

P5

Due Oct 7, 2018 at 11:59pm **Points** 10 **Questions** 3
Available after Sep 24, 2018 at 8am **Time Limit** None
Allowed Attempts Unlimited

Take the Quiz Again

Attempt History

	Attempt	Time	Score
LATEST	Attempt 1	6,962 minutes	9 out of 10

❗ Correct answers are hidden.

Score for this attempt: **9** out of 10

Submitted Oct 7, 2018 at 8:49am

This attempt took 6,962 minutes.

Question 1

3 / 3 pts

Write a program that asks the user to enter a sentence.

Using `matches` method using only **one pattern** validate that the entered sentence consists only of letters and ends with either: a period, an exclamation mark, or a question mark. To check if the given string represents a valid sentence define a pattern as shown in the Chapter 5 Lecture Notes.

If it is not a valid sentence, your program should output that the input is not valid.

Otherwise the input should be displayed with all the vowels replaced with an `#` character (**see lecture notes for the example**)

The following shows sample runs of the program:

Run #1

Please enter a sentence that consists of letters only and ends with a period, an exclamation mark, or a question mark

The first sentence is not valid

The entered input "The first sentence is not valid" is not a valid.

Run #2

Please enter a sentence that consists of letters only and ends with a period, an exclamation mark, or a question mark

The 2nd sentence is also invalid!

The entered input "The 2nd sentence is also invalid!" is not a valid.

Run #3

Please enter a sentence that consists of letters only and ends with a period, an exclamation mark, or a question mark

A very NICE sentence.

The entered input: "A very NICE sentence."

with all vowels replaced is: "# v#ry N#C# s#nt#nc#."

Run #4

Please enter a sentence that consists of letters only and ends with a period, an exclamation mark, or a question mark

Do you like programming?

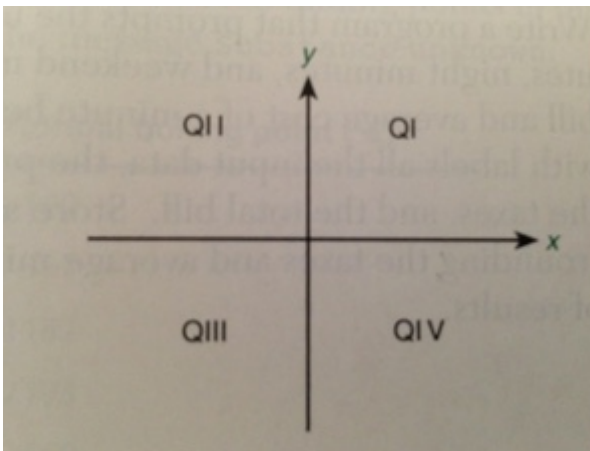
The entered input: "Do you like programming?"

with all vowels replaced is: "D# y## l#k# pr#gr#mm#ng?"

↓ [P51.java \(https://cilearn.csuci.edu/files/622879/download\)](https://cilearn.csuci.edu/files/622879/download)

Question 2

3 / 3 pts



Write a program that takes the x and y coordinates of a point in the Cartesian plane as doubles and prints a message telling **either**:

- the **axis** on which the point lies
- **or** the **quadrant** in which it is found.

If the point lies in a quadrant the program should also calculate and print the **distance** between **the point** and **the origin** (point $[0,0]$) using the following formula:

$$\sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$

See sample runs of the program:

Run#1

Enter value of x: 0

Enter value of y: 0

The point (0.0,0.0) is at intersection of x and y axis

Run#2

Enter value of x: -1.0

Enter value of y: -2.5

The point (-1.0,-2.5) is in quadrant 3; and the distance between (0, 0) and (-1.0,-2.5) is 2.69

Run#3

Enter value of x: 0.0

Enter value of y: 4.8

The point (0.0,4.8) is on the y axis

↓ [P52.zip \(https://cilearn.csuci.edu/files/628003/download\)](https://cilearn.csuci.edu/files/628003/download)

Question 3**3 / 4 pts**

Download the attached document [DayOfWeekTrick.docx \(https://cilearn.csuci.edu/files/535027/download?wrap=1\)](https://cilearn.csuci.edu/files/535027/download?wrap=1) and follow the instructions.

For this question please submit:

1. DayOfWeekTrick.docx with your answers
2. Weekday.java - that implements the algorithm
3. Two sample runs: one for Carroll's birthday and one for your birthday

↓ [Weekday.zip \(https://cilearn.csuci.edu/files/628004/download\)](https://cilearn.csuci.edu/files/628004/download)

Quiz Score: **9** out of 10