Name : Hariharasudhan. D
D. no : rollno_12
Subject : Python

Question5. Write a program to accept name, marks for three subjects and find the total marks secured, average and also display the class obtained.

- **Class 1 - above 80%**
- **Class 2 - 60% to 80%**
- **Pass Class - 40% to 59% and**
- **Fail otherwise**

Source code:

```
name = str(input("Enter the student name:"))      #create the var.name and user defined method
mark1 = int(input("Enter the mark1:"))            #create mark1,2,3 var.name and declare the data and a user defined method
mark2 = int(input("Enter the mark2:"))
mark3 = int(input("Enter the mark3: \n"))
total = mark1 + mark2 + mark3                     #total is calculate by the addition of total=m1+m2+m3
average = total / 3                               #average is calculated by total divided by 3
print("The total mark secured by the student is:", total)
print("The student average is :", average)
if (average > 80):                                #using if condition and printed the result
      print("Congratulation, The student got a 1st class")
elif (average >= 60 & average < 80):
      print("Congratulation, The student    got a 2nd class")
elif (average >= 40 & average < 59):
      print("Congratulation, The student got a 3rd class")
else:
      print("sorry to say, The student is fail:")
```

Output:

```
Enter the student name: Hariharasudhan
Enter the mark1: 93
Enter the mark2: 95
Enter the mark3: 97
The total mark secured by the student is: 285
The student average is : 95.0
Congratulation, The student got a 1st class
```

Question6.Read a number from keyboard. Print whether it is odd number, even number, positive number, negative number or zero. Also, print if its ASCII value represents a lower case or Upper case letter or digits

Write 8 test cases to validate odd, even, positive, negative, zero, lower case, upper case, letters and digits:

Source code:

Odd and Even

```
num = int(input("Enter a number: "))      #create user defined method and in assigned in num
if (num % 2) == 0:                        #using if condition and apply the logic if (num%2)==0)
    print("{0} is Even".format(num))
else:
    print("{0} is Odd".format(num))
```

Output:

```
Enter a number:  201
201 is Odd
```

Positive and Negative

Source code:

```
num = float(input("Enter a number: "))    #create a user defined method and declare datatype
if num > 0:                               #using if condition and apply a logic
    print("Positive number")
elif num == 0:
    print("Zero")
else:
    print("Negative number")
```

Output:

```
Enter a number: 301
Positive number
```

Find the Lowercase and Uppercase

Source code:

```
def string_test(s):                                  #using function
      d={"UPPER_CASE":0, "LOWER_CASE":0}     #given the variable name
      for c in s:                                    #using for statement
            if c.isupper():                          #character is uppercase execute if statement and using operators
                d["UPPER_CASE"]+=1
            elif c.islower():                        #character is lowercase execute elif statement and using operators
                d["LOWER_CASE"]+=1
            else:                                    #otherwise given else statement
                pass
      print ("Original String : ", s)                #print the given output statement
      print ("No. of Upper case characters : ", d["UPPER_CASE"])
      print ("No. of Lower case Characters : ", d["LOWER_CASE"])
string_test('Welcome to Our Data Science Course')          #string will be displayed
```

Output:

```
Original String :  Welcome to Our Data Science Course
No. of Upper case characters :  5
No. of Lower case Characters :  24
```

Combined One Program:

Sourcecode:

```
n=int(input("Enter the number: \n"))
if n>0:
      print("Number is positive: \n")
      if n%2==0:
            print("Number is Even: \n")
      else:
            print("Number is odd: \n")
elif n<0:
      print("Number is Negative: \n")
      if n%2==0:
            print("Number is Even: \n")
      else:
            print("number is odd: \n")
else:
      print("number is zero: \n")


print("ASCII values: \n")
if n>=65 and n<=91:
      print("Represents UPPER CASE LETTER \n")
elif n>=97 and n<=122:
      print("Represents LOWER CASE LETTER \n")
elif n>=48 and n<=57:
      print("Represents DIGIT \n")
val=chr(n)
print("The value", val)
```

Output:

```
Enter the number:
100
Number is positive:

Number is Even:

ASCII values:

Represents LOWER CASE LETTER

The value d
```
