# Directions

1. Complete the following programs. Pages 585, Question5, 10, 11, 13, 16
2. Screenshot the running programs. Include enough output to show the program works in it’s entirety.
3. Submit screenshots/copies of the code.
   1. Partial credit can be had if you made a valiant effort.
4. Submit to Brightspace.

Part 1: Complete Chapter 14 Programming Exercises starting on page 585; provide a snippet of the code and of the output screen when creating a main method:

**Question 1:**

1. import javax.swing.\*;  
   public class JBook {  
    public static void main(String[] args) {  
    JFrame frame = new JFrame();  
    JLabel quote = new JLabel("Remember, the enemy's gate is down");  
     
    frame.add(quote);  
    frame.setSize(100,100);  
    frame.setVisible(true);  
    frame.setDefaultCloseOperation(JFrame.*EXIT\_ON\_CLOSE*);  
    }  
   }
2. Text

   Description automatically generated
3. import javax.swing.\*;  
   import java.awt.\*;  
     
   public class JBook2 {  
    public static void main(String[] args) {  
    JFrame frame = new JFrame();  
    JLabel quote = new JLabel("Remember, the enemy's gate is down");  
    JButton showTitle = new JButton();  
     
    showTitle.addActionListener(e -> JOptionPane.*showMessageDialog*(frame,"Ender's Game"));  
    showTitle.setSize(50,50);  
     
    frame.add(quote);  
    frame.add(showTitle, BorderLayout.*SOUTH*);  
    frame.setSize(250,250);  
    frame.setVisible(true);  
    frame.setDefaultCloseOperation(JFrame.*EXIT\_ON\_CLOSE*);  
    }  
   }
4. A picture containing graphical user interface

   Description automatically generated

**Question 4:**

import javax.swing.\*;  
import java.awt.\*;  
import java.awt.event.ActionEvent;  
import java.awt.event.ActionListener;  
  
public class JVacationRental extends Frame implements ActionListener {  
 public static void main(String[] args) {  
 JFrame frame = new JFrame();  
 int price=0;  
  
 frame.setTitle("Vacation Rental's");  
 frame.setSize(1000,750);  
 frame.setVisible(true);  
 frame.setDefaultCloseOperation(WindowConstants.*EXIT\_ON\_CLOSE*);  
 frame.setLayout(new GridLayout());  
  
 //Location Button  
  
 ButtonGroup location = new ButtonGroup();  
 JPanel locationP = new JPanel();  
  
 JRadioButton parkside = new JRadioButton("Parkside >>> $600");  
 JRadioButton poolside = new JRadioButton("Poolside >>> $750");  
 JRadioButton lakeside = new JRadioButton("Lakeside >>> $825");  
  
 location.add(parkside);  
 location.add(poolside);  
 location.add(lakeside);  
 locationP.add(parkside);  
 locationP.add(poolside);  
 locationP.add(lakeside);  
 parkside.addActionListener(e -> parkside.isSelected());  
 poolside.addActionListener(e -> poolside.isSelected());  
 lakeside.addActionListener(e -> lakeside.isSelected());  
  
 frame.add(locationP);  
  
 ///Bedroom Numbers  
  
 ButtonGroup beds = new ButtonGroup();  
 JPanel bedsP = new JPanel();  
  
 JRadioButton one = new JRadioButton("One Bedroom");  
 JRadioButton two = new JRadioButton("Two Bedrooms >>> + $75");  
 JRadioButton three = new JRadioButton("Three Bedrooms >>> + $150");  
  
 beds.add(one);  
 beds.add(two);  
 beds.add(three);  
 bedsP.add(one);  
 bedsP.add(two);  
 bedsP.add(three);  
 one.addActionListener(e -> one.isSelected());  
 two.addActionListener(e -> two.isSelected());  
 three.addActionListener(e -> three.isSelected());  
  
  
 frame.add(bedsP);  
  
  
 //Meals  
  
 ButtonGroup meals = new ButtonGroup();  
 JPanel mealsP = new JPanel();  
  
 JRadioButton mealsYes = new JRadioButton("No Meals");  
 JRadioButton mealsNo = new JRadioButton("Yes Meals >>> + $200");  
  
 meals.add(mealsYes);  
 meals.add(mealsNo);  
 mealsP.add(mealsYes);  
 mealsP.add(mealsNo);  
 mealsYes.addActionListener(e -> mealsYes.isSelected());  
 mealsNo.addActionListener(e -> mealsNo.isSelected());  
  
 frame.add(mealsP);  
  
 //Calculate button  
  
 JButton calc = new JButton("Calculate Price");  
  
 frame.add(calc);  
 frame.add(new TextField("Price = "));  
 }  
  
 @Override  
 public void actionPerformed(ActionEvent e) {  
  
 }  
}

Graphical user interface

Description automatically generated with medium confidence

**Question 5:**

1. import javax.swing.\*;  
   import java.awt.\*;  
   import java.awt.event.ActionEvent;  
   import java.awt.event.ActionListener;  
     
   public class JTVDownload implements ActionListener {  
     
    private JButton s1,s2,s3,s4,s5;  
    private JLabel t;  
    public JTVDownload()  
    {  
    //Frame  
    JFrame frame = new JFrame("On Demand");  
    frame.setLayout(new GridBagLayout());  
    frame.setSize(1000,750);  
    frame.setDefaultCloseOperation(WindowConstants.*EXIT\_ON\_CLOSE*);  
    frame.setVisible(true);  
     
    //Buttons  
     
    s1 = new JButton("Flash");  
    s2 = new JButton("Green Arrow");  
    s3 = new JButton("Supergirl");  
    s4 = new JButton("Legends of Tomorrow");  
    s5 = new JButton("Batgirl");  
    s1.addActionListener(this);  
    s2.addActionListener(this);  
    s3.addActionListener(this);  
    s4.addActionListener(this);  
    s5.addActionListener(this);  
    frame.add(s1);  
    frame.add(s2);  
    frame.add(s3);  
    frame.add(s4);  
    frame.add(s5);  
     
    //Text Field  
     
    t =new JLabel("Description");  
    t.setVisible(true);  
    frame.add(t);  
     
     
    }  
     
    public static void main(String[] args) {  
     
    JTVDownload tv = new JTVDownload();  
     
    }  
     
    @Override  
    public void actionPerformed(ActionEvent e) {  
    if(e.getSource()==s1)  
    {  
    t.setText("A show about the flash and how he stops villians like Captain Cold");  
    }  
    else if(e.getSource()==s2)  
    {  
    t.setText("A show about Green Arrow and how he stops villians like Deathstroke");  
    }  
    else if(e.getSource()==s3)  
    {  
    t.setText("A show about Supergirl and how she stops villians like Lex Luthor");  
    }  
    else if(e.getSource()==s4)  
    {  
    t.setText("A show about The Legends of Tomorrow and how they travel through time");  
    }  
    else  
    {  
    t.setText("A show about Batgirl and how she stops villians like The Riddler");  
    }  
    }  
   }

Graphical user interface, text, application, email

Description automatically generated

import javax.swing.\*;  
import java.awt.\*;  
import java.awt.event.ActionEvent;  
import java.awt.event.ActionListener;  
  
public class JTVDownload2 implements ActionListener {  
 private JComboBox box;  
 private JLabel t;  
 public JTVDownload2()  
 {  
 //Frame  
 JFrame frame = new JFrame("On Demand");  
 frame.setLayout(new GridBagLayout());  
 frame.setSize(1000,750);  
 frame.setDefaultCloseOperation(WindowConstants.*EXIT\_ON\_CLOSE*);  
 frame.setVisible(true);  
  
 //Show Array  
  
 String[] shows = {"Flash","Green Arrow", "Supergirl", "Legends of Tomorrow", "Batgirl"};  
  
  
 box= new JComboBox(shows);  
 box.setEditable(true);  
 frame.add(box);  
 box.addActionListener(this);  
  
 //JLabel  
  
 t =new JLabel("On Demand");  
 t.setVisible(true);  
 frame.add(t);  
 }  
  
 public static void main(String[] args) {  
  
 JTVDownload2 tv = new JTVDownload2();  
  
 }  
  
 @Override  
 public void actionPerformed(ActionEvent e) {  
 String value= box.getSelectedItem().toString();  
  
 if(value.equals("Flash"))  
 {  
 t.setText("Flash is on demand");  
 }  
 else if(value.equals("Green Arrow"))  
 {  
 t.setText("Green Arrow is on demand");  
 }  
 else if(value.equals("Supergirl"))  
 {  
 t.setText("Supergirl is on demand");  
 }  
 else if(value.equals("Legends of Tomorrow"))  
 {  
 t.setText("Legends of Tomorrow is on demand");  
 }  
 else if(value.equals("Batgirl"))  
 {  
 t.setText("Batgirl iss on demand");  
 }  
 else  
 {  
 t.setText(value + " is not on demand");  
 }  
 }  
}

Graphical user interface, text

Description automatically generated

**Question 6:**

import javax.swing.\*;  
import javax.swing.event.ListSelectionEvent;  
import javax.swing.event.ListSelectionListener;  
import java.awt.\*;  
  
public class JSandwich implements ListSelectionListener {  
  
 private final String[] meat = {"Chicken","Turkey","Steak"};  
 private final String[] bread = {"Rye","Wheat","White"};  
 private JList meats,breads;  
 private JLabel t;  
  
 JSandwich()  
 {  
  
 //Frame  
  
 JFrame frame = new JFrame("On Demand");  
 frame.setLayout(new FlowLayout(FlowLayout.*CENTER*));  
 frame.setSize(1000,750);  
 frame.setDefaultCloseOperation(WindowConstants.*EXIT\_ON\_CLOSE*);  
 frame.setVisible(true);  
  
 //Lists  
  
 meats = new JList(meat);  
 breads = new JList(bread);  
  
 meats.addListSelectionListener(this);  
 breads.addListSelectionListener(this);  
  
 frame.add(meats);  
 frame.add(breads);  
  
 //JLabel  
  
 t= new JLabel("Price: $0");  
 frame.add(t);  
  
  
 }  
  
 public static void main(String[] args) {  
  
 new JSandwich();  
 }  
  
 @Override  
 public void valueChanged(ListSelectionEvent e) {  
 int price =0;  
  
 if(meats.getSelectedValue()=="Chicken")  
 {  
 price+=3;  
 }  
 else if(meats.getSelectedValue()=="Turkey")  
 {  
 price+=4;  
 }  
 else if(meats.getSelectedValue()=="Steak")  
 {  
 price+=5;  
 }  
  
 if(breads.getSelectedValue()=="Rye")  
 {  
 price+=5;  
 }  
 else if(breads.getSelectedValue()=="Wheat")  
 {  
 price+=4;  
 }  
 else if(breads.getSelectedValue()=="White")  
 {  
 price+=3;  
 }  
  
 t.setText("Price: $"+ price);  
  
 }  
}

Graphical user interface, application, Word

Description automatically generated

Part 2: complete question 1 & 2 of the Game Zone on Pg. 586. Provide a snippet of your code and a snippet of the output:

import javax.swing.\*;  
import java.awt.\*;  
import java.awt.event.ActionEvent;  
import java.awt.event.ActionListener;  
  
public class HedgeYourBet implements ActionListener {  
  
 private final JCheckBox q1\_1,q1\_2,q1\_3,q2\_1,q2\_2,q2\_3,q3\_1,q3\_2,q3\_3,q4\_1,q4\_2,q4\_3,q5\_1,q5\_2,q5\_3;  
 private final JPanel one,two,three,four,five,six;  
 private final JButton check;  
 private final JLabel q1,q2,q3,q4,q5,score;  
 HedgeYourBet()  
 {  
 //Frame  
  
 JFrame frame = new JFrame("On Demand");  
 frame.setLayout(new FlowLayout());  
 frame.setSize(500,750);  
 frame.setDefaultCloseOperation(WindowConstants.*EXIT\_ON\_CLOSE*);  
 frame.setVisible(true);  
 frame.setBounds(350,225,800,400);  
  
 //Q1  
 q1\_1 = new JCheckBox("Sidney Crosby");  
 q1\_2 = new JCheckBox("Kris Letang");  
 q1\_3 = new JCheckBox("Evgeni Malkin");  
 q1 = new JLabel("Who has the most career points?");  
  
 one = new JPanel();  
  
 one.add(q1);  
 one.add(q1\_1);  
 one.add(q1\_2);  
 one.add(q1\_3);  
  
 one.setLayout(new BoxLayout(one,BoxLayout.*X\_AXIS*));  
  
 //Q2  
  
 q2\_1 = new JCheckBox("Sidney Crosby");  
 q2\_2 = new JCheckBox("Kris Letang");  
 q2\_3 = new JCheckBox("Evgeni Malkin");  
 q2 = new JLabel("Who is from Russia?");  
  
 two = new JPanel();  
  
 two.add(q2);  
 two.add(q2\_1);  
 two.add(q2\_2);  
 two.add(q2\_3);  
  
 two.setLayout(new BoxLayout(two,BoxLayout.*X\_AXIS*));  
  
 //Q3  
  
 q3\_1 = new JCheckBox("Sidney Crosby");  
 q3\_2 = new JCheckBox("Kris Letang");  
 q3\_3 = new JCheckBox("Evgeni Malkin");  
 q3 = new JLabel("Who scored the golden goal?");  
  
 three = new JPanel();  
  
 three.add(q3);  
 three.add(q3\_1);  
 three.add(q3\_2);  
 three.add(q3\_3);  
  
 three.setLayout(new BoxLayout(three,BoxLayout.*X\_AXIS*));  
  
 //Q4  
  
 q4\_1 = new JCheckBox("Sidney Crosby");  
 q4\_2 = new JCheckBox("Kris Letang");  
 q4\_3 = new JCheckBox("Evgeni Malkin");  
 q4 = new JLabel("Who is a Defenseman?");  
  
 four = new JPanel();  
  
 four.add(q4);  
 four.add(q4\_1);  
 four.add(q4\_2);  
 four.add(q4\_3);  
  
 four.setLayout(new BoxLayout(four,BoxLayout.*X\_AXIS*));  
  
 //Q5  
  
 q5\_1 = new JCheckBox("Sidney Crosby");  
 q5\_2 = new JCheckBox("Kris Letang");  
 q5\_3 = new JCheckBox("Evgeni Malkin");  
 q5 = new JLabel("Who wears number 58?");  
  
 five = new JPanel();  
  
 five.add(q5);  
 five.add(q5\_1);  
 five.add(q5\_2);  
 five.add(q5\_3);  
  
 five.setLayout(new BoxLayout(five,BoxLayout.*X\_AXIS*));  
  
 //Score and Submit  
  
 score = new JLabel("");  
  
 six = new JPanel();  
 check = new JButton("Submit");  
 check.addActionListener(this);  
  
 six.add(check);  
 six.add(score);  
  
 six.setLayout(new BoxLayout(six,BoxLayout.*X\_AXIS*));  
  
 //Adding  
  
 frame.add(one);  
 frame.add(two);  
 frame.add(three);  
 frame.add(four);  
 frame.add(five);  
 frame.add(six);  
  
  
 }  
  
 public static void main(String[] args) {  
 new HedgeYourBet();  
 }  
  
 @Override  
 public void actionPerformed(ActionEvent e) {  
 int points = 0;  
  
 //Q1  
 if(q1\_1.isSelected() && q1\_2.isSelected() && q1\_3.isSelected())  
 points++;  
 else if(q1\_1.isSelected() && q1\_2.isSelected())  
 points+=2;  
 else if(q1\_1.isSelected() && q1\_3.isSelected())  
 points+=2;  
 else if(q1\_1.isSelected())  
 points+=5;  
 else  
 points+=0;  
  
 //Q2  
 if(q2\_1.isSelected() && q2\_2.isSelected() && q2\_3.isSelected())  
 points++;  
 else if(q2\_3.isSelected() && q2\_1.isSelected())  
 points+=2;  
 else if(q2\_3.isSelected() && q2\_2.isSelected())  
 points+=2;  
 else if(q2\_3.isSelected())  
 points+=5;  
 else  
 points+=0;  
  
 //Q3  
 if(q3\_1.isSelected() && q3\_2.isSelected() && q3\_3.isSelected())  
 points++;  
 else if(q3\_1.isSelected() && q3\_2.isSelected())  
 points+=2;  
 else if(q3\_1.isSelected() && q3\_3.isSelected())  
 points+=2;  
 else if(q3\_1.isSelected())  
 points+=5;  
 else  
 points+=0;  
  
 //Q4  
 if(q4\_1.isSelected() && q4\_2.isSelected() && q4\_3.isSelected())  
 points++;  
 else if(q4\_2.isSelected() && q4\_1.isSelected())  
 points+=2;  
 else if(q4\_2.isSelected() && q4\_3.isSelected())  
 points+=2;  
 else if(q4\_2.isSelected())  
 points+=5;  
 else  
 points+=0;  
  
 //Q5  
 if(q5\_1.isSelected() && q5\_2.isSelected() && q5\_3.isSelected())  
 points++;  
 else if(q5\_2.isSelected() && q5\_1.isSelected())  
 points+=2;  
 else if(q5\_2.isSelected() && q5\_3.isSelected())  
 points+=2;  
 else if(q5\_2.isSelected())  
 points+=5;  
 else  
 points+=0;  
  
 //Message  
  
 if(points>21)  
 score.setText("Fantastic");  
 else if(points>15)  
 score.setText("Very Good");  
 else  
 score.setText("Just OK");  
 }  
}

Graphical user interface, text, application, email

Description automatically generated

import javax.swing.\*;  
import java.awt.\*;  
import java.awt.event.ActionEvent;  
import java.awt.event.ActionListener;  
import java.io.File;  
import java.io.FileWriter;  
  
public class HedgeBet2 implements ActionListener {  
  
 private JCheckBox q1\_1,q1\_2,q1\_3,q2\_1,q2\_2,q2\_3,q3\_1,q3\_2,q3\_3,q4\_1,q4\_2,q4\_3,q5\_1,q5\_2,q5\_3;  
 private JPanel one,two,three,four,five,six;  
 private JButton check;  
 private JLabel q1,q2,q3,q4,q5,score;  
  
  
 HedgeBet2()  
 {  
  
  
 //Frame  
  
 JFrame frame = new JFrame("On Demand");  
 frame.setLayout(new FlowLayout());  
 frame.setSize(500,750);  
 frame.setDefaultCloseOperation(WindowConstants.*EXIT\_ON\_CLOSE*);  
 frame.setVisible(true);  
 frame.setBounds(350,225,800,400);  
  
 //Q1  
 q1\_1 = new JCheckBox("Sidney Crosby");  
 q1\_2 = new JCheckBox("Kris Letang");  
 q1\_3 = new JCheckBox("Evgeni Malkin");  
 q1 = new JLabel("Who has the most career points?");  
  
 one = new JPanel();  
  
 one.add(q1);  
 one.add(q1\_1);  
 one.add(q1\_2);  
 one.add(q1\_3);  
  
 one.setLayout(new BoxLayout(one,BoxLayout.*X\_AXIS*));  
  
 //Q2  
  
 q2\_1 = new JCheckBox("Sidney Crosby");  
 q2\_2 = new JCheckBox("Kris Letang");  
 q2\_3 = new JCheckBox("Evgeni Malkin");  
 q2 = new JLabel("Who is from Russia?");  
  
 two = new JPanel();  
  
 two.add(q2);  
 two.add(q2\_1);  
 two.add(q2\_2);  
 two.add(q2\_3);  
  
 two.setLayout(new BoxLayout(two,BoxLayout.*X\_AXIS*));  
  
 //Q3  
  
 q3\_1 = new JCheckBox("Sidney Crosby");  
 q3\_2 = new JCheckBox("Kris Letang");  
 q3\_3 = new JCheckBox("Evgeni Malkin");  
 q3 = new JLabel("Who scored the golden goal?");  
  
 three = new JPanel();  
  
 three.add(q3);  
 three.add(q3\_1);  
 three.add(q3\_2);  
 three.add(q3\_3);  
  
 three.setLayout(new BoxLayout(three,BoxLayout.*X\_AXIS*));  
  
 //Q4  
  
 q4\_1 = new JCheckBox("Sidney Crosby");  
 q4\_2 = new JCheckBox("Kris Letang");  
 q4\_3 = new JCheckBox("Evgeni Malkin");  
 q4 = new JLabel("Who is a Defenseman?");  
  
 four = new JPanel();  
  
 four.add(q4);  
 four.add(q4\_1);  
 four.add(q4\_2);  
 four.add(q4\_3);  
  
 four.setLayout(new BoxLayout(four,BoxLayout.*X\_AXIS*));  
  
 //Q5  
  
 q5\_1 = new JCheckBox("Sidney Crosby");  
 q5\_2 = new JCheckBox("Kris Letang");  
 q5\_3 = new JCheckBox("Evgeni Malkin");  
 q5 = new JLabel("Who wears number 58?");  
  
 five = new JPanel();  
  
 five.add(q5);  
 five.add(q5\_1);  
 five.add(q5\_2);  
 five.add(q5\_3);  
  
 five.setLayout(new BoxLayout(five,BoxLayout.*X\_AXIS*));  
  
 //Score and Submit  
  
 score = new JLabel("Points: 0");  
  
 six = new JPanel();  
 check = new JButton("Submit");  
 check.addActionListener(this);  
  
 six.add(check);  
 six.add(score);  
  
 six.setLayout(new BoxLayout(six,BoxLayout.*X\_AXIS*));  
  
 //Adding  
  
 frame.add(one);  
 frame.add(two);  
 frame.add(three);  
 frame.add(four);  
 frame.add(five);  
 frame.add(six);  
  
  
 }  
  
 public static void main(String[] args) {  
 new HedgeBet2();  
 }  
  
 @Override  
 public void actionPerformed(ActionEvent e) {  
 int points = 0;  
  
 //Q1  
 if(q1\_1.isSelected() && q1\_2.isSelected() && q1\_3.isSelected())  
 points++;  
 else if(q1\_1.isSelected() && q1\_2.isSelected())  
 points+=2;  
 else if(q1\_1.isSelected() && q1\_3.isSelected())  
 points+=2;  
 else if(q1\_1.isSelected())  
 points+=5;  
 else  
 points+=0;  
  
 //Q2  
 if(q2\_1.isSelected() && q2\_2.isSelected() && q2\_3.isSelected())  
 points++;  
 else if(q2\_3.isSelected() && q2\_1.isSelected())  
 points+=2;  
 else if(q2\_3.isSelected() && q2\_2.isSelected())  
 points+=2;  
 else if(q2\_3.isSelected())  
 points+=5;  
 else  
 points+=0;  
  
 //Q3  
 if(q3\_1.isSelected() && q3\_2.isSelected() && q3\_3.isSelected())  
 points++;  
 else if(q3\_1.isSelected() && q3\_2.isSelected())  
 points+=2;  
 else if(q3\_1.isSelected() && q3\_3.isSelected())  
 points+=2;  
 else if(q3\_1.isSelected())  
 points+=5;  
 else  
 points+=0;  
  
 //Q4  
 if(q4\_1.isSelected() && q4\_2.isSelected() && q4\_3.isSelected())  
 points++;  
 else if(q4\_2.isSelected() && q4\_1.isSelected())  
 points+=2;  
 else if(q4\_2.isSelected() && q4\_3.isSelected())  
 points+=2;  
 else if(q4\_2.isSelected())  
 points+=5;  
 else  
 points+=0;  
  
 //Q5  
 if(q5\_1.isSelected() && q5\_2.isSelected() && q5\_3.isSelected())  
 points++;  
 else if(q5\_2.isSelected() && q5\_1.isSelected())  
 points+=2;  
 else if(q5\_2.isSelected() && q5\_3.isSelected())  
 points+=2;  
 else if(q5\_2.isSelected())  
 points+=5;  
 else  
 points+=0;  
  
 //Message  
  
 score.setText("Points: " + points);  
 }  
}

Graphical user interface, text, application

Description automatically generated

import javax.swing.\*;  
import java.awt.\*;  
import java.awt.event.ActionEvent;  
import java.awt.event.ActionListener;  
import java.util.ArrayList;  
import java.util.Random;  
  
public class JLottery implements ActionListener {  
 private JPanel pan;  
 private JCheckBox[] checkboxes = new JCheckBox[31];  
 private JButton button;  
 private JLabel winnings,randoms;  
  
 JLottery()  
 {  
 //Frame  
 JFrame frame = new JFrame("On Demand");  
 frame.setLayout(new FlowLayout());  
 frame.setSize(500,750);  
 frame.setDefaultCloseOperation(WindowConstants.*EXIT\_ON\_CLOSE*);  
 frame.setVisible(true);  
 frame.setBounds(350,225,1000,400);  
  
 //Checkboxes  
  
 pan = new JPanel();  
 pan.setLayout(new BoxLayout(pan,BoxLayout.*X\_AXIS*));  
  
 for (int i = 0; i < 31; ++i)  
 {  
 checkboxes[i] = new JCheckBox(String.*valueOf*(i), false);  
 checkboxes[i].addActionListener(this);  
 pan.add(checkboxes[i]);  
 }  
  
 button = new JButton("Submit");  
 button.addActionListener(this);  
  
 winnings = new JLabel();  
 randoms = new JLabel();  
  
 frame.add(pan);  
 frame.add(button);  
 frame.add(randoms);  
 frame.add(winnings);  
  
 }  
  
 public static void main(String[] args) {  
 new JLottery();  
 }  
  
 @Override  
 public void actionPerformed(ActionEvent e) {  
  
 JCheckBox checkbox;  
 int counter = 0;  
 int i = 6;  
 ArrayList<Integer> selected = new ArrayList<>();  
 int[] winners = new int[6];  
 int inCommon=0;  
  
  
 // Make sure only 6 checkboxes are selected.  
 if (e.getSource() != button)  
 {  
 for (i = 0; i < 31; ++i)  
 {  
 if (checkboxes[i].isSelected())  
 {  
 ++counter;  
 }  
 }  
 if (counter > 6)  
 {  
 checkbox = (JCheckBox) e.getSource();  
 checkbox.setSelected(false);  
 JOptionPane.*showMessageDialog*(null, "Only select 6 numbers.");  
 }  
 }  
 //Comparing nums  
 else  
 {  
 //Making random nums  
 for(int x=0;x<6;x++)  
 {  
 winners[x]= (int)(Math.*random*()\*31);  
 }  
  
 //Checking which nums are selected  
 for(int x=0;x<31;x++)  
 {  
 if(checkboxes[x].isSelected())  
 {  
 selected.add(x);  
 }  
 }  
  
 //Printing random nums to screen  
 String r ="";  
 for(int x=0;x<6;x++)  
 {  
 r+=winners[x]+" ";  
 }  
  
 randoms.setText(r);  
 //Comparing how many nums are in common  
  
 for(int x=0;x<6;x++)  
 {  
 for(int y=0;y<6;y++)  
 {  
 if(selected.get(y)==winners[x])  
 inCommon++;  
 }  
 }  
  
 if(inCommon<=2)  
 winnings.setText("$0");  
 else if(inCommon==3)  
 winnings.setText("$100");  
 else if(inCommon==4)  
 winnings.setText("$10000");  
 else if(inCommon==5)  
 winnings.setText("$50000");  
 else if(inCommon==6)  
 winnings.setText("$1000000");  
 }  
  
  
 }  
}

