**2311cs020140**

**Tasks:**

1. Load the banking\_data.csv file using **Pandas**.
2. Display the first 5 rows of the dataset.
3. Use .describe() to generate basic statistics of the numerical columns (e.g., Transaction\_Amount, Account\_Balance).
4. Check for missing values in the dataset.

**Objective:**

* Understand how to load and inspect the dataset.
* Use basic descriptive statistics and data integrity checks.

**Tasks:**

1. Group the data by Account\_Type and calculate:
   * The total sum of Transaction\_Amount.
   * The average Account\_Balance for each account type.
2. Group the data by Branch and calculate:
   * The total number of transactions per branch.
   * The average transaction amount per branch.

**Objective:**

* Learn to use groupby() for aggregating data by categories.
* Gain skills in calculating grouped statistics.

**Program:**

import pandas as pd

1. Load the CSV file into a DataFrame

df = pd.read\_csv('banking\_data.csv')

# 2. Display the first 5 rows of the dataset

print("First 5 rows of the dataset:")

print(df.head())

# 3. Generate basic statistics for the numerical columns

print("\nBasic statistics of numerical columns:")

print(df.describe())

# 4. Check for missing values in the dataset

print("\nMissing values in the dataset:")

print(df.isnull().sum())

# 5. Group the data by Account\_Type and calculate total sum of Transaction\_Amount and average Account\_Balance

grouped\_account\_type = df.groupby('Account\_Type').agg(

total\_transaction\_amount=('Transaction\_Amount', 'sum'),

average\_account\_balance=('Account\_Balance', 'mean')

)

print("\nAggregated data by Account\_Type:")

print(grouped\_account\_type)

# 6. Group the data by Branch and calculate total number of transactions and average transaction amount

grouped\_branch = df.groupby('Branch').agg(

total\_transactions=('Transaction\_Amount', 'count'),

average\_transaction\_amount=('Transaction\_Amount', 'mean')

)

print("\nAggregated data by Branch:")

print(grouped\_branch)