Internet Technology

-supervised by:

Dr.Jagadish Kundu

Rohit Das

B. Tech(Computer Sc. and Engg)

Roll: 30000114022

Regn. No.: 143000110023

7th Semester,2017

Maulana Abul Kalam Azad University of Technology,

West Bengal.

LaTeX 2017

Contents

1. Assignment-1: HTML form (Date: 15/09/2017)

1..1 Create a form which will capture following data -

- First Name - Text - size 20 - validation (no special char)
- Last Name - Text - size 20 - validation (no special char)
- M/F - Radio button
- T-Shirt size (Drop-down Small, Medium, Large, Extra Large)
- T-shirt color (Drop-down Red, Green, Yellow, Black, White)
- Address (Text Area)
- Email address - Size 40 (basic email address validation)
- Phone No - size 10 (basic phone validation)
- Put Submit and Reset button

On submission - a mail will be triggered and a pop-up will arrive - thanking the user, along with some other relevant information.

.

Program:

```
<!doctype html>
<!-- index.html -->
<head>
  <meta charset="utf-8">
  <link rel="stylesheet" type="text/css" href="styles.css">
  <script type="text/javascript" src="app.js"> </script>
</head>

<body>
  <div id="container">
    <h1>&bull; Makaut T-shirts &bull;</h1>
    <div class="underline">
    </div>
    <div class="icon_wrapper">
    </div>
    <form action="https://script.google.com/macros/s/
       AKfycbzNh6ftYhA8Tu43PI0M9kT0Pj-8_6Fm_9tMBUmC1duOWUf5r5s/exec"
        method="post" id="gform">
      <div class="name">
        <label for="fname-inp"> </label>
        <input type="text" placeholder="First name" name="fname-inp
           " id="fname-inp" pattern="[A-Za-z]+" required />
      </div>

      <div class="name" style="float:right;">
        <label for="mname-inp"> </label>
        <input type="text" placeholder="Middle name" name="mname-
           inp" id="mname-inp" pattern="[A-Za-z]+" />
      </div>

      <div class="name">
        <label for="lname-inp"> </label>
```

```
29          <input type="text" placeholder="Last name" name="lname-inp"
                id="lname-inp" pattern="[A-Za-z]+" required>
30        </div>
31
32        <div class="options" id="gender">
33          <label for="gender"> </label>
34          <select name="gender-inp" id="gender-inp">
35            <option value="male" selected>Male</option>
36            <option value="female">Female</option>
37            <option value="others">Others</option>
38          </select>
39        </div>
40
41        <div class="name" id="t-size">
42          <label for="t-size"> </label>
43          <select placeholder="My size" name="t-size-inp" id="t-size-
                inp">
44            <option value="small" selected="">Small</option>
45            <option value="medium">Medium</option>
46            <option value="large">Large</option>
47            <option value="xlarge">Extra-large</option>
48          </select>
49        </div>
50
51        <div class="options" id="t-color">
52          <label for="t-color-inp"> </label>
53          <select placeholder="T-shirt colour" name="t-color-inp" id=
                "t-color-inp" onchange="changeColor()" required>
54            <option hidden selected>T-shirt colour</option>
55            <option value="red">Red</option>
56            <option value="green">Green</option>
57            <option value="yellow">Yellow</option>
58            <option value="black">Black</option>
59            <option value="white">White</option>
60          </select>
61        </div>
62
63        <div class="address">
64          <label for="address"> </label>
65          <textarea name="address" placeholder="Send your shirt at"
                id="address" rows="0" pattern="[A-Za-z0-9\s]+" required>
                </textarea>
66        </div>
67
68        <div class="telephone">
69          <label for="name"> </label>
70          <input type="text" placeholder="We will call you" name="
                telephone" id="telephone" pattern="[0-9]+" required>
71        </div>
72
73        <div class="email">
74          <label for="email"> </label>
```

```
75          <input type="email" placeholder="Your email" name="email"
                id="email" patter="[(?:[a-z0-9!#$%&'*+/=?^_`{|}~-]+(?:\.[
                a-z0-9!#$%&'*+/=?^_`{|}~-]+)*|"(?:[\x01-\x08\x0b\x0c\x0e
                -\x1f\x21\x23-\x5b\x5d-\x7f]|\\[\x01-\x09\x0b\x0c\x0e-\
                x7f])*")@(?:(?:[a-z0-9](?:[a-z0-9-]*[a-z0-9])?\.)+[a-z0
                -9](?:[a-z0-9-]*[a-z0-9])
                ?|\[(?:(?:25[0-5]|2[0-4][0-9]|[01]?[0-9][0-9]?)\.)
                {3}(?:25[0-5]|2[0-4][0-9]|[01]?[0-9][0-9]?|[a-z0-9-]*[a-
                z0-9]:(?:[\x01-\x08\x0b\x0c\x0e-\x1f\x21-\x5a\x53-\x7f
                ]|\\[\x01-\x09\x0b\x0c\x0e-\x7f])+)\])]" required>
76        </div>
77
78        <div class="submit">
79          <input type="submit" value="Submit" id="form_button" />
80          <input type="reset" value="Reset" id="form_button" style="
                float:right;"/>
81        </div>
82
83      </form><!-- // End form -->
84
85      <!-- Customise the Thankyou Message People See when they submit
            the form: -->
86      <div style="display:none;" id="thankyou_message">
87        <h2><em>Thanks</em> for contacting!
88        You shall be got back to soon!</h2>
89      </div>
90    </div><!-- // End #container -->
91
92    <script data-cfasync="false" type="text/javascript" src="form.js"
        > </script>
93
94  </body>
```

```
1  /*
2  * app.js
3  */
4  function changeColor() {
5    var e = document.getElementById('t-color-inp');
6    var color = e.options[e.selectedIndex].value;
7    var colour = "#d37070"
8    switch(color) {
9      case 'red':
10       colour = "#d37070"; break;
11     case 'green':
12       colour = "#51db5a"; break;
13     case 'yellow':
14       colour = "#edd30e"; break;
15     case 'black':
16       colour = "#000000"; break;
17     case 'white':
18       colour = "#ffffff"; break;
19     default:
```

```
20          colour = "#ffffff";
21      } document.getElementById('container').style.backgroundColor =
            colour
22  }
```

Output:

2. Assignment-2: Java Applets(Date: 21/4/2017)

2..1 Create a banner using Applet.

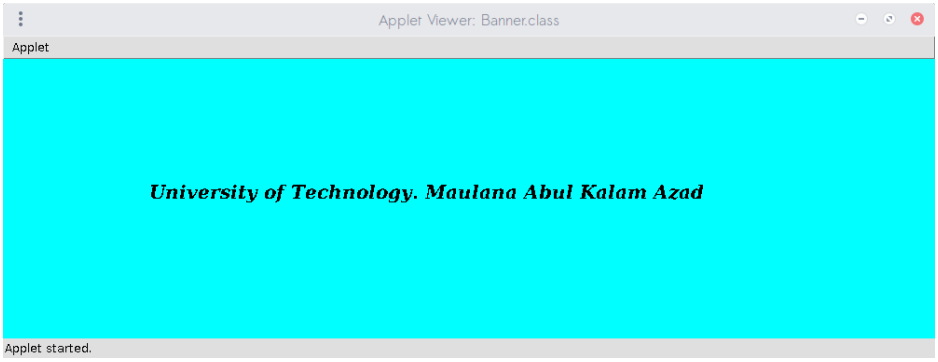
Program:

```
1  // Banner.java
2  import java.awt.*;
3  import java.applet.*;
4
5  public class Banner extends Applet implements Runnable
6  {
7    String msg; char ch;  boolean stop; Thread t;
8
9    public void init () {
10     msg = "Maulana Abul Kalam Azad University of Technology. ";
11     setFont(new Font("TimesRoman",Font.BOLD + Font.ITALIC, 20));
12     setBackground(Color.cyan);
13     setForeground(Color.red);
14     stop = true;  t = null;
15   }
16
17   public void start () {
18     t = new Thread (this);  stop = false; t.start();
19   }
20
21   public void run () {
22     for (;;) {
23       try {
24         repaint();  Thread.sleep(100);
25         ch = msg.charAt(0);
26         msg = msg.substring(1,msg.length());
27         msg = msg + ch; if(stop) break;
28       }
29       catch (InterruptedException e) {}
30     }
31   }
32
33   public void stop () {
34     stop = true;  t = null;
35   }
36
37   public void paint (Graphics g) {
38     g.drawString(msg, 150, 150);
```

```
    }
}
```

```
<!DOCTYPE html>
<!-- Banner.html -->
<html>
<head>
  <meta charset="utf-8">
  <title>Applets</title>
</head>
<body>
  <applet width="1000" height="300" code="Banner.class"></applet>
</body>
</html>
```

Output:



2..2 Display clock using Applet.

Program:

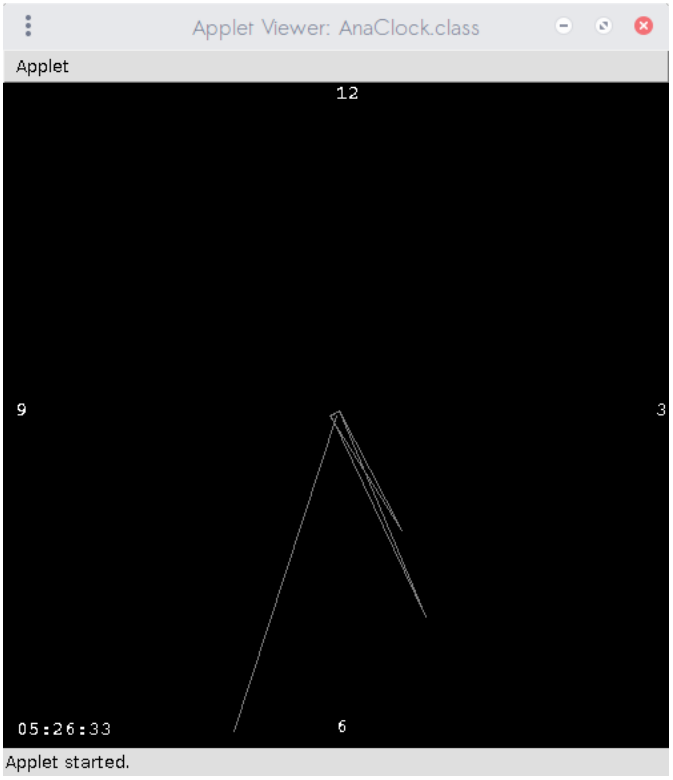
```
//AnaClock.java
import java.awt.*;
import java.applet.*;
import java.util.*;
import java.text.*;

public class AnaClock extends Applet implements Runnable
{
  int width, height;  int h = 0, min = 0, s = 0;
  Thread t = null;  boolean tSuspend; String time="";

  public void init () {
    width = getSize().width;  height = getSize().height;
    setBackground(Color.black); setFont(new Font("Courier",Font.
      BOLD,15));
  }

  public void start () {
    if (t == null) {
      t = new Thread(this); t.setPriority(Thread.MIN_PRIORITY);
      tSuspend = false; t.start();
```

```
21      }
22      else {
23        if (tSuspend) {
24          tSuspend = false;
25          synchronized(this){ notify(); }
26        }
27      }
28    }
29
30    public void stop () { tSuspend = true;  }
31
32    public void run () {
33      try {
34        while (true) {
35          Calendar cal = Calendar.getInstance();
36
37          h = cal.get( Calendar.HOUR_OF_DAY );
38                if ( h > 12 ) h -= 12;
39                min = cal.get( Calendar.MINUTE );
40                s = cal.get( Calendar.SECOND );
41
42          SimpleDateFormat formatting = new SimpleDateFormat("hh:mm:
              ss", Locale.getDefault());
43          Date date = cal.getTime();
44          time = formatting.format(date);
45
46          //thread checks to see if it should suspend itself
47          if (tSuspend) {
48            synchronized(this){
49              while (tSuspend) {  wait(); }
50            }
51          }
52          repaint();
53          t.sleep(1000);//time in milliseconds
54        }
55      }
56      catch (Exception e) { }
57    }
58
59    void drawHand( double angle, int radius, Graphics g ) {
60        angle -= 0.5 * Math.PI;
61        int x = (int)( radius*Math.cos(angle) );
62        int y = (int)( radius*Math.sin(angle) );
63        g.drawLine( width/2, height/2, width/2 + x, height/2 + y );
64      }
65
66      void drawWedge( double angle, int radius, Graphics g ) {
67        angle -= 0.5 * Math.PI;
68        int x = (int)( radius*Math.cos(angle) );
69        int y = (int)( radius*Math.sin(angle) );
70        angle += 2*Math.PI/3;
71        int x2 = (int)( 5*Math.cos(angle) );
```

```
72          int y2 = (int)( 5*Math.sin(angle) );
73          angle += 2*Math.PI/3;
74          int x3 = (int)( 5*Math.cos(angle) );
75          int y3 = (int)( 5*Math.sin(angle) );
76          g.drawLine( width/2+x2, height/2+y2, width/2 + x, height/2 +
                y );
77          g.drawLine( width/2+x3, height/2+y3, width/2 + x, height/2 +
                y );
78          g.drawLine( width/2+x2, height/2+y2, width/2 + x3, height/2 +
                y3 );
79      }
80
81      public void paint( Graphics g ) {
82          g.setColor( Color.gray );
83          drawWedge( 2*Math.PI * h / 12, width/5, g );
84          drawWedge( 2*Math.PI * min / 60, width/3, g );
85          drawHand( 2*Math.PI * s / 60, width/2, g );
86          g.setColor( Color.white );
87          g.drawString( time, 10, height-10 );
88          g.drawString("12", width / 2, 12);
89          g.drawString("6", width / 2, height - 12);
90          g.drawString("9", 10, height / 2);
91          g.drawString("3", width - 10, height / 2);
92      }
93  }
```

```
1  <!DOCTYPE html>
2  <!-- AnaClock.html -->
3  <html>
4  <head>
5    <meta charset="utf-8">
6    <title>Applets</title>
7  </head>
8  <body>
9    <applet width="500" height="500" code="AnaClock.class"></applet>
10 </body>
11 </html>
```

Output:



2..3 Create different shapes using Applet.

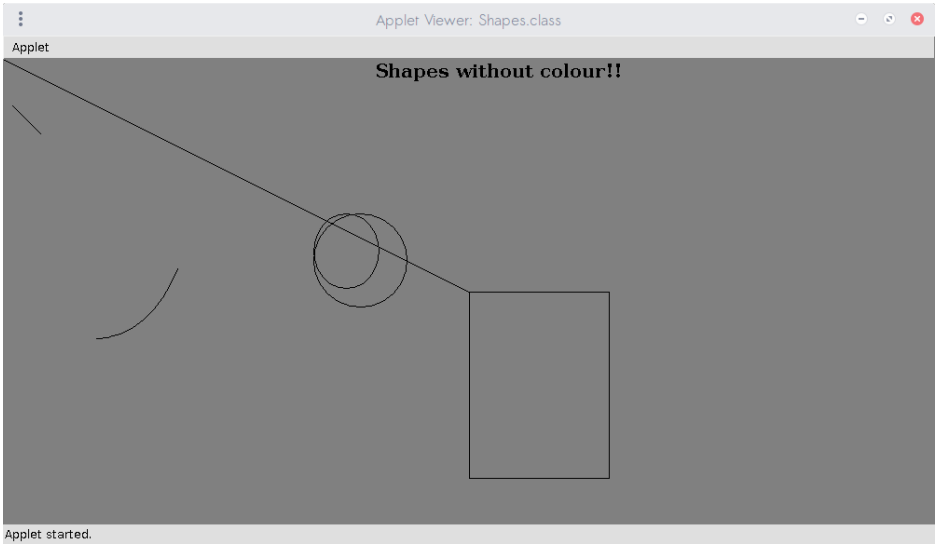
Program:

```
1  // Shapes.java
2  import java.awt.*;
3  import java.applet.*;
4  import java.util.*;
5
6  public class Shapes extends Applet
7  {
8    int width,height;
9
10   public void init () {
11     height = getSize().height;   width = getSize().width;
12
13     setBackground(Color.gray);
14     setFont(new Font("TimesRoman",Font.BOLD,20));
15   }
16
17   public void paint (Graphics g) {
18     int x1[] = {10,20,30,40}; int y1[] = {50,60,70,80};
19     g.drawString("Shapes without colour!!",width / 2 - 100, 20);
20
21     g.drawLine(0,0,width/2, height / 2);
22     g.drawOval(width/3, height/3, 70, 80);
23     g.drawOval(width/3, height/3, 100, 100);
24     g.drawRect(width/2, height/2, 150, 200);   g.drawPolygon(x1,y1
         ,4);
25     g.drawArc(0,0,200,300,270,60);
```

```
26      }
27  }
```

```
1  <!DOCTYPE html>
2  <!-- Shapes.html -->
3  <html>
4  <head>
5    <meta charset="utf-8">
6    <title>Applets</title>
7  </head>
8  <body>
9    <applet width="1000" height="500" code="Shapes.class"></applet>
10 </body>
11 </html>
```

Output:



2..4 Fill colors in shapes using Applet.

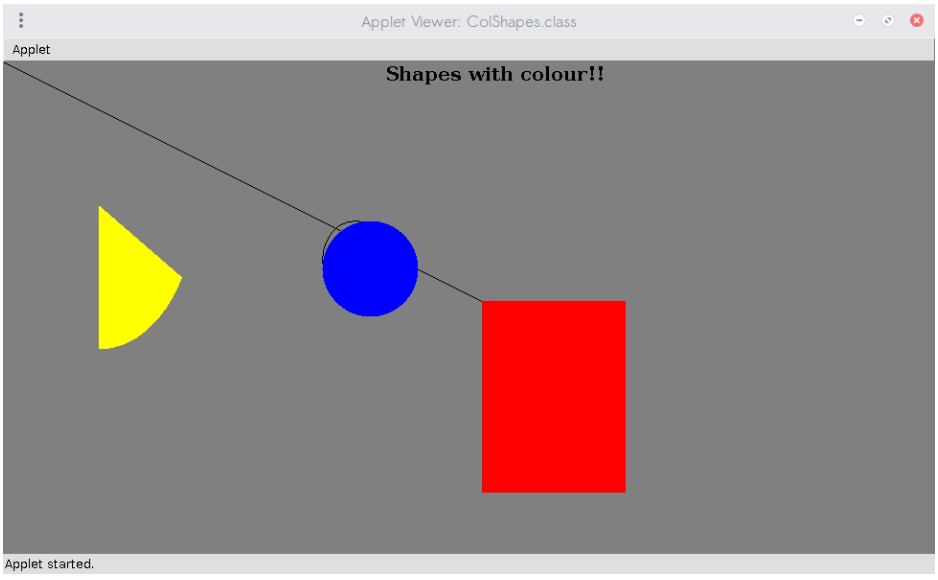
Program:

```
1  // ColShapes.java
2  import java.awt.*;
3  import java.applet.*;
4  import java.util.*;
5
6  public class ColShapes extends Applet
7  {
8    int width,height;
9
10   public void init () {
11     height = getSize().height;   width = getSize().width;
12
13     setBackground(Color.gray);
14     setFont(new Font("TimesRoman",Font.BOLD,20));
15   }
16
```

```
17    public void paint (Graphics g) {
18      int x1[] = {10,20,30,40}; int y1[] = {50,60,70,80};
19      g.drawString("Shapes with colour!!",width / 2 - 100, 20);
20
21      g.drawLine(0,0,width/2, height / 2);
22      g.drawOval(width/3, height/3, 70, 80);  g.setColor(Color.blue);
23      g.fillOval(width/3, height/3, 100, 100);  g.setColor(Color.red)
          ;
24      g.fillRect(width/2, height/2, 150, 200);  g.setColor(Color.
          green);
25      g.fillPolygon(x1,y1,4); g.setColor(Color.yellow);
26      g.fillArc(0,0,200,300,270,60);
27    }
28  }
```

```
1  <!DOCTYPE html>
2  <!-- ColShapes.html -->
3  <html>
4  <head>
5    <meta charset="utf-8">
6    <title>Applets</title>
7  </head>
8  <body>
9    <applet width="1000" height="500" code="ColShapes.class"></applet
       >
10 </body>
11 </html>
```

Output:



2..5 Goto a link using Applet.

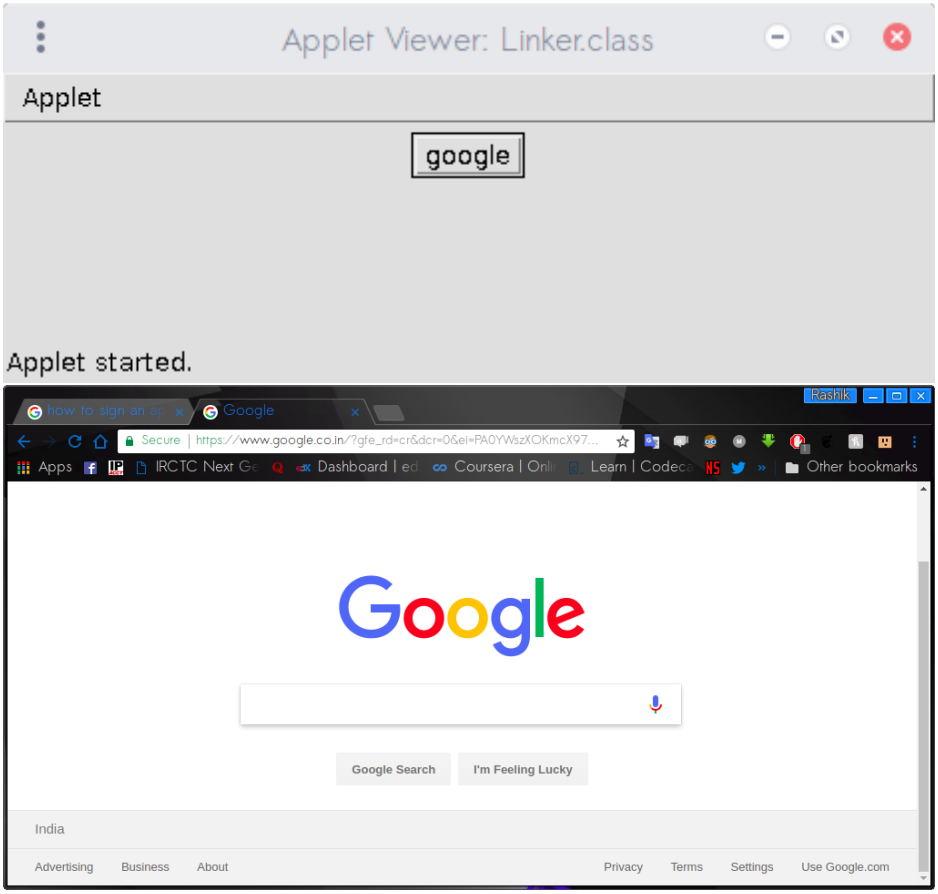
Program:

```
1  // Linker.java
2  import java.awt.*;
```

```java
import java.awt.event.*;
import java.applet.*;
import java.net.*;

public class Linker extends Applet implements ActionListener
{
  public void init () {
    String link = "google"; Button b = new Button(link);
    b.addActionListener(this);  add(b);
  }

  public void actionPerformed(ActionEvent ae) {
    Button source = (Button)ae.getSource();
    String link = "https://www." + source.getLabel() + ".com";

    try {
      AppletContext a = getAppletContext(); URL url = new URL(link)
          ;
      a.showDocument(url,"_self");
    } catch (Exception e) {
      System.out.println(e.getMessage());
    }
  }
}
```

```html
<!DOCTYPE html>
<!-- Linker.html -->
<html>
<head>
  <meta charset="utf-8">
   <title>Applets</title>
</head>
<body>
  <applet width="1000" height="500" code="Linker.class"></applet>
</body>
</html>
```

Output:



2..6 Create an event listener in Applet.

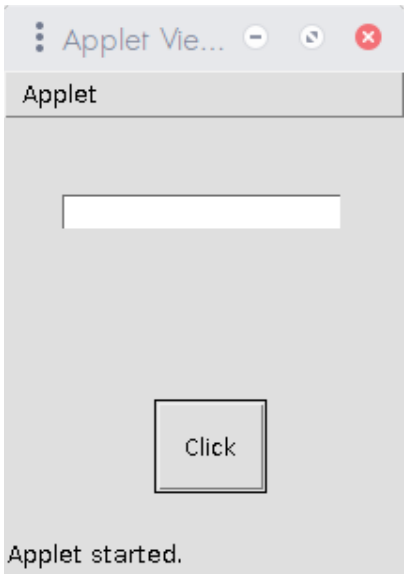
Program:

```
1  // Listen.java
2  import java.awt.*;
3  import java.applet.*;
4  import java.awt.event.*;
5
6  public class Listen extends Applet implements ActionListener
7  {
8    Button b;    TextField tf;
9
10   public void init() {
11     tf=new TextField();   tf.setBounds(30,40,150,20);
12
13     b=new Button("Click");   b.setBounds(80,150,60,50);
14
15     add(b);add(tf);   b.addActionListener(this); setLayout(null);
16   }
17
18   public void actionPerformed(ActionEvent e){
19     tf.setText("Welcome");
20   }
21 }
```

```
1  <!DOCTYPE html>
```

```
<!-- Listen.html -->
<html>
<head>
  <meta charset="utf-8">
  <title>Applets</title>
</head>
<body>
  <applet width="1000" height="500" code="Listen.class"></applet>
</body>
</html>
```

Output:



2..7 Display image using Applet.

Program:

```
import java.awt.*;
import java.applet.*;


public class Imager extends Applet
{

  Image picture;

  public void init() {
    picture = getImage(getDocumentBase(),"makaut.png");
  }

  public void paint(Graphics g) {
    g.drawImage(picture, 30,30, this);
  }

}
```

```html
<!DOCTYPE html>
<html>
<head>
  <meta charset="utf-8">
  <title>Applets</title>
</head>
<body>
  <applet width="1000" height="500" code="Imager.class"></applet>
</body>
</html>
```

Output:

2..8 Play sound using Applet.

Program:

```java
// Sound.java
import java.applet.*;
import java.awt.*;
import java.awt.event.*;

public class Sound extends Applet implements ActionListener
{
    Button play;    AudioClip audioClip;

    public void init() {
        play = new Button(" Play ");    add(play);
        play.addActionListener(this);
        audioClip = getAudioClip(getCodeBase(), "sirenpolice.wav");
    }
    public void actionPerformed(ActionEvent ae) {
        Button source = (Button)ae.getSource();    audioClip.play();
    }
}
```

```html
<!DOCTYPE html>
<!-- Sound.html -->
<html>
<head>
```

```
5     <meta charset="utf-8">
6     <title>Applets</title>
7   </head>
8   <body>
9     <applet width="1000" height="500" code="Sound.class"></applet>
10  </body>
11  </html>
```

Output:

2..9 Read a file using Applet.

Program:

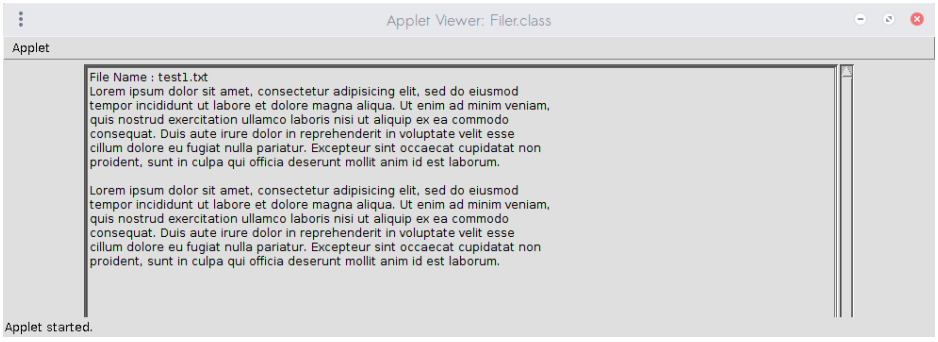
```
1   // Filer.java
2   import java.applet.*;
3   import java.awt.*;
4   import java.io.*;
5   import java.net.*;
6
7   public class Filer extends Applet
8   {
9       String fileToRead = "test1.txt";    StringBuffer strBuff;
10      TextArea txtArea;
11
12      public void init() {
13          txtArea = new TextArea(100, 100);    txtArea.setEditable(false
                );
14          add(txtArea, "center");    String prHtml = this.getParameter("
                fileToRead");
15
16          if (prHtml != null) fileToRead = new String(prHtml);
                readFile();
17      }
18      public void readFile(){
19          String line;    URL url = null;
20          try {    url = new URL(getCodeBase(), fileToRead); }
21          catch(MalformedURLException e){}
22          try {
23              InputStream in = url.openStream();
24              BufferedReader bf = new BufferedReader(new
                    InputStreamReader(in));
25              strBuff = new StringBuffer();
26              while((line = bf.readLine()) != null) {
27                  strBuff.append(line + "\n");
```

```
            }
            txtArea.append("File Name : " + fileToRead + "\n");
            txtArea.append(strBuff.toString());
        } catch(IOException e) {
            e.printStackTrace();
        }
    }
}
```

```
<!DOCTYPE html>
<!-- Filer.html -->
<html>
<head>
  <meta charset="utf-8">
   <title>Applets</title>
</head>
<body>
  <applet width="1000" height="500" code="Filer.class"></applet>
</body>
</html>
```

```
Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do
    eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut
    enim ad minim veniam, quis nostrud exercitation ullamco laboris
    nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in
     reprehenderit in voluptate velit esse cillum dolore eu fugiat
    nulla pariatur. Excepteur sint occaecat cupidatat non proident,
    sunt in culpa qui officia deserunt mollit anim id est laborum.

Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do
    eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut
    enim ad minim veniam, quis nostrud exercitation ullamco laboris
    nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in
     reprehenderit in voluptate velit esse cillum dolore eu fugiat
    nulla pariatur. Excepteur sint occaecat cupidatat non proident,
    sunt in culpa qui officia deserunt mollit anim id est laborum.
```

Output:



2..10 Write to a file using Applet.

Program:

```java
// Filew.java
import java.applet.*;
import java.awt.*;
import java.io.*;

public class Filew extends Applet {
  String myFile = "test2";  File f = new File(myFile);
  DataOutputStream dos;

  public void init() {    String osname = System.getProperty("os.
     name");  }

  public void paint(Graphics g) {
    try {
      dos = new DataOutputStream(new BufferedOutputStream(new
         FileOutputStream(myFile), 128));
      dos.writeChars("Cats can hypnotize you when you least expect
         it\n");  dos.flush();
      g.drawString("Successfully wrote to the file named " + myFile
          + " -- go take a look at it!", 10, 10);
    } catch (SecurityException e) {
      g.drawString("writeFile: caught security exception: " + e,
         10, 10);
    } catch (IOException ioe) {
      g.drawString("writeFile: caught i/o exception", 10, 10);
    }
  }
}
```

```html
<!DOCTYPE html>
<!-- Filew.html -->
<html>
<head>
  <meta charset="utf-8">
  <title>Applets</title>
</head>
<body>
  <applet width="1000" height="500" code="Filew.class"></applet>
</body>
</html>
```

Output: