University of Information Technology and Sciences (UITS)

Department of Information Technology

Team Name: BLAST

IT-216 : Object Oriented Programming Lab II

Multiple Choice Question Project

Submitted To:

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Contents

1 Abstract

In this Project we learn how create a Online base multiple question shit by using OOPL(JAvA) by using Abstract Window Toolkit (AWT).Its helps to create Java's original platform-dependent windowing, graphics, and user-interfa AWT stands for Abstract window toolkit is an Application programming interface (API) for creating Graphical User Interface (GUI) in Java. It allows Java programmers to develop window-based applications. AWT provides various components like button, label, checkbox, etc. used as objects inside a Java Program.

2 Objective

In this project its help to taking online multiple quiz test by any subject and any quiz.
java is the One of the most widely used programming languages, Java is used as the server-side language for most back-end development projects, including those involving big data and Android development and learn how to use AWT(Abstract Windowing Toolkit) and we are create many types of desktop application project.Java swing tutorial is a part of java foundation classes,an API for providing a graphics user interface,for java programmers, and AWT is java original platform dependend windowing graphics also,and user interface widget toolkit.This is part of API.

We use awt to provides the classes necessary to create an applet and the classes an applet uses to communicate with its applet context. Contains all of the classes for creating user interfaces and for painting graphics and images.we are also used Swing..Swing was developed to provide a more sophisticated set of GUI components than the earlier Abstract Window Toolkit (AWT).

3 Working Procedure

1. import java.awt.*; :- Java AWT (Abstract Window Toolkit) is an API to develop GUI or window-based applications in java.
2.import java.awt.event.*; :- Awt. event. An event listener registers with an event source to receive notifications about the events of a particular type.
3. import javax.swing.*; :- javax.swing package provides classes for java swing API such as JButton, JTextField, JTextArea, JRadioButton, JCheckbox, JMenu, JColorChooser etc.
4.taking AWT()/AWT2/AWT3/class :- Abstract Window Toolkit (AWT)
5.setBounds() :- The setBounds() method is used in such a situation to set the position and size.
6.setLocation() :- Changes the point to have the specified location.
7.getContentPane().setBackground(Color.WHITE);
8.setLayout(null) :- it's used to change the background in AWT page
9. ImageIcon I1 = new ImageIcon("nazmul5.JPEG"); :- This function is used to attached picture in page.
10.setFont(new Font()); :- It's set font size in AWT class
11.JLabel() :- JLabel is a class of java Swing . JLabel is used to display a short string or an image icon. JLabel can display text, image or both.
12.JButton lg() :- JButton class in Java is used to create push buttons that can be used to perform any ActionEvent whenever it is clicked.;
13.ButtonGroup bg() :- manages the selected/unselected state for a set of buttons/
14,JRadioButton() :- used to create a radio button.
15. setTitle() :- it's used to set title.
16.setLocation(100,100) :- It's used for set location.
17.addActionListener(this) :- that the component button will be added to the components that are being tracked for an action event.
18.setDefaultCloseOperation();
19.getActionCommand() :-getActionCommand() gives you a String representing the action command.
20.setSelected() :- use setSelected method in javax.
21.boolean check() :- In general, the client can use boolean messages to check for various true/false conditions of the receiver.

4 Outcome

4.1 Output-1

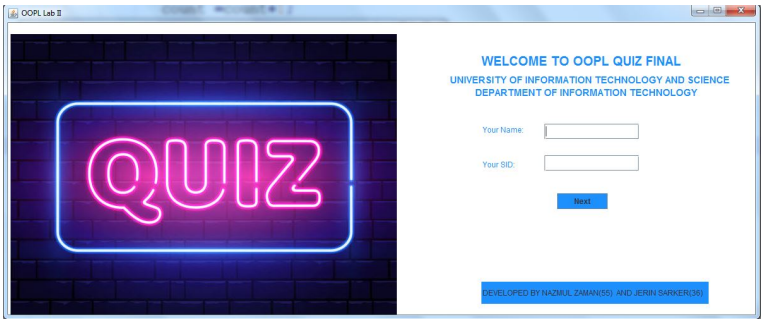

Figure 1: Output-1

4.2 Output-2

Figure 2: Output-2

4.3 Output-3

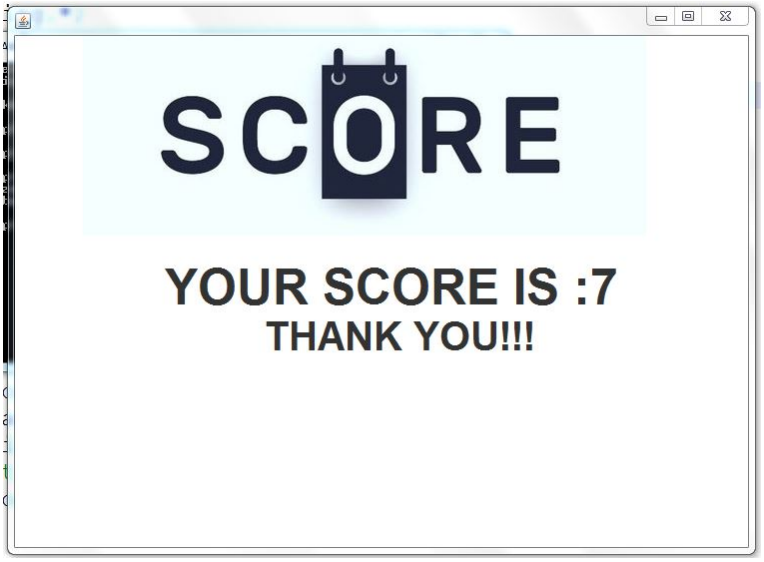

Figure 3: Output-2

5 Conclusion

In this project making a online base multiple choice quiz question by using java AWT package .In this project we knowing many things about OOPL in JAVA and know about awt and how its works and why we used it. By using awt in java we can build many real life oopl project which can help us to our daily life and its a new experience to us about oopl.
Finally we can say that in this project we learn what is best meaning of oopl and why we use this language and what can we do by using awt in oopl .

6 Java Code

6.1 Class AWT2(Main class)

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


public class AWT2 extends JFrame implements ActionListener{



  JButton btn1;

  AWT2()
  {
       setBounds(400,200,1200, 500);
       getContentPane().setBackground(Color.WHITE);
       setLayout(null);
       setTitle("OOPL Lab II");
         //setSize(600,700);
       setLocation(100,100);







       ImageIcon I1 = new ImageIcon("naz.jpeg");
       JLabel L1 = new JLabel(I1);
       L1.setBounds(0,0,620,500);
       add(L1);

       JLabel L4=new JLabel("WELCOME TO OOPL QUIZ FINAL ");
       L4.setFont(new Font ("Railway",Font.BOLD,20));
       L4.setForeground(new Color(30,144,254));
       L4.setBounds(750,10,500,100);
       add(L4);

       JLabel L2=new JLabel("UNIVERSITY OF INFORMATION TECHNOLOGY
   AND SCIENCE ");
       L2.setFont(new Font ("Railway",Font.BOLD,15));
       L2.setForeground(new Color(30,144,254));
       L2.setBounds(700,40,500,100);
       add(L2);

       JLabel L3=new JLabel("DEPARTMENT OF INFORMATION TECHNOLOGY "
   );
       L3.setFont(new Font ("Railway",Font.BOLD,15));
       L3.setForeground(new Color(30,144,254));
       L3.setBounds(740,60,500,100);
```

```
46          add(L3);
47
48          Label l1 = new Label("Your Name: ");
49          l1.setBounds(750,160,100,20);
50          l1.setForeground(new Color(30,144,254));
51          add(l1);
52
53
54          Label l2= new Label("Your SID: ");
55              l2.setBounds(750,210,100,30);
56          l2.setForeground(new Color(30,144,254));
57          add(l2);
58
59
60
61          JTextField t1 = new JTextField();
62              t1.setBounds(850,160,150,25);
63              add(t1);
64
65
66          JTextField t2 = new JTextField();
67              t2.setBounds(850,210,150,25);
68              add(t2);
69
70
71
72              btn1 = new JButton("Next");
73              btn1.setBounds(870, 270, 80, 25);
74          btn1.setBackground(new Color(30,144,254));
75          btn1.addActionListener(this);
76          add(btn1);
77
78
79
80          Label db = new Label("DEVELOPED BY NAZMUL ZAMAN(55)  AND
      JERIN SARKER(36)");
81              db.setBounds(750,410,360,35);
82          db.setBackground(new Color(30,144,254));
83
84              add(db);
85          setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
86          setVisible(true);
87
88
89
90
91
92
93
94      }
95           public void actionPerformed(ActionEvent e)
```

```
96
97          {
98        if(e.getSource()==btn1)
99        {
100         this.setVisible(false);
101         new AWT().setVisible(true);
102       }
103
104     }
105     public static void main(String [] args)
106     {
107
108     new AWT2();
109
110     }
111
112 }
```

[?]

6.2 Class AWT(Question part)

```
1  import java.awt.*;
2
3  import java.awt.event.*;
4
5  import javax.swing.*;
6
7
8
9  public class AWT extends  JFrame implements ActionListener
10
11
12 {
13   int count=0;
14
15       JLabel ql;
16
17       JButton lg;
18
19       ButtonGroup bg;
20
21       JRadioButton rb[] = new JRadioButton[5];
22
23       int running = 0;
24
25       //int count = 0;
26
27
28
29
```

```
30
31
32
33    AWT()
34
35    {
36
37      //Frame f = new Frame();
38
39
40
41
42      //setSize(600,700);
43      setBounds(400,200,1200, 500);
44      getContentPane().setBackground(Color.WHITE);
45
46      setTitle("OOPL Lab II");
47
48      setLayout(null);
49
50      setVisible(true);
51
52                  setLocation(100,100);
53
54
55
56
57
58            ImageIcon I2 = new ImageIcon("naz3.JPEG");
59            JLabel L2 = new JLabel(I2);
60            L2.setBounds(0,0,1200,200);
61            add(L2);
62
63                  ql = new JLabel();
64
65                   add(ql);
66
67
68
69                   bg = new ButtonGroup();
70
71
72
73                   for(int i=0;i<5;i++)
74
75                   {
76
77
78
79                        rb[i] = new JRadioButton();
80
```

```
81
82                  add(rb[i]);
83            rb[i].setBackground(Color.WHITE);
84                  bg.add(rb[i]);
85
86                }
87
88
89
90                rb[0].setBounds(400,250,300,20);
91
92                rb[1].setBounds(400,280,300,20);
93
94                rb[2].setBounds(400,310,300,20);
95
96                rb[3].setBounds(400,340,300,20);
97
98
99
100
101               lg = new JButton("Next");
102
103               lg.setBounds(500,370,70,40);
104         lg.setBackground(new Color(30,144,254));
105
106               add(lg);
107
108
109               lg.addActionListener(this);
110
111               setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
112
113
114
115               set();
116
117
118
119         }
120
121
122
123         public void actionPerformed(ActionEvent e)
124
125         {
126
127
128
129            if(e.getSource()==lg)
130
131            {
```

```
132
133                 if(check())
134
135                 {
136
137                     count = count+1;
138
139                 }
140
141                 running++;
142
143                 set();
144
145
146
147                 if(running ==9)
148
149                 {
150
151                     lg.setText("Result");
152
153                 }
154
155
156             }
157
158
159
160             if(e.getActionCommand().equals("Result"))
161
162             {
163
164                  if(check())
165
166                  {
167
168                      count =count+1;
169
170                  }
171
172                  running++;
173
174
175
176                   //JOptionPane.showMessageDialog(this,"Correct
    Answer :" + count);
177          this.setVisible(false);
178
179          new AWT3(count).setVisible(true);
180
181                 // System.exit(0);
```

```
182
183             }
184
185         }
186
187
188
189         void set()
190
191         {
192
193             rb[4].setSelected(true);
194
195
196
197             if (running ==0)
198
199             {
200
201                 ql.setText("1. _____ is used to find and fix bugs in
     the Java programs.?");
202
203                 rb[0].setText("JVM");
204
205                 rb[1].setText("JRE");
206
207                 rb[2].setText("JDK");
208
209                 rb[3].setText("JDB");
210
211             }
212
213
214
215             if (running ==1)
216
217             {
218
219                 ql.setText("2. What is the name of the Swing class
    that is used for frames? ");
220
221                 rb[0].setText("Window");
222
223              rb[1].setText("Frame");
224
225                 rb[2].setText(" JFrame");
226
227                 rb[3].setText("SwingFrame ");
228
229             }
230
```

```
231         if (running ==2)
232 
233                 {
234 
235                     ql.setText("3. Which of the following is not a Java
    features?");
236 
237                     rb[0].setText("Dynamic");
238 
239                     rb[1].setText("Architecture Neutral");
240 
241                     rb[2].setText("Use of pointers");
242 
243                     rb[3].setText("Object-oriented");
244 
245                 }
246         if (running ==3)
247 
248                 {
249 
250                     ql.setText("4.Encapsulation is supported by
    ___________?");
251 
252                     rb[0].setText("Objects");
253 
254                     rb[1].setText("Methods");
255 
256                     rb[2].setText("Classes");
257 
258                     rb[3].setText("None of the above");
259 
260                 }
261 
262 
263           if (running ==4)
264 
265                 {
266 
267                     ql.setText("5. An interface with no fields or
    methods is known as a ______.?");
268 
269                     rb[0].setText("Runnable Interface");
270 
271                     rb[1].setText("Marker Interface");
272 
273                     rb[2].setText("Abstract Interface");
274 
275                     rb[3].setText("CharSequence Interface");
276 
277                 }
278         if (running ==5)
```

```
279
280             {
281
282                 ql.setText("6. Which of the following is a mutable
    class in java?");
283
284                 rb[0].setText("java.lang.String");
285
286                 rb[1].setText("java.lang.Byte");
287
288                 rb[2].setText("java.lang.Short");
289
290                 rb[3].setText("java.lang.StringBuilder");
291
292             }
293
294         if (running ==6)
295
296             {
297
298                 ql.setText("7. The class that inherits an already
    defined class is called ___.?");
299
300                 rb[0].setText("Subclass");
301
302                 rb[1].setText("Superclass");
303
304                 rb[2].setText("Main Class");
305
306                 rb[3].setText("Java Class");
307
308             }
309
310        if (running ==7)
311
312             {
313
314                 ql.setText("8. Which of these method is used to
    implement Runnable interface?");
315
316                 rb[0].setText("stop()");
317
318                 rb[1].setText("run()");
319
320                 rb[2].setText("runThread()");
321
322                 rb[3].setText("stopThread()");
323
324             }
325
326        if (running ==8)
```

```
327
328             {
329
330                 ql.setText("9. In OOPs in Java, private, public &
    protected are_____.?");
331
332                 rb[0].setText("Interfaces");
333
334                 rb[1].setText("Classes");
335
336                 rb[2].setText("Access Modifiers");
337
338                 rb[3].setText("Method signature");
339
340
341             }
342
343        if (running ==9)
344
345             {
346
347                 ql.setText("10. Which of the following is not an
    OOPS concept??");
348
349                 rb[0].setText("Exception");
350
351                 rb[1].setText("Abstraction");
352
353                 rb[2].setText("Polymorphism");
354
355                 rb[3].setText("None of the above");
356
357             }
358
359
360
361             ql.setBounds(400,220,400,20);
362
363         }
364
365
366
367         boolean check()
368
369         {
370
371             if(running == 0)
372
373             {
374
375                 return(rb[3].isSelected());
```

```
376
377             }
378
379
380             if(running == 1)
381
382             {
383
384                 return(rb[2].isSelected());
385
386             }
387          if(running == 2)
388
389             {
390
391                 return(rb[1].isSelected());
392
393             }
394         if(running == 3)
395
396             {
397
398                 return(rb[2].isSelected());
399
400             }
401
402        if(running == 4)
403
404             {
405
406                 return(rb[1].isSelected());
407
408             }
409        if(running == 5)
410
411             {
412
413                 return(rb[3].isSelected());
414
415             }
416
417        if(running == 6)
418
419             {
420
421                 return(rb[1].isSelected());
422
423             }
424
425        if(running == 7)
426
```

```
427             {
428
429                 return(rb[1].isSelected());
430
431             }
432
433             if(running == 8)
434
435             {
436
437                 return(rb[2].isSelected());
438
439             }
440       if(running == 9)
441
442             {
443
444                 return(rb[0].isSelected());
445
446             }
447
448
449
450
451
452             return false;
453
454         }
455
456
457
458
459
460
461
462   public static void main(String []args)
463
464   {
465
466     AWT awt = new AWT();
467
468   }
469
470
471
472 }
```

[?]

6.3 Class AWT3(Result part)

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

public class AWT3 extends JFrame{

  AWT3(int count)
    {
      setBounds(700,150,750,550);
      setLocation(300,100);
      getContentPane().setBackground(Color.WHITE);
      setLayout(null);



       ImageIcon I1 = new ImageIcon("nazmul5.JPEG");
       JLabel L1 = new JLabel(I1);
       L1.setBounds(0,0,700,200);
       add(L1);

       JLabel L2=new JLabel("YOUR SCORE IS : " +count);
       L2.setFont(new Font ("Railway",Font.BOLD,50));
       //L4.setForeground(new Color(30,144,254));
       L2.setBounds(150,200,500,100);
       add(L2);

       JLabel L3=new JLabel("THANK YOU!!!");
       L3.setFont(new Font ("Railway",Font.BOLD,40));
       //L4.setForeground(new Color(30,144,254));
       L3.setBounds(250,250,300,100);
       add(L3);


  }


  public static void main(String [] args)
    {

    new AWT3(0).setVisible(true);

    }

}
```

[?]

References

1. https://www.javatpoint.com
2. https://projectabstracts.com
3. https://codingbat.com