

Experiment no:- 1

Area of Triangle

```
a=int(input(" Enter height of Triangle "))
b=int(input(" Enter base of Triangle "))
areaofTriangle =(a*b)/2
print(" Area of Triangle is ",areaofTriangle)
```

#Area of Rectangle

```
l=int(input(" Enter the length of the rectangle "))
w=int(input(" Enter the width of the rectangle "))
areaofRectangle=l*w
print(" Area of Rectangle is ",areaofRectangle)
```

#Area of circle

```
r=int(input(" Enter the radius of circle "))
pi=3.14 #22/7
areaofcircle= pi*r*r
print(" Area of circle is ",areaofcircle)
```

Output:-

```
Enter height of Triangle 14
Enter base of Triangle 12
Area of Triangle is 84.0
Enter the length of the rectangle 14
Enter the width of the rectangle 12
Area of Rectangle is 168
Enter the radius of circle 5
Area of circle is 78.5
```

union of two list

Experiment no:- 2

```
list1 = [10,20,30]
list2 = [40,50,60,70,80]
list3 = list1 + list2
print(list3)
```

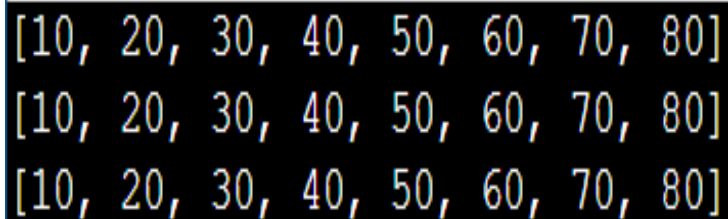
OR

```
list1 = [10,20,30]
list2 = [40,50,60,70,80]
for ele in list2:
    list1.append(ele)
print(list1)
```

OR

```
list1 = [10,20,30]
list2 = [40,50,60,70,80]
list1.extend(list2)
print(list1)
```

Output:-



```
[10, 20, 30, 40, 50, 60, 70, 80]
[10, 20, 30, 40, 50, 60, 70, 80]
[10, 20, 30, 40, 50, 60, 70, 80]
```

intersection of two lists

Experiment no:- 3

```
list1 = [10,20,30]  
list2 = [40,10,30,50,60,70,80]  
list3 = []
```

```
for ele in list1:  
    if ele in list2:  
        list3.append(ele)  
print(list3)
```

Output:-

```
[10, 30]
```

remove the "i"th occurrence of the given word in a list where words re

Experiment no.- 4

```
list1 = ["car", "truck", "motorcycle", "car", "car", "scooter",  
         "truck", "scooter", "motorcycle", "car"]  
i = 3  
word = "car"  
# about to delete 3rd occurrence of "car" in this list  
print("Original list :", list1)  
ind = 0  
count = 0  
while ind < len(list1):  
    if list1[ind] == word:  
        count = count + 1  
        if count == i:  
            list1.pop(ind)  
            ind = ind + 1  
print("Updated list :", list1)
```

Output:-

```
Original list : ['car', 'truck', 'motorcycle', 'car', 'car', 'scooter', 'truck', 'scooter', 'motorcycle', 'car']  
Updated list : ['car', 'truck', 'motorcycle', 'car', 'scooter', 'scooter', 'car']
```

python dictionary

Experiment no:- 5

```
s1 = "There was a king. He was very brave."
```

```
ls = s1.split(" ")
```

```
set1 = set(ls)
```

```
for word in set1:
```

```
    c = ls.count(word)
```

```
    print(word, " - ", c)
```

Output:-

```
brave. - 1
was - 2
There - 1
a - 1
king. - 1
He - 1
very - 1
```

if substring is present in a given string

Experiment no:- 6

```
s1 = "There was a king. He was very brave."
```

```
print("Enter substring to search for : ")
```

```
s2 = input()
```

```
if s2 in s1:
```

```
    print("Requested substring is present")
```

```
else:
```

```
    print("Requested substring is not present")
```

Output:-

```
Enter substring to search for :  
There  
Requested substring is present
```

to map two list into a dictionary

Experiment no:- 7

```
list1 = [1,2,3,4,5]
```

```
list2 = ["One", "Two", "Three", "Four", "Five"]
```

```
d = dict(zip(list1,list2))
```

```
print(d)
```

Output:-

```
{1: 'One', 2: 'Two', 3: 'Three', 4: 'Four', 5: 'Five'}
```

count the frequency of word apparing in a string using a dictionary

Experiment no:- 8

```
d = {}  
i = 1  
while i<=5:  
    print("Enter an alphabet")  
    alpha = input()  
    print("Enter word begins with", alpha)  
    word = input()  
    d[alpha] = word  
    i = i + 1  
print(d)
```

Output:-

```
Enter an alphabet  
p  
Enter word begins with p  
Pran  
Enter an alphabet  
v  
Enter word begins with v  
Vaibhav  
Enter an alphabet  
d  
Enter word begins with d  
Dhiraj  
Enter an alphabet  
h  
Enter word begins with h  
Harshal  
Enter an alphabet  
P  
Enter word begins with P  
Priti  
{'p': 'Pran', 'v': 'Vaibhav', 'd': 'Dhiraj', 'h': 'Harshal', 'P': 'Priti'}
```

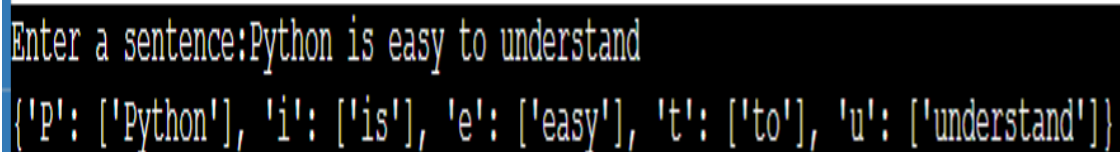

create dictionary with key as first character and value as word starting with that character

Experiment no:- 9

```
string1 = input("Enter a sentence:")
words = string1.split(" ")

dictionary={}
for char in words:
    if (char[0] not in dictionary.keys()):
        dictionary [char[0]]=[]
        dictionary [char[0]] .append (char)
    else:
        if (char not in dictionary [char[0]]):
            dictionary [char[0]].append (char)
print (dictionary)
```

Output:-



```
Enter a sentence:Python is easy to understand
{'P': ['Python'], 'i': ['is'], 'e': ['easy'], 't': ['to'], 'u': ['understand']}
```

Find the length of a list using recursion

Experiment no:- 10

```
def rec_lenght (a):  
    global count  
    if a:  
        count=count+1  
        rec_lenght(a[1:])  
    return count  
list1=[1,2,3,4,5,6,7,8,9]  
count=0  
lenght= rec_lenght (list1)  
print ("the lenght of a list is:/", lenght)
```

Output:-

```
the lenght of a list is:/ 9
```

compute the diameter , circumstancs and volume of a sphare using class

Experiment no:- 11

```
import math
class sphere:
    def __init__ (self,radius):
        self.radius=radius
    def caldiameter (self):
        return 2*self.radius
    def calcircumference (self):
        return 2* math.pi * self.radius
    def calvolume (self):
        return (4/3) * math.pi * self.radius**3
r=int(input("Enter the radius of sphere: "))
obj=sphere(r)
d=obj.caldiameter()
print("diameter of sphere: ",d)
c = obj.calcircumference ()
print("circumference of sphere: ",c)
v=obj.calvolume ()
print ("volume of sphere: ", v)
```

Output:-

```
Enter the radius of sphere: 5
diameter of sphere: 10
circumference of sphere: 31.41592653589793
volume of sphere: 523.5987755982989
```

read to file and capitalize the first Letter of every word in the file

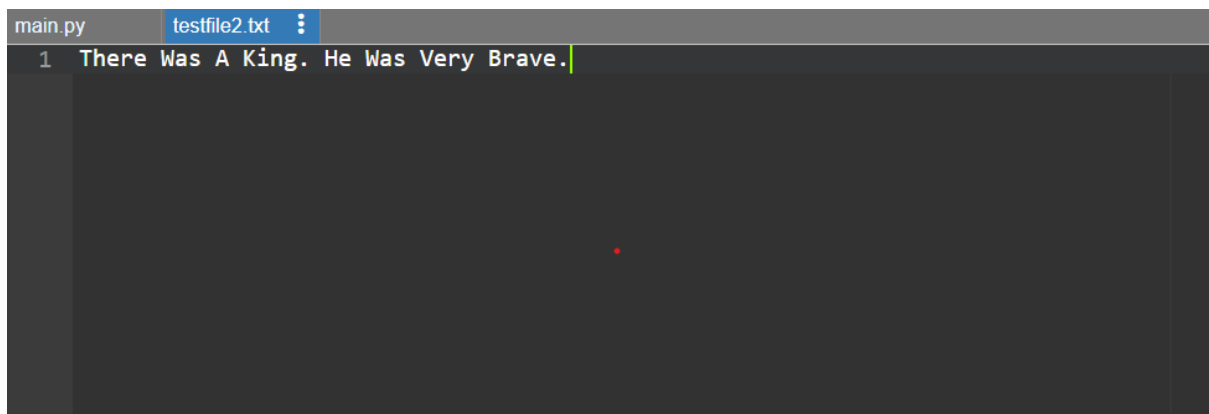
Experiment no:- 12

```
fobj = open("testfile2.txt", "w")  
fobj.write("there was a king. he was very brave.")  
fobj.close()
```

```
fobj2 = open("testfile2.txt", "r")  
s = fobj2.read()  
fobj2.close()
```

```
s2 = s.title()  
fobj3 = open("testfile2.txt", "w")  
fobj3.write(s2)  
fobj.close()
```

Output:-

A screenshot of a code editor window. The title bar shows 'main.py' and 'testfile2.txt'. The editor content shows a single line of text: '1 There Was A King. He Was Very Brave.' with a green cursor at the end of the line. The background is dark gray.

```
main.py testfile2.txt  
1 There Was A King. He Was Very Brave.
```