



DAY-4 ASSIGNMENT

Q.1 Write a program that asks the user for their favorite color and prints out a message depending on the color they choose. For example: "Red is a bold color!" or "Blue is a calm color!". Use at least 3 different colors in your program.

```
Assignment_4.py > ...
18 a = input("Please enter your favourite color Blue/Red/Black = ").lower()
19
20 # ABC -> abc
21 # Black -> black
22
23 if a == "blue":
24     print("Blue is a calm color ")
25 elif a == "red":
26     print("Red is a bold color")
27 elif a == "black":
28     print("Black is class")
29 else:
30     print("Please enter color given in the list")

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
PS D:\Python\Practical> & C:/Users/Rutvik/AppData/Local/Programs/Python/Python310/python.exe d:/Python/Practical
/Assignment_4.py
Please enter your favourite color Blue/Red/Black = red
Red is a bold color
PS D:\Python\Practical> █
```

Q.2 Write a program that asks the user for a number and prints out whether the number is positive, negative, or zero.

```
Assignment_4.py > ...
34
35 # Check if the number is greater than zero.
36 if num > 0:
37     # If true, print that it is a positive number.
38     print("It is a positive number")
39 # Check if the number is equal to zero.
40 elif num == 0:
41     # If true, print that it is zero.
42     print("It is zero")
43 else:
44     # If the above conditions are not met, print that it is a negative number.
45     print("It is a negative number")
46
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

- PS D:\Python\Practical> & C:/Users/Rutvik/AppData/Local/Programs/Python/Python310/python.exe d:/Python/Practical /Assignment_4.py
Input a number: 6
It is a positive number
- PS D:\Python\Practical> & C:/Users/Rutvik/AppData/Local/Programs/Python/Python310/python.exe d:/Python/Practical /Assignment_4.py
Input a number: -7
It is a negative number
- PS D:\Python\Practical> & C:/Users/Rutvik/AppData/Local/Programs/Python/Python310/python.exe d:/Python/Practical /Assignment_4.py
Input a number: 0
It is zero
- PS D:\Python\Practical>

Q.3 Write a program that asks the user for a letter grade (A, B, C, D, or F) and prints out the corresponding GPA. For example, an A should print out as 4.0, a B as 3.0. and so on.

```
Assignment_4.py > ...
48
49 def test(nums):
50     return ["A+" if grade >= 4.0
51             else ("A" if grade >= 3.7
52                 else ("A-" if grade >= 3.4
53                     else ("B+" if grade >= 3.0
54                         else ("B" if grade >= 2.7
55                             else ("B-" if grade >= 2.4
56                                 else ("C+" if grade >= 2.0
57                                     else ("C" if grade >= 1.7
58                                         else ("C-" if grade >= 1.4
59                                             else "F"))))))))
60     for grade in nums]
61
62
63 nums = [4.0, 3.5, 3.8]
64 print("List of numbers:",nums)
65 print("Convert GPAs to letter grades:")
66 print(test(nums))
67 nums = [5.0, 4.7, 3.4, 3.0, 2.7, 2.4, 2.0, 1.7, 1.4, 0.0]
68 print("\nList of numbers:",nums)
69 print("Convert GPAs to letter grades:")
70 print(test(nums))

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
/Assignment_4.py
List of numbers: [4.0, 3.5, 3.8]
Convert GPAs to letter grades:
['A+', 'A-', 'A']

List of numbers: [5.0, 4.7, 3.4, 3.0, 2.7, 2.4, 2.0, 1.7, 1.4, 0.0]
Convert GPAs to letter grades:
['A+', 'A+', 'A-', 'B+', 'B', 'B-', 'C+', 'C', 'C-', 'F']
PS D:\Python\Practical> 
```

Q.4 Ask 4 ages from user (age1, age2, age3, age4). Print out which age is the youngest.

```
Assignment_4.py > ...
70 # print(test(nums))
71
72 # Prompt the user to enter four ages
73 age1 = int(input("Enter age 1: "))
74 age2 = int(input("Enter age 2: "))
75 age3 = int(input("Enter age 3: "))
76 age4 = int(input("Enter age 4: "))
77
78 # Compare the ages to find the youngest age
79 youngest_age = min(age1, age2, age3, age4)
80
81 # Print out the youngest age
82 print("The youngest age is:", youngest_age)
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

```
PS D:\Python\Practical> & C:/Users/Rutvik/AppData/Local/Programs/Python/Python310/python.exe d:/Python/Practical
/Assignment_4.py
Enter age 1: 5
Enter age 2: 8
Enter age 3: 2
Enter age 4: 11
The youngest age is: 2
PS D:\Python\Practical> █
```

Q.5 Python Program to Generate a Random Number (take help of google)

```
Assignment_4.py
85
86 # importing the random module
87 import random
88
89 print(random.randint(0,9))
90
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

- PS D:\Python\Practical> & C:/Users/Rutvik/AppData/Local/Programs/Python/Python310/python.exe d:/Python/Practical/Assignment_4.py
3
- PS D:\Python\Practical> & C:/Users/Rutvik/AppData/Local/Programs/Python/Python310/python.exe d:/Python/Practical/Assignment_4.py
4
- PS D:\Python\Practical> & C:/Users/Rutvik/AppData/Local/Programs/Python/Python310/python.exe d:/Python/Practical/Assignment_4.py
4
- PS D:\Python\Practical> & C:/Users/Rutvik/AppData/Local/Programs/Python/Python310/python.exe d:/Python/Practical/Assignment_4.py
9
- PS D:\Python\Practical> & C:/Users/Rutvik/AppData/Local/Programs/Python/Python310/python.exe d:/Python/Practical/Assignment_4.py
7
- PS D:\Python\Practical> & C:/Users/Rutvik/AppData/Local/Programs/Python/Python310/python.exe d:/Python/Practical/Assignment_4.py
5
- PS D:\Python\Practical> □