**Experiment 07**

**Aim:** To perform OLAP operations such as slice, dice, roll up, drill down and pivot

**Code:**

import pandas as pd

data = {'Doctor': ['Dr. Smith', 'Dr. Johnson', 'Dr. Smith', 'Dr. Johnson'],

        'Patient': ['Patient A', 'Patient B', 'Patient A', 'Patient B'],

        'Time': ['2022-01-01', '2022-01-01', '2022-01-02', '2022-01-02'],

        'Count': [1, 1, 1, 1],

        'Charge': [100, 150, 120, 180]}

df = pd.DataFrame(data)

print("Original Data:")

print(df)

sliced\_data = df[df['Doctor'] == 'Dr. Smith']

print("\n(i) Slice - Data for Doctor 'Dr. Smith':")

print(sliced\_data)

diced\_data = df[(df['Doctor'] == 'Dr. Smith') & (df['Patient'] == 'Patient A')]

print("\n(ii) Dice - Data for Doctor 'Dr. Smith' and Patient 'Patient A':")

print(diced\_data)

roll\_up\_data = df.groupby('Doctor').sum().reset\_index()

print("\n(iii) Roll Up - Total Count and Charge for each Doctor:")

print(roll\_up\_data)

drill\_down\_data = df.groupby(['Doctor', 'Patient']).sum().reset\_index()

print("\n(iv) Drill Down - Count and Charge for each Doctor and Patient:")

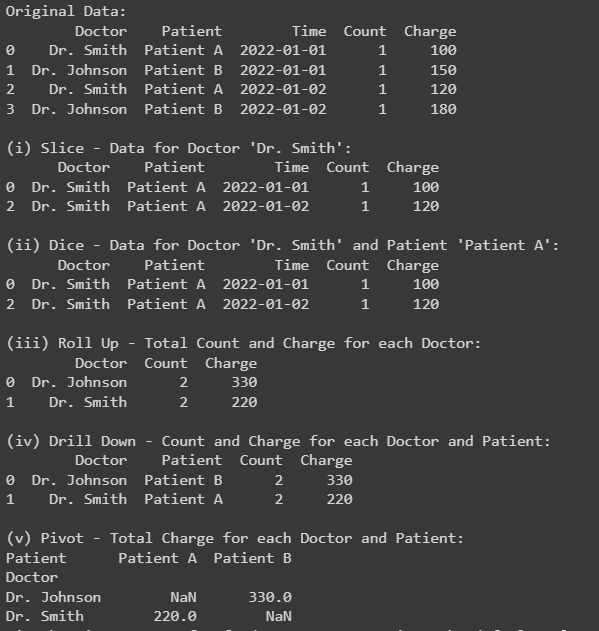
print(drill\_down\_data)

pivot\_data = df.pivot\_table(index='Doctor', columns='Patient', values='Charge', aggfunc='sum')

print("\n(v) Pivot - Total Charge for each Doctor and Patient:")

print(pivot\_data)

**Output:**

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