WEEK#1

OBJECTIVES

- ❒ To practice basic Python programming concepts.
- ❒ To solve simple mathematical and logical problems using Python.

Outcomes

After completing this week, the students would be able to:

- ❒ Write Python programs for basic arithmetic operations.
- ❒ Implement basic algorithms for checking conditions and iterating through lists.

Problems

1. Write a program to find the product of two user-supplied integers and if the product is equal to or lower than 5000, then return the sum of the two numbers.

```
# Product of two numbers less than target
num1 = int(input("Enter first number: "))
num2 = int(input("Enter the second number: "))
sum = num1 + num2
if num1*num2 < 5000:
    print("Sum is : ", sum)
else:
    print("Product is : ", num1*num2)
```

```
PS C:\Users\hp\Documents\Suhel\3rd - Sem\Lab-Manual-III>
Enter first number: 124
Enter the second number: 12
Sum is :  136
```

2. Write a program to print the sum of the first 10 numbers.

```
# Sum of first 10 numbers
sum = 0
for num in range(1, 11):
    sum += num
```

```
print("Sum is : ", sum)
```

```
Sum is :  55
PS C:\Users\hp\Documents\Suhel\3rd - Sem\Lab-Manual-III>
```

3. Write a program to iterate through a supplied list of 20 numbers and print only those numbers which are divisible by 5.

```
# Numbers in list divisible by 5
numbers = []
print("Enter 20 numbers: ")
for _ in range(20):
    num = int(input())
    numbers.append(num)
print("Entered numbers : ", numbers)
print("Divisible by 5: ", end=" ")
for num in numbers:
    if num % 5 == 0:
        print(num, end=" ")
```

```
Entered numbers :  [12, 2, 4, 54, 65, 4566, 45, 65, 45, 36,
 63, 85, 457, 5489, 9652, 25, 52, 258, 55, 98674]
Divisible by 5:  65 45 65 45 85 25 55
PS C:\Users\hp\Documents\Suhel\3rd - Sem\Lab-Manual-III> S
```

4. Write a program to check if the given number is a palindrome.

```
# Given number is palindrome or not
num = int(input("Enter a number : "))
num1 = num
rev = 0
while num1 != 0:
    r = num1 % 10
    num1 //= 10 # use integer division
    rev = rev * 10 + r
if num == rev:
    print(num, "- is Palindrome")
else:
    print(num, "- is not Palindrome")
```

```
Enter a number : 121
121 - is Palindrome
PS C:\Users\hp\Documents\Suhel\3rd - Sem\Lab-Manual-III>
```

5. Write a program to calculate the cube of all numbers from 1 to a given number.

```
# Cube of all numbers from 1 to given number

num = int(input("Enter a number: "))

print("Cube of numbers from 1 to ", num, " are: ", end=" ")

for number in range(1, num + 1):

   print((number ** 3), end=" ")
```

```
Enter a number: 11
Cube of numbers from 1 to  11  are:  1 8 27 64 125 216 343
512 729 1000 1331
PS C:\Users\hp\Documents\Suhel\3rd - Sem\Lab-Manual-III>
```