Green University of Bangladesh
Department of Computer Science and Engineering (CSE)

Faculty of Sciences and Engineering

Semester: (Spring, Year:2025), B.Sc. in CSE (Day)

LabPerformance 01: PythonIntro

Course Title: Artificial Intelligence Lab

Course Code: CSE-316 Section:221-14

Student Details

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Submission Date : 04-01-2025

Course Teacher's Name : Md. Sabbir Hosen Mamun

Lab Report Status

Marks: …… Signature:.....

Comments:..... Date:.....

1. Write a python program to find the sum of odd and even numbers from a set of numbers.

Code:

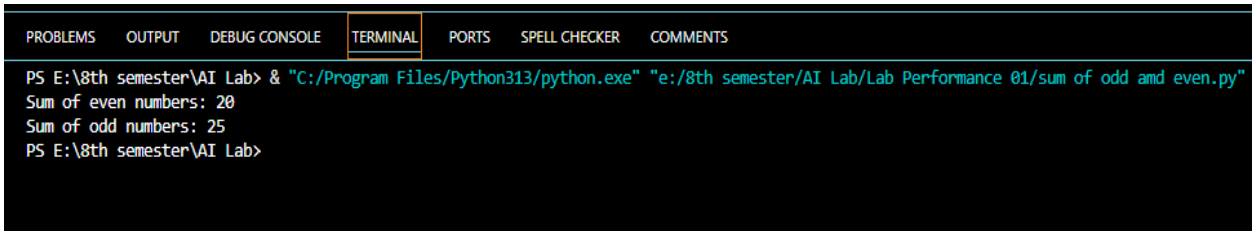
```python
numbers = [1, 2, 3, 4, 5, 6, 7, 8, 9]

even_sum = 0
odd_sum = 0

for num in numbers:
    if num % 2 == 0:
        even_sum += num
    else:
        odd_sum += num

print(f"Sum of even numbers: {even_sum}")
print(f"Sum of odd numbers: {odd_sum}")
```

Output:



2. Write a python program to find the smallest number from a set of numbers.

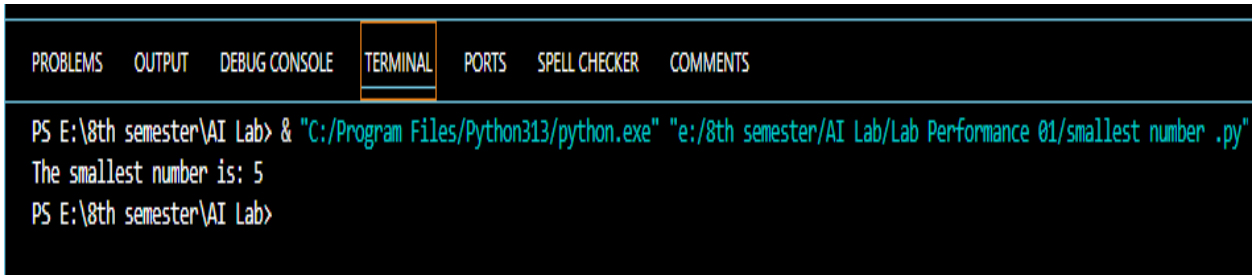
Code:

```python
numbers = [10, 20, 5, 40, 30]
smallest = numbers[0]

for num in numbers:
    if num < smallest:
        smallest = num

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

Output:



3. Write a python program to find the sum of all numbers between 50 and 100, which are divisible by 3 and not divisible by 5.

Code:

```
total_sum = 0
divisible_numbers = []

for num in range(50, 101):
    if num % 3 == 0 and num % 5 != 0:
        divisible_numbers.append(num)
        total_sum += num

print(f"Sum of numbers between 50 and 100 divisible by 3 and not by 5:
{total_sum}")
print(f"Total numbers between 50 and 100 divisible by{divisible_numbers}")
```

Output:

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS  SPELL CHECKER  COMMENTS
PS E:\8th semester\AI Lab> & "C:/Program Files/Python313/python.exe" "e:/8th semester/AI Lab/Lab Performa
Sum of numbers between 50 and 100 divisible by 3 and not by 5: 1050
Total numbers between 50 and 100 divisible by[51, 54, 57, 63, 66, 69, 72, 78, 81, 84, 87, 93, 96, 99]
PS E:\8th semester\AI Lab>
```

4.Write a python program to find the second highest number from a set of numbers.

Code:

```
list_val = []
num_list = int(input("Enter number of elements in list: "))

for i in range(1, num_list + 1):
    element = int(input("Enter the elements: "))
    list_val.append(element)

list_val.sort()
print("Second largest element is:", list_val[-2])
```

Output:

```
PS E:\8th semester\AI Lab> & "C:/Program Files/Python313/python.exe" "e:/8th semester/AI Lab/Lab Performance 01/second highest numbers.py"
Enter number of elements in list: 5
Enter the elements: 4
Enter the elements: 5
Enter the elements: 6
Enter the elements: 9
Enter the elements: 13
Second largest element is: 9
PS E:\8th semester\AI Lab>
```

5. Write a python program to find the factorial of a number using a for loop.

Code:

```
number = int(input("Enter a number to find its factorial: "))

factorial = 1
for i in range(1, number + 1):
    factorial *= i

print(f"The factorial of {number} is: {factorial}")
```

Output:

```
PS E:\8th semester\AI Lab> & "C:/Program Files/Python313/python.exe" "e:/8th semeste
Enter a number to find its factorial: 5
The factorial of 5 is: 120
PS E:\8th semester\AI Lab>
```

6. Write a python program to generate Fibonacci series.

Code:

```
n = int(input("Enter the number of terms for the Fibonacci series: "))
a, b = 0, 1
if n <= 0:
    print("Please enter a positive integer.")
elif n == 1:
    print(f"Fibonacci series with {n} term: {a}")
else:
    fib_series = [a, b]
    for _ in range(2, n):
        c = a + b
        fib_series.append(c)
        a, b = b, c

    print(f"Fibonacci series with {n} terms: {fib_series}")
```

Output:

```
PS E:\8th semester\AI Lab> & "C:/Program Files/Python313/python.exe" "e:/8th semester/AI Lab/Lab Perf
Enter the number of terms for the Fibonacci series: 10
Fibonacci series with 10 terms: [0, 1, 1, 2, 3, 5, 8, 13, 21, 34]
```

7 . Write a python program to find the largest number between two numbers using function

Code:

```
def find_largest(num1, num2):
    if num1 > num2:
        return num1
    else:
        return num2

num1 = float(input("Enter the first number: "))
num2 = float(input("Enter the second number: "))

largest = find_largest(num1, num2)
print(f"The largest number between {num1} and {num2} is: {largest}")
```

Output:

```
PS E:\8th semester\AI Lab> & "C:/Program Files/Python313/python.exe" "e:/8th semester/AI Lab/Lab Performance 01/largest number i
Enter the first number: 67
Enter the second number: 34
The largest number between 67.0 and 34.0 is: 67.0
PS E:\8th semester\AI Lab>
```

8. Write a python program to find the sum of the numbers passed as parameters.

```
def sum_of_numbers(*args):
    return sum(args)

numbers = [10, 20, 30, 40, 50]
result = sum_of_numbers(*numbers)
print(f"The sum of the numbers is: {result}")
```

Output:

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS  SPELL CHECKER  COMMENTS
PS E:\8th semester\AI Lab> & "C:/Program Files/Python313/python.exe" "e:/8th semester/AI Lab/Lab Perf
The sum of the numbers is: 150
PS E:\8th semester\AI Lab>
```