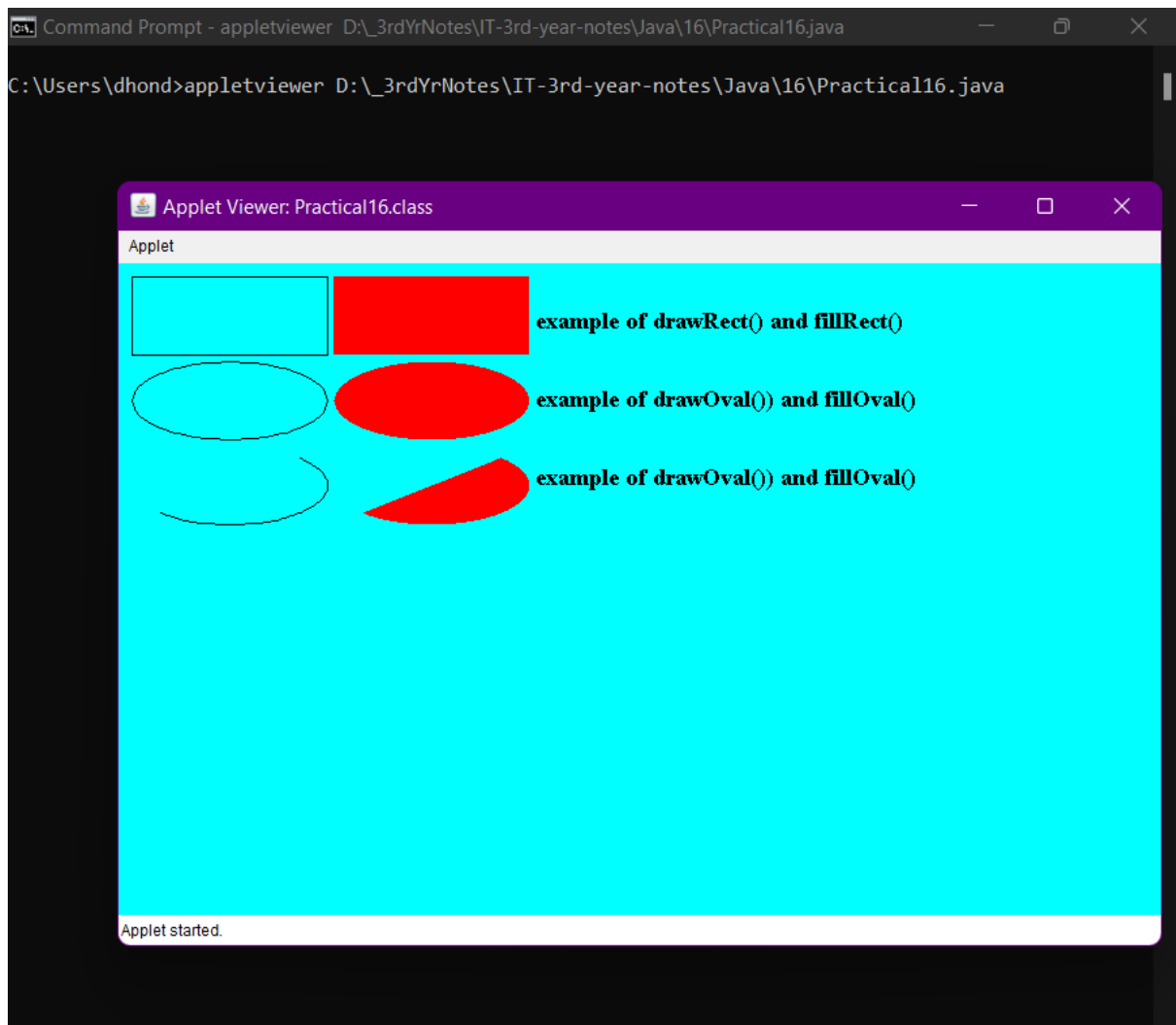
```
import java.awt.*;
import java.applet.*;
/*<applet code="Practical16.class" height="500" width="800"></applet>*/
public class Practical16 extends Applet{
    Font f1,f2;
    public void init(){
        setBackground(Color.CYAN);
        f2 = new Font("Times New Roman",Font.BOLD,18);
    }

    public void paint(Graphics g){
        f1 = g.getFont();
        g.drawRect(10,10,150,60);
        g.setColor(Color.RED);
        g.fillRect(165,10,150,60);
        g.setColor(Color.BLACK);
        g.setFont(f2);
        g.drawString("example of drawRect() and fillRect()",320,50);

        g.setColor(Color.BLACK);
        g.drawOval(10,75,150,60);
        g.setColor(Color.RED);
        g.fillOval(165,75,150,60);
        g.setColor(Color.BLACK);
        g.setFont(f2);
        g.drawString("example of drawOval() and fillOval()",320,110);

        g.setColor(Color.BLACK);
        g.drawArc(10,140,150,60,45,-180);
        g.setColor(Color.RED);
        g.fillArc(165,140,150,60,45,-180);
        g.setColor(Color.BLACK);
        g.setFont(f2);
        g.drawString("example of drawOval() and fillOval()",320,170);
    }
}
```

Output:



Applet using Graphics class

Conclusion:

Hence, I created, debugged and executed Java programs based on graphics to draw, fill, different shapes.