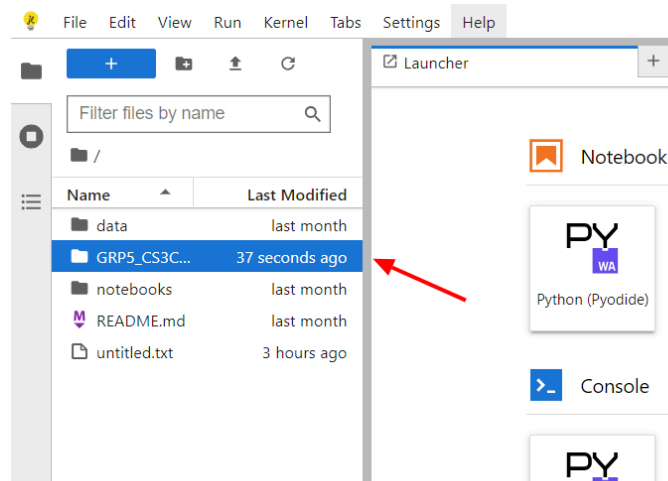
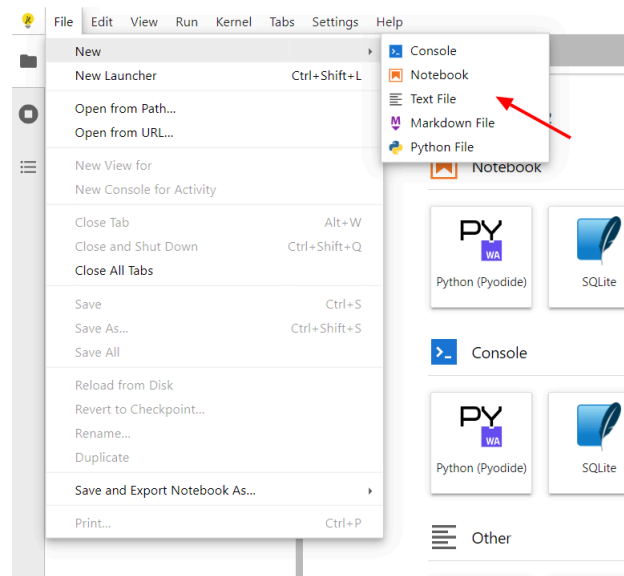


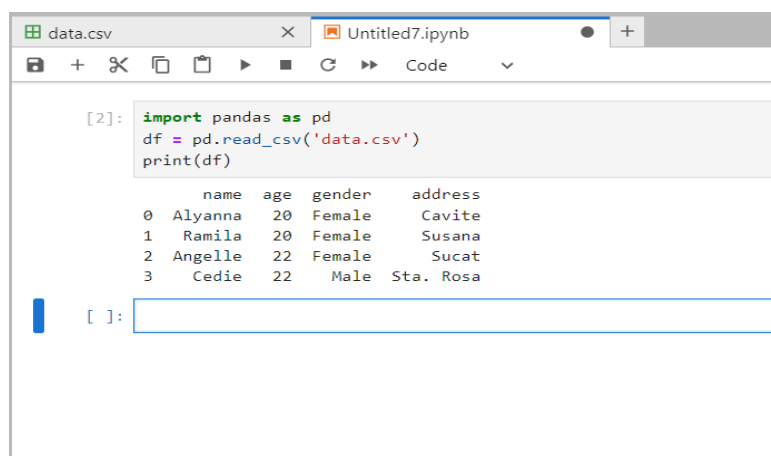
- Adding Folder



- Adding Text file



- CSV file for data analysis and visualization



- To write and call dictionary methods.

The screenshot shows a Jupyter Notebook window with three tabs: 'data.csv', 'Untitled7.ipynb', and 'Untitled8.ipynb'. The active tab is 'Untitled7.ipynb'. The code cell contains the following Python code:

```
[3]: my_dict = {"a": 1, "b": 2, "c": 3}
     del my_dict["b"]
     print(my_dict)
```

The output of the code cell is:

```
{'a': 1, 'c': 3}
```

- To create a directory using jupyter notebook.

The screenshot shows a Jupyter Notebook window with two tabs: 'Launcher' and 'Untitled10.ipynb'. The active tab is 'Untitled10.ipynb'. The code cell contains the following Python code:

```
[1]: import os
     directory_name = "my_folder"
     if not os.path.exists(directory_name):
         os.makedirs(directory_name)
         print(f"Directory '{directory_name}' created successfully.")
     else:
         print(f"Directory '{directory_name}' already exists.")
```

The output of the code cell is:

```
Directory 'my_folder' created successfully.
```

The left sidebar shows a file explorer with a search bar and a table of files and folders:

Name	Last Modified
my_folder	now
data.csv	12 minutes ago
Untitled10.i...	28 seconds ago
Untitled7.ip...	10 minutes ago
Untitled8.ip...	5 minutes ago

- To import libraries

The screenshot shows a Jupyter Notebook window with three tabs: 'Launcher', 'Untitled10.ipynb', and 'Untitled11.ipynb'. The active tab is 'Untitled10.ipynb'. The code cell contains the following Python code:

```
[1]: import pandas as pd
```

The output of the code cell is:

```
[ ]:
```

The left sidebar shows a file explorer with a search bar and a table of files and folders:

Name	Last Modified
my_folder	18 minutes ago
data.csv	30 minutes ago
Untitled10.i...	4 minutes ago
Untitled11.i...	2 minutes ago
Untitled7.ip...	28 minutes ago
Untitled8.ip...	23 minutes ago

- To use CSV file for data

The screenshot shows the JupyterLab interface. On the left, the file browser displays the directory `/ GRP5_CS3C_CPE32 /` with files `my_folder`, `data.csv`, `sampledata...`, `Untitled10.i...`, `Untitled7.ip...`, and `Untitled8.ip...`. The `sampledata...` file is selected. On the right, the `sampledata.csv` file is open in a viewer. The viewer shows a table with columns `name`, `age`, `city`, and `salary`. The data is as follows:

	name	age	city	salary
1	Alice	34	New York	150000
2	Bob	23	Los Angeles	145000
3	Charlie	45	Chicago	140000
4	Angela	36	USA	180000
5	David	43	Canada	160000

The screenshot shows the JupyterLab interface. On the left, the file browser displays the directory `/ GRP5_CS3C_CPE32 /` with files `my_folder`, `data.csv`, `sampledata...`, `Untitled10.i...`, `Untitled7.ip...`, and `Untitled8.ip...`. The `Untitled7.ip...` file is selected. On the right, the `Untitled7.ipynb` notebook is open. The notebook contains two code cells. The first cell, labeled `[11]:`, imports `pandas` as `pd` and reads `data.csv` into a DataFrame `df`. The second cell, labeled `[12]:`, imports `pandas` as `pd` and `matplotlib.pyplot` as `plt`, and reads `sampledata.csv` into a DataFrame `df`. The output of the first cell is a table with columns `name`, `age`, `gender`, and `address`. The output of the second cell is a table with columns `name`, `age`, `city`, and `salary`.

```
[11]: import pandas as pd
df = pd.read_csv('data.csv')
print(df)
```

	name	age	gender	address
0	Alyanna	20	Female	Cavite
1	Ramila	20	Female	Susana
2	Angelle	22	Female	Sucat
3	Cedie	22	Male	Sta. Rosa

```
[12]: import pandas as pd
import matplotlib.pyplot as plt
df = pd.read_csv('sampledata.csv')
print(df)
```

	name	age	city	salary
0	Alice	34	New York	150000
1	Bob	23	Los Angeles	145000
2	Charlie	45	Chicago	140000
3	Angela	36	USA	180000
4	David	43	Canada	160000

## • Analysis and visualization

Filter files by name

/ GRP5\_CS3C\_CPE32 /

Name	Last Modified
my_folder	22 hours ago
data.csv	22 hours ago
sampledata...	18 minutes ago
Untitled10.i...	21 hours ago
Untitled7.ip...	10 seconds ago
Untitled8.ip...	19 minutes ago

Launcher

Untitled7.ipynb

sampled

Code

```

[12]: import pandas as pd
import matplotlib.pyplot as plt
df = pd.read_csv('sampledata.csv')
print(df)

      name  age    city  salary
0   Alice   34  New York  150000
1    Bob   23 Los Angeles  145000
2  Charlie   45   Chicago  140000
3  Angela   36     USA    180000
4   David   43    Canada  160000

[13]: print("First 6 rows of the DataFrame:")
print(df.head())

First 6 rows of the DataFrame:
      name  age    city  salary
0   Alice   34  New York  150000
1    Bob   23 Los Angeles  145000
2  Charlie   45   Chicago  140000
3  Angela   36     USA    180000
4   David   43    Canada  160000

[14]: print("\nMissing Values:")
print(df.isnull().sum())

Missing Values:
name      0
age       0
city      0
salary    0
dtype: int64

```

Filter files by name

/ GRP5\_CS3C\_CPE32 /

Name	Last Modified
my_folder	22 hours ago
data.csv	22 hours ago
sampledata...	19 minutes ago
Untitled10.i...	21 hours ago
Untitled7.ip...	1 minute ago
Untitled8.ip...	20 minutes ago

Launcher

Untitled7.ipynb

sampledata.csv

Code

```

[15]: print("\nSummary Statistics:")
print(df.describe())

Summary Statistics:
              age      salary
count  5.000000   5.000000
mean   36.200000  155000.000000
std     8.700575   15811.388301
min    23.000000  140000.000000
25%    34.000000  145000.000000
50%    36.000000  150000.000000
75%    43.000000  160000.000000
max     45.000000  180000.000000

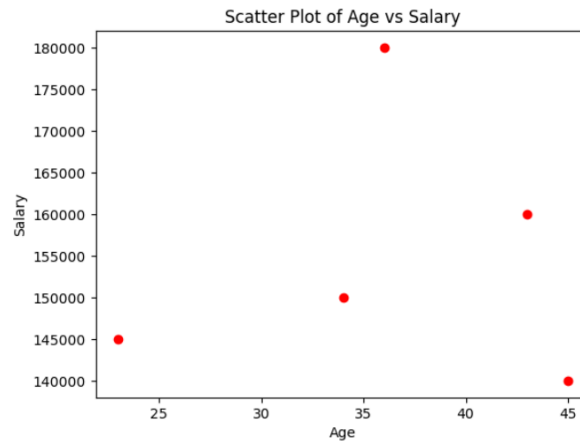
```

```

[18]: plt.hist(df['age'], bins=10, color='red', edgecolor='black')
plt.title('Histogram of Age')
plt.xlabel('Age')
plt.ylabel('Frequency')
plt.show()

```

```
[19]: plt.scatter(df['age'], df['salary'], color='red')
plt.title('Scatter Plot of Age vs Salary')
plt.xlabel('Age')
plt.ylabel('Salary')
plt.show()
```



## • Import libraries

The screenshot shows a Jupyter Notebook interface. On the left is a file explorer showing a directory structure with files like 'data.csv', 'sampledata...', and 'Untitled7.ip...'. The main area shows a code editor with the following code:

```
[20]: import pandas as pd
import matplotlib.pyplot as plt
```

## • Finding data

The screenshot shows a Jupyter Notebook interface. On the left is a file explorer showing a directory structure with files like 'data.csv', 'sampledata...', and 'Untitled7.ip...'. The main area shows a code editor with the following code:

```
[21]: import pandas as pd
df = pd.read_csv('sampledata.csv')
```

## • Importing data

The screenshot shows the JupyterLab interface. On the left, the file browser displays the directory `/ GRP5_CS3C_CPE32 /` with files `my_folder`, `data.csv`, `sampledata...`, `Untitled10.i...`, `Untitled7.ip...` (selected), and `Untitled8.ip...`. The main area shows a code cell [22] with the following code:

```
[22]: import pandas as pd
df = pd.read_csv('sampledata.csv')
print(df)
```

The output of the code is a table with 5 rows and 5 columns:

	name	age	city	salary
0	Alice	34	New York	150000
1	Bob	23	Los Angeles	145000
2	Charlie	45	Chicago	140000
3	Angela	36	USA	180000
4	David	43	Canada	160000

Below the output, there is an empty code cell [ ]:

```
[ ]:
```

## • Data attributes

The screenshot shows the JupyterLab interface. On the left, the file browser displays the directory `/ GRP5_CS3C_CPE32 /` with files `my_folder`, `data.csv`, `sampledata...`, `Untitled10.i...`, `Untitled7.ip...` (selected), and `Untitled8.ip...`. The main area shows three code cells:

```
[23]: print("Data Types:")
print(df.dtypes)

Data Types:
name      object
age       int64
city      object
salary    int64
dtype: object

[24]: print("\nColumn Names:")
print(df.columns)

Column Names:
Index(['name', 'age', 'city', 'salary'], dtype='object')

[25]: print("\nMissing Values:")
print(df.isnull().sum())

Missing Values:
name      0
age       0
city      0
salary    0
dtype: int64
```

Below the output, there is an empty code cell [ ]:

```
[ ]:
```