

Experiment No. 2

Area of Rectangle , Triangle and Circle :



```
main.py area.py x
1 import math
2
3 def triangle(base, height): 1 usage
4     return 0.5 * base * height
5
6 def rectangle(length, width): 1 usage
7     return length * width
8
9 def circle(radius): 1 usage
10    return math.pi * radius * radius
11
12 print("Triangle Area:", triangle(base: 10, height: 5))
13 print("Rectangle Area:", rectangle(length: 10, width: 5))
14 print("Circle Area:", circle(5))
15
```

OUTPUT :

```
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.pyunion of lists.py ×

1a = [1, 2, 3, 4]

2b = [3, 4, 5, 6]

3union = a[:]

4

5for i in b:

6 if i not in union:

7 union.append(i)

8

9print("Union:", union)

10

OUTPUT :

Rununion of lists ×

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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 :



The screenshot shows a Python IDE with two tabs: 'main.py' and 'intersection of lists.py'. The 'intersection of lists.py' tab is active and contains the following code:

```
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)
```


Below the code editor, there is a 'Run' button and a tab for the output window titled 'intersection of lists'. The output window displays the following text:

```
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



The screenshot displays a Python IDE with three tabs: `main.py`, `list1.py` (selected), and `list2.py`. The code in `list1.py` is as follows:

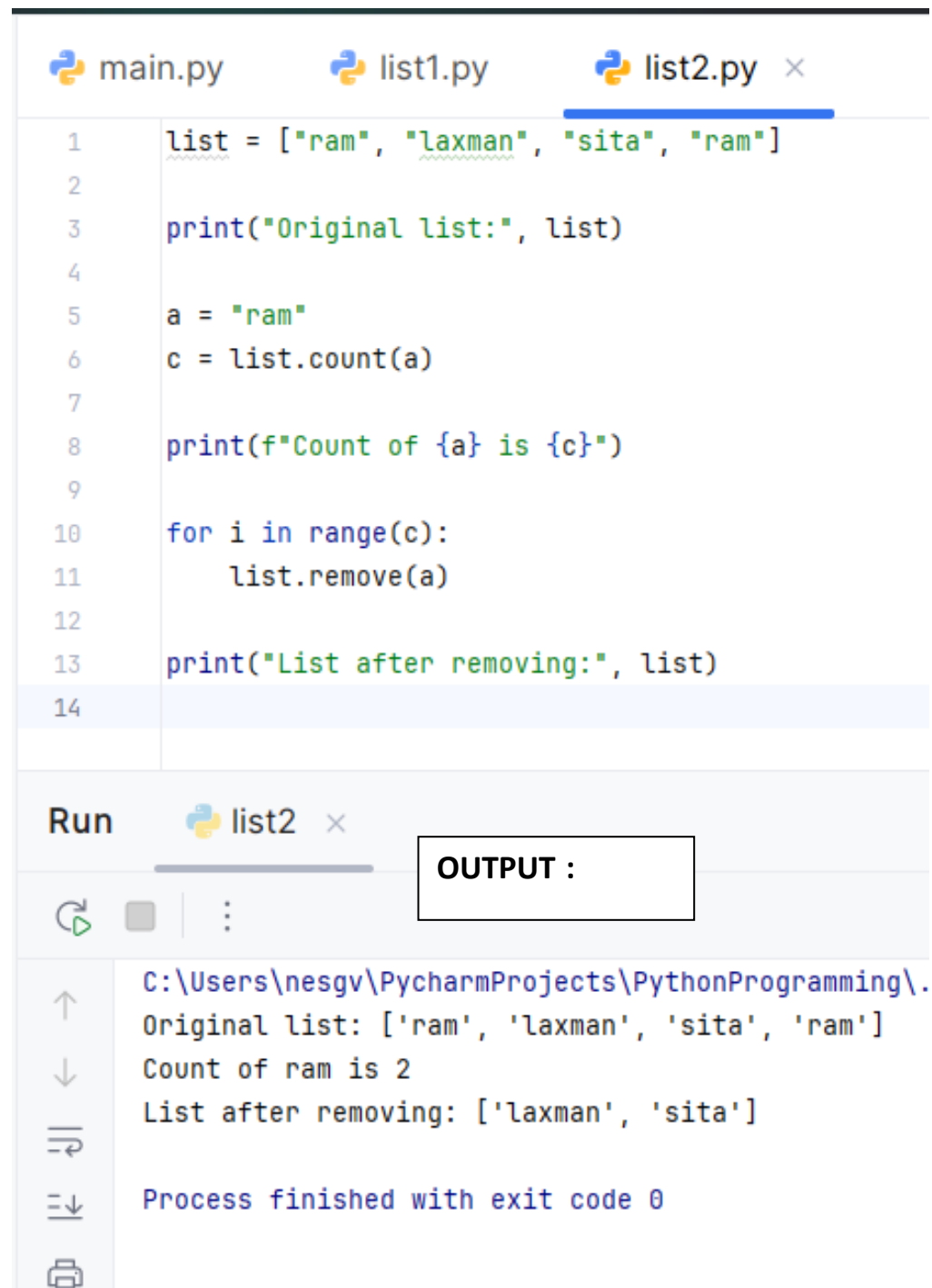
```
1 list = [3, 2, 3, 5, 4, 3, 7, 3, 3]
2
3 print("Original list:", list)
4
5 a = 3
6 c = list.count(a)
7
8 print(f"Count of {a} is {c}")
9
10 for i in range(c):
11     list.remove(a)
12
13 print("List after removing:", list)
14
```

Below the code editor, the **Run** button is visible, along with a tab for `list1`. To the right of the `Run` button, a box labeled **OUTPUT :** contains the following text:

```
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



The screenshot displays the PyCharm IDE interface. At the top, three tabs are visible: `main.py`, `list1.py`, and `list2.py`. The `list2.py` tab is active and contains the following Python code:

```
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
```

Below the code editor, the **Run** button is visible, along with a tab for `list2`. To the right of the Run button, a box labeled **OUTPUT :** contains the following 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
```