

Program No: 1

AIM: Python program to find area

```
def area(r):
```

```
    Pi = 3.14
```

```
    return Pi * (r * r);
```

```
num = float(input("Enter the value for:"))
```

```
print("Area is %.6f" % area(num));
```

Result: The program has been executed and the output was verified.

Output

Enter the value for : 3

Area is 28.26000

Program No: 2

AIM: Python program to find largest among three numbers.

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

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

```
num3 = float(input("Enter the 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)
```

Result: The program has been executed and the output was verified.

Output

Enter the first number: 3

Enter the second number: 8

Enter the third number: 5

The largest number is 8

Program No: 3

AIM: Python program to find square of a number.

```
digit = int(input("Enter an integer  
number:"))
```

```
square = digit * digit
```

```
print("Square of {digit} is {square}")
```

Result: The program has been executed and the output was verified

Output

Enter an integer number: 3
square of 3 is 9.

Program No: 4

AIM: Python program to find area of circle.

from math import pi

r = float(input("Enter the radius of the circle:"))

print("The area of the circle with radius
+ str(r) + " is : " + str(pi * r ** 2))

Result: The program has been executed
and the output was verified.

Output

Input the radius of the circle: 4
The area of the circle with radius
4.0 is: 50.2654

Program No: 5

AIM: Python program to find square of n.

```
list1 = [14, 20, 13, 8, 6, 2]
```

```
for n in list1:
```

```
    square = n**n
```

```
    print(n, squared is "square")
```

Result: The program has been executed and the output was verified.

Output

14 squared is 196

20 squared is 400

13 squared is 169

8 squared is 64

6 squared is 36

2 squared is 4

Program No: 6

AIM: Python program to find vowels in a string.

```
string A = "Hello... how are you"  
print ("Given string: \n", string A)  
vowels = "AeEeIiOoUu"  
ves = set ([each for each in string A  
            if each in vowels])  
print ("The vowels present in the  
       string: \n" ves)
```

Result: The program has been executed and the output was verified.

Output

Given string:

Hello... how are you

The vowels present in the string:

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

AIM: Python program to count words in a sentence.

```
def word_count(st):
```

```
    counts = dict()
```

```
    words = st.split()
```

```
    for word in words:
```

```
        if word in counts:
```

```
            counts[word] += 1
```

```
        else:
```

```
            counts[word] = 1
```

```
    return counts
```

```
print(word_count("when you change the  
quality of your thinking, you change  
the quality of your life sometimes  
instantly"))
```

Result: The program has been executed and the output was verified.

Output

Σ 'when':1, 'you':2, 'change':2, 'the':
'quality':2, 'of':2, 'you':2, 'thinking':1,
'life':1, 'sometimes':1, 'instantly':1}

Program No: 8

AIM: Python program to count a in a list.

```
a = ['aya', 'aun', 'keethi', 'meru']
```

```
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))
```

Result: The program has been executed and the output was verified.

Output

count of a in the list is: 3

AIM: Python program to check the length of lists

```
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]
```

```
len 1 = len(list 1)
```

```
len 2 = len(list 2)
```

```
if len 1 == len 2:
```

```
    print('both list have equal length')
```

```
else:
```

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

Result: The program has been executed and the output was verified.

Output

both list have equal length

Program No: 10

AIM: Python program to check the sum of lists

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

```
list 2 = [6, 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')
```

Result: The program has been executed and the output was verified.

Output

both list have equal sum.

Program No: 11

AIM: Python program to check the common elements in the list.

list 1 = [10, 10, 11, 12, 12, 16, 22, 33, 44, 22]

list 2 = [10, 10, 11, 12, 12, 16, 22, 33, 44, 22]

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")

Result: The program has been executed and the output was verified.

Output:

there are common elements

Program No: 12

AIM: Python program to replace a character.

```
def change_char(str1):  
    char = str1[0]  
    str1 = str1.replace(char, '$')  
    str1 = char + str1[1:]  
    print(change_char('refresh'))
```

Result: The program has been executed and the output was verified.

Output:

self test

Program No:13

AIM: Python program to exchange the first and last letter in a string.

```
def change_string(s):  
    return s[-1:] + s[1:-1] + s[0]  
print(change_string('pineapple'))
```

Result: The program has been executed and the output was verified.

Output

eneapplp.

Program No: 14

AIM: Python program to merge 2 dictionaries.

```
def merge(dict1, dict2)  
    return (dict2.update(dict1))
```

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

```
dict2 = {'d': 5, 'c': 2}
```

```
print(merge(dict1, dict2))
```

```
print(dict2)
```

Result: The program has been executed and the output was verified.

Output

None

{ 'd': 5, 'c': 2, 'a': 10, 'b': 8 }

Program No: 15

AIM: Python program to ascend and decent dictionary

```
import operator
```

```
d = {1:2, 3:4, 4:3, 2:1, 0:0}
```

```
print('Original dictionary: ' + d)
```

```
sorted_d = sorted(d.items(), key=operator.  
itemgetter(1))
```

```
print('Dictionary is ascending order by  
value: ' + str(sorted_d))
```

```
sorted_d = dict(sorted(d.items(), key=operator.  
itemgetter(1), reverse = True))
```

```
print('Dictionary in descending order by  
value: ' + str(sorted_d))
```

Result: The program has been executed and the output was verified.

Output

Original dictionary: $\{1:2, 3:4, 4:3, 2:1, 0:0\}$

Dictionary in ascending order by
value: $[(0,0), (2,1), (1,2), (4,3)]$

Dictionary in descending order by
 $\{3:4, 4:3, 1:2, 2:1, 0:0\}$

Program No:16

AIM: Python program to remove even numbers from the list.

```
list = [11,22,33,44,55,66,77,88,99]
```

```
print(list)
```

```
for i in list:
```

```
    if (i % 2 == 0)
```

```
        list.remove(i)
```

```
print("list after removing:", list)
```

Result: The program has been executed and the output was verified.

Output

[11, 22, 33, 44, 55, 66, 77, 88, 99]

list after removing: [11, 33, 55, 77, 99]

Program No: 17

AIM: Python program to find gcd of number.

```
def gcd(a, b):  
    if (b == 0):  
        return a  
    return gcd(b, a % b)
```

a = 45

b = 65

```
if (gcd(a, b)):  
    print('gcd of', a, 'and', b, 'is',  
          gcd(a, b))
```

```
else:  
    print('not found')
```

Result: The program has been executed and the output was verified.

Output

GCD of 45 and 65 is 5

Program No: 18

AIM: Python program to find factorial of a number.

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

```
factorial = 1
```

```
if num < 0:
```

```
    print("Sorry, 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)
```

Result: The program has been executed and the output was verified.

Output

Enter a number : 5

The factorial of 5 is 120.

Program No: 19

AIM: Python program to find fibonacci sequence.

```
def recur_fibo(n):  
    if n <= 1:  
        return n  
    else:  
        return (recur_fibo(n-1) + recur_fibo(n-2))  
returns = int(input("How many terms?"))  
if returns <= 0:  
    print("Please enter a positive integer")  
else:  
    print("Fibonacci sequence:")  
    for i in range(n terms):  
        print(recur_fibo(i))
```

Result: The program has been executed and the output was verified.

Output

How many terms? 4

Fibonacci sequence:

0

1

1

2.

Program No: 20

Aim: Python program to perform string function.

```
def add_string (str1):
```

```
    length = len(str1)
```

```
    if length > 1:
```

```
        if str1[-3:] == "ing":
```

```
            str1 += 'ly'
```

```
    else:
```

```
        str1 += 'ing'
```

```
    return str1
```

```
print (add_string('do'))
```

```
print (add_string('accaucharing'))
```

Result: The program has been executed and the output was verified.

Output

doing
accordingly

Program No: 21

AIM: Python program to perform the sum of given items.

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

```
sum = sum(numbers)
```

```
print(sum)
```

Result: The program has been executed and the output was verified.

Output

22.

Program No: 22

Aim: Python program to find perfect even square numbers in a range.

```
num1 = int(input("Enter a number: "))  
num2 = int(input("Enter a number: "))  
for i in range(num1, num2+1):  
    for j in range(32, 100+1):  
        if i == j*j:  
            string = str(i)  
            if int(string[0])%2 == 0 and  
               int(string[1])%2 == 0 and  
               int(string[2])%2 == 0 and  
               int(string[3])%2 == 0:  
                print(i)
```

Result: The program has been executed and the output was verified.

Output

Enter a number: 4444

Enter a number: 9999

4624

6084

6400

8464

Program No: 23

Aim: Python program to display the given pyramidal with step number accepted from 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("\n")
```

```
    i = i + 1
```

Result: The program has been executed and the output was verified.

Output

Enter a number: 4

1

2 4

3 6 9

4 8 12 16

Program No: 24

Aim: Python program to count the number of characters in a string

```
def char_frequency(str1):  
    dict = {}
```

```
    for n in str1:
```

```
        keys = dict.keys()
```

```
        if n in keys:
```

```
            dict[n] += 1
```

```
        else:
```

```
            dict[n] = 1
```

```
    return dict
```

```
print(char_frequency('hellow how are you'))
```

Result: The program has been executed and the output was verified.

Output .

Σ 'b': 2, 'c': 2, 'd': 2, 'o': 3, 'i': 3, 'w':

'a': 1, 'e': 1, 'g': 1, 'v': 1 } 3

Program No: 25

Aim: Python program to accept a list of words and return length of longest word.

```
def find(word):  
    wl = []  
    for n in word:  
        wl.append(len(n), n)  
    wl.sort()  
    result = wl[-1][0], wl[-1][1]  
    print("longest word:", result[1])  
    print("length of the longest word:",  
          result[0])  
    find(["hello", "manning", "hi"])
```

Result: The program has been executed and the output was verified.

Output.

longest word : morning

length of the longest word : 7

Program No: 26

Aim: Python program to construct patterns using nested loop.

```
def star():  
    n = 5  
    for i in range(n):  
        for j in range(i):  
            print('*', end = " ")  
        print(" ")  
    for i in range(n, 0, -1):  
        for j in range(i):  
            print("a", end = " ")  
        print(" ")
```

star()

Result: The program has been executed and the output was verified.

Output!

OK

OK OK

OK OK OK

OK OK OK OK

OK OK OK OK OK

OK OK OK OK

OK OK OK

OK OK

OK

Program No: 27

Aim: Python program to print 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(232)
```

Result: The program has been executed and the output was verified.

Output

The factors of 232 are:

1
2
4
8
29
58
116
232.

Program No: 28

Aim: Python program to write lambda functions to find area of square, rectangle and triangle.

```
print("Enter the length of a side of  
square:")
```

```
s = int(input("Enter your value:"))
```

```
print("Enter the length and breadth  
of rectangle:")
```

```
l = int(input("Enter your value:"))
```

```
b = int(input("Enter your value:"))
```

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

```
b = int(input("Enter your value:"))
```

```
d = int(input("Enter your value:"))
```

$x = \text{lambda } s: s * s$

$y = \text{lambda } l, b: l * b$

$t = 0.5$

$z = \text{lambda } b, d, t: b * d * t$

$\text{print}(\text{"Area of square is: "}, x(5))$

$\text{print}(\text{"Area of rectangle is: "}, y(2, 3))$

$\text{print}(\text{"Area of triangle is: "}, z(2, 3, t))$

Result: The program has been executed and the output was verified.

Output

Enter the length of a side of square

Enter your value: 2

Enter the length and breadth of rectangle

Enter your value: 4

Enter your value: 2

Enter the base and height of triangle

Enter your value: 3

Enter your value: 2

Area of square: 4

Area of rectangle: 8

Area of triangle: 3.0

Program No: 29

Aim: Python program to display future leap years from current years to a final year entered by user.

```
import datetime
a = int(a.year)
b = int(input("Enter final year:"))
print("In leap years:")
for i in range(a, b+1):
    if (i % 4 == 0):
        print(i)
```

Result: The program has been executed and the output was verified.

Output

Enter final year : 2040

Leap years :

2024

2028

2032

2036

2040

Program No: 30

Aim: Python program to generate positive list of numbers from a given list of integers.

```
list1 = [1, -1, 2, -5, 9, -2, -54, 87, -33, -76, 24, -67]
```

```
pos = list()
```

```
for i in list1:
```

```
    if i > 0:
```

```
        pos.append(i)
```

```
print('Original list:', list1)
```

```
print('Positive integer list:', pos)
```

Result: The program has been executed and the output was verified.

Output

Original list: $[1, -1, 2, -5, 9, -2, -54, 87, -33, -70, 24, -67]$

positive integer list: $[1, 2, 9, 87, 24]$

Program No: 31

Aim: Python program to find biggest of 3 numbers entered

```
a = int(input('Enter 1st no: '))  
b = int(input('Enter 2nd no: '))  
c = int(input('Enter 3rd no: '))  
if a > b and b > c:  
    print(a, 'is biggest number')  
elif b > a and b > c:  
    print(b, 'is biggest number')  
else:  
    print(c, 'is the biggest number')
```

Result: The program has been executed and the output was verified.

Output

Enter 1st no: 5

Enter 2nd no: 6

Enter 3rd no: 8

8 is the biggest number.

Program No: 32

Aim: Python program to create a list of colours from comma-separated colour names entered by user. Display first and last colours.

```
colours = input('Enter colours separated  
by commas: ').split(',')  
print('First colour: ' + colours[0])  
print('Last colour: ' + colours[-1])
```

Result: The program has been executed and the output was verified.

Output

enter colours separated by comma
red, black, yellow;

First color: red

Last color: yellow

Program No: 33

Aim: Python program to print out all
: colours from colour-list1 not contained
in colour-list2.

```
colour1 = set(input('Enter colour  
separated by commas: ').split(','))  
colour2 = set(input('Enter colour  
separated by commas: ').split(','))  
print('Colours in colour-list1 not  
contained in colour-list2 are: ',  
list(colour1.difference(colour2)))
```

Result: The program has been
executed and the output was
verified.

Output

Enter colors separated by commas:

red, yellow, brown

Enter colors separated by commas:

black, white

colors in color-list1 not contained in

color-list2 are ['brown', 'red', 'yellow']

Program No: 34

Aim: Python program to create a package graphics with modules rectangle, circle and sub-package 3D-graphics with modules cuboid, and sphere.

Include methods to find area and perimeter of respective figures in each module. Write programs that find area and perimeter of figures by different inspecting statements.

circle.py

```
def area(Ci):
```

```
    print('Area of circle with radius',
```

```
        2.18, ' is: ', '%.2f' % (3.14 * 2.18 * 2.18), ' sq units')
```

def circumference:

print('Circumference of circle with
radius: ', 'r', 'is: ', '%.2f' % (3.14 * 2 * r),
'units')

rectangle.py

def area(a, b):

print('Area of rectangle with sides
a, ' and ' b, 'is: ', '%.2f' % (a * b),
'sq. units')

def perimeter(a, b):

print('Perimeter of rectangle with
sides, "a", ' and ' b, 'is: ', '%.2f' %
(2 * (a + b)), 'units')

Sphere.py

def area(r):

print('Area of sphere with radius,

```
0, 'is:', '%.2f' % 1.0 * 4 * (3.14 * r * r),  
'sq. units')
```

```
def perimeter(r):
```

```
    print('Perimeter of (great circle of)  
    sphere with radius', r, 'is:',  
    '%.2f' % (2 * 3.14 * r), 'units')
```

cuboid.py

```
def area(l, b, h):
```

```
    print('Total surface area of cuboid  
    with dimensions:', l, ',', b, ',', h,  
    'is:', '%.2f' % (2 * ((l * b) + (b * h) +  
    (l * h))), 'sq. units')
```

```
def perimeter(l, b, h):
```

```
    print('perimeter of cuboid with  
    dimensions:', l, ',', b, ',', h, 'is:',
```

'%.5f' % ((4 * (l + b + r)), 'units')

Find Perimeter.py

import turtle

from rectangle import a

from Graphics_3D_graphics import
cuboid, sphere

a = float(input('Enter length of the
rectangle: '))

b = float(input('Enter breadth of the
rectangle: '))

perimeter(a, b)

r = float(input('Enter the radius of
the circle: '))

circle.circumference(r)

l = float(input('Enter length of the cuboid: '))

b = float(input('Enter breadth of the cuboid: '))

h = float(input('Enter height of the cuboid: '))

cuboid.perimeter(l, b, h)

r = float(input('Enter the radius of the sphere: '))

sphere.perimeter(r)

Find Area.py

import circle

from rectangle import *

from graphics_3d_graphics import
cuboid, sphere

a = float(input('Enter length of the rectangle: '))

$b = \text{float}(\text{input}(\text{'Enter breadth of the rectangle : '}))$

$\text{area}(a, b)$

$r = \text{float}(\text{input}(\text{'Enter the radius of the circle : '}))$

$\text{circle.area}(r)$

$l = \text{float}(\text{input}(\text{'Enter the length of the cuboid : '}))$

$b = \text{float}(\text{input}(\text{'Enter the breadth of the cuboid : '}))$

$h = \text{float}(\text{input}(\text{'Enter the height of the cuboid : '}))$

$\text{cuboid.area}(l, b, h)$

$r = \text{float}(\text{input}(\text{'Enter the radius of the sphere : '}))$

sphere.area(r)

Result: The program has been executed and the output was verified.

Output

Enter length of the rectangle: 4

Enter breadth of the rectangle: 3

Perimeter of rectangle with sides

4.0 and 3.0 is : 14.00 units.

Enter the radius of the circle: 2

Circumference of circle with radius

2.0 is : 12.56 units.

Enter length of the cuboid: 5

Enter breadth of the cuboid: 4

Enter height of the cuboid: 3.

Perimeter of cuboid with dimensions

5.0, 4.0, 3.0, is 48.00 units.

Enter the radius of the sphere: 2

Perimeter of (great circle of) sphere
with radius 2.0 is 12.56 units

Enter length of the rectangle: 2

Enter breadth of the rectangle: 3

Area of rectangle with sides 2.0
and 3.0 is: 6.00 sq. units.

Enter the radius of the circle: 4

Area of circle with radius 4.0 is
50.24 sq. units.

Enter length of the cuboid: 4

Enter breadth of the cuboid: 7

Enter height of the cuboid: 2.

Total surface area of cuboid with
dimensions 4.0, 7.0, 2.0 is 100.00
sq. units.

Enter the radius of the sphere: 1

Area of sphere with radius 1.0 is
12.56 sq. units.

```
def comp(self, obj):
```

```
    if self.area() > obj.area():
```

```
        print('Rectangle with length=',  
              self.length, 'and', 'breadth=',  
              'has the greater area')
```

```
    elif self.area() < obj.area():
```

```
        print('Rectangle with length=',  
              obj.length, 'and breadth=',  
              obj.breadth, 'has the greater  
              area')
```

```
    else:
```

```
        print('They have equal area')
```

```
x1 = rectangle(9,3)
```

```
x2 = rectangle(3,4)
```

```
x1.comp(x2)
```

Result: The program has been executed
and the output was verified.

Output: (35)

Rectangle with length = 9 and
breadth = 3 has the greater area.

Program No : 36

Aim : Python program to create a bank account with members account number, name, type of account and balance. Write constructor and methods to deposit at the bank and withdraw an amount from the bank.

class BankAccount:

def __init__(self, a, n, t, b):

self.acno = a

self.name = n

self.type = t

self.bal = b.


```
def deposit(self, a):
```

```
    self.bal += a.
```

```
    print('Rs.', a, 'deposited! current  
        balance is Rs', self.bal)
```

```
def withdraw(self, a):
```

```
    if self.bal >= a:
```

```
        self.bal -= a
```

```
    print('Rs.', a, 'withdrawn! current balance  
        is Rs.', self.bal)
```

```
else:
```

```
    print("Insufficient balance to make  
        this transaction!")
```

```
a = int(input('Enter account number:'))
```

```
n = input('Enter name of the account  
        holder:')
```

```
t = input('Enter account type:')
```

```
b= float(input('Enter your balance:'))  
ac1: Bank account (a,n,t,b)  
ac1.deposit(float(input('Enter amount  
to deposit:')))  
ac1.withdraw(float(input('Enter amount  
to withdraw:'))))
```

Result: The program has been executed
and the output was verified.

Output:

enter account number: 00900923213

enter name of the account holder:

Karthik.

enter account type: savings

enter your balance: 100000

enter amount to deposit: 300000

Rs. 300000.0 deposited! current balance is Rs. 400000.0

enter amount to withdraw: 5000

Rs. 5000.0 withdrawn! current balance is: Rs. 395000.0

Program No: 37.

Aim: Python program to create rectangle with attributes length and breadth and methods to find area and perimeter. Compare 2 rectangle objects by their area.

```
class Rectangle:
```

```
    def __init__(self, l, b):
```

```
        self.length = l
```

```
        self.breadth = b
```

```
    def area(self):
```

```
        return self.length * self.breadth
```

```
    def perimeter(self):
```

```
        return 2 * (self.length + self.breadth)
```

```
    def cmp(self, obj):
```

```
        if self.area() > obj.area():
```

```
print ('Rectangle with length=',  
      self.length, 'and breadth=',  
      self.breadth, 'has the greater  
      area').
```

```
elif self.area() < obj.area():  
    print ('Rectangle with length=',  
          obj.length, 'and breadth=',  
          obj.breadth, 'has the greater  
          area').
```

```
else:
```

```
    print ('They have equal area:')
```

```
r1 = Rectangle(9,3)
```

```
r3 = Rectangle(3,4)
```

```
r1.emp(r3)
```

Result: The program has been executed
and the output was verified.

Output.

Rectangle with length = 9 and
breadth = 3 has the greater area.

Program No: 38

Aim: Python Program to create a class rectangle with private attribute length and width. Overload '<' operator to compare the area of 2 rectangles

```
class Rectangle:
```

```
    def __init__(self, l, w):
```

```
        self.length = l
```

```
        self.width = w
```

```
        self.area = self.width * self.length
```

```
    def __lt__(self, other):
```

```
        if self.area < other.area:
```

```
            print('Rectangle with length=',  
                  self.length, 'and width=',  
                  self.width, 'has the lesser
```


area!')

elif other == area1 self.area:

print('Rectangle with length = ' +
other.length + ' and width = ' +
other.width + ' has the lesser
area!').

else:

print('They have equal area!')

l = float(input('Enter length of
1st rectangle:'))

w = float(input('Enter width of 1st
rectangle:'))

R1 = Rectangle(l, w)

l = float(input('Enter length of 2nd
rectangle:'))

w = float(input('Enter width of 2nd
rectangle:'))

R2 = Rectangle(l, w)

$R_1 < R_2$.

Result: The program has been executed
and the output was verified.

Output!

Enter length of the 1st rectangle: 7

Enter width of the 1st rectangle: 8

Enter length of the 2nd rectangle: 8

Enter width of the 2nd rectangle: 7

They have equal area!

Program No: 39

Aim: Python program to create a class publisher (name). Derive class book from publisher with attributes title and author. Derive class python from book with attributes price and no. of pages. Write a program that displays information about a python book. Use base class constructor invocation and method overriding.

```
class publisher:
```

```
    def __init__(self, name):
```

```
        self.name = name
```

```
    def show(self):
```

```
        pass.
```

```
class Book(Publisher):
```

```
    def __init__(self, title, author, name):
```

```
        self.title = title
```

```
        self.author = author
```

```
Publisher.__init__(self, name)
```

```
    def show(self):
```

```
        pass.
```

```
class Python(selfBook):
```

```
    def __init__(self, pno, title, author,  
                    names):
```

```
        print('Book title', self.title)
```

```
        print('Author:', self.author)
```

```
        print('Publisher:', self.name)
```

```
        print('Price:', self.price)
```

```
        print('No of Pages:', self.no. of  
              - pages)
```

P1 = Python(565.90, 250, 'Programming
with Python', 'Ch Rossum', 'ABC Books')

P1.show()

Result: The program has been executed
and the output was verified.

Output

Book title : Programming with
python.

Author : CV Rossam

Publisher : ABC books.

Price : 565.9

No of pages : 250

Program No: 40

Aim: Python program to read a file line by line and store it into a list.

```
def file_read(filename):  
    with open(filename) as f:  
        # content_list is the list that contains  
        # the read lines.  
        c = f.readlines()  
        print(c)  
        # print(len(c))  
file_read("demo.txt")
```

Result: The program has been executed and the output was verified.

Output

[A trailer is a vehicle designed for carrying bulk material, often on building sites. In, they are distinguished from dump trucks by configuration: a dumped.]

Program No: 41

Aim: Python program to copy odd lines of one file to other.

```
a = open('demo.txt', 'r')
```

```
b = open('d.txt', 'w')
```

```
c = a.readlines()
```

```
for i in range(0, len(c)):
```

```
    if (i % 2 != 0):
```

```
        b.write(c[i])
```

```
    else:
```

```
        pass
```

```
b.close()
```

```
b = open('d.txt', 'r')
```

```
d = b.read()
```

```
print(d)
```

a.close()

b.close()

Result: The program has been executed
and the output can be verified

Output

They are distinguished from dump trucks by configuration: a dumper is usually an open 4-wheeled vehicle with the load ship in front of the driver.

Program No: 42.

Aim: Python program to read each row from a given csv file and print a list of strings.

import csv

with open('temp.csv', newline='')
as csv file:

d = csv.reader(csv file, delimiter=',',
quotechar = '|')

for r in d:

print(' ', join(r))

Result: The program has been executed
and the output was verified

Output

"[1, 2, 3]", "[33, 25, 56]", "[35, 30, 30]"

"[24, 40, 55]", "[71, 25, 55]", "[10, 10, 40]"

"[1, 2, 3]", "[33, 25, 56]", "[35, 30, 30]"

"[24, 40, 55]", "[71, 25, 55]", "[10, 10, 40]"

Program No: 43

Aim: Python program to read specific columns of a given csv file and print the content of the columns

```
import csv  
with open('dep.csv', newline='') as  
    csvfile:
```

```
d = csv.DictReader(csvfile)  
print("ID Department Name")  
print("-----")  
for r in d:  
    print(r['value'], r['data'])
```

Result: The program has been executed and the output verified.

Output

I		Department	Name
0	0		
1	1		
2	2		
3	3		
4	4		
5	5		
6	6		
7	7		
8	8		
9	9		
10	10		

Program No: 44

Aim: Python Program to write a python dictionary to a csv file. After writing the csv file read the and display the content.

```
import csv
```

```
field_names = ['best_book_id', 'author:',  
               'original_title',  
               'The Hunger Games',
```

```
]
```

```
best_book_id': 1, 'author': 'JK Rowling  
Maeve Creaven Pie', 'original_title':  
'Harry Potter and the Philosopher  
Stone', 3,
```


'best_book_id': 3, 'author': 'Stephenie
Meyer', 'original_title': 'Twilight',

with open('c1.csv', 'w') as csvfile:

writer = csv.DictWriter(csvfile,

fieldnames=field_names)

writer = writer_header()

writer = writer_rows(book)

with open('c1.csv', newline='') as csv

d = csv.reader(csvfile, delimiter=',',
file: '1')

for r in d:

print(','.join(r))

Output

best - book id, authors, original -

1, Suzanne Collins, The Hunger Games

2, "J.K. Rowling, Mary GrandPré, Harry

Potter and the Philosopher's Stone

3. Stephanie Meyer, Twilight.