Graphics

```
import java.awt.*; import java.io.*;
import java.lang.*; import javax.swing.*;
import java.applet.*;
public class gr extends Applet
{ int x=70; String a=" ";
  public void init( )
  { setBackground(Color.white);
    setForeground(Color.red);
  }
  public void paint(Graphics g)
  { g.drawRect(10,100,50,70);
    g.fillOval(10,100,50,70);
    g.drawString("Kapil",x,7);
    g.drawLine(100,20,400,70);
    g.setColor(Color.blue);
    g.drawOval(100,200,50,10);
  }
}
```

In a file whose name is **gr.java** type this program. Compile it by command **javac gr.java**. In a file **gr.html** type following.

```
<html>
<applet code="gr.java" height=300 width=700>
</applet>
</html>
```

Now give command **appletviewer gr.html**

g.drawRect(10,100,50,70) draws a rectangle whose north west corner is (10,100) and sides are 50 and 70.

g.drawOval(10,100,50,70) draws a ellipse inside a rectangle whose north west corner is (10,100) and sides are 50 and 70.

g.drawLine(100,20,400,70) draws a line joining (100,20) and (400,70).

[Caution: The file name and class name must be same. The html file may have another name]

In the above program replace the paint function as follows:

```
public void paint(Graphics g)
{  do{ try{DataInputStream o=new DataInputStream(System.in);
        a=o.readLine( );  }catch (Exception t) { }
        x=Integer.parseInt(a);g.drawLine(x,100,x+50,200);
    }while (1==1);
```

} Read a number (x) and draws a line joining points (x,100) and (x+50,200). After giving a number as input the above program displays a line.

1. When a number (x) is typed then square of side x is drawn. North west corner (200,200).
2. When a number (x) is typed then square of side x is drawn. South east corner (200,200).
3. When a number (x) is typed then square of side x is drawn. The centre is (200,200).
4. When a string of two numbers x y it typed then square of side 100 is drawn. The north west corner is (x,y).
5. Write program, which reads string
   (A) If string is square x then a square of side x is displayed. The center is 100 100.
   (B) If string is rectangle a b then a rectangle of length a and breadth b is displayed. The north west corner is (100,100).
   (C) If string is circle a b c is then a circle with center (a,b) and radius c is displayed. [Hint: join " 12 17 22" to the input string]
6. When ram is typed then a red circle is displayed. When gagan is typed then green circle is displayed. When bimu is typed then blue circle is displayed. The centre is (100,100). The radius is 40.
7. Modify above so that after every subsequence operation the radius (of new circle) increases by 5. [The radius of previous circles remain unchanged][Hint: take a variable 'r' and initialize it as 40]

In the example program replace while(1==1); by while (x>0); repaint( ); when a number 0 is given then window is cleaned (all lines are erased). After subsequent inputs new lines are drawn. The Repaint() function cleans the window. After that paint function is executed.

8. Modify above so that entire window is cleaned when hari is typed. After giving inputs (ram, gagan or bimu) circles of radius 40, 45, ... are again drawn.
9. The radius of circle (after window clean) starts from the radius of the last circle before window clean.
10. The radius of circle starts from 10 less than the radius of the last circle
11. The radius of the circle after window clean starts from 50
12. After first window clean the radius starts from 50, after second window clean from 60, after third from 70 and so on.