

Data Science with Python Career Program

Hackathon 2.0

Questions

Major Question 1

(15 marks)

1. Write a program to print the following pattern :

```
*
* *
* * *
* * * *
* * *
* *
*
*
```

2. Write a program to accept 5 even and 5 odd numbers from the user and display :

- *sum of even numbers,*
- *product of odd numbers*
- *absolute difference of the sum and product.*

Check if the *final result (absolute difference) is a prime number or not.*

3. Create a class named Item that holds data about an item in a retail store. The class should have the following three properties:

- *name*: the name property is a String object that holds the name of the item.
- *price*: the price property is a double variable that holds the item's retail price
- *quantity*: the quantity property is an int variable that holds the number of units currently in inventory

Write the following four methods to retrieve the values from the three fields and their current inventory value

- *getName()* returns the item name of type String
- *getPrice()* returns the price of the item of type double

- *getQuantity()* returns the number of quantities of type int
- *getValue()* that returns the current inventory value (quantity * price) of type double

Major Question 2

(15 marks)

1. Ask the user number of rows to be generated of a series. Suppose user enters no. of rows = 5 then the series shall be :
9
99
999
9999
99999
2. Write a program to accept a number from the user and check whether the number entered is prime or not.
3. Continued from Major Question 1. Write a separate class called Inventory with methods
 - *generate()* - creates three Item objects
 - *getDetails()* - produces a neatly formatted table of the store's inventory displaying the three items, their current inventory value, and the total inventory value for the store.

Name	Price	Quantity	Value
=====	=====	=====	=====
Stapler	2.25	15	33.75
Paper	32.99	255	8412.45
Binder	4.75	9	42.75
Total Inventory is 8488.95			

Points to Note

- Do not try to copy the answers from the internet or your peers, as it may lead to the elimination from the hackathon.

- Try to maintain the code in proper format and try to include comments as much as you can.

Process for Submission

*You just need to fill out the answer sheet by copying and pasting the code in the text box provided below each question. Download the answer sheet from here : [Answer Sheet \(Python\).docx](#) , fill the answers by opening in MS Word and *upload it in the form below.**

That's all folks. Hope you guys give your best and have a great competition among yourselves. All the best!