Day_11_Tasks

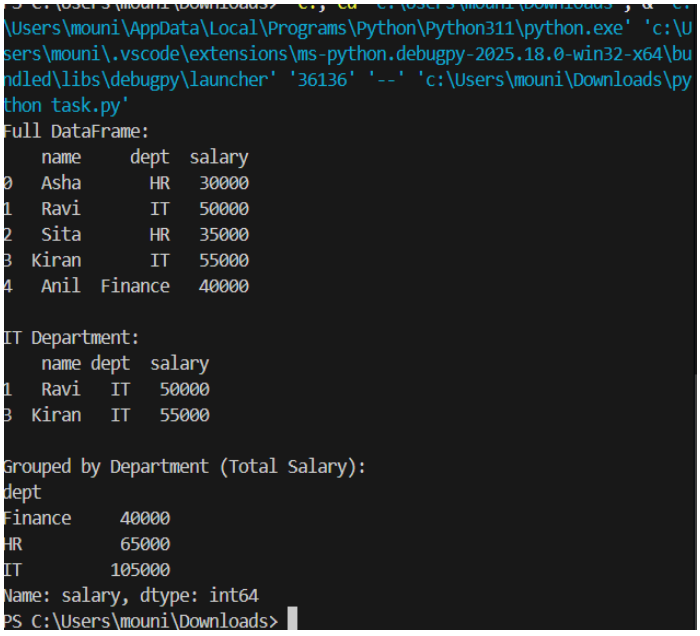
Task:1

create a dataframe where it consists of columns like name,dept,salary

filter by department

group by department.

```
import pandas as pd
data = {
    "name": ["Asha", "Ravi", "Sita", "Kiran", "Anil"],
    "dept": ["HR", "IT", "HR", "IT", "Finance"],
    "salary": [30000, 50000, 35000, 55000, 40000]
}
df = pd.DataFrame(data)
print("Full DataFrame:")
print(df)
print("\nIT Department:")
print(df[df["dept"] == "IT"])
print("\nGrouped by Department (Total Salary):")
print(df.groupby("dept")["salary"].sum())
```



Task:2

create a dataframe where the columns like product id,product name,quantity,**and** price

find the top 5 products based on the total price.

```
import pandas as pd
# Create dataset
data = {
    "Product ID": [101, 102, 103, 104, 105, 106, 107, 108, 109, 110],
    "Product Name": [
        "Laptop", "Mouse", "Keyboard", "Monitor", "Tablet",
        "Printer", "Headphones", "Speaker", "Webcam", "Hard Drive"
    ],
    "Quantity": [5, 20, 15, 7, 10, 3, 12, 8, 6, 9],
    "Price": [50000, 500, 1500, 12000, 25000, 8000, 2000, 3000, 2500, 4000]
}
df = pd.DataFrame(data)
print("Original DataFrame:")
print(df)
```

```
notice] A new release of pip available: 22.3.1 -> 26.0.1
notice] To update, run: python.exe -m pip install --upgr
S C:\Users\mouni\Downloads> python products.py
>
riginal DataFrame:
  Product ID Product Name  Quantity  Price
         101       Laptop         5  50000
         102        Mouse        20    500
         103     Keyboard        15   1500
         104      Monitor         7  12000
         105       Tablet        10  25000
         106      Printer         3   8000
         107   Headphones        12   2000
         108      Speaker         8   3000
         109       Webcam         6   2500
         110   Hard Drive         9   4000
S C:\Users\mouni\Downloads>
```

Task:3

create a two datasets customer details and order details

merge the two datsets on the basis of customer_id.

```
import pandas as pd
# Create Customer Details Dataset
customers = pd.DataFrame({
    "customer_id": [1, 2, 3, 4, 5],
    "customer_name": ["Ravi", "Sneha", "Arjun", "Meena", "Kiran"],
    "city": ["Hyderabad", "Chennai", "Bangalore", "Mumbai", "Delhi"]
})
# Create Order Details Dataset
orders = pd.DataFrame({
    "order_id": [101, 102, 103, 104, 105],
    "customer_id": [1, 2, 1, 3, 4],
    "product": ["Laptop", "Mouse", "Keyboard", "Tablet", "Monitor"],
    "amount": [50000, 500, 1500, 25000, 12000]
})
# Merge both datasets on customer_id
merged_data = pd.merge(customers, orders, on="customer_id")
print("Merged Data:")
print(merged_data)
```

```
TERMINAL

PS C:\Users\mouni\Downloads> python merge_data.py
>>
Merged Data:
   customer_id customer_name       city  order_id   product  amount
0            1          Ravi  Hyderabad       101    Laptop   50000
1            1          Ravi  Hyderabad       103  Keyboard    1500
2            2         Sneha    Chennai       102     Mouse     500
3            3         Arjun  Bangalore       104    Tablet   25000
4            4         Meena     Mumbai       105   Monitor   12000
PS C:\Users\mouni\Downloads>
```