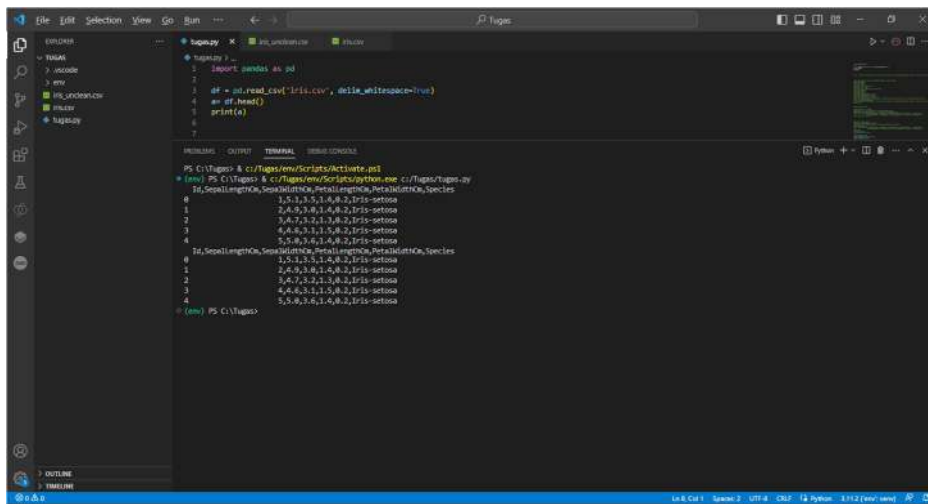


Nama : Nurul Mufliha Puasa

Kelas : C

Nim : 20.01.013.014

Modul 1 – 3

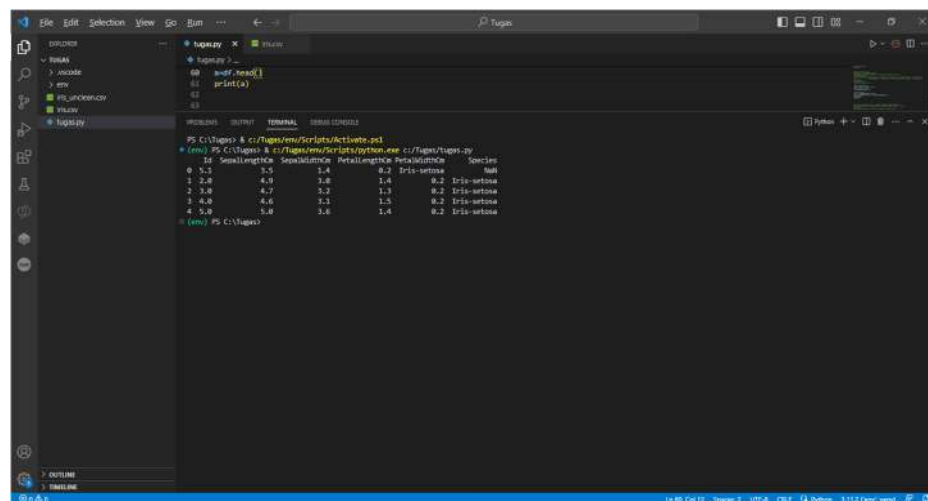


The screenshot shows a Jupyter Notebook with the following code:

```
1 import pandas as pd
2
3 df = pd.read_csv('iris.csv', delimiter=',')
4
5 df.head()
```

The output of the script is displayed in the terminal:

```
PS C:\Tugas> cd c:\Tugas\env\Scripts\activate.ps1
PS C:\Tugas> & c:\Tugas\env\Scripts\python.exe c:\Tugas\tugas.py
#SepalLengthCm, SepalWidthCm, PetalLengthCm, PetalWidthCm, Species
0 5.1 3.5 1.4 0.2 Iris-setosa
1 4.9 3.0 1.4 0.2 Iris-setosa
2 5.0 3.2 1.5 0.2 Iris-setosa
3 5.4 4.1 1.5 0.2 Iris-setosa
#SepalLengthCm, SepalWidthCm, PetalLengthCm, PetalWidthCm, Species
0 5.1 3.5 1.4 0.2 Iris-setosa
1 4.9 3.0 1.4 0.2 Iris-setosa
2 5.0 3.2 1.5 0.2 Iris-setosa
3 5.4 4.1 1.5 0.2 Iris-setosa
PS C:\Tugas>
```



The screenshot shows a Jupyter Notebook with the following code:

```
00 df['head']
01 print(df)
02
03
```

The output of the script is displayed in the terminal:

```
PS C:\Tugas> cd c:\Tugas\env\Scripts\activate.ps1
PS C:\Tugas> & c:\Tugas\env\Scripts\python.exe c:\Tugas\tugas.py
#SepalLengthCm SepalWidthCm PetalLengthCm PetalWidthCm Species
0 5.1 3.5 1.4 0.2 Iris-setosa seta
1 4.9 3.0 1.4 0.2 Iris-setosa
2 5.0 3.2 1.5 0.2 Iris-setosa
3 5.4 4.1 1.5 0.2 Iris-setosa
4 5.0 3.6 3.6 1.4 0.2 Iris-setosa
PS C:\Tugas>
```

```
File Edit Selection View Go Run ...
tugas

tugas.py
34 import pandas as pd
35
36 #load dataset iris unclean
37 df=pd.read_csv('iris_unclean.csv', delimiter=',')
38 df.info()
39 print(a)
40
PROBLEMS OUTPUT TERMINAL DEBUG CONSOLE
Python
PS C:\tugas> cd C:\tugas\env\Scripts\activate.ps1
PS C:\tugas> & c:\tugas\env\Scripts\python.exe c:\tugas\tugas.py
SepalLengthCm 2
SepalWidthCm 0
PetalLengthCm 0
PetalWidthCm 0
Species 0
dtypes: int64
memory usage: 1064 B
PS C:\tugas>
```

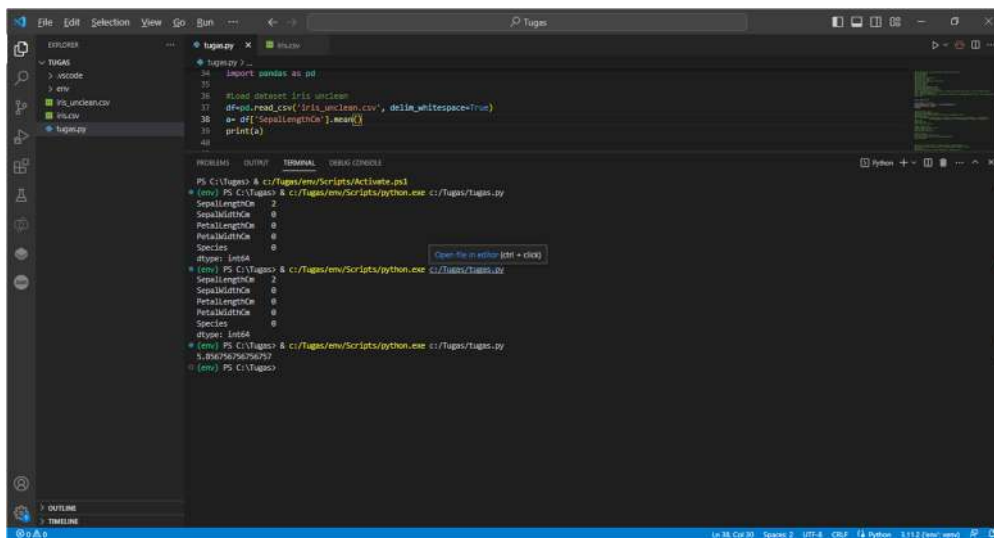
```
File Edit Selection View Go Run ...
tugas

tugas.py
36 #load dataset iris unclean
37 df=pd.read_csv('iris_unclean.csv', delimiter=',')
38 df.info()
39 print(a)
40
PROBLEMS OUTPUT TERMINAL DEBUG CONSOLE
Python
PS C:\tugas> cd C:\tugas\env\Scripts\activate.ps1
PS C:\tugas> & c:\tugas\env\Scripts\python.exe c:\tugas\tugas.py
class 'pandas.core.frame.DataFrame'
RangeIndex: 150 entries, 0 to 149
Data columns (total 5 columns):
 # Column Non-Null Count Dtype
---  ---
 0 SepalLengthCm 150 non-null float64
 1 SepalWidthCm 150 non-null float64
 2 PetalLengthCm 150 non-null float64
 3 PetalWidthCm 150 non-null float64
 4 Species 150 non-null object
dtypes: float64(4), object(1)
memory usage: 6.4+ KB
None
PS C:\tugas>
```

```
File Edit Selection View Go Run ...
tugas

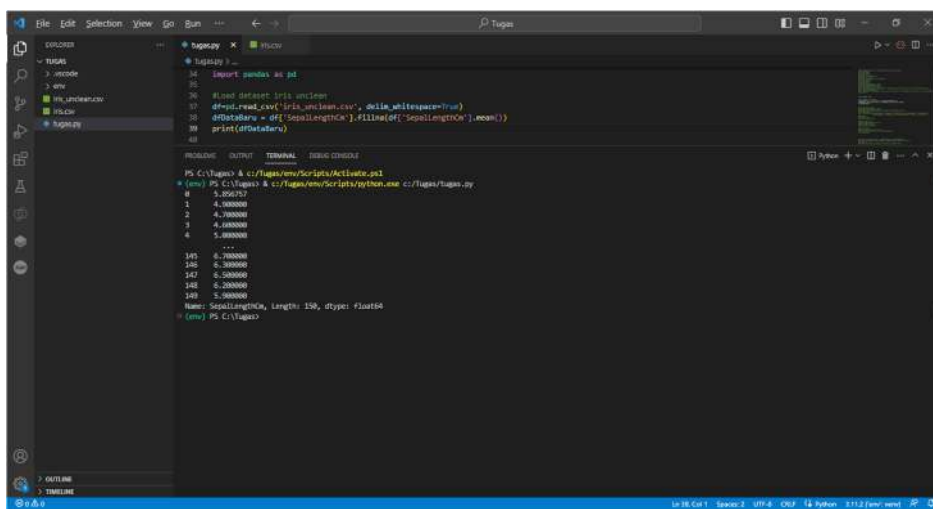
tugas.py
36 #load dataset iris unclean
37 df=pd.read_csv('iris_unclean.csv', delimiter=',')
38 dfDataBaru = df['SepalLengthCm'].fillna(df['SepalLengthCm'].mean())
39 df2 = pd.DataFrame({'SepalLengthCm': dfDataBaru, 'SepalWidthCm': df['SepalWidthCm'], 'PetalLengthCm':
40                      df['PetalLengthCm'], 'PetalWidthCm': df['PetalWidthCm'], 'Species':df['Species'] })
41 print(df2)
42
PROBLEMS OUTPUT TERMINAL DEBUG CONSOLE
Python
PS C:\tugas> cd C:\tugas\env\Scripts\activate.ps1
PS C:\tugas> & c:\tugas\env\Scripts\python.exe c:\tugas\tugas.py
SepalLengthCm SepalWidthCm PetalLengthCm PetalWidthCm Species
0 5.857957 3.5 1.4 0.2 Iris-setosa
1 4.900000 2000.0 1.4 0.2 Iris-setosa
2 4.200000 3.2 -1.3 0.2 Iris-setosa
3 4.000000 3.1 1.5 0.2 Iris-setosa
4 5.000000 3.6 1.4 0.2 Iris-setosa
...
145 6.700000 3.0 5.2 2.3 Iris-virginica
146 6.300000 2.5 5.0 1.9 Iris-virginica
147 6.500000 3.0 5.2 2.0 Iris-virginica
148 6.200000 3.4 5.4 2.3 Iris-virginica
149 5.900000 3.0 5.1 1.8 Iris-virginica

[150 rows x 5 columns]
PS C:\tugas>
```



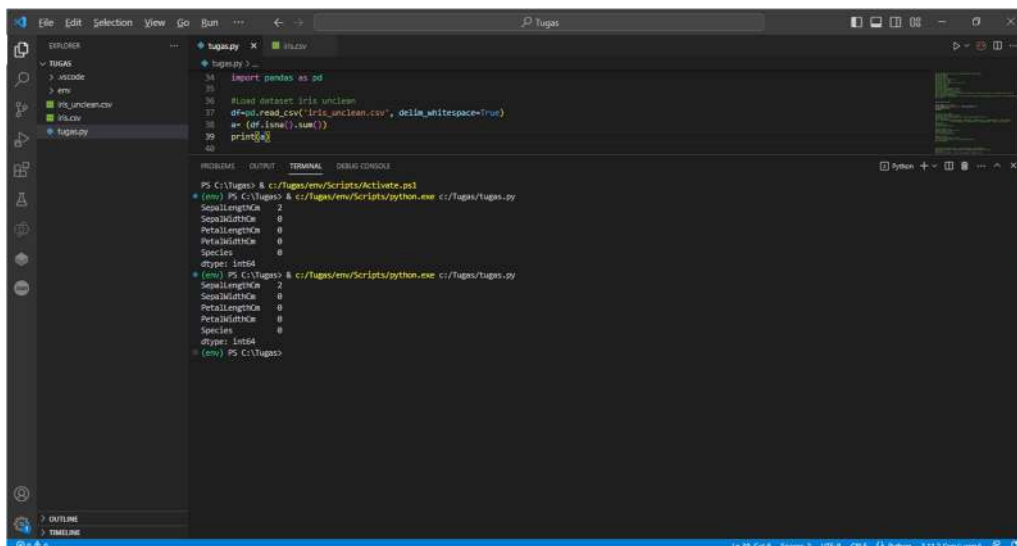
```
File Edit Selection View Go Run ...
tugas.py
34 import pandas as pd
35
36 #load dataset iris unclen
37 df=pd.read_csv('iris_unclen.csv', delim_whitespace=True)
38 a= df['SepalLengthCm'].mean()
39 print(a)
40
```

```
PS C:\Tugas> & c:/Tugas/env/Scripts/Activate.ps1
(env) PS C:\Tugas> & c:/Tugas/env/Scripts/python.exe c:/Tugas/tugas.py
SepalLengthCm    2
SepalWidthCm      0
PetalLengthCm     0
PetalWidthCm      0
Species           0
dtype: float64
(env) PS C:\Tugas> & c:/Tugas/env/Scripts/python.exe c:/Tugas/tugas.py
5.846756756756757
(env) PS C:\Tugas>
```



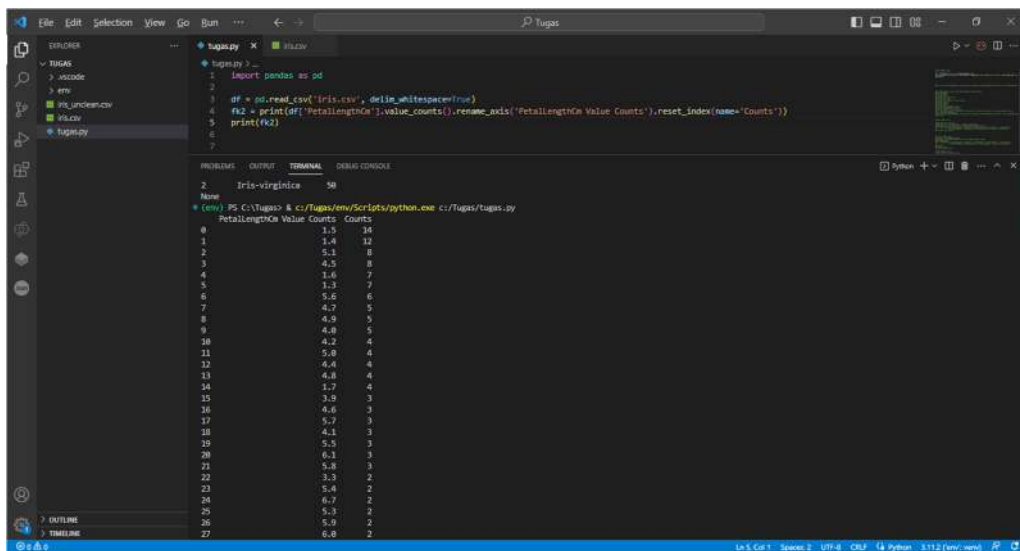
```
File Edit Selection View Go Run ...
tugas.py
34 import pandas as pd
35
36 #load dataset iris unclen
37 df=pd.read_csv('iris_unclen.csv', delim_whitespace=True)
38 df['SepalLengthCm'].fillna(df['SepalLengthCm'].mean())
39 print(df.head())
40
```

```
PS C:\Tugas> & c:/Tugas/env/Scripts/Activate.ps1
(env) PS C:\Tugas> & c:/Tugas/env/Scripts/python.exe c:/Tugas/tugas.py
0      5.846757
1      4.900000
2      4.700000
3      4.800000
4      5.000000
...
140     5.700000
141     6.300000
142     6.200000
143     6.200000
144     5.000000
dtype: float64
Name: SepalLengthCm, Length: 150, dtype: float64
(env) PS C:\Tugas>
```



```
File Edit Selection View Go Run ...
tugas.py
34 import pandas as pd
35
36 #load dataset iris unclen
37 df=pd.read_csv('iris_unclen.csv', delim_whitespace=True)
38 a = (df['SepalLengthCm'].sum())
39 print(a)
40
```

```
PS C:\Tugas> & c:/Tugas/env/Scripts/Activate.ps1
(env) PS C:\Tugas> & c:/Tugas/env/Scripts/python.exe c:/Tugas/tugas.py
SepalLengthCm    2
SepalWidthCm      0
PetalLengthCm     0
PetalWidthCm      0
Species           0
dtype: float64
(env) PS C:\Tugas> & c:/Tugas/env/Scripts/python.exe c:/Tugas/tugas.py
5.846756756756757
(env) PS C:\Tugas>
```

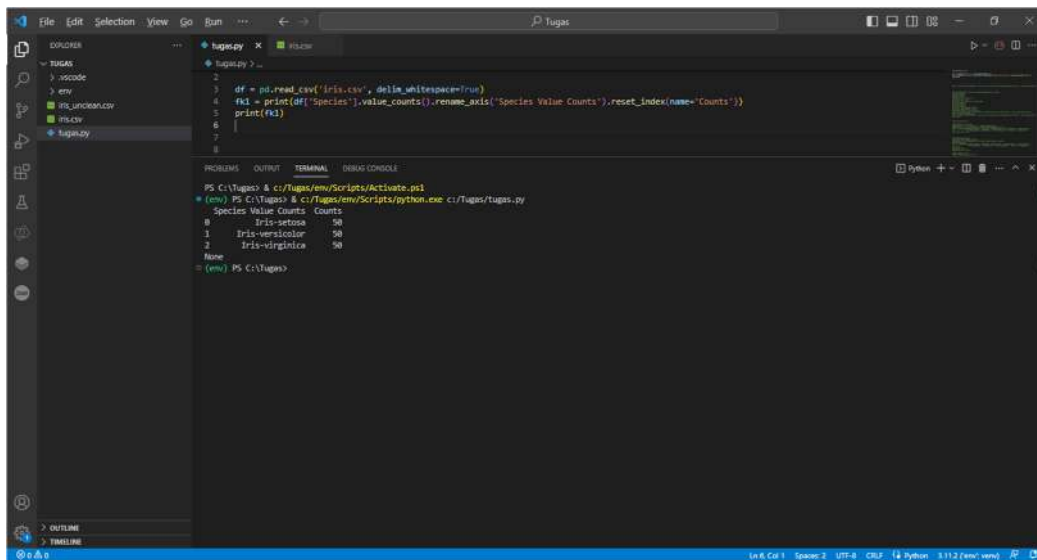


```
1 import pandas as pd
2
3 df = pd.read_csv('iris.csv', delim_whitespace=True)
4
5 # Print the value counts for 'Petal.Length'
6 print(df['Petal.Length'].value_counts().reset_index(name='Counts'))
```

PROBLEMS OUTPUT TERMINAL DEBUG CONSOLE

PS C:\Tugas> & c:/Tugas/env/Scripts/python.exe c:/Tugas/tugas.py

Petal.Length	Value Counts
1.5	14
1.6	12
1.7	8
1.8	8
1.9	7
2.0	7
2.1	6
2.2	5
2.3	5
2.4	4
2.5	4
2.6	4
2.7	4
2.8	3
2.9	3
3.0	3
3.1	3
3.2	3
3.3	2
3.4	2
3.5	2
3.6	2
3.7	2
3.8	2



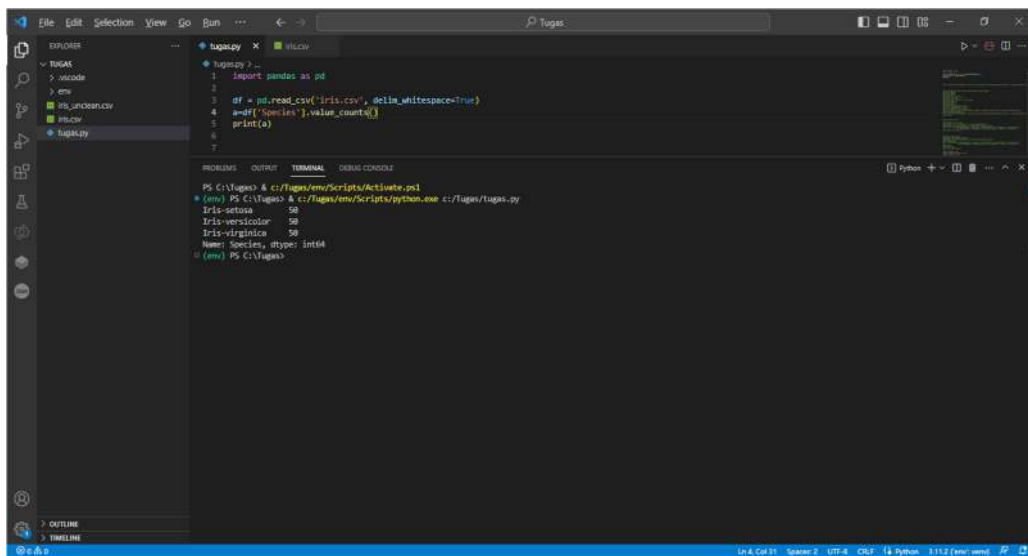
```
1 import pandas as pd
2
3 df = pd.read_csv('iris.csv', delim_whitespace=True)
4
5 # Print the value counts for 'Species'
6 print(df['Species'].value_counts().reset_index(name='Counts'))
```

PROBLEMS OUTPUT TERMINAL DEBUG CONSOLE

PS C:\Tugas> & c:/Tugas/env/Scripts/Activate.ps1

(env) PS C:\Tugas> & c:/Tugas/env/Scripts/python.exe c:/Tugas/tugas.py

Species	Value Counts
Iris-setosa	50
Iris-versicolor	50
Iris-virginica	50



```
1 import pandas as pd
2
3 df = pd.read_csv('iris.csv', delim_whitespace=True)
4
5 # Print the value counts for 'Species'
6 print(df['Species'].value_counts())
```

PROBLEMS OUTPUT TERMINAL DEBUG CONSOLE

PS C:\Tugas> & c:/Tugas/env/Scripts/Activate.ps1

(env) PS C:\Tugas> & c:/Tugas/env/Scripts/python.exe c:/Tugas/tugas.py

Species	Value Counts
Iris-setosa	50
Iris-versicolor	50
Iris-virginica	50

```
File Edit Selection View Go Run ... tugas
```

```
1 import pandas as pd
2
3 df = pd.read_csv('iris.csv', delim_whitespace=True)
4 a=df['SepalLengthCm'].mean()
5 print(a)
6
7
```

```
PS C:\tugas> c:\tugas\env\Scripts\Activate.ps1
(env) PS C:\tugas> c:\tugas\env\Scripts\python.exe c:\tugas\tugas.py
3.7586666666666666
(env) PS C:\tugas> c:\tugas\env\Scripts\python.exe c:\tugas\tugas.py
3.8
(env) PS C:\tugas>
```

Python 3.11.2 (env: venv)

```
File Edit Selection View Go Run ... tugas
```

```
1 import pandas as pd
2
3 df = pd.read_csv('iris.csv', delim_whitespace=True)
4 a=df['SepalLengthCm'].mean()
5 print(a)
6
7
```

```
PS C:\tugas> c:\tugas\env\Scripts\Activate.ps1
(env) PS C:\tugas> c:\tugas\env\Scripts\python.exe c:\tugas\tugas.py
3.7586666666666666
(env) PS C:\tugas>
```

Python 3.11.2 (env: venv)

```
File Edit Selection View Go Run ... tugas
```

```
1 import pandas as pd
2
3 df = pd.read_csv('iris.csv', delim_whitespace=True)
4 a=df.mean()
5 print(a)
6
7
```

```
PS C:\tugas> c:\tugas\env\Scripts\Activate.ps1
(env) PS C:\tugas> c:\tugas\env\Scripts\python.exe c:\tugas\tugas.py
c:\tugas\tugas.py:4: FutureWarning: The default value of numeric_only in DataFrame.mean is deprecated. In a future version, it will default to False. In addition, specifying 'numeric_only=None' is deprecated. Select only valid columns or specify the value of numeric_only to silence this warning.
  a=df.mean()
Id      5000000
SepalLengthCm  5.043333
SepalWidthCm  3.854000
PetalLengthCm  3.758667
PetalWidthCm  1.190667
dtype: float64
(env) PS C:\tugas>
```

Python 3.11.2 (env: venv)

```
1 df = pd.read_csv('iris.csv', delim_whitespace=True)
2
3 a=df.tail(3)
4 print(a)
```

Terminal output:

```
PS C:\Tugas> & c:/Tugas/emu/Scripts/Activate.ps1
PS C:\Tugas> & c:/Tugas/emu/Scripts/python.exe c:/Tugas/tugas.py
Id SepalLengthCm SepalKilometer PetalLengthCm PetalKilometer Species
347 340 6.3 3.9 5.2 2.8 Iris-virginica
348 349 6.2 3.4 5.4 2.9 Iris-virginica
349 350 5.9 3.8 5.1 2.8 Iris-virginica
```

```
1 import pandas as pd
2
3 df = pd.read_csv('iris.csv', delim_whitespace=True)
4 a=df.head(10)
5 print(a)
```

Terminal output:

```
PS C:\Tugas> & c:/Tugas/emu/Scripts/Activate.ps1
PS C:\Tugas> & c:/Tugas/emu/Scripts/python.exe c:/Tugas/tugas.py
Id SepalLengthCm SepalKilometer PetalLengthCm PetalKilometer Species
0 1 5.1 3.5 1.4 0.2 Iris-setosa
1 2 4.9 3.8 1.4 0.2 Iris-setosa
2 3 4.7 3.2 1.3 0.2 Iris-setosa
3 4 4.6 3.1 1.5 0.2 Iris-setosa
4 5 5.8 3.4 1.4 0.2 Iris-setosa
5 6 5.4 3.9 1.7 0.4 Iris-setosa
6 7 4.6 3.4 1.4 0.3 Iris-setosa
7 8 5.8 3.4 1.5 0.2 Iris-setosa
```

```
1 import pandas as pd
2
3 df = pd.read_csv('iris.csv', delim_whitespace=True)
4 a=df[['Id', 'Species']].iloc[11:20]
5 print(a)
```

Terminal output:

```
PS C:\Tugas> & c:/Tugas/emu/Scripts/Activate.ps1
PS C:\Tugas> & c:/Tugas/emu/Scripts/python.exe c:/Tugas/tugas.py
Id Species
11 12 Iris-setosa
12 13 Iris-setosa
13 14 Iris-setosa
14 15 Iris-setosa
15 16 Iris-setosa
```

The screenshot shows a VS Code editor with a file named `tugas.py` containing the following Python code:

```
1 import pandas as pd
2
3 df = pd.read_csv('iris.csv', delim_whitespace=True)
4 a=df.iloc[:10]
5 print(a)
6
7
```

The terminal output shows the first 10 rows of the Iris dataset:

```
PS C:\Tugas> C:\Tugas\env\Scripts\Activate.ps1
* (env) PS C:\Tugas> & C:\Tugas\env\Scripts\python.exe c:\Tugas\tugas.py
   Id  SepallengthCm  SepalWidthCm  PetalLengthCm  PetalWidthCm  Species
0  1         5.1         3.5         1.4         0.2  Iris-setosa
1  2         4.9         3.0         1.4         0.2  Iris-setosa
2  3         4.7         3.2         1.3         0.2  Iris-setosa
3  4         4.6         3.1         1.5         0.2  Iris-setosa
4  5         5.0         3.6         1.4         0.2  Iris-setosa
5  6         5.4         3.9         1.7         0.4  Iris-setosa
6  7         4.6         3.4         1.4         0.3  Iris-setosa
7  8         5.0         3.4         1.5         0.2  Iris-setosa
8  9         4.4         2.9         1.4         0.2  Iris-setosa
9 10         4.9         3.1         1.5         0.1  Iris-setosa
* (env) PS C:\Tugas>
```

The screenshot shows a VS Code editor with a file named `tugas.py` containing the following Python code:

```
1 import pandas as pd
2
3 df = pd.read_csv('iris.csv', delim_whitespace=True)
4 a=df[['Id', 'Species']]
5 print(a)
6
7
```

The terminal output shows the first 5 rows of the dataset, displaying only the 'Id' and 'Species' columns:

```
PS C:\Tugas> C:\Tugas\env\Scripts\Activate.ps1
* (env) PS C:\Tugas> & C:\Tugas\env\Scripts\python.exe c:\Tugas\tugas.py
   Id  Species
0  1  Iris-setosa
1  2  Iris-setosa
2  3  Iris-setosa
3  4  Iris-setosa
4  5  Iris-setosa
...
345 146  Iris-virginica
346 147  Iris-virginica
347 148  Iris-virginica
348 149  Iris-virginica
349 150  Iris-virginica
[150 rows x 2 columns]
* (env) PS C:\Tugas>
```

The screenshot shows a VS Code editor with a file named `tugas.py` containing the following Python code:

```
1 import pandas as pd
2
3 df = pd.read_csv('iris.csv', delim_whitespace=True)
4 a=df.info()
5 print(a)
6
7
```

The terminal output shows the information of the dataset:

```
PS C:\Tugas> C:\Tugas\env\Scripts\Activate.ps1
* (env) PS C:\Tugas> & C:\Tugas\env\Scripts\python.exe c:\Tugas\tugas.py
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 150 entries, 0 to 149
Data columns (total 6 columns):
 #   Column      Non-Null Count  Dtype
---  ---
0  Id          150 non-null    int64
1  SepallengthCm  150 non-null    float64
2  SepalWidthCm  150 non-null    float64
3  PetalLengthCm  150 non-null    float64
4  PetalWidthCm  150 non-null    float64
5  Species      150 non-null    object
dtypes: float64(4), int64(1), object(1)
memory usage: 7.2+ KB
None
* (env) PS C:\Tugas>
```

```
File Edit Selection View Go Run ... Tugus
tuguspy x insciv
tuguspy > ...
1 import pandas as pd
2
3 df = pd.read_csv('iris.csv', delim_whitespace=True)
4
5 andr.dtypes
6 print(a)
7

PROBLEMS OUTPUT TERMINAL DEBUG CONSOLE
Python + ...
PS C:\Tugus> & c:/Tugus/env/Scripts/Activate.ps1
* (env) PS C:\Tugus> & c:/Tugus/env/Scripts/python.exe c:/Tugus/tugus.py
Id                               dtype: object
SepalLengthCm                    float64
SepalWidthCm                     float64
PetalLengthCm                   float64
PetalWidthCm                    float64
Species                          object
dtype: object
* (env) PS C:\Tugus>
```

```
File Edit Selection View Go Run ... Tugus
tuguspy x insciv
tuguspy > ...
1 import pandas as pd
2
3 df = pd.read_csv('iris.csv', delim_whitespace=True)
4
5 andr.dtypes
6 print(a)
7

PROBLEMS OUTPUT TERMINAL DEBUG CONSOLE
Python + ...
PS C:\Tugus> & c:/Tugus/env/Scripts/Activate.ps1
* (env) PS C:\Tugus> & c:/Tugus/env/Scripts/python.exe c:/Tugus/tugus.py
Id,SepalLengthCm,SepalWidthCm,PetalLengthCm,PetalWidthCm,Species
0      1.5,3.0,1.6,0.2,Iris-setosa
1      2.4,3.0,1.4,0.2,Iris-setosa
2      3.4,3.2,1.3,0.2,Iris-setosa
3      4.4,3.1,1.5,0.2,Iris-setosa
4      5.5,3.6,1.4,0.2,Iris-setosa
Id,SepalLengthCm,SepalWidthCm,PetalLengthCm,PetalWidthCm,Species
0      1.5,3.0,1.6,0.2,Iris-setosa
1      2.4,3.0,1.4,0.2,Iris-setosa
2      3.4,3.2,1.3,0.2,Iris-setosa
3      4.4,3.1,1.5,0.2,Iris-setosa
4      5.5,3.6,1.4,0.2,Iris-setosa
* (env) PS C:\Tugus>
```



Figure 1

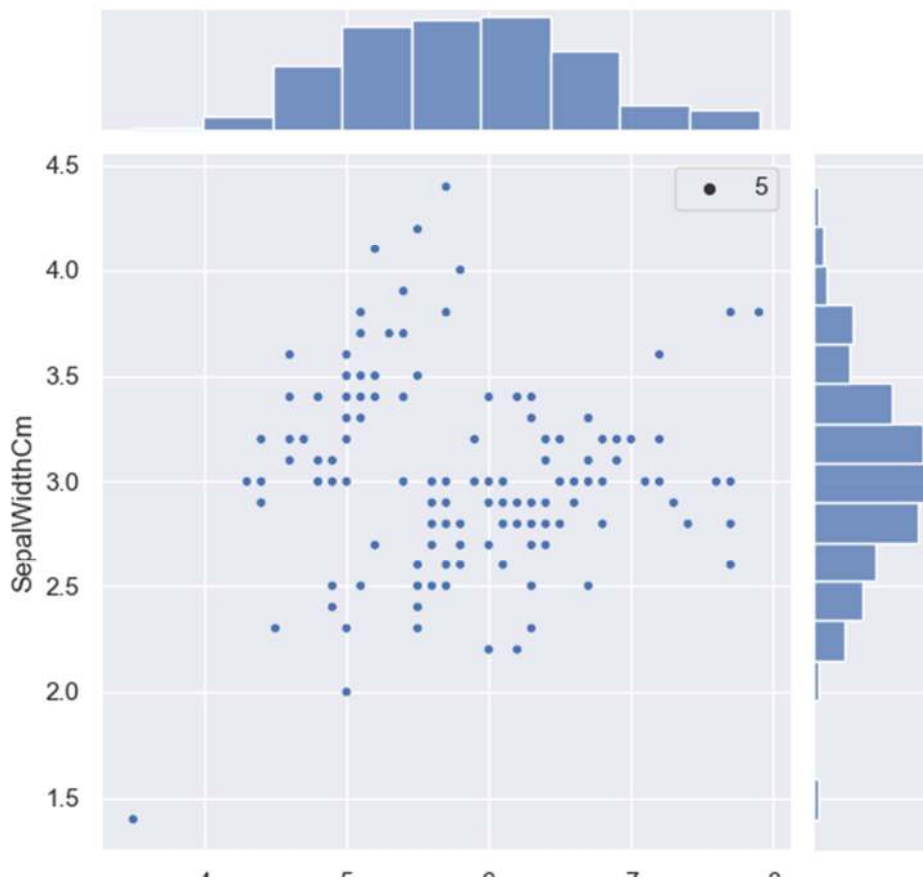
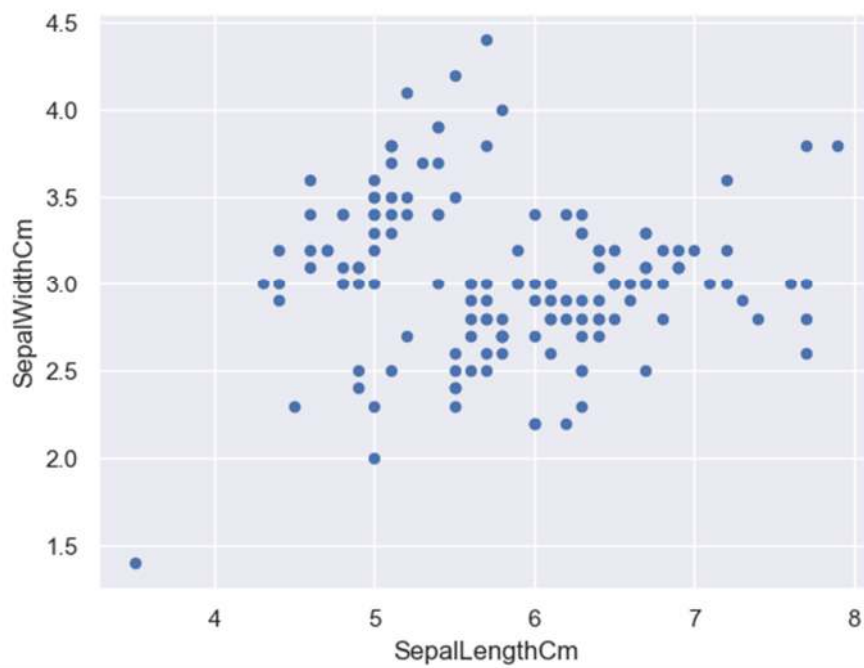
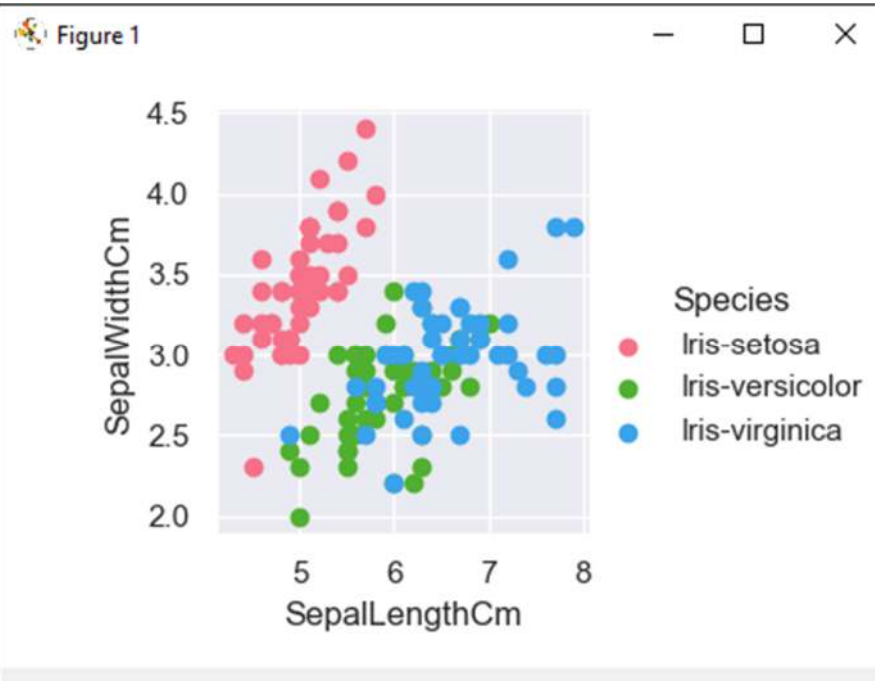


Figure 1





```
File Edit Selection View Go Run ... Tugus
```

```
55 sns.set(color_codes=True)
56
57 import warnings
58 warnings.filterwarnings('ignore')
59 df = pd.read_csv('iris.csv', delimiter=',')
60 print(sns.FacetGrid(df, hue='Species', palette='husl'))
61 .map(pit.scatter, "SepalLengthCm", "SepalWidthCm").add_legend()
```

```
PS C:\Tugus> & c:\Tugus\env\Scripts\Activate.ps1
PS C:\Tugus> & c:\Tugus\env\Scripts\python.exe c:\Tugus\tugas.py
Id SepalLengthCm SepalWidthCm PetalLengthCm PetalWidthCm Species
0 5.1 3.5 1.4 0.2 Iris-setosa
1 4.9 3.0 1.4 0.2 Iris-setosa
2 5.0 3.2 1.3 0.2 Iris-setosa
3 4.4 3.1 1.5 0.2 Iris-setosa
4 5.0 1.6 1.4 0.2 Iris-setosa
Traceback (most recent call last):
  File "c:\Tugus\tugas.py", line 60, in <module>
    print(sns.FacetGrid(df, size=5, hue="Species", palette="husl"))
TypeError: FacetGrid.__init__() got an unexpected keyword argument 'Size'
PS C:\Tugus> & c:\Tugus\env\Scripts\python.exe c:\Tugus\tugas.py
c:\Tugus\env\Scripts\python.exe: Fatal Python error: Py_Initialize: unable to load the Python interpreter's shared library (python3.dll)
Python 3.11.2 (main, 2023-01-05, [AMD64])
```