

NAME	Waseem khan
ID	14306
SEMESTER	5th
DEPARTMENT	BS(CS)
SUBJECT	(OOP)
Teacher name	Sir Ayoub

ASSIGNMENT

Q1. Create a Tic Tac Toe game in java (use any java tool for coding) and explain it in detail including screen shots.

Creat in tic tac toe game in java

Program

```

1 import java.awt.event.ActionEvent;
2 import java.awt.event.ActionListener;
3 import java.awt.GridLayout;
4
5 import javax.swing.JButton;
6 import javax.swing.JFrame;
7 import javax.swing.JOptionPane;
8
9
10 public class TicTacToe extends JFrame {
11     //for making a frame we have to extend JFrame
12     //creating a constructor
13     //making array of button
14     int chance=0;
15     //lets's say player1 chance be 0
16     JButton[] button = new JButton[11];
17
18     TicTacToe () {
19         for(int i=0;i<button.length;i++) {
20             if(i==9) {
21                 button[i]=new JButton("reset");
22                 add(button[i]);
23             }
24             else if (i==10) {
25                 button [i]= new JButton("EXIT");
26                 add (button[i]);
27             }
28             else {
29                 button[i]=new JButton();
30                 add(button[i]);
31             }
32
33
34         }
35         button[0].addActionListener(new ActionListener() {
36
37

```

```
36
37
38Ⓞ @Override
39 public void actionPerformed(ActionEvent e) {
40     if(button[0].getText().equals("")) {
41         if(chance==0){declareresult();
42         button[0].setText("x");
43         chance=1;
44
45
46     }
47     else {declareresult();
48         button[0].setText("0");
49         chance=0;
50
51     }
52 }
53
54
55
56 }});
57
58
59Ⓞ button[1].addActionListener(new ActionListener() {
60
61
62Ⓞ @Override
63 public void actionPerformed(ActionEvent e) {
64
65     if(button[1].getText().equals("")) {
66         if(chance==0){ declareresult();
67         button[1].setText("x");
68         chance=1;
69     }
70     else { declareresult();
```

```

71         button[1].setText("0");
72         chance=0;
73     }
74 }
75 }
76 }
77 });
78
79
80
81
82 button[2].addActionListener(new ActionListener() {
83
84
85     @Override
86     public void actionPerformed(ActionEvent e) {
87         if(button[2].getText().equals("")) {
88
89             if(chance==0){ declareresult();
90             button[2].setText("x");
91             chance=1;
92             }
93             else { declareresult();
94                 button[2].setText("0");
95                 chance=0;
96             }
97         }
98     }
99 }
100 });
101
102
103 button[3].addActionListener(new ActionListener() {
104
105
106     @Override
107     public void actionPerformed(ActionEvent e) {

```

```
108
109     if(button[3].getText().equals("")) {
110         if(chance==0){ declareresult();
111         button[3].setText("x");
112         chance=1;
113         }
114         else { declareresult();
115             button[3].setText("0");
116             chance=0;
117         }
118     }
119 }
120
121 }});
122
123
124 button[4].addActionListener(new ActionListener()
125
126
127 @Override
128 public void actionPerformed(ActionEvent e) {
129
130     if(button[4].getText().equals("")) {
131         if(chance==0){ declareresult();
132         button[4].setText("x");
133         chance=1;
134         }
135         else { declareresult();
136             button[4].setText("0");
137             chance=0;
138         }
139     }
140 }
141
142 }});
```

```
143
144
145
146
147 button[5].addActionListener(new ActionListener() {
148
149
150     @Override
151     public void actionPerformed(ActionEvent e) {
152         if(button[5].getText().equals("")) {
153
154             if(chance==0){ declareresult();
155             button[5].setText("X");
156             chance=1;
157             }
158             else { declareresult();
159                 button[5].setText("0");
160                 chance=0;
161             }
162         }
163     }
164
165     });
166
167
168
169
170
171 button[6].addActionListener(new ActionListener() {
172
173
174     @Override
175     public void actionPerformed(ActionEvent e) {
176
177         if(button[6].getText().equals("")) {
178             if(chance==0){ declareresult();
```

```
178         if(chance==0){ declareresult();
179         button[6].setText("x");
180         chance=1;
181     }
182     else { declareresult();
183           button[6].setText("0");
184           chance=0;
185     }
186 }
187 }
188
189 }));
190
191
192 button[7].addActionListener(new ActionListener() {
193
194
195     @Override
196     public void actionPerformed(ActionEvent e) {
197         if(button[7].getText().equals("")) {
198
199             if(chance==0){ declareresult();
200             button[7].setText("x");
201             chance=1;
202         }
203         else { declareresult();
204               button[7].setText("0");
205               chance=0;
206         }
207     }
208 }
209
210 }));
211
212
213 button[8].addActionListener(new ActionListener() {
214
```

```
214
215
216 @Override
217 public void actionPerformed(ActionEvent e) {
218
219     if(button[8].getText().equals("")) {
220         if(chance==0){ declareresult();
221         button[8].setText("x");
222         chance=1;
223         }
224         else { declareresult();
225         button[8].setText("0");
226         chance=0;
227
228     }
229 }
230
231 }});
232
233 button[9].addActionListener(new ActionListener() {
234     @Override
235     public void actionPerformed(ActionEvent e ) {
236         for(int i=0; i<9;i++)
237             button[i].setText("");
238     }
239 });
240
241
242 button[10].addActionListener(new ActionListener() {
243     @Override
244     public void actionPerformed(ActionEvent e) {
245         System.exit(0);
246     }
247 });
248
249
```



```

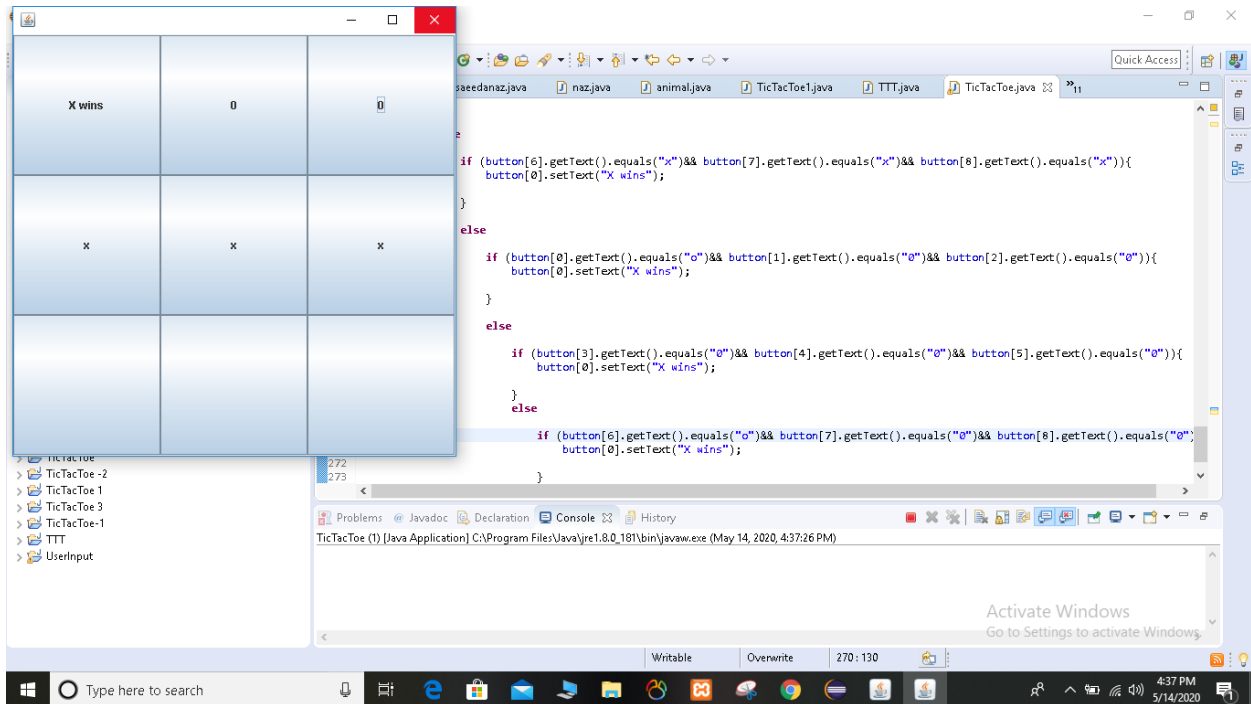
250     //for making a frame visible
251     setVisible(true);
252     //setting frame size
253     setSize(700,700);
254     //setting layout like tictactoe
255     setLayout(new GridLayout(4,3));
256     }
257     public static void main(String[] args) {
258         // TODO Auto-generated method stub
259         // making a class object to call constructor
260         TicTacToe obj = new TicTacToe();
261     }
262
263     public void declareresult() {
264
265         if (button[0].getText().equals("x")&& button[1].getText().equals("x")&&
266             button[2].getText().equals("x")){
267             JOptionPane.showMessageDialog(null , "X WINS !!");
268
269         }
270         else
271
272             if (button[3].getText().equals("x")&& button[4].getText().equals("x")&&
273                 button[5].getText().equals("x")){
274                 JOptionPane.showMessageDialog(null , "X WINS !!");
275
276             }
277
278         else
279
280             if (button[6].getText().equals("x")&& button[7].getText().equals("x")&&
281                 button[8].getText().equals("x")){
282                 JOptionPane.showMessageDialog(null , "X WINS !!");
283
284             }

```

```
284
285     }
286
287     else
288
289         if (button[0].getText().equals("o")&& button[1].getText().equals("0")&&
290             button[2].getText().equals("0")){
291             JOptionPane.showMessageDialog(null , "0 WINS !!");
292         }
293
294     else
295
296         if (button[3].getText().equals("0")&& button[4].getText().equals("0")&&
297             button[5].getText().equals("0")){
298             JOptionPane.showMessageDialog(null , "0 WINS !!");
299         }
300     }
301     else
302
303         if (button[6].getText().equals("o")&& button[7].getText().equals("0")&&
304             button[8].getText().equals("0")){
305             JOptionPane.showMessageDialog(null , "0 WINS !!");
306         }
307
308     else
309         if (button[0].getText().equals("x")&& button[3].getText().equals("x")&&
310             button[5].getText().equals("x")){
311             JOptionPane.showMessageDialog(null , "X WINS !!");
312         }
313     else
314
315         if (button[1].getText().equals("x")&& button[4].getText().equals("x")&&
316             button[7].getText().equals("x")){
317             JOptionPane.showMessageDialog(null , "X WINS !!");
318         }
319     }
320
321     else
```

```
322
323     if (button[2].getText().equals("x")&& button[5].getText().equals("x")&&
324         button[8].getText().equals("x")){
325         JOptionPane.showMessageDialog(null , "X WINS !!");
326     }
327
328     else
329
330     if (button[0].getText().equals("o")&& button[1].getText().equals("0")&&
331         button[2].getText().equals("0")){
332         JOptionPane.showMessageDialog(null , "0 WINS !!");
333     }
334
335     else
336
337     if (button[1].getText().equals("0")&& button[4].getText().equals("0")&&
338         button[5].getText().equals("0")){
339         JOptionPane.showMessageDialog(null , "0 WINS !!");
340     }
341
342     else
343
344     if (button[0].getText().equals("o")&& button[3].getText().equals("0")&&
345         button[5].getText().equals("0")){
346         JOptionPane.showMessageDialog(null , "0 WINS !!");
347     }
348 }
349 }
350
351 }
```

Out put in this parogram



X wins	0	0
x	x	x

- > Multiplication table
- > naz
- > saeedanaz
- > table
- > tic tac toe
- > TicTacToe
- > TicTacToe-2
- > TicTacToe 1
- > TicTacToe 3
- > TicTacToe-1
- > TTT
- > UserInput

```
Auto-generated method stub
// Creating a class object to call constructor
TicTacToe obj = new TicTacToe();

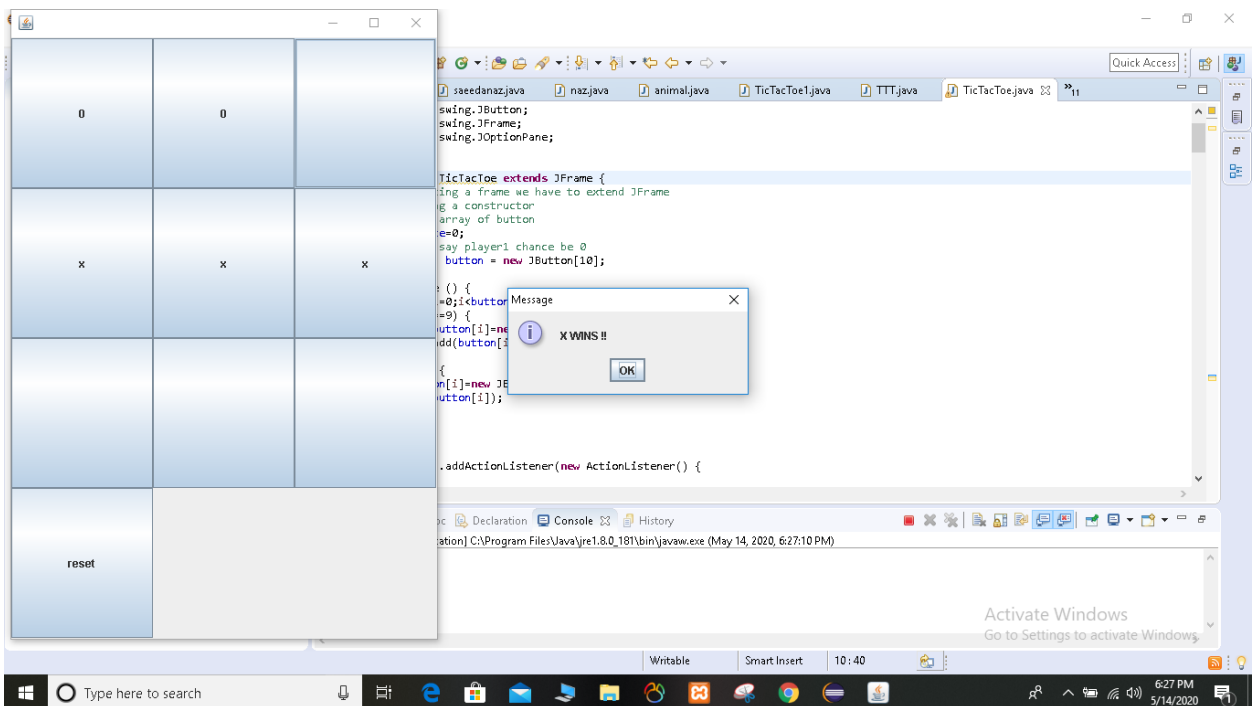
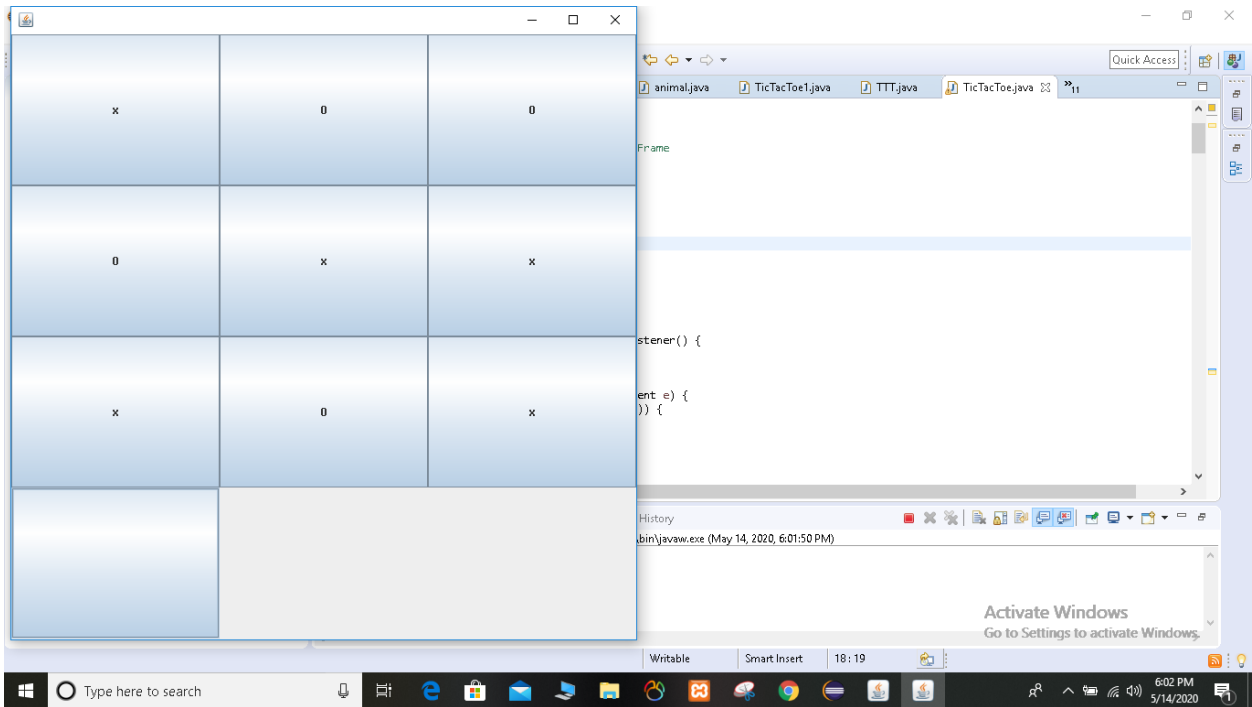
declareResult() {
    if (button[0].getText().equals("x") && button[1].getText().equals("x") && button[2].getText().equals("x")){
        button[0].setText("X wins");
    }

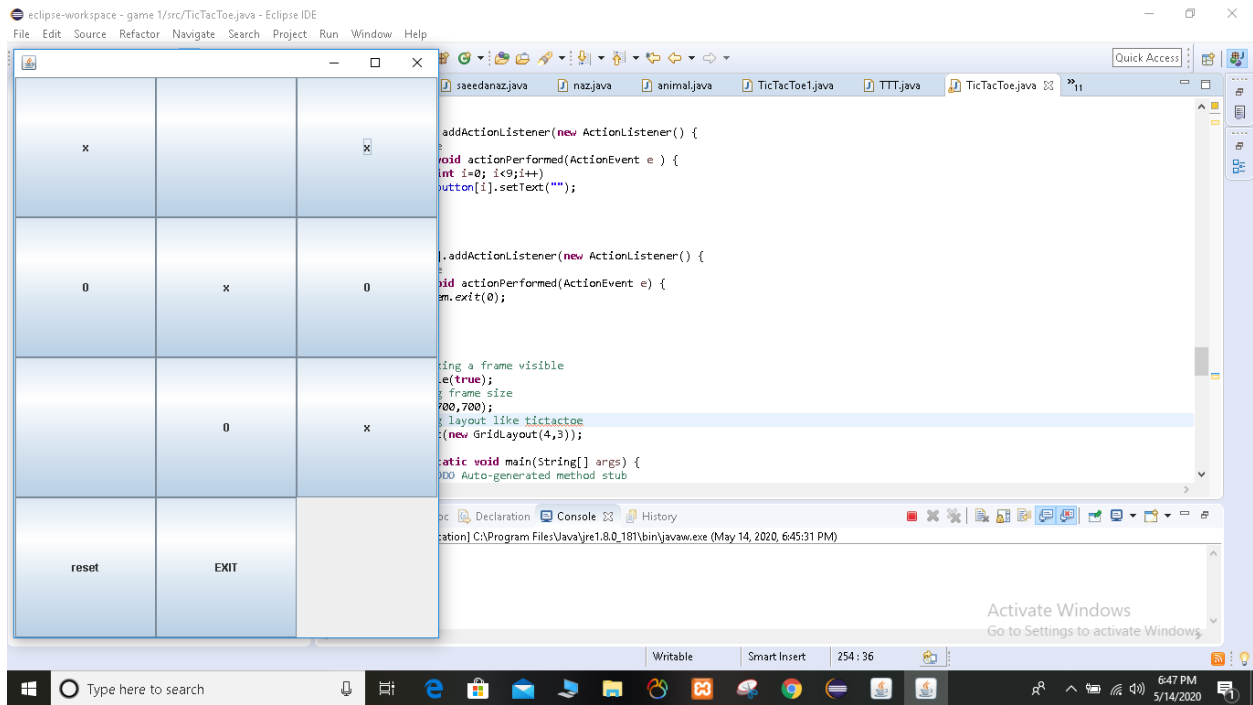
    if (button[3].getText().equals("x") && button[4].getText().equals("x") && button[5].getText().equals("x")){
        button[0].setText("X wins");
    }

    if (button[6].getText().equals("x") && button[7].getText().equals("x") && button[8].getText().equals("x")){
        button[0].setText("X wins");
    }
}

else
{
    if (button[0].getText().equals("o") && button[1].getText().equals("o") && button[2].getText().equals("o")){
        button[0].setText("X wins");
    }
}
}
```

Problems Javadoc Declaration Console History
TicTacToe (1) [Java Application] C:\Program Files\Java\jre1.8.0_181\bin\javaw.exe (May 14, 2020, 5:06:30 PM)





Last out put

The screenshot shows a Java Swing application window on the left and an IDE on the right. The game board is a 4x3 grid with the following state:

	x	
	x	0
	x	0
reset	EXIT	

The IDE shows the following Java code:

```
...  
.addActionListener(new ActionListener() {  
    e  
    void actionPerformed(ActionEvent e) {  
        int i=0; i<9;i++  
        button[i].setText("");  
    }  
});  
...  
].addActionListener(new ActionListener() {  
    e  
    void actionPerformed(ActionEvent e) {  
        em.exit(0);  
    }  
});  
...  
king a frame  
le(true);  
g frame size  
700,700);  
g layout like tictactoe  
t(new GridLayout(4,3));  
...  
tatic void main(String[] args) {  
    ODD Auto-generated method stub  
}
```

A message box titled "Message" with the text "X WINS !!" and an "OK" button is displayed over the IDE.

This is a duplicate of the screenshot above, showing the same Java Swing application window and IDE. The game board state is identical to the first screenshot, and the IDE code and "X WINS !!" message box are also present.