Unit 2.3 Graded Assignment: pandas - average sepal length

Instructions:

Download the Iris dataset from
https://www.kaggle.com/datasets/uciml/iris
and write a program that loads the CSV file and answers
what is the average sepal length for each of three iris species.

Submitted By:

1. **Syed Muhammad Hammad Irshad (2303.KHI.DEG.032)**
2. **Arshad Shiwani (2303.KHI.DEG.026)**

Solution:

In this assignment we use pandas to import csv file and extract data of iris and calculate average sepal length of each species I try to solve it with two methods

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

[2]: df = pd.read_csv("./Iris.csv")

[3]: df
```

	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
...	...	...	...	...	...	...
145	146	6.7	3.0	5.2	2.3	Iris-virginica
146	147	6.3	2.5	5.0	1.9	Iris-virginica
147	148	6.5	3.0	5.2	2.0	Iris-virginica
148	149	6.2	3.4	5.4	2.3	Iris-virginica
149	150	5.9	3.0	5.1	1.8	Iris-virginica

150 rows × 6 columns

150 rows × 6 columns

```
[4]: df_Iris_setosa = df[df["Species"]=="Iris-setosa"]
     df_Iris_versicolor = df[df["Species"]=="Iris-versicolor"]
     df_Iris_virginica = df[df["Species"]=="Iris-virginica"]
```

```
[5]: df_Iris_setosa_mean = df_Iris_setosa["SepalLengthCm"].mean()
     df_Iris_versicolor_mean = df_Iris_versicolor["SepalLengthCm"].mean()
     df_Iris_virginica_mean = df_Iris_virginica["SepalLengthCm"].mean()
```

```
[6]: print("The average sepal length of Iris-setosa is = " + str(df_Iris_setosa_mean))
     print("The average sepal length of Iris-versicolor is = " + str(df_Iris_versicolor_mean))
     print("The average sepal length of Iris-virginica is = " + str(df_Iris_virginica_mean))
```

```
The average sepal length of Iris-setosa is = 5.006
The average sepal length of Iris-versicolor is = 5.936
The average sepal length of Iris-virginica is = 6.587999999999998
```

Another method of solve ¶

```
[7]: data=df.groupby("Species")["SepalLengthCm"].mean()
```

```
[8]: data
```

```
[8]: Species
     Iris-setosa       5.006
     Iris-versicolor   5.936
     Iris-virginica    6.588
     Name: SepalLengthCm, dtype: float64
```

```
            [63, 31, 35, 54],
            [70, 84, 63, 56]])
```

```
[ ]:
```

```
[4]: df_Iris_setosa = df[df["Species"]=="Iris-setosa"]
     df_Iris_versicolor = df[df["Species"]=="Iris-versicolor"]
     df_Iris_virginica = df[df["Species"]=="Iris-virginica"]
```

```
[5]: df_Iris_setosa_mean = df_Iris_setosa["SepalLengthCm"].mean()
     df_Iris_versicolor_mean = df_Iris_versicolor["SepalLengthCm"].mean()
     df_Iris_virginica_mean = df_Iris_virginica["SepalLengthCm"].mean()
```

```
[6]: print("The average sepal length of Iris-setosa is = " + str(df_Iris_setosa_mean))
     print("The average sepal length of Iris-versicolor is = " + str(df_Iris_versicolor_mean))
     print("The average sepal length of Iris-virginica is = " + str(df_Iris_virginica_mean))
```