```python
                                    #GE ASSIGNMENT 1

#NAME:HARSH ARORA
#ROLL NO:AE-1218
#COURSE:BSC(HONS.)COMPUTER SCIENCE

#1.ACCEPTING STUDENT DETAILS:

name=str(input("ENTER STUDENT'S NAME : "))
roll=int(input("ENTER STUDENT'S ROLL NO : "))
course=str(input("ENTER STUDENT'S COURSE: "))

print("\nSTUDENT'S NAME IS",name)
print("STUDENT'S ROLL NO IS",roll)
print("STUDENT'S COURSE IS",course)

print("...........................................")
```

```
ENTER STUDENT'S NAME : HARSH ARORA
ENTER STUDENT'S ROLL NO : 18
ENTER STUDENT'S COURSE: BSC HONS. COMPUTER SCIENCE

STUDENT'S NAME IS HARSH ARORA
STUDENT'S ROLL NO IS 18
STUDENT'S COURSE IS BSC HONS. COMPUTER SCIENCE
..................................................................
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#2.GRADING BASED ON THE MARKS OF STUDENTS.

marks_maths=int(input("ENTER THE MARKS OF MATHS: "))
marks_english=int(input("ENTER THE MARKS OF ENGLISH: "))
marks_physics=int(input("ENTER THE MARKS OF PHYSICS: "))
marks_chemistery=int(input("ENTER THE MARKS OF CHEMISTRY: "))
marks_history=int(input("ENTER THE MARKS OF HISTORY: "))

marks_percentage=((marks_maths+marks_english+marks_physics+marks_chemistery+marks_history)/500)*100


if marks_percentage>=90:
    print("GRADE=O")
    print("OUTSTANDING")

elif 90<marks_percentage>=80:
    print("GRADE=A+")
    print("EXCELLENT")

elif 80<marks_percentage>=70:
    print("GRADE=A")
    print("VERY GOOD")

elif 70<marks_percentage>=60:
    print("GRADE=B+")
    print("GOOD")
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elif 60<marks_percentage>=50:
    print("GRADE=B")
    print("ABOVE AVERAGE")

elif 50<marks_percentage>=45:
    print("GRADE=C")
    print("AVERAGE")

elif 45<marks_percentage>=40:
    print("GRADE=D")
    print("PASS")

elif marks_percentage<40:
    print("GRADE=F")
    print("FAIL")
print("....................................................")
```

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ENTER THE MARKS OF MATHS: 90
ENTER THE MARKS OF ENGLISH: 97
ENTER THE MARKS OF PHYSICS: 89
ENTER THE MARKS OF CHEMISTRY: 85
ENTER THE MARKS OF HISTORY: 90
GRADE=O
OUTSTANDING
```

```python
#3.FINDING ROOTS OF A QUADRATIC EQUATION:

a=int(input("Enter The Cofficient of X2: "))
b=int(input("Enter The Cofficient of X: "))
c=int(input("Enter The Cofficient of Constant: "))
d=b*2-4*a*c
if d>0:
    print("\nROOTS ARE REAL AND DISTINCT\n")
    x1=(-b+((d)**0.5))/2*a
    x2=(-b-((d)**0.5))/2*a
    print("The Roots are",x1,",",x2)
if d<0:
    print("\nROOTS ARE COMPLEX\n")
if d==0:
    print("\nROOTS ARE REAL AND EQUAL\n")

print("...............................................")
```

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Enter The Cofficient of X2: 3
Enter The Cofficient of X: 5
Enter The Cofficient of Constant: -7

ROOTS ARE REAL AND DISTINCT

The Roots are 7.043039572248988 , -22.043039572248986
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#4.WRITE A MENU DRIVEN PROGRAMM :

print("\nMENU\n")
print("\n1:X**y")
print("\n2:A.P SERIES")
print("\n3:G.P SERIES")
print("\n4:FACTORIAL\n")
a=int(input("ENTER THE OPEARTION YOU WANT TO PERFORM(1,2,3,4): "))


if a==1:
    print("\nPERFORMING X**Y\n")
    def function(x,y):
        return(x**y)
    x=int(input("ENTER THE VALUE OF X: "))
    y=int(input("ENTER THE VALUE OF y: "))
    print(function(x,y))

if a==2:
    print("\nPERFORMING A.P SERIES\n")
    def AP_SERIES(b):
        i=1
        print(b)
        while d>i:
            b=b+c
            print(b)
            i=i+1

    b=int(input("ENTER THE STARTING NUMBER: "))
    c=int(input("ENTER THE COMMON DIFFERENCE: "))
    d=int(input("ENTER THE NUMBER OF TERMS YOU WANT: "))
    print(AP_SERIES(b))
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if a==3:
    print("\nPERFORMING G.P SERIES\n")
    def GP_SERIES(b):
        i=1
        print(b)
        while d>i:
            b=b*c
            print(b)
            i=i+1

    b=int(input("ENTER THE STARTING NUMBER: "))
    c=int(input("ENTER THE COMMON DIFFERENCE: "))
    d=int(input("ENTER THE NUMBER OF TERMS YOU WANT: "))
    print(GP_SERIES(b))


if a==4:
    print("\nPERFORMING FACTORIAL \n")
    def FACTORIAL(b):
        factorial=1
        for i in range(1,b+1):
            factorial=factorial*i
        print("\nTHE FACTORIAL OF THE NUMBER IS")
        return(factorial)
    b=int(input("ENTER THE NUMBER: "))
    print(FACTORIAL(b))
```

```
MENU

1:X**y

2:A.P SERIES

3:G.P SERIES

4:FACTORIAL

ENTER THE OPEARTION YOU WANT TO PERFORM(1,2,3,4): 2

PERFORMING A.P SERIES

ENTER THE STARTING NUMBER: 2
ENTER THE COMMON DIFFERENCE: 2
ENTER THE NUMBER OF TERMS YOU WANT: 5
2
4
6
8
10
```

```
MENU

1:X**y

2:A.P SERIES

3:G.P SERIES

4:FACTORIAL

ENTER THE OPEARTION YOU WANT TO PERFORM(1,2,3,4): 4

PERFORMING FACTORIAL

ENTER THE NUMBER: 5

THE FACTORIAL OF THE NUMBER IS
120
```