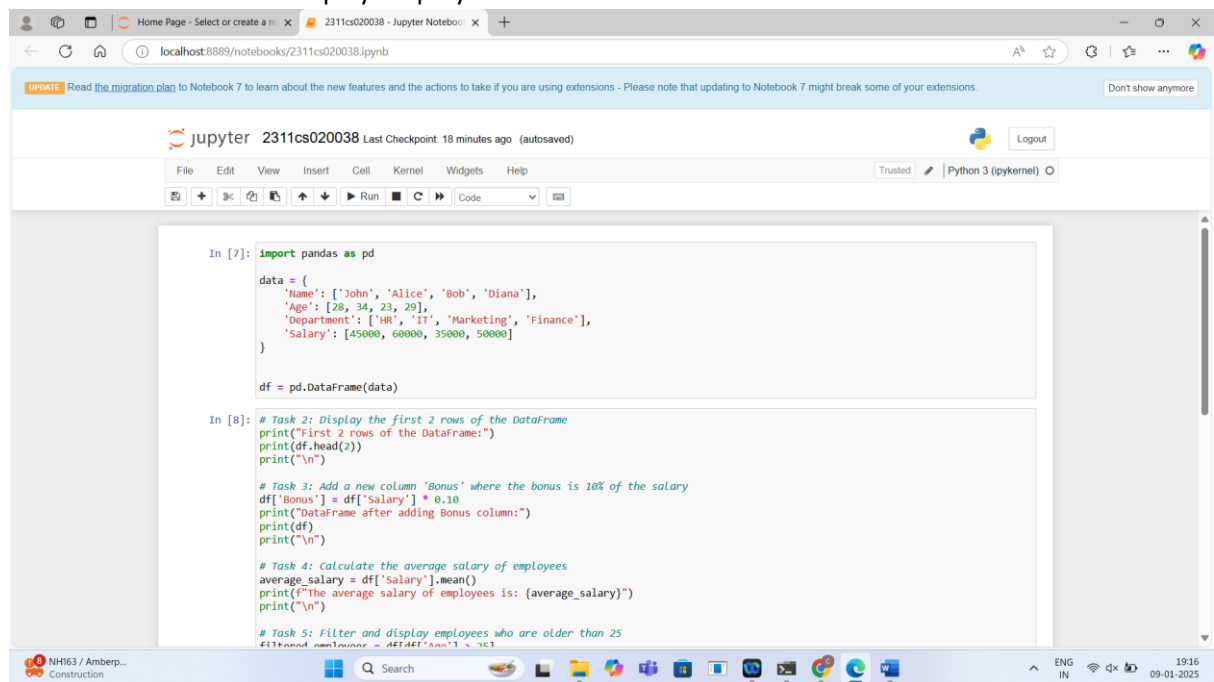


Question: Using the Pandas library, perform the following tasks:

1. Create a DataFrame from the following data:
| Name | Age | Department | Salary |
|-----|-----|-----|-----|
| John | 28 | HR | 45000 |
| Alice | 34 | IT | 60000 |
| Bob | 23 | Marketing | 35000 |
| Diana | 29 | Finance | 50000 |
2. Write code to: - Display the first 2 rows of the DataFrame. - Add a new column named Bonus where the bonus is 10% of the salary. - Calculate the average salary of employees in the DataFrame. - Filter and display employees who are older than 25.



```
In [7]: import pandas as pd

data = {
    'Name': ['John', 'Alice', 'Bob', 'Diana'],
    'Age': [28, 34, 23, 29],
    'Department': ['HR', 'IT', 'Marketing', 'Finance'],
    'Salary': [45000, 60000, 35000, 50000]
}

df = pd.DataFrame(data)

In [8]: # Task 2: Display the first 2 rows of the DataFrame
print("First 2 rows of the DataFrame:")
print(df.head(2))
print("\n")

# Task 3: Add a new column 'Bonus' where the bonus is 10% of the salary
df['Bonus'] = df['Salary'] * 0.10
print("DataFrame after adding Bonus column:")
print(df)
print("\n")

# Task 4: Calculate the average salary of employees
average_salary = df['Salary'].mean()
print(f"The average salary of employees is: {average_salary}")
print("\n")

# Task 5: Filter and display employees who are older than 25
# Filtered DataFrame:
#   Name  Age  Department  Salary  Bonus
# 0  John   28         HR   45000   4500
# 1  Alice  34         IT   60000   6000
# 3  Diana  29        Finance  50000   5000
```

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UPDATE Read the migration plan to Notebook 7 to learn about the new features and the actions to take if you are using extensions - Please note that updating to Notebook 7 might break some of your extensions. Don't show anymore

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Python 3 (ipykernel)

```
print(df)

# Task 5: Filter and display employees who are older than 25
filtered_employees = df[df['Age'] > 25]
print("Employees who are older than 25:")
print(filtered_employees)

First 2 rows of the DataFrame:
   Name  Age Department  Salary
0  John   28         HR   45000
1  Alice  34         IT   60000

DataFrame after adding Bonus column:
   Name  Age Department  Salary  Bonus
0  John   28         HR   45000  4500.0
1  Alice  34         IT   60000  6000.0
2   Bob   23       Marketing  35000  3500.0
3  Diana  29        Finance  50000  5000.0

The average salary of employees is: 47500.0

Employees who are older than 25:
   Name  Age Department  Salary  Bonus
0  John   28         HR   45000  4500.0
1  Alice  34         IT   60000  6000.0
3  Diana  29        Finance  50000  5000.0
```

In []:

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