Write a Python program to calculate the area of a rectangle using user input for length and width.

l=int(input('Enter a number :'))  
b=int(input('Enter a number :'))  
area=l\*b  
print('Area of the rectangle :',area)

Output:

Enter a number :2

Enter a number :3

Area of the rectangle : 6

Write a Python program to find the maximum of three numbers using conditional statements.

a=int(input('Enter a number :'))  
b=int(input('Enter a number :'))  
c=int(input('Enter a number :'))  
if a>b and a>c:  
 print('The maximum value is :',a)  
elif b>a and b>c:  
 print('The maximum value is :',b)  
else:  
 print('The maximum value is :',c)

Output:

Enter a number :1

Enter a number :3

Enter a number :6

The maximum value is : 6

Write a Python program to swap the values of two variables without using a temporary variable.

a=int(input('Enter a value :'))  
b=int(input('Enter a value :'))  
print('Before swapping the value of a :',a)  
print('Before swapping the value of b :',b)  
a,b=b,a  
print('After swapping the value of a :',a)  
print('After swapping the value of b :',b)

Output:

Enter a value :3

Enter a value :2

Before swapping the value of a : 3

Before swapping the value of b : 2

After swapping the value of a : 2

After swapping the value of b : 3

Write a Python program to convert temperature from Celsius to Fahrenheit and vice versa using functions.

celsius=int(input('Enter a celsius value :'))  
cel\_to\_fahren=(celsius\*9/5)+32  
print('The ',celsius,'in fahrenheit is :',cel\_to\_fahren)  
  
fahrenheit=int(input('Enter a fahrenheit value :'))  
fahren\_to\_cel=(fahrenheit-32)\*5/9  
print('The ',fahrenheit,'in fahrenheit is :',fahren\_to\_cel)

Output:

Enter a celsius value :25

The 25 in fahrenheit is : 77.0

Enter a fahrenheit value :77

The 77 in fahrenheit is : 25.0

Write a Python program to count the number of vowels in a given string.

s=input('Enter a string :')  
s=s.lower()  
l=[]  
for i in s:  
 if i in 'aeiou':  
 l.append(i)  
print(len(l))

Output:

Enter a string :puropale

4

Write a Python program to check if a given number is prime or not.

n=int(input('Enter a number :'))  
if n>1:  
 for i in range(2,(n//2)+1):  
 if n%i==0:  
 print('The given number is not prime')  
 break  
 else:  
 print('The given number is prime')  
else:  
 print('The given number is not prime')

Output:

Enter a number :29

The given number is prime

Write a Python program to find the factorial of a given number using recursion.

def factorial\_recursion(n):  
 if n==0 or n==1:  
 return 1  
 else:  
 return n\*factorial\_recursion(n-1)  
n=int(input('Enter a number :'))  
print('The factorial of ',n,'is :',factorial\_recursion(n))

Output:

Enter a number :3

The factorial of 3 is : 6

Write a Python program to generate the Fibonacci sequence up to a certain number of terms.

n=int(input('Enter a number :'))  
a,b=0,1  
if n<1:  
 print('Null')  
elif n==1:  
 print(a)  
elif n==2:  
 print(a)  
 print(b)  
elif n>2:  
 print(a)  
 print(b)  
 for i in range(n-2):  
 c=a+b  
 a,b=b,c  
 print(c)

Output:

Enter a number :10

0

1

1

2

3

5

8

13

21

34

Write a Python program to remove duplicates from a list.

l=[1,2,3,4,1,3]  
print('Original list :',l)  
s=set(l)  
print('After removing the duplicates :',list(s))

Output:

Original list : [1, 2, 3, 4, 1, 3]

After removing the duplicates : [1, 2, 3, 4]

Write a Python program to find the intersection of two lists.

l1=[1,2,3,4]  
l2=[3,4,5]  
s1=set(l1)  
s2=set(l2)  
s=s1.intersection(s2)  
print('The intersection of 2 lists are :',list(s))

Output:

The intersection of 2 lists are : [3, 4]

Write a Python program to find the longest word in a given list of words.

l=['apple','banana','kiwi','orange','watermelon','cherry']  
longest\_word=''  
for i in l:  
 if len(i)>len(longest\_word):  
 longest\_word=i  
print(longest\_word)

Output:

watermelon

Write a Python program to count the occurrences of each word in a given string.

s=input('Enter a string :')  
s=s.lower()  
print({i:s.count(i) for i in s})

Output:

Enter a string :Deepthi

{'d': 1, 'e': 2, 'p': 1, 't': 1, 'h': 1, 'i': 1}

Write a Python program to reverse a given string.

s=input('Enter a string :')  
print(s[::-1])

Output:

Enter a string :Puropale

elaporuP

Write a Python program to sort a list of tuples based on the second element of each tuple.

l=[(1,2),(4,1),(3,8),(9,3)]  
for i in range(len(l)):  
 for j in range(i+1,len(l)):  
 if l[i][1]>l[j][1]:  
 l[i],l[j]=l[j],l[i]  
print(l)

Output:

[(4, 1), (1, 2), (9, 3), (3, 8)]

Write a Python program to find the sum of all elements in a list using a loop.

l=[1,2,3,4]  
sum=0  
for i in l:  
 sum=sum+i  
print('The sum of elements in the list is :',sum)

Output:

The sum of elements in the list is : 10

Write a Python program to remove the last element from a list.

l=[1,2,3,4,7,5]  
print(l.pop())  
print(l)

Output:

5

[1, 2, 3, 4, 7]

Write a Python program to check if a given string is a palindrome.

s=input('Enter a string :')  
s=s.lower()  
if s==s[::-1]:  
 print('The given string is Palindrome')  
else:  
 print('The given string is Not Palindrome')

Output:

Enter a string :Madam

The given string is Palindrome

Write a Python program to find the common characters between two strings.

s1=input('Enter a string :')  
s2=input('Enter a string :')  
for i in s1:  
 for j in s2:  
 if i in j:  
 print(i)

Output:

Enter a string :Reyansh

Enter a string :Karthikeya

e

y

a

a

h

Write a Python program to find the length of the longest consecutive sequence of a given list of integers.

l=[2,6,1,9,4,5,3]  
l.sort()  
res=1  
cnt=1  
for i in range(1,len(l)):  
 if l[i]==l[i-1]:  
 continue  
 if l[i]==l[i-1]+1:  
 cnt+=1  
 else:  
 cnt=1  
 res=max(res,cnt)  
print(res)

Output:

6

Write a Python program to find the difference between two sets.

s1={1,2,3,4}  
s2={3,4,5,6}  
print('The difference between two sets :',s1.difference(s2))

Output:

The difference between two sets : {1, 2}