Write a Python program to calculate the area of a rectangle using user input

length= float(input('Enter length:'))  
Width= float(input('Enter width:'))  
area = length\*Width  
print('area of rectangle:', area)

o/p: Enter length:33.2

Enter width:22.4

area of rectangle: 743.6800000000001

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

num1=int(input('enter num'))  
num2=int(input('enter num'))  
num3=int(input('enter num'))  
if num1 >= num2 and num1 >= num3:  
 max\_num=num1  
elif num2 >= num1 and num2 >= num3:  
 max\_num=num2  
else:  
 max\_num=num3  
print('maximum\_number is:', max\_num)

o/p: enter num22

enter num33

enter num12

maximum\_number is: 33

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

a=2  
 b=3  
 a,b = b,a  
 print('a',a)  
 print('b',b)

o/p: a 3

b 2

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

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

string="puropaleCREATIONS"  
 vowels= "aeiouAEIOU"  
 count= sum(string.count(vowel) for vowel in vowels)  
 print(count)

o/p: 8

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

num=int(input("enter a number"))  
if num > 1:  
 for i in range(2,num):  
 if num % i == 0:  
 print('it is not a prime number',num)  
 break  
 else:  
 print('it is a prime number',num)  
else:  
 print( 'it is not a prime number',num)

o/p: enter a number10

it is not a prime number 10

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

def factorial(n):  
 if (n==1) or (n==0):  
 return 1  
 else :  
 return(n\* factorial (n-1))  
num = 5  
print(num)  
print(factorial(num))

o/p: 5

120

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

num\_terms= int(input('Enter a numb'))  
a,b = 0,1  
for \_ in range(num\_terms):  
 print(a,end=" ")  
 a,b = b, a+b

o/p: Enter a numb10

0 1 1 2 3 5 8 13 21 34

Write a Python program to remove duplicates from a list.

A = [1,3,3,5,6,7,7,3,5,1]  
unique\_list= list (set(A))  
print(unique\_list)

o/p: [1, 3, 5, 6, 7]

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

x=[1,3,5,7,5,3,2,1,23,44]  
y=[3,5,4,44,6,10,99,32,21]  
z= list(set(x) & set(y))   
print(z) o/p: [3, 44, 5]

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

A=['uday','intern','at','puropale','sols']  
res=max(A, key=len)  
print(res)

o/p: puropale

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

text='apple banana apple orange watermelon apple'  
for word in set(text.split()):  
 print(f"'{word}':{text.split().count(word)}")

o/p:

'apple':3

'orange':1

'watermelon':1

'banana':1

Write a Python program to reverse a given string.

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

o/p: Enter a stringpuropale

elaporup

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

a=[(1,2),(2,4),(3,1),(4,7)]  
a.sort(key = lambda x: x[1])  
print(a)

o/p: [(3, 1), (1, 2), (2, 4), (4, 7)]

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

z=[2,3,1,55,3,2]  
x=sum(z)  
print(x)

o/p:66

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

lst=[2,3,4,7,8,9]  
lst.pop()  
print(lst)

o/p: [2, 3, 4, 7, 8]

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

string=input('enter a string')  
if string == string[::-1]:  
 print('The string is palindrome:',string)  
else:  
 print('the string is not palindrome')

o/p: enter a stringmadam

The string is palindrome: madam

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

x=input('enter the string')  
y=input('enter the string')  
comm\_char=set(x) & set(y)  
print(comm\_char)

o/p:

enter the stringuday

enter the stringvasireddy

{'a', 'y', 'd'}

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

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

set1={2,3,1,5,3}  
set2={3,1,4,8,10}  
difference=set1-set2  
print(difference)

o/p:

{2,5}