Python programming

UNIT 2 LAB MANUAL

7. Write a program to perform any 5 built-in functions by taking any list.

Program:-

```
my_list = [3, -1, 4, 1, -5, 9, 2, -6, 5, 3]

# 1. abs()
absolute_values = (my_list)
print("Absolute values of list elements:", absolute_values)

# 2. min()
minimum_value = min(my_list)
print("Minimum value in the list:", minimum_value)

# 3. max()
maximum_value = max(my_list)
print("Maximum value in the list:", maximum_value)
```

```
# 4. len()
length_of_list = len(my_list)
print("Length of the list:", length_of_list)

# 5. sum()
sum_of_list = sum(my_list)
print("Sum of all elements in the list:", sum_of_list)
```

output:-

```
Absolute values of list elements: [3, -1, 4, 1, -5, 9, 2, -6, 5, 3]
Minimum value in the list: -6
Maximum value in the list: 9
Length of the list: 10
Sum of all elements in the list: 15
```

8. Write a program to define a function using default arguments.

Program:-

```
def calculate_area(length=5, width=3):
    area = length * width
    return area
print("Area with default values:", calculate_area())
print("Area with custom length and width:", calculate_area(10, 4))
```

output:-

Area with default values: 15

Area with custom length and width: 40

9. Write a program to check if the substring is present in a given string or not.

Program:-

```
string = "Hello, World!"

substring = "Hello"

if substring in string:

   print("Substring found!")

else:

      print("Substring not found.")
```

output:-

Substring found!

10. Write a program to perform the given operations on a list:

i)Addition

ii) Insertion

iii)Slicing

i)addition:-

```
 my_list = [1, 2, 3, 4, 5]
# Addition: Append elements to the end of the list
my_list.append(6)  # Adds 6 to the end of the list
my_list.append(7)  # Adds 7 to the end of the list
# Print the updated list
print("List after addition:", my_list)
```

output:-

```
List after addition: [1, 2, 3, 4, 5, 6, 7]
```

ii)insertion

```
my_list = [1, 2, 3, 4, 5]

# Insertion: Insert an element at a specific position
my_list.insert(2, 10)  # Insert 10 at index 2

print("List after insertion:", my_list)
```

output:-

List after insertion: [1, 2, 10, 3, 4, 5]

iii)slicing:-

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

sliced_list = my_list[2:5]

print("Sliced portion of the list:", sliced_list)

last_four_elements = my_list[-4:]

print("Last four elements:", last_four_elements)
```

output:-

Sliced portion of the list: [3, 4, 5]

Last four elements: [6, 7, 8, 9]