In [5]:

```
#GPA calculator
name=input("Enter the Student name:")
reg=input("Enter the Register Number:")
dep=input("Enter the Department: ")
sem=input("Enter the Semester of the student")
lettergrd = " "
credit = 0.0
caltimes = 0.0
totalcal = 0.0
totalcredit = 0.0
finalgpa = 0.0
O = 10.0
Aplus = 9.0
A = 8.0
Bplus = 7.0
B = 6.0
U = 0.0


for i in range(0,8):
    lettergrd = input("\nPlease enter the letter grade: ")
    credit = input("Please enter the course credit: ")
if(lettergrd == "O"):
    caltimes = int(credit) * O
elif(lettergrd == "Aplus"):
    caltimes = int(credit) * Aplus
elif(lettergrd == "A" ):
    caltimes = int(credit) * A
elif(lettergrd == "Bplus" ):
    caltimes = int(credit) * Bplus
elif(lettergrd == "B" ):
    caltimes = int(credit) * B
elif(lettergrd == "U" ):
    caltimes = int(credit) * U

totalcredit = totalcredit + int(credit)
totalcal = totalcal + caltimes

finalgpa = totalcal/totalcredit
print("\nGPA1: " + str(finalgpa))



for i in range(0,8):
    lettergrd = input("\nPlease enter the letter grade: ")
    credit = input("Please enter the course credit: ")
if(lettergrd == "O"):
    caltimes = int(credit) * O
elif(lettergrd == "Aplus"):
    caltimes = int(credit) * Aplus
elif(lettergrd == "A" ):
    caltimes = int(credit) * A
elif(lettergrd == "Bplus" ):
    caltimes = int(credit) * Bplus
elif(lettergrd == "B" ):
    caltimes = int(credit) * B
elif(lettergrd == "U" ):
    caltimes = int(credit) * U

totalcredit = totalcredit + int(credit)
totalcal = totalcal + caltimes

finalgpa = totalcal/totalcredit
print("\nGPA2: " + str(finalgpa))




#cgpa calculator
class Gpa(object):
    # data attributes
    "helps to calculate the Gpa and Cgpa"
    arg1 = None
    arg2 = None
    subData = None
    Scale = None
    credits = None
    initCourse = 0
    initgetCredit = 0
    totalCredits = 0
    temp = 0

    def getCourse(self):
        "get the value of the no of course you registered"
        self.arg1 = input("No of course you have registered: " )
        pass

    def getSubject(self,value):
        "get the subject value"
        self.arg2 = value
        pass


    def getScale(self):
        "To get the scale value"
        self.Scale = input("Enter the Scale value(Either 5 or 10): " )
        pass


    def getSubjectData(self):
        "get the subject Data in string"
        self.subData = raw_input("Enter the grade: " )
        pass
    def getGradeData(self):
        # To calculate grade for two scale,one is for 5.0 and other one for 10.0
        if self.Scale == 10:

            grade1 = {'s':10,'a':9,'b':8,'c':7,'d':5,'e':3,'f':0}
            x=grade1[self.subData]

        else: #5.0 scale
            grade2 = {'a':5,'b':4,'c':3,'d':2,'e':1,'f':0}
            x=grade2[self.subData]
        return x
    def getCredits(self):
        "get credit value"
        self.credits = input("Enter the credits for a subject:"  )
        pass


    def gpa(self):
        print ("Calculate GPA:")
        sem = raw_input("Please Enter Semester: ")
        self.getScale() #input the scale value
        if self.Scale == 5 or self.Scale == 10:
            self.getCourse()
            if self.arg1 >= 2:
                self.calculateGpa()
            else:
                print ("In order to calculate Gpa you schould have atleast 2 subject minimum")
        else:
            print ("you have not entered the scale correctly please try again")
        pass


    def calculateGpa(self):
        "Method to calculate Gpa "
        while self.initCourse!=self.arg1:
            self.initCourse=self.initCourse+1
            self.getCredits()
            self.initgetCredit = self.credits
            self.getSubjectData()
            #type(self.getSubjectData())
            self.temp = self.initgetCredit*self.getGradeData()+self.temp
            self.totalCredits=self.totalCredits+self.initgetCredit

        gpa = round((self.temp+.0)/(self.totalCredits+.0),2)
        print ("you have registered for total credits:"+" "+str(self.totalCredits)+" "+"and you have acquired GPA:\""+str(gpa)+"\"")
        pass

    def cgpa(self):
        print ("Calculate your cgpa: ")
        semesters = input("Enter how many semester cgpa has to be found of: " )
        counter = 0
        tempInit = 0
        tempTotalCredits = 0
        self.getScale() #input the scale value
        if self.Scale == 5 or self.Scale == 10:
            while counter != semesters:
                counter = counter+1
                print ("Please enter the details of the semester"+" "+str(counter))
                self.getCourse()
                self.calculateGpa()
                tempInit = self.temp+tempInit
                tempTotalCredits = tempTotalCredits + self.totalCredits
                # re-assigning
                self.arg1=0
                self.initCourse =0
                self.temp=0
                self.totalCredits=0
                print ("\n")

            cgpa = round((tempInit+.0)/(tempTotalCredits+.0),2)

            print ("you have registered for total credits:"+" "+str(tempTotalCredits)+" "+"and you have acquired CGPA:\""+str(cgpa)+"\" " )
        else:
            print ("you have not entered the scale correctly please try again")
        pass


if __name__ == '__main__':

    Init = Gpa()
    Init.cgpa()
```

```
Enter the Student name:sushmitha
Enter the Register Number:ECC1934
Enter the Department: ECE
Enter the Semester of the student2

Please enter the letter grade: A
Please enter the course credit: 3

Please enter the letter grade: B
Please enter the course credit: 2

Please enter the letter grade: O
Please enter the course credit: 3

Please enter the letter grade: A
Please enter the course credit: 2

Please enter the letter grade: B
Please enter the course credit: 3

Please enter the letter grade: A
Please enter the course credit: 1

Please enter the letter grade: O
Please enter the course credit: 2

Please enter the letter grade: A
Please enter the course credit: 3

GPA1: 8.0

Please enter the letter grade: A
Please enter the course credit: 3

Please enter the letter grade: B
Please enter the course credit: 2

Please enter the letter grade: O
Please enter the course credit: 3

Please enter the letter grade: B
Please enter the course credit: 2

Please enter the letter grade: A
Please enter the course credit: 3

Please enter the letter grade: O
Please enter the course credit: 1

Please enter the letter grade: B
Please enter the course credit: 2

Please enter the letter grade: A
Please enter the course credit: 3

GPA2: 8.0
Calculate your cgpa:
Enter how many semester cgpa has to be found of: 2
Enter the Scale value(Either 5 or 10): 10
you have not entered the scale correctly please try again
```

In [6]:

```
n = int(input("Enter the no of semester:"))
if n == 1:
    sem1=int(input("Enter your GPA"))
    print("Your cgpa is:")
    print("sem1")
if n == 2:
    sem1 = int(input())
    sem2 = int(input())
    cgpa_until_2sem = (sem1+sem2)/2
    print("your cgpa is:")
    print(cgpa_until_2sem)
if n == 3:
    sem1 = int(input())
    sem2 = int(input())
    sem3 = int(input())
    cgpa_until_3sem = (sem1+sem2+sem3)/3
    print("your cgpa is :")
    print(cgpa_until_3sem)
if n == 4:
    sem1 = int(input())
    sem2 = int(input())
    sem3 = int(input())
    sem4 = int(input())
    cgpa_until_sem4=(sem1+sem2+sem3+sem4)/2
    print("your cgpa is :")
    print(cgpa_until_sem4)
if n == 5:
    sem1 = int(input())
    sem2 = int(input())
    sem3 = int(input())
    sem4 = int(input())
    sem5 = int(input())
    cgpa_until_sem5= (sem1+sem2+sem3+sem4)/2
    print("your cgpa is :")
    print(cgpa_until_sem5)
if n ==6:
    sem1 = int(input())
    sem2 = int(input())
    sem3 = int(input())
    sem4 = int(input())
    sem5 = int(input())
    sem6 = int(input())
    cgpa_until_sem6 = (sem1+sem2+sem3+sem4+sem5+sem6)/2
    print("your cgpa is :")
    print(cgpa_until_sem6)
if n ==7:
    sem1 = int(input())
    sem2 = int(input())
    sem3 = int(input())
    sem4 = int(input())
    sem5 = int(input())
    sem6 = int(input())
    sem7 = int(input())
    cgpa_until_sem7=(sem1+sem2+sem3+sem4+sem5+sem6+sem7)/2
    print("your cgpa is :")
    print(cgpa_until_sem7)
else:
    sem1 = int(input())
    sem2 = int(input())
    sem3 = int(input())
    sem4 = int(input())
    sem5 = int(input())
    sem6 = int(input())
    sem7 = int(input())
    sem8= int(input())
    cgpa_until_sem8=(sem1+sem2+sem3+sem4+sem5+sem6+sem7+sem8)/2
    print("your cgpa:")
    print(cgpa_until_sem8)
```

```
Enter the no of semester:1
Enter your GPA8.9
```

```
---------------------------------------------------------------------------
ValueError                                Traceback (most recent call last)
~\AppData\Local\Temp\ipykernel_8580/2019965228.py in <module>
      1 n = int(input("Enter the no of semester:"))
      2 if n == 1:
----> 3     sem1=int(input("Enter your GPA"))
      4     print("Your cgpa is:")
      5     print("sem1")

ValueError: invalid literal for int() with base 10: '8.9'
```

In [ ]:

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