Digital_assessment_1

January 19, 2025

1 Digital Assignment 1

1.1 Slot : L29+L30

1.2 Course Name & code: Regression Analysis and Predictive Models Lab & PMDS504P

1.3 1. Greatest of Three Numbers

Write a Python program to find the greatest of three numbers entered by the user. Example:

Input: last three digits of your register number, say 2, 8, 1.

Output: 8 is the greatest number

[3]:
```
a, b, c = map(int, input("Enter 3 numbers separated by commas (','): ").
 ↪split(','))
if a>=b and a>=c:
    print(a,"is the greatest")
elif b>=a and b>=c:
    print(b,"is the greatest")
else:
    print(c,"is the greatest")
```

```
Enter 3 numbers separated by commas (','):  1,8,4
8 is the greatest
```

1.4 2. Multiplication Table

Write a Python program to print the multiplication table of a number entered by the user

[5]:
```
num = int(input("Enter a number:"))
print(f"Multiplication table of {num}:")
for i in range(1,11):
    print(f"{num} * {i} = {num*i}")
```

```
Enter a number: 7
Multiplication table of 7:
7 * 1 = 7
7 * 2 = 14
7 * 3 = 21
```

```
7 * 4 = 28
7 * 5 = 35
7 * 6 = 42
7 * 7 = 49
7 * 8 = 56
7 * 9 = 63
7 * 10 = 70
```

1.5 3. Print Numbers from 1 to 10 Using a For Loop

Write a Python program to print numbers from 1 to 10 using a for loop.

[7]:
```
print("Numbers from 1 to 10 using for loop:")
for i in range(1,11):
    print(i)
```

```
Numbers from 1 to 10 using for loop:
1
2
3
4
5
6
7
8
9
10
```

1.6 4-Write a Python program using a single-line if-else statement to determine if a number is positive or negative.

Example: Input:-5 Output: Number is negative

[9]:
```
num = int(input("Enter a number:"))
print(f"{num} is positive" if num>=0 else f"{num} is negative")
```

```
Enter a number: -5
```

```
-5 is negative
```

1.7 5. Mark Range (Pass or Fail)

Write a Python program that takes a students marks as input and determines if the student has passed or failed. Assume passing marks are 40.

[13]:
```
marks = int(input("Enter your marks:"))
if marks >= 40:
    print("Congratulations! you have passed")
else:
    print("Sorry! you have failed")
```

```
Enter your marks: 33

Sorry! you have failed
```

1.8 6. Checking Vowels

Write a Python program to check if a given character is a vowel or not

[15]:
```
ch = input("Enter a character:")
vowels = "aeiouAEIOU"
if ch in vowels:
    print(f"'{ch}' is a vowel")
else:
    print(f"'{ch}' is not a vowel")
```

```
Enter a character: t

't' is not a vowel
```

1.9 7. Sum and Average Using While Loop

Write a Python program to calculate the sum and average of n numbers entered by the user using a while loop

[19]:
```
n = int(input("Enter the value of n:"))
i = 1
sum_dig = 0
while i<=n:
    num = int(input(f"Enter number {i}:"))
    sum_dig += num
    i+=1
print("\nsum of the n digits is:",sum_dig)
print("Average of the n digits is:",sum_dig/n)
```

```
Enter the value of n: 5
Enter number 1: 12
Enter number 2: 45
Enter number 3: 52
Enter number 4: 63
Enter number 5: 89


sum of the n digits is: 261
Average of the n digits is: 52.2
```

1.10 8. Program to Print Fibonacci Sequence up to a Given Limit

Write a Python program to generate the Fibonacci sequence up to a user-specified limit.

[21]:
```
n = int(input("Enter the number of terms (n):"))
fib = [0,1]
if n <= 0:
    print("Please enter a positive integer.")
elif n == 1:
    print(f"Fibonacci series till {n} term is:{fib[0]}")
else:
    for i in range(2,n):
        fib_next = fib[i-2]+fib[i-1]
        fib.append(fib_next)
    print(f"Fibonacci series till {n} terms is:\n",fib)
```

```
Enter the number of terms (n): 10

Fibonacci series till 10 terms is:
 [0, 1, 1, 2, 3, 5, 8, 13, 21, 34]
```