TTTK1143

Rekabentuk aturcara dan penyelesaian masalah

Topic

Graphical User Interface (GUI)

Tutorial 5

Section B

Question 4

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Question 4

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

public class Question4 extends JFrame implements ActionListener{
        private JPanel p1,p2,p3,p4,p5,p6,p7,p8,p9,p10;
        private JLabel j1,j2,j3,j4,j5,j6,j7;
        private JTextField name;
        private JList size,crust;
        private JCheckBox [] top=new JCheckBox[6];
        private JButton order,reset;

        String [] sizes= {"Small(RM3)","Regular(RM5)","Large(RM7)","XTra Large(RM9)"};
        String [] crusts= {"Classic(RM2)","Crunchy Thin(RM3)","Stuffed(RM4)","Chesse
Burst(RM5)"};
        String [] tops= {"Pepperoni","Mushroom","Onion","Sausage","Cheese","Pepper"};

        public Question4() {
                Container pane=getContentPane();
                pane.setLayout(new BorderLayout(6,0));

                p1=new JPanel();
                p1.setLayout(new GridLayout(2,1));
                j1=new JLabel("Cheap & Tasty(Limited 1 customer=1
pizza",SwingConstants.CENTER);
                p1.add(j1);
                j2=new JLabel("*************",SwingConstants.CENTER);
                p1.add(j2);

                p2=new JPanel();
                p2.setLayout(new FlowLayout());
                j3=new JLabel("Customers name: ");
                p2.add(j3);
                name=new JTextField(20);
                p2.add(name);
                name.addActionListener(this);

                p3=new JPanel(new GridLayout(0,1));
                p3.add(p1);
                p3.add(p2);

                p4=new JPanel(new GridLayout(0,3));
                j4=new JLabel("        Size:");
                j5=new JLabel("Crust:");
                j6=new JLabel("Topping (RM1 each) ");
                p4.add(j4);
                p4.add(j5);
                p4.add(j6);
                p3.add(p4);
                pane.add(p3,BorderLayout.NORTH);
```

```java
        p5=new JPanel(new GridLayout(1,0));
        size=new JList(sizes);
        size.setSelectionMode(ListSelectionModel.SINGLE_SELECTION);
        p5.add(size);
        pane.add(p5,BorderLayout.WEST);

        p6=new JPanel(new GridLayout(1,0));
        crust=new JList(crusts);
        crust.setSelectionMode(ListSelectionModel.SINGLE_SELECTION);
        p6.add(crust);
        pane.add(p6,BorderLayout.CENTER);

        p7=new JPanel(new GridLayout(3,1));
        for(int i=0;i<top.length;i++) {
            top[i]=new JCheckBox(tops[i]);
            p7.add(top[i]);
        }
        pane.add(p7,BorderLayout.EAST);

        p8=new JPanel(new FlowLayout());
        order=new JButton("Order");
        reset=new JButton("Reset");
        p8.add(order);
        p8.add(reset);
        order.addActionListener(this);
        reset.addActionListener(this);

        p9=new JPanel(new FlowLayout());
        j7=new JLabel(" ");
        p9.add(j7);

        p10=new JPanel(new GridLayout(2,1));
        p10.add(p8);
        p10.add(p9);
        pane.add(p10,BorderLayout.SOUTH);

    }
    private boolean checkCheckboxes(JCheckBox[]box) {
        for(int i=0;i<box.length;i++) {
            if (box[i].isSelected()) {
                return true;
            }
        }
        return false;
    }

    public void actionPerformed(ActionEvent e) {
        Object obj=e.getSource();

        if (obj==order) {

            if(name.getText().equals("")) {
                j7.setText("Pleas complete the form.TQ");

            }
```

```java
                    else if(size.getSelectedIndex()==-1 || crust.getSelectedIndex()==
-1) {
                            j7.setText("Pleas complete the form.TQ");

                    }
                    else if (!checkCheckboxes(top)) {
                            j7.setText("Pleas complete the form.TQ");

                    }
                    else {
                            int total=0;
                            switch(size.getSelectedIndex()) {
                            case 0: total=total+3;
                            break;
                            case 1: total=total+5;
                            break;
                            case 2: total=total+7;
                            break;
                            case 3: total=total+9;
                    }
                    switch(crust.getSelectedIndex()) {
                            case 0: total=total+2;
                            break;
                            case 1: total=total+3;
                            break;
                            case 2: total=total+4;
                            break;
                            case 3: total=total+5;
                            break;
                    }
                    for(int i=0;i<top.length;i++) {
                            if (top[i].isSelected()) {
                                    total=total+1;
                            }
                    }
                    j7.setText("Hi "+name.getText()+".Your total order is RM
"+total+".00.Thank you");
                    }
            }
            else if(obj==reset) {
                    for(int i=0;i<top.length;i++) {
                            top[i].setSelected(false);
                    }
                    size.clearSelection();
                    crust.clearSelection();
                    name.setText("");
                    j7.setText("");
            }
    }

    public static void main (String[]args) {
            Question4 frame = new Question4();//Jframe
            frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
            frame.setTitle("Create Your Own Pizza");
            frame.setSize(450, 280);
```

```
                frame.setVisible(true);
        }
}
```

Output