LAB CAT II

NAME: Kamran Ansari
REG NO: 22MCA0223

Question 1

Write a python program to get the number of students from the user. For each student get name and total marks. Bases on the marks obtained from the student assign the grade to the student and store it into a dictionary and display it. Further display the grade associated with the students and counts the number of each grade.

Code

```python
def grade(marks):
    if (marks > 90):
        return 'A'
    if (marks > 80):
        return 'B'
    if (marks > 60):
        return 'C'
    if (marks > 40):
        return 'D'
    return 'F'

print("Enter number of students: ")
num_of_students = int(input())

student_list = []

for i in range(num_of_students):
    print("Enter name of student", i + 1)
    name = input()
    print("Enter marks of student", i + 1)
    marks = float(input())
    student_list.append({
        "name": name,
        "marks": marks,
        "grade": grade(marks)
    })

print("\nStudents along with their grades:")
for student in student_list:
    print("Student:")
```

```python
        print("Name:", student["name"])
        print("Marks:", student["marks"])
        print("Grade:", student["grade"])
        print("")

gradeCount = {
    'A': 0,
    'B': 0,
    'C': 0,
    'D': 0,
    'F': 0
}

for student in student_list:
    gradeCount[student["grade"]] += 1

print("\nCount of each grade:")
for grade, count in gradeCount.items():
    print(grade, count)
```
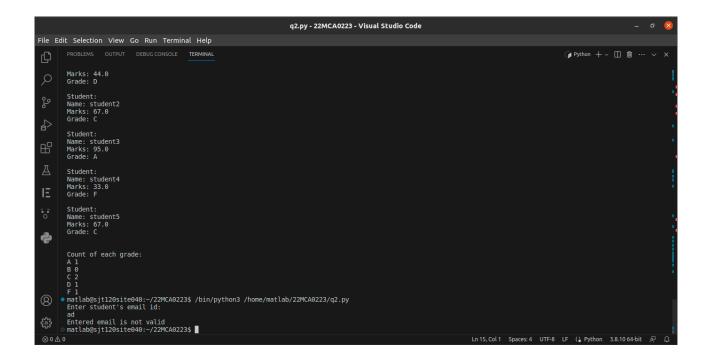
Output

```
Marks: 44.0
Grade: D

Student:
Name: student2
Marks: 67.0
Grade: C

Student:
Name: student3
Marks: 95.0
Grade: A

Student:
Name: student4
Marks: 33.0
Grade: F

Student:
Name: student5
Marks: 67.0
Grade: C


Count of each grade:
A 1
B 0
C 2
D 1
F 1
matlab@sjt120site040:~/22MCA0223$ /bin/python3 /home/matlab/22MCA0223/q2.py
Enter student's email id:
ad
Entered email is not valid
matlab@sjt120site040:~/22MCA0223$
```

Question 2

The CTS in VIT Vellore wants to create email id to all the first-year students. Assume that they get the current email id of the students, separate the username from it and append the new domain as "vit.ac.in" to create the new vit account. Given a personal mail id of student, design a flowchart and write the Python code to automatically generate the new mail id. If the current mail id is arunalbert@gmail.com then the new mail ID to be generated is arunalbert@vit.ac.in

Input Format
arunalbert@gmail.com

Output Format
arunalbert@vit.ac.in

Code

```
import re

print("Enter student's email id:")
personal_mail = input()

match = re.match(r'([\w._%+-]+)@[\w-]+.+.[a-zA-Z]{2,4}',
personal_mail)

if (not match):
    print("Entered email is not valid")
    exit()

username = match.group(1)

official_email = username + "@vit.ac.in"

print(official_email)
```

Output

matlab@sjt120site040:~/22MCA0223$ /bin/python3 /home/matlab/22MCA0223/q2.py
Enter student's email id:
arun
Entered email is not valid
matlab@sjt120site040:~/22MCA0223$ /bin/python3 /home/matlab/22MCA0223/q2.py
Enter student's email id:
arunalbert@gmail.com
arunalbert@vit.ac.in
matlab@sjt120site040:~/22MCA0223$ /bin/python3 /home/matlab/22MCA0223/q2.py
Enter student's email id:
kamranansari@yahoo.com
kamranansari@vit.ac.in
matlab@sjt120site040:~/22MCA0223$