

Name : Vinayak Kumar Singh
Subject : Python Lab

Register No: 23MCA1030
Department : MCA

Q3. Develop a program that analyzes data from a medical study. Write a Python program that creates a tuple for each patient that contains their age, gender, and medical condition. The program should then calculate and output the average age and the number of patients with each medical condition.

```
medicaldata=[(25,'Male','Malaria'),(30,'Male','Typhoid'),(54,'Male','Sugar'),(26,'Female','Asthma'),(41,'Female','Cancer'),(45,'Male','ColdFlu'),(35,'Male','Malaria'),(32,'Male','ColdFlu'),(29,'Female','Sugar'),(65,'Male','Asthma'),(20,'Female','ColdFlu')]

count = {}
c_total_age = {}

total_age = 0
total_patients = len(medicaldata)

for age,gender,condition in medicaldata:
    total_age = total_age + age
    if condition in count:
        count[condition] = count[condition] + 1
        c_total_age[condition] = c_total_age[condition] + age
    else:
        count[condition] = 1
        c_total_age[condition] = age

average_age = total_age / total_patients
print("Name : Vinayak Kumar Singh \nRegister No: 23MCA1030")
print("Total Number of patients are:",total_patients)
print(f"Average Age of patients are: {average_age:.2f}")

for condition, count in count.items():
    print(f"Number of patients with {condition}: {count}")
```

Output:

```
Python 3.8.10 (default, Mar 15 2022, 12:22:08)
[GCC 9.4.0] on linux
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: /home/student/Documents/23MCA1030/q3.py =====
Name : Vinayak Kumar Singh
Register No: 23MCA1030
Total Number of patients are: 11
Average Age of patients are: 36.55
Number of patients with Malaria: 2
Number of patients with Typhoid: 1
Number of patients with Sugar: 2
Number of patients with Asthma: 2
Number of patients with Cancer: 1
Number of patients with ColdFlu: 3
>>> |
```