IMPORT REQUIRED LIBRARIES

LIBRARIES:

A library is a collection of functions that can be added to your Python code and called as necessary, just like any other function. There is no reason to rewrite code that will perform a standard task. With libraries, you can import pre-existing functions and efficiently expand the functionality of your code.

POPULAR LIBRARIES AND FUNCTIONALITIES:

- **Requests:** an elegant and simple HTTP library for Python, commonly used for REST API calls.
- **Beautiful Soup:** a library for pulling data out of HTML and XML files.
- **Pandas:** a fast, powerful, and easy-to-use open-source data analysis and manipulation tool.

KEYWORD FOR IMPORTING LIBRARIES:

- To *import* library functionality into your code, use the keyword "**import".**

- Using the "**import"** keyword at the top of your code file, you can import certain library functions or the entire library at once.

PANDAS:

- Pandas is an open source data analysis library built on top of the Python programming language.
- The most common way to import pandas into your Python environment is to use the following syntax:

```
import pandas as pd
```

- The "**import pandas**" portion of the code tells Python to bring the pandas data analysis library into your current environment.
- The "**as pd**" portion of the code then tells Python to give pandas the alias of **Pd**. This allows you to use pandas functions by simply typing pd.function_name rather than pandas.function_name.
- After importing pandas, you can then use the functions built in it to create and analyze data.

```python
import pandas as pd
import numpy as np
from sklearn.preprocessing import MinMaxScaler
from sklearn.metrics import confusion_matrix,accuracy_score
```

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1. Series:

A Series is a 1-dimensional array. The following code shows how to quickly create a Series using pandas:

```python
import pandas as pd

#define Series
x = pd.Series([25, 12, 15, 14, 19, 23, 25, 29])

#display Series
print(x)

0    25
1    12
2    15
```

```
3   14
4   19
5   23
6   25
7   29
dtype: int64
```

2. DataFrame:

A DataFrame is a 2-dimensional array. The following code shows how to quickly create a DataFrame using pandas.

```python
import pandas as pd

#define DataFrame
df = pd.DataFrame({'points': [25, 12, 15, 14, 19, 23, 25, 29],
                   'assists': [5, 7, 7, 9, 12, 9, 9, 4],
                   'rebounds': [11, 8, 10, 6, 6, 5, 9, 12]})

#display DataFrame
print(df)
```

	points	assists	rebounds
0	25	5	11
1	12	7	8
2	15	7	10
3	14	9	6
4	19	12	6
5	23	9	5
6	25	9	9
7	29	4	12