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```
#CREATING FUNCTIONS AND A CLASS
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In [37]:
```
class AssignmentClass():

    #Print area and perimeter of square using function
    def Area():
        print('side=12')
        print('Area formula=side*side')
        side=12
        AreaOfSquare=side*side
        print("Area of square:", AreaOfSquare)
    def Perimeter():
        side=12
        print('Perimeter formula=4*side')
        PerimeterOfSquare=4*side
        print("Perimter of square:",PerimeterOfSquare)

    #Create function to calculate simple linear using formula
    def SimpleLinear():
        print('weight=15')
        print('input:5')
        print('Bias value=1')
        weight=15
        input=5
        Bias_value=1
        print('Formula:output=weight*input+Bias value')
        output=weight*input+Bias_value
        print('simple linear:',output)

    #Print your present age using function
    def AgeCalculator():
        Birth_year=1993
        Present_year=2022
        print('Birth year=1993')
        print('Present year=2022')
        print('Formula= Present year - Birth year')
        Formula= Present_year - Birth_year
        print('Present Age:',Formula)

    #Print course list using class and function
    def CourseList():
        print('Course list:')
        for temp in ['python','Machine Learning','Data science','Deep Learning',
            print(temp)

    #print area and perimeter of rectangle using class and functions
    def AreaofR():
        #Area of Rectangle
        Length=12
        Breadth=18
        print('Length=12')
        print('Breadth=18')
        print('Area formula: Length*Breadth')
        Area=Length*Breadth
        print('Area of rectangle:',Area)

    def PerimeterofR():
        #Perimter of Rectangle
```

```
    Length=9
    Breadth=15
    print('length=9')
    print('Breadth=15')
    perimeter= 2*(Length+Breadth)
    print('Perimeter of rectangle:', perimeter)


#Create a class to swap two numbers without using temporary variable
def NumberSwap():
    a=67
    b=45
    print('a=67')
    print('b=45')
    print('after swapping')
    a,b=b,a
    print('a=',a)
    print('b=',b)

 #Create class to calculate simple interest
def SIcalculator():
    P=5000
    R=5
    T=12
    SI=(P*R*T)/100
    print('Principal amount=5000')
    print('rate of interest=5')
    print('Time period=12')
    print('simple interest formula: (P*R*T)/100')
    print('Simple interest:',SI)


    #Create a class to calculate average marks
def TotalaverageMarks():
    Mark1=78
    Mark2=89
    Mark3=90
    print('Mark1=78')
    print('Mark2=89')
    print('Mark3=90')
    Total=Mark1+Mark2+Mark3
    print('Total:',Total)
    average=Total//3
    print('Average:',average)

 #print car model names using class and function
def carModels():
    list1=['Car model Names:', 'Maruti Alto','Maruti Dzire','Maruti creta','I
    for temp in list1:
        print(temp)

 #Create class and function to check the number is prime number or not
def primenumcheck():
    num=int(input('Enter any number:'))
    if num > 1:
        for i in range(2,num):
           if (num % i) == 0:
```

```
                print(num,"is not a prime number")
                print(i,"times",num//i,"is",num)
                break
        else:
            print(num,"is a prime number")
```

In [38]:
```
#Print area and perimeter of square using function
AssignmentClass.Area()
```

```
side=12
Area formula=side*side
Area of square: 144
```

In [39]:
```
#Print area and perimeter of square using function
AssignmentClass.Perimeter()
```

```
Perimeter formula=4*side
Perimter of square: 48
```

In [40]:
```
#Create function to calculate simple linear using formula
AssignmentClass.SimpleLinear()
```

```
weight=15
input:5
Bias value=1
Formula:output=weight*input+Bias value
simple linear: 76
```

In [41]:
```
#Print your present age using function
AssignmentClass.AgeCalculator()
```

```
Birth year=1993
Present year=2022
Formula= Present year - Birth year
Present Age: 29
```

In [42]:
```
#Print course list using class and function
AssignmentClass.CourseList()
```

```
Course list:
python
Machine Learning
Data science
Deep Learning
NLP
Time series analysis
```

In [43]:
```
 #print area and perimeter of rectangle using class and functions
AssignmentClass.AreaofR()
AssignmentClass.PerimeterofR()
```

```
Length=12
Breadth=18
Area formula: Length*Breadth
Area of rectangle: 216
length=9
Breadth=15
Perimeter of rectangle: 48
```

In [44]:
```
#Create a class to swap two numbers without using temporary variable
AssignmentClass.NumberSwap()
```

```
a=67
b=45
after swapping
a= 45
b= 67
```

In [45]:
```
#Create class to calculate simple interest
AssignmentClass.SIcalculator()
```

```
Principal amount=5000
rate of interest=5
Time period=12
simple interest formula: (P*R*T)/100
Simple interest: 3000.0
```

In [46]:
```
#Create a class to calculate average marks
AssignmentClass.TotalaverageMarks()
```

```
Mark1=78
Mark2=89
Mark3=90
Total: 257
Average: 85
```

In [47]:
```
 #print car model names using class and function
AssignmentClass.carModels()
```

```
Car model Names:
Maruti Alto
Maruti Dzire
Maruti creta
Maruti swift
```

In [48]:
```
#Create class and function to check the number is prime number or not
AssignmentClass.primenumcheck()
```

```
Enter any number:37
37 is a prime number
```

In [49]:
```
#Create class and function to check the number is prime number or not
AssignmentClass.primenumcheck()
```

```
Enter any number:16
16 is not a prime number
2 times 8 is 16
```

In [ ]:
```

```