**Co4 programs**

**Program 1**

1. Create Rectangle class with attributes length and breadth and methods to find area and perimeter. Compare

two Rectangle objects by their area

class rectangle():

def \_\_init\_\_(self,breadth,length):

self.breadth=breadth

self.length=length

def area(self):

return self.breadth\*self.length

def perimeter(self):

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

r1=rectangle(10,20)

r2=rectangle(3,5)

print("Area of rectangle 1 :",r1.area())

print("Area of rectangle 2 :",r2.area())

print("Peimeter of rectangle 1:",r1.perimeter())

print("Peimeter of rectangle 2:",r2.perimeter())

if(r1.area()>r2.area()):

print("recangle 1 is of greater area")

else:

print("recangle 2 is of greater area")

**output**

Area of rectangle 1 : 200

Area of rectangle 2 : 15

Peimeter of rectangle 1: 60

Peimeter of rectangle 2: 16

recangle 1 is of greater area

**program 2**

**class Account:**

**def \_\_init\_\_(self):**

**self.balance=0**

**print('Your Account is Created.')**

**def deposit(self):**

**amount=int(input('Enter the amount to deposit:'))**

**self.balance+=amount**

**print('Your New Balance =%d' %self.balance)**

**def withdraw(self):**

**amount=int(input('Enter the amount to withdraw:'))**

**if(amount>self.balance):**

**print('Insufficient Balance!')**

**else:**

**self.balance-=amount**

**print('Your Remaining Balance =%d' %self.balance)**

**def enquiry(self):**

**print('Your Balance =%d' %self.balance)**

**account= Account()**

**account.deposit()**

**account.withdraw()**

**account.enquiry()**

**output**

**Your Account is Created.**

**Enter the amount to deposit:50000**

**Your New Balance =50000**

**Enter the amount to withdraw:2000**

**Your Remaining Balance =48000**

**Your Balance =48000**

**Program 3**

**class rectangle:**

**\_\_area = 0**

**\_\_perimeter = 0**

**def \_\_init\_\_(self,length,breadth):**

**self.\_\_length = length**

**self.\_\_breadth = breadth**

**def calc\_area(self):**

**self.\_\_area = self.\_\_length\*self.\_\_breadth**

**print("Area is :",self.\_\_area)**

**def \_\_lt\_\_(self,second):**

**if self.\_\_area < second.\_\_area:**

**return True**

**else:**

**return False**

**length1= int(input("Enter length of the rectangle 1 : "))**

**breadth1 = int(input("Enter width of the rectangle 1 : "))**

**length2 = int(input("Enter length of the rectangle 2 : "))**

**breadth2 = int(input("Enter width of the rectangle 2 : "))**

**obj1 = rectangle(length1,breadth1)**

**obj2 = rectangle(length2,breadth2)**

**obj1.calc\_area()**

**obj2.calc\_area()**

**if obj1 < obj2:**

**print("Rectangle two is large")**

**else:**

**print("Rectangle one is large or these are equal")**

**output**

**Enter length of the rectangle 1 : 3**

**Enter width of the rectangle 1 : 4**

**Enter length of the rectangle 2 : 4**

**Enter width of the rectangle 2 : 3**

**Area is : 12**

**Area is : 12**

**Rectangle one is large or these are equal**

**Program 4**

class Time:

def \_\_init\_\_(self,hour,minute,second):

self.\_\_hour=hour

self.\_\_minute=minute

self.\_\_second=second

def \_\_add\_\_(self,a2):

second=self.\_\_second+a2.\_\_second

minute=self.\_\_minute+a2.\_\_minute

hour=self.\_\_hour+a2.\_\_hour

if(second>60):

second=second-60

minute=minute+1

if(minute>60):

minute=minute-60

hour=hour+1

return hour,minute,second

print("Enter time1:")

h1=int(input("hour:"))

m1=int(input("minute:"))

s1=int(input("second"))

t1=Time(h1,m1,s1)

print("Enter time2:")

h2=int(input("hour:"))

m2=int(input("minute:"))

s2=int(input("second"))

t2=Time(h2,m2,s2)

hr,min,sec=t1+t2

print(hr,end=":")

print(min,end=":")

print(sec,end=" ")

**output**

Enter time1:

hour:23

minute:13

second56

Enter time2:

hour:3

minute:4

second34

26:18:30

**Program 5**

class publisher:

def \_\_init\_\_(self,title,author):

self.title=title

self.author=author

def display(self):

print("Title:",self.title)

print("Author:",self.author)

class book(publisher):

def \_\_init\_\_(self,price,no\_of\_page):

self.price=price

self.no\_of\_page=no\_of\_page

def display(self):

print("Price:",self.price)

print("No. of Pages:",self.no\_of\_page)

class python(book):

def \_\_init\_\_(self,title,author,price,no\_of\_page):

publisher.\_\_init\_\_(self,title,author)

book.\_\_init\_\_(self,price,no\_of\_page)

def display(self):

print("Title:",self.title)

print("Author:",self.author)

print("Price:",self.price)

print("No. of Pages:",self.no\_of\_page)

p=python("Python Programming","m mukundhan",2000,200)

p.display()

**output**

Title: Python Programming

Author: m mukundhan

Price: 2000

No. of Pages: 200