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Week3Meet - 10 pts

Turn in on BBL as soon as complete, but before end of day Friday following the lecture.

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Reading a program

Read both programs. Be the computer and trace which line of code is executing in order. Keep track of what the current state of each variable is.

In puzzlepage class we create main method it access the scanner library to take input from user and we create wordsramble object to use the methods of that class. Then we print the solution.

In wordscamble we create constructor of that class that defines solution to “NA”. then method to set solution called setter. String scramble method returns string which we scramble.

We also use string reverse method that reverse the string str. And also checks that string is empty or not. It also shows the recursive call in that.

import java.util.Scanner;

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\* PuzzlePage.java

\* Creates word puzzles for the Triangle

\* @author Tammy Pirmann

\* @version 20210407

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public class PuzzlePage {

public static void main(String args[]){

Scanner keyboard = new Scanner(System.in);

WordScramble puzzle = new WordScramble();

System.out.print("Enter the solution word: ");

String solution = keyboard.nextLine();

System.out.printf("Your puzzle is: %s", puzzle.scramble(solution));

}

}

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\* WordScramble.java, Scrambles a given word

\* @author Tammy Pirmann

\* @version 20210407

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public class WordScramble {

private String solution;

//constructor

public WordScramble() {

solution = "NA";

}

//Setter

public void setSolution(String str){

solution = str.toUpperCase();

}

//Scrambles the solution String

public String scramble(String str){

setSolution(str);

String mix;

int a = solution.indexOf("A");

if (a >= 0) {

mix = solution.substring(a).concat(solution.substring(0,a));

}

int e = solution.indexOf("E");

if (e >= 0) {

mix = solution.substring(e).concat(solution.substring(0,e));

}

int i = solution.indexOf("I");

if (i >= 0) {

mix = solution.substring(i).concat(solution.substring(0,i));

}

int oh = solution.indexOf("O");

if (oh >= 0) {

mix = solution.substring(oh).concat(solution.substring(0,oh));

}

int u = solution.indexOf("U");

if (u >= 0) {

mix = solution.substring(u).concat(solution.substring(0,u));

}

//reverse it in case it still looks like the original word

return reverse(mix);

}

//helper method to reverse the scrambled string

private String reverse(String str){

//base case

if (str.isEmpty()){

return str;

}

//Recursive call

return reverseString(str.substring(1)) + str.charAt(0);

}

}

Everything below this line relates ONLY to the problem discussed in class, the code we wrote together.

I understand the problem introduced in class to be: (in your own words)

The class which we see to use in two different way like we create two classes separate and in one class file we create two classes. We create wall class in that we use constructor then set width and height and create method area. Second class is paint where we use wall class object and use the width height and area using wall instance.

My UML Diagram for these classes: (feel free to paste in a photo of a hand done diagram)

Graphical user interface, application

Description automatically generated

The solution to the problem were the following programs: (provide the names of the .java files only)

PaintTakeTwo.java

I tested the solution with at least 3 different value sets. The test data and results are:

(use this format: var1 = data, var2 = data, etc -> result)

Enter the walls width:

100

Enter the walls height:

100

Area:10000.0

Quarts:100

Enter the walls width:

-100

Enter the walls height:

-100

Area:0.0

Quarts:0

Enter the wallA width:

40

Enter the wallA height:

60

Area:2400.0

Quarts:24

Enter the wallB width:

60

Enter the wallB height:

80

Area:4800.0

Quarts:48

Reflect on your problem-solving: We solve the problem using different values we check the height and width in if condition. It is interesting that we create two classes to find the area and paint and solve using methods.

How confident are you in the solution?

I am confident in this solution that I can change anything and get the result correct I understand how to create variables and methods and their visibility.

How often do you go to the Internet when working on your lab?

Rarely if I have problem in syntax that time only I use internet.

How often do you refer to programs from class or the text when working on your lab?

It is similar programs and I refer my class programs for my lab work.

Reflect on your learning and your needs. After this class meeting, what topics do you feel like you learned and what topics do you feel like you need more information on to learn?

I learned about the class methods and variables visibility. The constructor I would like to see more in upcoming classes.