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CSL-131

1/22/2024

Lab #2

6.

Good Work!

10.

I got no output because I had nothing to output.

14.

I’m guessing that the default number of sides a Dice object has is 6 because a typical dice has 6 sides.

First number rolled is 3

First number rolled is 2

First number rolled is 3

First number rolled is 6

First number rolled is 4

First number rolled is 6

First number rolled is 1

First number rolled is 2

First number rolled is 3

First number rolled is 1

17.

First number rolled is 3

Second number rolled is 2

First number rolled is 6

Second number rolled is 2

First number rolled is 2

Second number rolled is 3

19.

The program did run correctly. This is because all of the output values and objects worked as intended.

First number rolled is 1

Second number rolled is 6

Total rolled is 7

First number rolled is 4

Second number rolled is 3

Total rolled is 7

First number rolled is 3

Second number rolled is 3

Total rolled is 6

20.

**import** javax.swing.\*;

/\*\* DiceRoller.java

\*

\* The DiceRoller class will be used to test

\* the Dice class.

\*

\* Added a second dice class along with a sum of the two rolls.

\* Both dice rolls along with their sum are then displayed.

\*

\* **@author** Remah Alshinina

\* **@version** 20 Aug. 2020

\*/

**public** **class** DiceRoller

{

**public** **static** **void** main(String[] args)

{

Dice die1; // this line declares a Dice object named die1

die1 = **new** Dice(); // this line creates the object using the new operator

Dice die2;

die2 = **new** Dice();

**int** result1; // this line declares result1 to be a variable that stores integers

result1 = die1.roll();

**int** result2;

result2 = die2.roll();

**int** sum; // this line declares a new integer variable sum

sum = result1 + result2; // this line adds the values in result1 and result2 and places the integer in sum

System.***out***.println("First number rolled is " + result1); // this line lets us see the integer assigned to the variable result1

System.***out***.println("Second number rolled is " + result2);

System.***out***.println("Total rolled is " + sum);

}

}

24.

First number rolled is 6

First number rolled is 5

First number rolled is 6

First number rolled is 9

First number rolled is 2

First number rolled is 5

First number rolled is 1

First number rolled is 2

First number rolled is 3

First number rolled is 4

25.

It is indicated by the program that the highest number that can be rolled is a 10. This means that nothing can be greater than 10 when his program is run.

27.

First number rolled is 3

Second number rolled is 4

First number rolled is 7

Second number rolled is 1

First number rolled is 5

Second number rolled is 3

First number rolled is 3

Second number rolled is 3

First number rolled is 3

Second number rolled is 6

First number rolled is 3

Second number rolled is 1

First number rolled is 10

Second number rolled is 4

First number rolled is 4

Second number rolled is 1

First number rolled is 7

Second number rolled is 2

First number rolled is 6

Second number rolled is 2

28.

The dice with 10 sides rolled first and the dice with six sides rolled second. The proof of this is that the first dice rolled a 10 as it’s highest roll, while the second dice rolled a 6 as it’s highest roll. This leads me to believe that both dice objects are different.

29.

**import** javax.swing.\*;

/\*\* DiceRoller.java

\*

\* The DiceRoller class will be used to test

\* the Dice class.

\*

\* die3 rolls a 10 sided dice. die4 rolls a 6 sided dice.

\* The program the outputs both dice rolls.

\*

\* **@author** Remah Alshinina

\* **@version** 20 Aug. 2020

\*/

**public** **class** DiceRoller

{

**public** **static** **void** main(String[] args)

{

Dice die3;

die3 = **new** Dice(10);

Dice die4;

die4 = **new** Dice();

**int** result3;

result3 = die3.roll();

**int** result4;

result4 = die4.roll();

System.***out***.println("First number rolled is " + result3);

System.***out***.println("Second number rolled is " + result4);

}

}

31.

The difference between DiceGUISimple.java and DiceRoller.java is that DiceGUISimple.java outputs a menu bar where you can click and roll an infinite number of times. The console doesn’t contain any text other than “roll event” after the dice is rolled from the menu. There is also a picture of the specific number rolled on the dice.

32.

import java.awt.\*;

import java.awt.event.\*;

import javax.swing.ImageIcon;

import javax.swing.JFrame;

import javax.swing.JMenu;

import javax.swing.JMenuBar;

import javax.swing.JMenuItem;

import javax.swing.JOptionPane;

import javax.swing.JTextField;

import javax.swing.KeyStroke;

/\*\*

\* Creates a Graphical User Interface to simulate a dice roll.

\* Creates a window that holds one DicePanel object.

\* The DicePanel uses a Dice(default 6 sides) object to obtain a roll value.

\* Then displays the roll value and image.

\*

\*/

public class DiceGUISimple extends JFrame {

private static final long serialVersionUID = 1L;

static private DicePanel die1;

public static void main(String[] args) {

createAndShowGUI();

}

//Creates and shows the GUI for the DiceGUI class

private static void createAndShowGUI() {

die1 = new DicePanel(new Dice(), "Die", new JTextField(2),false);

// Create window

DiceGUISimple guiWindow = new DiceGUISimple(die1);

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Menu Bar \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

JMenuBar menuBar = new JMenuBar();

JMenuItem menuItem;

JMenu file, help;

// Build the file menu.

file = new JMenu("File");

file.setMnemonic(KeyEvent.VK\_F);

menuBar.add(file);

/\*\*\*\*\*\*\*\*\*\* Quit \*\*\*\*\*\*\*\*\*\*\*/

menuItem = new JMenuItem("Quit", KeyEvent.VK\_Q);

menuItem.setAccelerator(KeyStroke.getKeyStroke(KeyEvent.VK\_Q,

ActionEvent.ALT\_MASK));

menuItem.addActionListener(new ActionListener() {

public void actionPerformed(ActionEvent ae) {

System.exit(0);

}

});

file.add(menuItem);

// Build the Help menu.

help = new JMenu("Help");

help.setMnemonic(KeyEvent.VK\_H);

menuBar.add(help);

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* About \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

menuItem = new JMenuItem("About", KeyEvent.VK\_A);

menuItem.setAccelerator(KeyStroke.getKeyStroke(KeyEvent.VK\_A,

ActionEvent.ALT\_MASK));

menuItem.addActionListener(new ActionListener() {

public void actionPerformed(ActionEvent ae) {

// Set icon image

ImageIcon icon = new ImageIcon("CoolPlanet.jpg");

JOptionPane.showMessageDialog(null,

"DiceGUI\nby: Brad Murphy and David Hazall-Farrell", "About", 0, icon);

}

});

help.add(menuItem);

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* End Menu Bar \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

// Set window attributes

guiWindow.setSize(250, 130);

guiWindow.setJMenuBar(menuBar);

guiWindow.setDefaultCloseOperation(JFrame.EXIT\_ON\_CLOSE);

guiWindow.setLocationRelativeTo(null);

guiWindow.setVisible(true);

}

// Constructor for the DiceGUI1 class

//@param die1 DicePanel object

public DiceGUISimple(DicePanel die1) {

super("Dice GUI");

this.add(die1, BorderLayout.CENTER);

}

}

