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1 Assignment-1

1.1 HTML form

```

1 <html>
2   <head>
3     <link rel="stylesheet" href="style.css">
4     <script type="text/javascript" src="form.js"></script>
5   </head>
6   <body>
7     <div class="form">
8       <form id="myForm" >
9         <h2> Sign Up</h2>
10        FirstName:
11        <input type="text" name="firstName" id="firstName">
12        <br> <span id="firstValidation" class="validation">
13        </span>
14        <br><br> LastName:
15        <input type="text" name="lastName" id="lastName">
16        <br><span id="secondValidation" class="validation">
17        </span>
18        <label for="gender"> Gender: </label> <br>
19        <input type="radio" name="gender" id="male" checked>male
20        <input type="radio" name="gender" id="female"> female
21        <div style="display:block;">Tshirt size-
22          <select name="tshirtColor" id="dropDown">
23            <option value="small"> Small </option>
24            <option value="medium" selected> Medium </option>
25            <option value="large"> Large </option>
26          </select><br><br>Tshirt color-
27          <select name="tshirtColor" id="dropDown">
28            <option value="small"> red </option>
29            <option value="medium" selected> blue </option>
30            <option value="large"> yellow </option>
31          </select>
32        </div><br>email :<input type="email" name="Email" id="Email">
33        <span id="emailValidation" class="validation"></span>password:
34        <input type="password" name="password" id="password">
35        <br><br> <br>
36        phone number: <input type="tel" id = "phno">
37        <br><span id="phoneValidation" class="validation"></span>
38        Address: <br>
39        <textarea name="Address" id="address" cols="30" rows="10">
40        </textarea>
41        <br><span id="addressValidation"></span> <br>
42        <div class="buttonholder">
43          <input type="submit" value="Submit" id="submit" onclick="validate();">
44          <input type="reset" value="Reset" id="reset" onclick="resetFields();">
45        </div>
46      </form>
47    </div>
48  </body>
49 </html>

```

1.2 JavaScript

```
1 function validate(){
2   var firstName = document.getElementById("firstName").value;
3   var lastName = document.getElementById("lastName").value;
4   var ph = document.getElementById("phno").value;
5   var email = document.getElementById("Email").value;
6   var password = document.getElementById("password").value;
7   var regex=/^[a-zA-Z]+$;/;
8   var phn=/^[0-9]{10}$/;
9   var e=/^([a-zA-Z0-9_\-\.])$/;
10  var flag=true;
11  if(firstName=="")
12  {
13    document.getElementById("firstValidation").innerHTML = "";
14  }
15  if(lastName=="")
16  {
17    document.getElementById("secondValidation").innerHTML = "";
18  }
19  console.log("inside_validate");
20  if(firstName!="" || lastName!="")
21  {
22    if(regex.test(firstName)== false)
23    {
24      document.getElementById("firstValidation").innerHTML="xyz";
25      document.getElementById("firstName").value="";
26      flag=false;
27    }
28    if(regex.test(lastName)== false)
29    {
30      document.getElementById("secondValidation").innerHTML = "xyz";
31      document.getElementById("lastName").value="";
32      flag=false;
33    }
34    if(firstName.length>40)
35    {
36      document.getElementById("firstValidation").innerHTML = "xyz"
37      document.getElementById("firstName").value="";
38      flag=false;
39    }
40    if(lastName.length>40)
41    {
42      document.getElementById("secondValidation").innerHTML="xyz";
43      document.getElementById("lastName").value="";
44      flag=false;
45    }
46  }
47  if(ph!="")
48  {
49    if(phn.test(ph)==false)
50    {
51      document.getElementById("phoneValidation").innerHTML="10digit";
52      document.getElementById("phno").value="";
53      flag=false;
```

```

54     }
55 }
56 else
57 {
58     document.getElementById("phoneValidation").innerHTML = "";
59 }
60 if(email!="")
61 {
62     if(e.test(email)==false)
63     {
64         document.getElementById("emailValidation").innerHTML = "email_id";
65         document.getElementById("Email").value="";
66         flag=false;
67     }
68 }
69 else
70 {
71     document.getElementById("emailValidation").innerHTML = "";
72 }
73 if(flag&&firstName!=""&&lastName!=""&& ph!="")
74 {
75     document.write("Form_successfully_submitted");
76     setTimeout(function() {
77         window.location.reload(true);
78     }, 3000);
79 }
80 }
81 function resetFields(){
82     window.location.reload(true);
83 }

```

1.3 CSS

```

1 body{
2     background: #5b5f63;
3     font-size: 20px;
4     width: 95%;
5     height: 95%;
6 }
7 body *{
8     box-sizing: border-box;
9 }
10 div.form
11 {
12     display: block;
13     text-align: center;
14     background: rgba(248, 248, 248, 0.815);
15     margin-left: 500px;
16     margin-right: 500px;
17     margin-top: 50px;
18     margin-bottom: 50px;
19     width: 45%;
20     -webkit-border-radius: 5px;
21     -moz-border-radius: 5px;

```

```
22 }
23 h2
24 {
25     text-align: center;
26     width: 100%;
27 }
28 input{
29     padding: 10px;
30     border: 2px solid #e7e7e7;
31     -webkit-border-radius: 5px;
32     -moz-border-radius: 5px;
33     border-radius: 5px;
34 }
35 form
36 {
37     display: inline-block;
38     margin-left: auto;
39     margin-right: auto;
40     text-align: left;
41     width: 60%;
42 }
43 }
44 input[type=radio]:not(old){
45     display: inline-block;
46     line-height: 24px;
47     border: 0.0625em solid rgb(209, 19, 19);
48 }
49 #email{
50     width: 90%;
51 }
52 #password{
53     width: 90%;
54 }
55 #firstName{
56     margin-top: 40px;
57     width: 90%;
58 }
59 #phno{
60     width: 90%;
61 }
62 #lastName{
63     width: 90%;
64 }
65 #address{
66     width: 100%;
67 }
68 .buttonholder{
69     text-align: center;
70 }
71 .buttons{
72     height: auto;
73     font-size: 22px;
74     font-weight: 500;
75     padding: 30px;
76     width: 50%;
```

```

77     text-align: center;
78     color: white;
79     background: #15CD72;
80     border: 1;
81     cursor: pointer;
82     margin-bottom: 0;
83 }
84 .validation{
85     margin-left: 110px;
86     color: rgba(250, 3, 3, 0.45);
87     font-size: x-small;
88 }
89 .buttons:hover{
90     background-color: #9696E2;
91 }
92 .buttons:active {
93     background-color: #9595E7;
94     box-shadow: 0 5px #666;
95     transform: translateY(4px);
96 }
97 #phonevalidation{
98     margin-left: 136px;
99 }
100 #submit{
101     float: left;
102 }
103 #reset{
104     float: right;
105 }

```

The screenshot shows a web browser window with a single tab titled 'form.html'. The address bar shows the file path: 'file:///home/ratul/repo/InternetTechnology/assignment1/form.html'. The main content is a 'Sign Up' form with the following elements:

- Form Title:** Sign Up
- Fields:**
 - FirstName:
 - LastName:
 - Gender: ☒ male ☐ female
 - Tshirt size:
 - Tshirt color:
 - email:
 - password:
 - phone number:
 - Address:
- Buttons:** Submit, Reset

The browser's taskbar at the bottom shows various open applications including 'start', 'Deep Pur...', '[latexFiles]', '[Telegram]', '/home/r...', '[ratul@r...]', 'LaTeX - I...', 'assignm...', 'style.css...', and 'form.ht...'. The system clock shows 22:29.

Figure 1: form.html

2 Assignment-2

2.1 Banner using applet

```
1 import java.awt.*;  
2 import java.applet.*;  
3  
4 public class Banner extends Applet  
5 {  
6     String msg;  
7     char ch;  
8     boolean stop;  
9     Thread t;  
10  
11     public void init () {  
12         msg = "Maulana_Abul_Kalam_Azad_University_of_Technology.";  
13         setFont(new Font("TimesRoman",Font.BOLD + Font.ITALIC, 20));  
14         setBackground(Color.cyan);  
15         setForeground(Color.red);  
16     }  
17     public void paint (Graphics g) {  
18         g.drawString(msg, 150, 150);  
19     }  
20 }
```

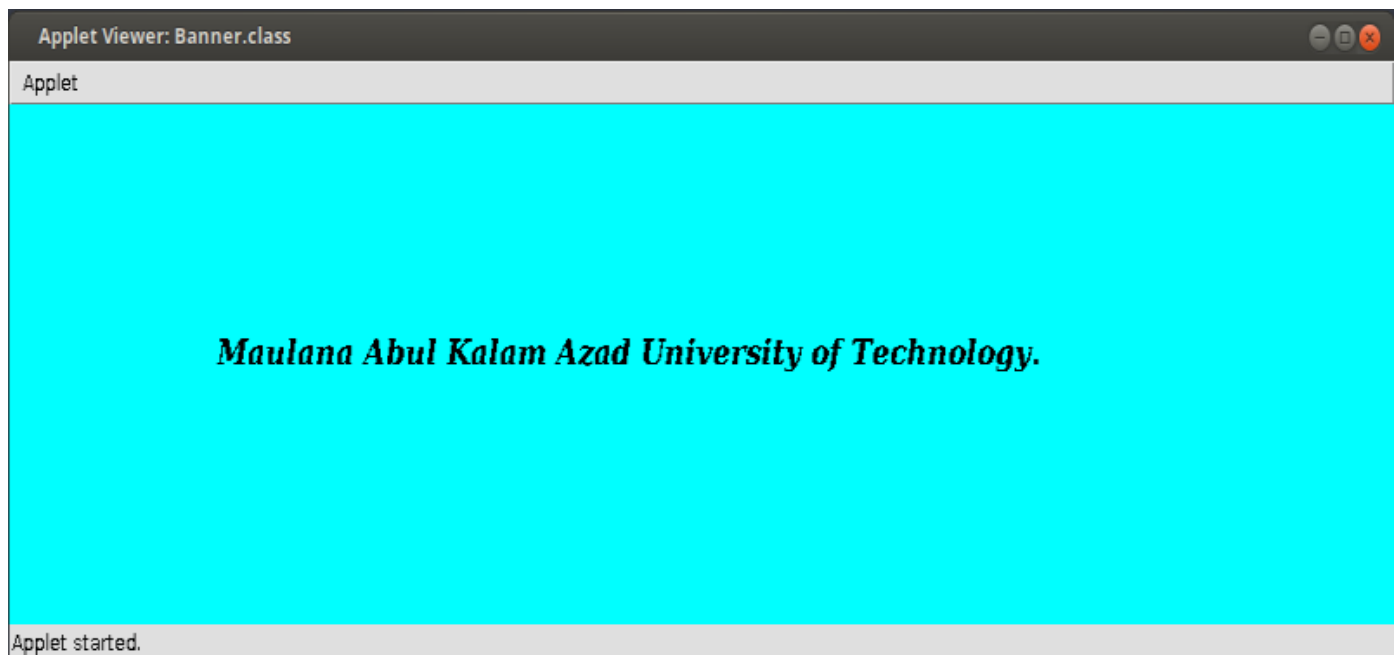


Figure 2: Banner

2.2 Generating shapes using applet

```
1 import java.applet.Applet;  
2 import java.awt.*;  
3 /* <applet code="GraphicsDemo" width=500 height=500></applet> */  
4 public class GraphicsDemo extends Applet{  
5     public void paint(Graphics g)  
6     {  
7         g.setColor(Color.red);  
8         g.drawString("Welcome",50, 50);  
9         g.drawLine(20,30,20,300);  
10        g.drawRect(70,100,30,30);  
11        g.fillRect(170,100,30,30);  
12        g.drawOval(70,200,30,30);  
13  
14        g.setColor(Color.pink);  
15        g.fillOval(170,200,30,30);  
16        g.drawArc(90,150,30,30,30,270);  
17        g.fillArc(270,150,30,30,0,180);  
18    }  
19 }  
20 }
```

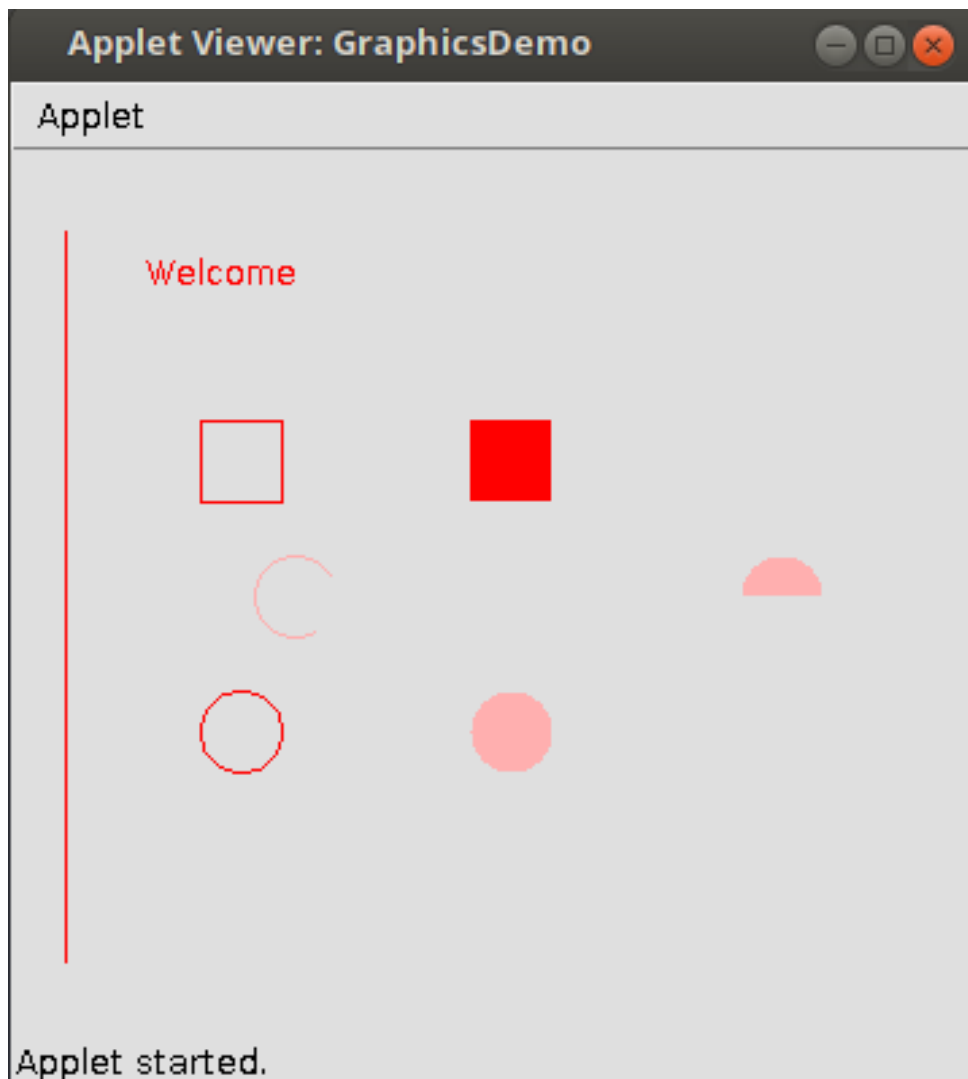


Figure 3: Different shapes

2.3 Clock using applet

```
1 import java.awt.*;
2 import java.applet.*;
3 import java.util.*;
4 import java.text.*;
5 public class DigiClock extends Applet implements Runnable
6 {
7     Thread t = null;
8     String time = "";
9     public void init () {
10         setFont(new Font("Helvetica",Font.BOLD, 50));
11         setBackground(Color.darkGray);
12     }
13     public void start () {
14         t = new Thread(this);
15         t.start();
16     }
17     public void run () {
18         try {
19             while (true) {
20                 Calendar cal = Calendar.getInstance();
21                 SimpleDateFormat formatting = new SimpleDateFormat("hh:mm:ss");
22                 Date date = cal.getTime();
23                 time = formatting.format(date);
24
25                 repaint();
26
27                 t.sleep(1000);//time in milliseconds
28             }
29         }
30         catch (Exception e) { }
31     }
32     public void paint (Graphics g){
33         g.setColor(Color.GRAY);
34         g.drawString(time, 125, 250);
35     }
36 }
```

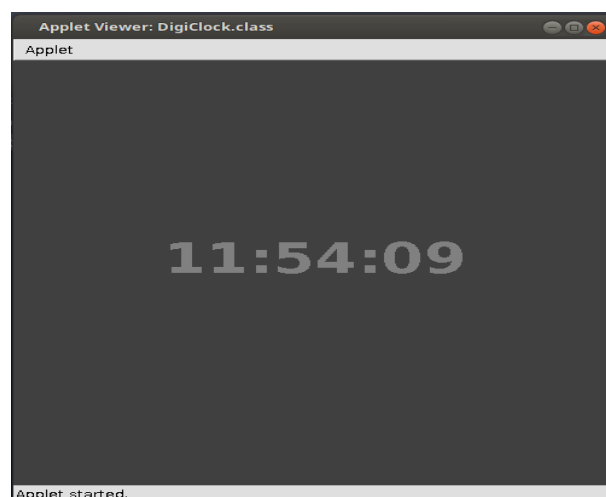
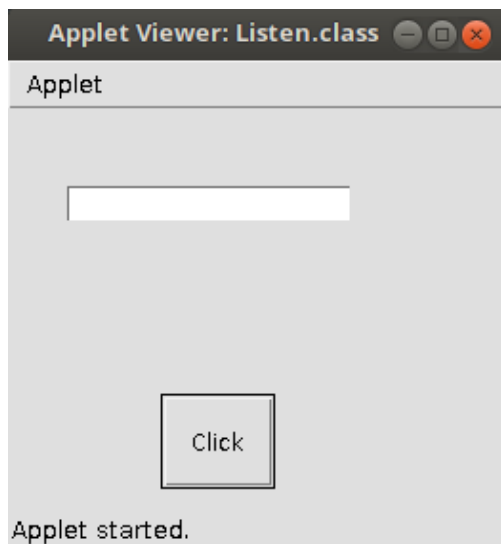


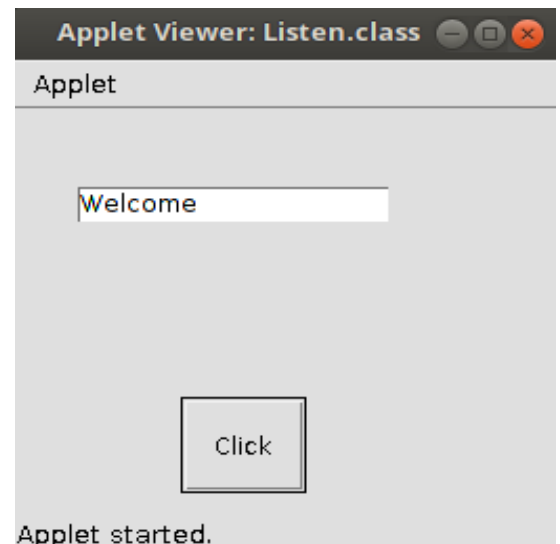
Figure 4: Clock applet

2.4 Event listener using Applet

```
1 import java.awt.*;  
2 import java.applet.*;  
3 import java.awt.event.*;  
4  
5 public class Listen extends Applet implements ActionListener  
6 {  
7     Button b;  
8     TextField tf;  
9  
10    public void init() {  
11        tf=new TextField();  
12        tf.setBounds(30,40,150,20);  
13  
14        b=new Button("Click");  
15        b.setBounds(80,150,60,50);  
16  
17        add(b);add(tf);  
18        b.addActionListener(this);  
19  
20        setLayout(null);  
21    }  
22  
23    public void actionPerformed(ActionEvent e){  
24        tf.setText("Welcome");  
25    }  
26 }
```



(a) Before click



(b) After click

Figure 5: A click event listener

2.5 Playing sound using applet

```
1 import java.applet.*;
2 import java.awt.*;
3 import java.awt.event.*;
4
5 public class Sound extends Applet implements ActionListener
6 {
7     Button play;
8     AudioClip audioClip;
9
10    public void init() {
11        play = new Button("Play");
12        add(play);
13        play.addActionListener(this);
14        audioClip = getAudioClip(getCodeBase(), "sirenpolice.wav");
15    }
16    public void actionPerformed(ActionEvent ae) {
17        Button source = (Button)ae.getSource();
18        audioClip.play();
19    }
20 }
```

2.6 Image Display using applet

```
1 import java.awt.*;  
2 import java.applet.*;  
3  
4  
5 public class Imager extends Applet  
6 {  
7  
8     Image picture;  
9  
10    public void init() {  
11        picture = getImage(getDocumentBase(),"WBUT9.jpg");  
12    }  
13  
14    public void paint(Graphics g) {  
15        g.drawImage(picture, 40,40, this);  
16    }  
17  
18 }
```



Figure 6: Image Displayed using applet

2.7 Reading a file using applet

```

1 import java.applet.*;
2 import java.awt.*;
3 import java.io.*;
4 import java.net.*;
5
6 public class Filer extends Applet
7 {
8     String fileToRead = "test1.txt";
9     StringBuffer strBuff;
10    TextArea txtArea;
11    public void init() {
12        txtArea = new TextArea(100, 100);
13        txtArea.setEditable(false);
14        add(txtArea, "center");
15        String prHtml = this.getParameter("fileToRead");
16
17        if (prHtml != null) fileToRead = new String(prHtml);
18        readFile();
19    }
20    public void readFile(){
21        String line;
22        URL url = null;
23        try {
24            url = new URL(getCodeBase(), fileToRead);
25        }
26        catch(MalformedURLException e){}
27        try {
28            InputStream in = url.openStream();
29            BufferedReader bf = new BufferedReader(new InputStreamReader(in));
30            strBuff = new StringBuffer();
31            while((line = bf.readLine()) != null) {
32                strBuff.append(line + "\n");
33            }
34            txtArea.append("File Name: " + fileToRead + "\n");
35            txtArea.append(strBuff.toString());
36        } catch(IOException e) {
37            e.printStackTrace();
38        }
39    }
40 }

```

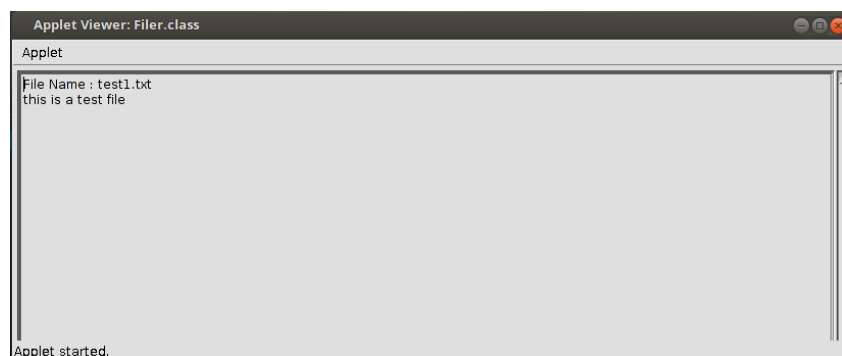


Figure 7: Reading a file using applet