Python Programming Lab. [Batch-B3]

Assignment Submission Details

Field	Details
Student Name *	Dilip Balu Magar
Student PRN *	125M1H055
Course Name	Python Programming Lab. (MCA31PC06)
Academic Year	2025-26 (Semester-1)
Course Teacher	Prof. Prakash Ukhalkar
Assignment Name	Assignments based on input and outputs.
Assignment Number	Assignment 02
Submission Date *	10-10-2025

Instructions

1. **Fill in your details** in the table above
2. **Write your code** in the provided code cells below each question
3. **Test your code** to ensure it works correctly
4. **Add comments** to explain your logic
5. **Save the notebook** before submission

Question 1: Develop a Python program that takes two numbers as input and performs addition, subtraction, multiplication, and division, printing each result.

In [ ]:
```
num1=int(input("enter first number"))
num2=int(input("enter second number"))
print(f"First number:{num1}\nSecond Number:{num2}\n",)

print(f"addition of {num1} and {num2} is {num1+num2}")
print(f"subtraction  of {num2} from  {num1} is {num1-num2}")
print(f"multiplication of {num1} and {num2} is {num1*num2}")

if num2==0:
    print("cannot divide by zero")
else:
    print(f"division of {num1} by {num2} is {num1/num2}")
```

```
First number:10
Second Number:5

addition of 10 and 5 is 15
subtraction  of 5 from  10 is 5
multiplication of 10 and 5 is 50
division of 10 by 5 is 2.0
```

Question 2:Write a Python program that takes a string input from the user and prints the string in uppercase, lowercase, and with each word capitalized.

In [ ]:
```
name=input("enter a string")
print("Given String",name)

print(f"string in uppercase {name.upper()}")
print(f"string in lowercase {name.lower()}")
print(f"string with each word capitalized {name.title()}")
```

```
Given String dILiP BAlu MaGar
string in uppercase DILIP BALU MAGAR
string in lowercase dilip balu magar
string with each word capitalized Dilip Balu Magar
```

Question 3:Create a Python program that asks the user for the radius of a circle and then calculates and prints the area and circumference.

In [ ]:
```
import math # to use value of pi

radius=int(input("enter the radius of circle"))
print("Radius:",radius)

area = math.pi * radius ** 2      # area = math.pi * radius * radius
circumference = 2 * math.pi * radius

 # :.2f use to display number with 2 decimals
print(f"area of circle with radius {radius} is {area:.2f}")
print(f"circumference of circle with radius {radius} is {circumference:.2f}")
```

```
Radius: 5
area of circle with radius 5 is 78.54
circumference of circle with radius 5 is 31.42
```

Question 4: Write a Python program that converts a temperature from Celsius to Fahrenheit and vice versa based on user input.

In [8]:
```
print("1. Fahrenheit to Celsius")
print("2. Celsius to Fahrenheit")

choice =int( input("Enter your choice (1 or 2): "))

if choice == 1:
    print("You choose:1. Fahrenheit to Celsius")
    f = float(input("Enter temperature in Fahrenheit: "))
    c = (f - 32) * 5/9
    print(f" Given temperature ={f}(Fahrenheit)")
```

```
    print(f"After converting Temperature = {c:.2f} Celsius")

elif choice == 2:
    print("You choose:2. Celsius to Fahrenheit")
    c = float(input("Enter temperature in Celsius: "))
    f = (c * 9/5) + 32
    print(f"Given temperature ={c}(Celsius) ")
    print(f"After converting Temperature={f:.2f} Fahrenheit")

else:
    print("Invalid choice Please enter 1 or 2.")
```

```
1. Fahrenheit to Celsius
2. Celsius to Fahrenheit
You choose:2. Celsius to Fahrenheit
Given temperature =25.0(Celsius)
After converting Temperature=77.00 Fahrenheit
```

Question 5: Write a Python program that asks the user for their name and a number, then prints the name repeated that many times.

In [11]:
```
name=input("enter your name:")
print("name:",name)
n= int(input("Enter a number: "))
print("number",n)
print(name * n ) # use * to print string multiple times
```

```
name: dilip
number 3
dilipdilipdilip
```

Question 6:Create a Python program that takes two numbers as input from the user and prints their sum.

In [12]:
```
num1= int(input("enter first number:"))

num2 = int(input("enter second number"))

print(f"First Number={num1} Second Number={num2}")

print(f"Sum of {num1} and {num2} is {num1+num2}")
```

```
First Number=10 Second Number=5
Sum of 10 and 5 is 15
```

Question 7:Write a Python program that takes a string as input and prints the number of characters, words, and sentences in the string.

In [11]:
```
data=input("enter a string(minimum 2 sentence)")

print(data)

no_of_charachters=len(data)
print(f"No of characters:{no_of_charachters}")
```

```
words=data.split()
print(words)
print("No of words:",len(words))

count=0
for ch in data:
        # if char in ['.', '!', '?']:
     if ch ="." or ch ="!" or ch == "?" :
      count=count + 1

print(f"No. of sentences:{count}")
```

```
python programmng practical of batch b3.  In today session we learn about data struc
tures in python.
No of characters:100
['python', 'programmng', 'practical', 'of', 'batch', 'b3.', 'In', 'today', 'sessio
n', 'we', 'learn', 'about', 'data', 'structures', 'in', 'python.']
No of words: 16
No. of sentences:2
```

Question 8:Develop a Python program that calculates simple interest. The user should input the principal, rate of interest, and time, and the program should output the interest amount.

In [10]:
```
principal = float(input("Enter the principal amount: "))
rate = float(input("Enter the annual rate of interest (in %): "))
time = float(input("Enter the time period (in years): "))

        # Formula: SI = (P * R * T) / 100
simple_interest = (principal * rate * time) / 100


print(f"Principal Amount: ₹{principal:.2f}")

print(f"Annual Rate of Interest: {rate}%")

print(f"Time : {time} years")

print(f"Simple Interest Amount: ₹{simple_interest:.2f}")
```

```
Principal Amount: ₹500000.00
Annual Rate of Interest: 6.7%
Time : 2.5 years
Simple Interest Amount: ₹83750.00
```

Question 9: Write a Python program that takes a sentence as input and prints each word in reverse order while keeping the word sequence the same.

In [ ]:
```
sentence = input("Enter a sentence: ")

words = sentence.split() # here delimiter is space

reversed_list = []

for word in words:
```

```
    reversed_list.append(word[::-1]) # [start:stop:step] USE SLICING TO REVERSE STR
    #as start and end is blank we consider whole string AND - to start from lasr ch
res = " ".join(reversed_list)

print("\nOriginal sentence:", sentence)
print("Sentence with reversed words:", res)
```

```
Original sentence: PYTHON PROGRAMMING PRACTICAL OF BATCH B3
Sentence with reversed words: NOHTYP GNIMMARGORP LACITCARP FO HCTAB 3B
```

Question 10:Create a Python program that takes three numbers as input and prints the largest and smallest of the three.

In [3]:
```
num1 = int(input("Enter the first number: "))
num2 = int(input("Enter the second number: "))
num3 = int(input("Enter the third number: "))
print(num1,num2,num3)

if num1 == num2 and num1 == num3:
    print("All three numbers are equal.")
else:

    if num1 >= num2 and num1 >= num3:
        largest = num1
    elif num2 >= num1 and num2 >= num3:
        largest = num2
    else:
        largest = num3

    if num1 <= num2 and num1 <= num3:
         smallest = num1
    elif num2 <= num1 and num2 <= num3:
        smallest = num2
    else:
        smallest = num3

    print(f"The largest number is: {largest}")
    print(f"The smallest number is: {smallest}")
```

```
5 10 15
The largest number is: 15
The smallest number is: 5
```

Submission Checklist

Before submitting, make sure you have completed the following:

- ☐ Filled in all personal details in the header
- ☐ Completed all 10 questions
- ☐ Added appropriate comments to your code
- ☐ Tested all programs to ensure they work correctly
- ☐ Used proper variable names and coding conventions

- ☐ Saved the notebook file (.ipynb)
- ☐ Followed file naming format as PRN_A01_PPLAB_B3.ipynb
