Experiment No. 2

Area of Rectangle , Triangle and Circle :

main.py area.py

```python
import math

def triangle(base, height):  1 usage
    return 0.5 * base * height

def rectangle(length, width):  1 usage
    return length * width

def circle(radius):  1 usage
    return math.pi * radius * radius

print("Triangle Area:", triangle( base: 10,  height: 5))
print("Rectangle Area:", rectangle( length: 10,  width: 5))
print("Circle Area:", circle(5))
```

OUTPUT :

area

```
C:\Users\nesgv\PycharmProjects\PythonProgramming\.venv\Scripts\
Triangle Area: 25.0
Rectangle Area: 50
Circle Area: 78.53981633974483

Process finished with exit code 0
```

Experiment No. 3

Union of Two Lists a and b :

---

main.py | union of lists.py

```
1   a = [1, 2, 3, 4]
2   b = [3, 4, 5, 6]
3   union = a[:]
4
5   for i in b:
6       if i not in union:
7           union.append(i)
8
9   print("Union:", union)
10
```

OUTPUT :

Run | union of lists

```
C:\Users\nesgv\PycharmProjects\PythonProgramming\
Union: [1, 2, 3, 4, 5, 6]

Process finished with exit code 0
```

Experiment No. 4

Intersection of Two Lists a and b :

main.py | intersection of lists.py

```
1  a = [1, 2, 3, 4]
2  b = [3, 4, 5, 6]
3  i = []
4
5  for x in a:
6      if x in b and x not in i:
7          i.append(x)
8
9  print("Intersection:", i)
10
```

OUTPUT :

Run | intersection of lists

```
C:\Users\nesgv\PycharmProjects\PythonProgramming\.
Intersection: [3, 4]

Process finished with exit code 0
```

Experiment No. 5

Program 1: Remove All Occurrences of a Number from a List

main.py list1.py list2.py

```
1  list = [3, 2, 3, 5, 4, 3, 7, 3, 3]
2
3  print("Original list:", list)
4
5  a = 3
6  c = list.count(a)
7
8  print(f"Count of {a} is {c}")
9
10 for i in range(c):
11     list.remove(a)
12
13 print("List after removing:", list)
14
```

Run list1

OUTPUT :

```
C:\Users\nesgv\PycharmProjects\PythonProgramming\
Original list: [3, 2, 3, 5, 4, 3, 7, 3, 3]
Count of 3 is 5
List after removing: [2, 5, 4, 7]

Process finished with exit code 0
```

Program 2: Remove All Occurrences of a Word from a List

main.py list1.py list2.py

```
1  list = ["ram", "laxman", "sita", "ram"]
2
3  print("Original list:", list)
4
5  a = "ram"
6  c = list.count(a)
7
8  print(f"Count of {a} is {c}")
9
10 for i in range(c):
11     list.remove(a)
12
13 print("List after removing:", list)
14
```

Run list2

OUTPUT :

```
C:\Users\nesgv\PycharmProjects\PythonProgramming\.
Original list: ['ram', 'laxman', 'sita', 'ram']
Count of ram is 2
List after removing: ['laxman', 'sita']

Process finished with exit code 0
```

Experiment No. 6

Program to Count the Occurrence of a Word in a User-Entered Sentence

main.py wordCount.py

```
1   str1 = input("Enter a string: ")
2   word = input("Enter a word: ")
3
4   a = str1.split(" ")
5   count = 0
6
7   print("Your entered string is:", str1)
8
9   for i in range(len(a)):
10      if word == a[i]:
11          count += 1
12
13  print(f"The word '{word}' occurs {count} times.")
14
```

Run wordCount

OUTPUT :

```
C:\Users\nesgv\PycharmProjects\PythonProgramming\.venv\Scri
Enter a string: hello the KIT is the best college
Enter a word: the
Your entered string is: hello the KIT is the best college
The word 'the' occurs 2 times.

Process finished with exit code 0
```