

Program No: 1

Aim: Program To Find Area Of a Circle

def findarea(r):

PI = 3.142

return PI * r * r

num = float(input("enter a value"))

print ("area is %f" % findarea(num))

Output

enter x value : 21

area is 1385.62200

Program No: 2

Aim : Programs To Find Square Of A Number

```
digit = int(input("enter an integer number: "))
square = digit * digit
print("square of {} digit is {} square")
```

Output

enter an integer number: 5

Square of 5 is 25

Program No: 3

Aim: Program to find largest Number

max

num1 = float(input("Enter first number: "))

num2 = float(input("Enter second number: "))

num3 = float(input("Enter third number: "))

if (num1 > num2) and (num1 > num3):

 largest = num1

elif (num2 > num1) and (num2 > num3):

 largest = num2

else:

 largest = num3

print("The largest number is", largest)

Output:

Enter first number : 32

Enter second number : 85

Enter third number : 45

The largest number is 85.0

Program No: 4

Aim: Program To Display Leap Years From
Current Year To Final Year

Print ("Enter year")

endyear = int(input())

startyear = 2020

print ("List of leap years:")

for year in range (startyear, endyear):

if (0 == year % 4) and (0 != year % 100)
or (0 == year % 400):

print year.

Output

start year = 2020
end year = 2030

2020

2024

2028

Program No: 5

Aim: To find Square of numbers in the list.

List1 = [14, 21, 11, 9, 7, 5]

for n in list1:

 square = n**2

 print(n, 'square is', square)

Output

14 squared is 196

21 squared is 441

11 squared is 121

9 squared is 81

7 squared is 49

5 squared is 25

Program No 1-b

Aim : To Find Vowels In a String

String A = " Itii how are you "

print (" Given String: In ", string A)

Vowels = " AaEeIiOoUu "

res = set { Each char which is in string A & in vowels }

print (" The Vowels present in the string: In res)

Output

Given String :

Hii How are you

The vowels present in the String

{'o', 'i', 'u', 'a', 'e'}

Program No : 7

Aim : To count the Occurrence of each Word
in a line Of Text.

def word_count(stri) :

counts = dict()

words = stri.split()

for word in words:

if word in counts:

counts[word] += 1

else:

counts[word] = 1

return counts

print(word_count('the quick brown fox jumps over the
lazy dog.'))

Output

```
{'the': 2, 'quick': 1, 'brown': 1, 'fox': 1,  
 'jumps': 1, 'over': 1, 'lazy': 1, 'dog': 1}
```

Program No: 8

Aim: To Find the Occurrence of 'a' within a Given list.

```
a = ['athul', 'Ajay', 'Alam', 'mishuk']
str1 = (' ').join(a)
count = 0
```

for i in str1:

```
    if i == 'a':
        count = count + 1
```

```
print ("Count of a in the list is : " + str(count))
```

Output

Count of a in the list is: 6

Program No: 9

Aim: Program to find whether the given list are of Same Length.

$\text{list1} = [10, 10, 11, 12, 12, 13, 14, 16, 15, 16, 12]$

$\text{list2} = [16, 12, 13, 14, 15, 16, 10, 11, 12, 10, 12]$

$\text{len1} = \text{len(list1)}$

$\text{len2} = \text{len(list2)}$

if $\text{len1} == \text{len2}$:

 print ("both list have equal length")

else:

 print ("both list doesn't have equal length")

Output

both list have equal length.

Program No: 10

Aim: Programs to Check 2 list have Same Sum

List 1 = [10, 10, 11, 12, 12, 13, 14, 16, 15, 16, 12]

List 2 = [16, 12, 13, 14, 15, 16, 10, 11, 12, 10, 12]

Total 1 = sum(List 1)

Total 2 = sum(List 2)

If total 1 == Total 2 :

print (" both list have equal sum ")

else:

print (" both list doesn't have equal sum ")

Output:

both list have equal sum

Grill ad - last
Cuban ad - 2nd

Cool - last fi

purple - last

blue - last

green - last

Program No : 11

Aim : Program To Check Whether 2 lists have Common Elements

List 1 = {10, 10, 11, 12, 12, 13, 14, 16, 19, 16, 12}

List 2 = {10, 10, 11, 12, 12, 16, 14, 16, 15, 14, 12}

for value in List 1:

 if value in List 2:

 common = 1

 if common == 1:

 print ("There are common elements")

else:

 print ("no common elements")

Output:

There we common elements.

Program No : 12

Aim: A Program To Replace Occurrence Of First Character in A Given String by { }

```
def change_char(str):
    char = str[0]
    str = str.replace(char, '{ }')
    str = char + str[1:]
    return str
```

```
print(change_char('restart'))
```

Object:

nesting

= annual

annual

annual

annual

annual

annual

Program No: 13

Aim: A Program to Create A String From A Given String Where First and Last Characters Are Interchanged

```
def change_string(sstr1)
    return sstr1[0:-1] + sstr1[-1:] + sstr1[1:-1]
```

```
print t.change_string('bunnunu')
```

Output

aanab

Program No: 14

Aim : Program to compute nannnn

a = int(input("Input an Integer : "))

n1 = int("%s" % a)

n2 = int("%s%s" % (a,a))

n3 = int("%s%s%s" % (a,a,a))

print(n1n2n3)

Output

Enter an integer: 5

615

Program No: 15

Aim: Merging 2 dictionaries

def Merge(dict1, dict2):

return (dict2.update(dict1))

dict1 = { 'a': 10, 'b': 8 }

dict2 = { 'a': 6, 'c': 4 }

print(Merge(dict1, dict2))

print(dict2)

Output

{'d': 6, 'c': 4, 'a': 10, 'b': 8}

Program No : 16

Aim : Programs to find gcd of 2 numbers

def gcd(a,b):

if (b == 0):

return a

return gcd(b, a%b)

a = 98

b = 56

if (gcd(a,b)):

print ('GCD of', a, 'and', b, 'is', gcd(a,b))

else:

print ('not found')

Output:

GCD of 98 and 456 is 14.

Program No : 17

Aim : Programs to remove even Numbers
from a list of Integers.

list = [11, 22, 33, 44, 55]

print (list)

~~for~~

for i in list:

if (i % 2 == 0):

list.remove(i)

print("list after removing even numbers: ")

print (list)

Output

print (list)

[11, 22, 33, 44, 55]

list after removing

list = [11, 33, 55]

Program No. 18

Aim: Program To Find Factorial Of A Number

```
def fact(num):  
    factorial = 1
```

if num < 0:

print ("Factorial does not exist for negative
numbers")

```
elif num == 0:
```

print ("The Factorial of 0 is 1")

else:

```
for i in range(1, num+1):
```

factorial = factorial * i

print ("The Factorial of", num, "is", factorial)

Output

Fact (1)

The factorial of 1 is 1

Fact (2)

The factorial of 2 is 5040

Fact (3)

The factorial of 0 is 1

Program No: 11

Aim: Program To find Fibonacci Series Of N terms

def fibo(term):

$n_1, n_2 = 0, 1$
count = 0

if term == 0:

print("Please enter a positive integer")

elif term == 1:

print("Fibonacci sequence upto", term, ":")
print(n1)

else:

print("Fibonacci Sequence: ")

while count < term:

print(n1)

$n3 = n1 + n2$

$n1 = n2$

$n_2 = n_{th}$

count += 1

English

Q1

Output

$\text{fibo}(n)$

Fibonacci sequence:

- 0
- 1
- 1
- 2
- 3
- 5
- 8
- 13

Program No: 20

Aim: Program to find Sum Of All items
in a list.

```
def sum_list(items):  
    sum_numbers = 0  
    for x in items:  
        sum_numbers += x  
    return sum_numbers
```

```
print(sum_list([-3, -4, 6, 7]))
```

$\sin \theta = \frac{r}{a}$
 $r = \text{constant}$

Output :

12

Program No: 21

Aim : Display a pyramid with a number inputed from the User.

```
lines = int(input("Enter a number: "))
```

```
# i=1
```

```
j=1
```

```
while i <= lines:
```

```
    j = 1
```

```
    while j <= i:
```

```
        temp = i + j
```

```
        print(temp, end=' ', flush=True)
```

```
        print(" ", end=' ', flush=True)
```

```
j = j + 1
```

```
print("")
```

```
i = i + 1
```

Program No: 22

Aim: Program to find Number Of Characters
in a String

```
def char_frequency(str):  
    dict = {}  
    for n in str:  
        keys = dict.keys()  
        if n in keys:  
            dict[n] += 1  
        else:  
            dict[n] = 1  
    return dict
```

```
print(char_frequency('Hello world'))
```

Output:

{ 'h': 1, 'e': 1, 'l': 3, 'o': 2, 'w': 1, 'r': 1
'd': 1 }

Program No: 23

Aim: Programs to Return length of Longest Word in a list.

```
def func(strings,y):
    g = len(strings[0])
    for i in range(y):
        if l <= len(strings[i]):
            g = len(strings[i])
    return g
```

input_string = input ("Enter a list element separated by space ")

```
list = input_string.split()
y = len(list)
print(func(list,y))
```

Program No : 24

Aim : Program to generate All factors
of a Number.

```
def print_factors(x):  
    print ("The factors of", x, "are: ")  
    for i in range (1, x+1):  
        if x % i == 0:  
            print (i)
```

print factors(234) (234)

Output

The factors we

- 1
- 2
- 3
- 6
- 9
- 13
- 18
- 26
- 39
- 78
- 117
- 234

Program No: 25

Topic: Programs To Print Patterns

 $n = 5;$

```
for i in range(n):
```

```
    for j in range(i):
```

```
        print('* ', end='')
```

```
    print()
```

```
for i in range(n, 1, -1):
```

```
    for j in range(i):
```

```
        print('* ', end='')
```

```
    print()
```

Program No. 26

Aim: Program to Find Area Of Square, Triangle And Rectangle Using Lambda Functions.

```
s = int(input("Enter the length of a side of square:"))
l = int(input("Enter the length of rectangle:"))
b = int(input("Enter the breadth of rectangle:"))
```

```
print('Enter the base and height of triangle')
```

```
b = int(input("Enter the base of triangle:"))
d = int(input("Enter the height of triangle:"))
```

```
y = lambda s: s * s
```

```
y = lambda l, b: l * b
```

```
t = 0.5
```

```
g = lambda h, d, t: h * d * t
```

```
print("Area of square is : ", x(s))
```

```
print("Area of rectangle", y(l, b))
```

```
print("Area of triangle", g(h, d, t))
```