Pyton task-5 Anukrishnan

1: Write a Python program to create a class representing a Circle. Include methods to calculate its area and perimeter.

In [1]:
```
class circle:
    def __init__(self,radius):
        self.radius=radius
    def area(self):
        print("area of the circle:",pi*self.radius**2)
    def perimeter(self):
        print("perimeter of the circle:",2*pi*self.radius)
pi=3.14
x=circle(2)
x.area()
x.perimeter()
```

```
area of the circle: 12.56
perimeter of the circle: 12.56
```

2: Write a Python program to create a calculator class. Include methods for basic arithmetic operations

In [2]:
```
class calculator:
    def __init__(self,a,b):
        self.a=a
        self.b=b
    def addition(self):
        print("sum:",self.a+self.b)
    def subtraction(self):
        print("difference:",self.a-self.b)
    def multiplication(self):
        print("product:",self.a*self.b)
    def division(self):
        print("quotient:",self.a/self.b)

x=calculator(6,3)
x.addition()
x.subtraction()
x.multiplication()
x.division()
```

```
sum: 9
difference: 3
product: 18
quotient: 2.0
```

3: Write a Python program to create a class that represents a shape. Include methods to calculate its area and perimeter. Implement subclasses for different shapes like circle, triangle, and square.

In [3]:
```
class shape:
    def area(self):
        pass
    def perimeter(self):
        pass
class circle(shape):
    def __init__(self,radius):
        self.radius=radius
    def area(self):
        print("area of the circle:", 3.14*self.radius**2)
    def perimeter(self):
        print("perimeter of the circle:",2*3.14*self.radius)
class triangle(shape):
    def __init__(self,s1,s2,s3,base,height):
        self.s1=s1
        self.s2=s2
        self.s3=s3
        self.base=base
        self.height=height
    def area(self):
        print("area of triangle:",0.5*self.base*self.height)
    def perimeter(self):
        print("perimeter of the triangle:",self.s1+self.s2+self.s3)
class square(shape):
    def __init__(self,s1):
        self.s1=s1
    def area(self):
        print("area of the square:",self.s1**2)
    def perimeter(self):
        print("perimeter of the square:",4*self.s1)

x=circle(2)
y=triangle(3,4,5,4,5)
z=square(3)
x.area()
x.perimeter()
y.area()
y.perimeter()
z.area()
z.perimeter()
```

```
area of the circle: 12.56
perimeter of the circle: 12.56
area of triangle: 10.0
perimeter of the triangle: 12
area of the square: 9
perimeter of the square: 12
```