

```
In [41]: # Assignment 2-1

numbers = [19,3,15,7,11]

print("\nCreating a bar chart from numbers")
print(f'Index{"Value":>8} bar')

for index, value in enumerate (numbers):
    print(f'{index: > 5} {value: > 8} {"*" * value}')
```

Creating a bar chart from numbers

Index	Value	bar
0	19	*****
1	3	***
2	15	*****
3	7	*****
4	11	*****

In line 5:

f'...' tells Python it's a formatted string (f-string).

"Value":>8 means "take the string "Value" and put it inside a field 8 characters aligned to the right."

This ensures the word "Value" starts under the numbers in the next rows, so everything lines up like a table.

In line 7 & 8:

enumerate(numbers) gives you both index (0,1,2,...) and value (19,3,15,...).

print{index: > 5} this makes small numbers (0, 1, 2, ...) line up neatly.

{value: > 8} same idea, but for the actual number in the list.

{" \* " \* value} makes a bar by repeating "\*" value times. e.g. if value=11, it produces  
"\*\*\*\*\*".

The repeated \* gives the "bar" effect.

```
In [1]: #Assignment 2-2

import matplotlib.pyplot as plt
import seaborn as sns
import pandas as pd

df = pd.read_csv('scores-2.csv')
```

In [16]: df

Out[16]:

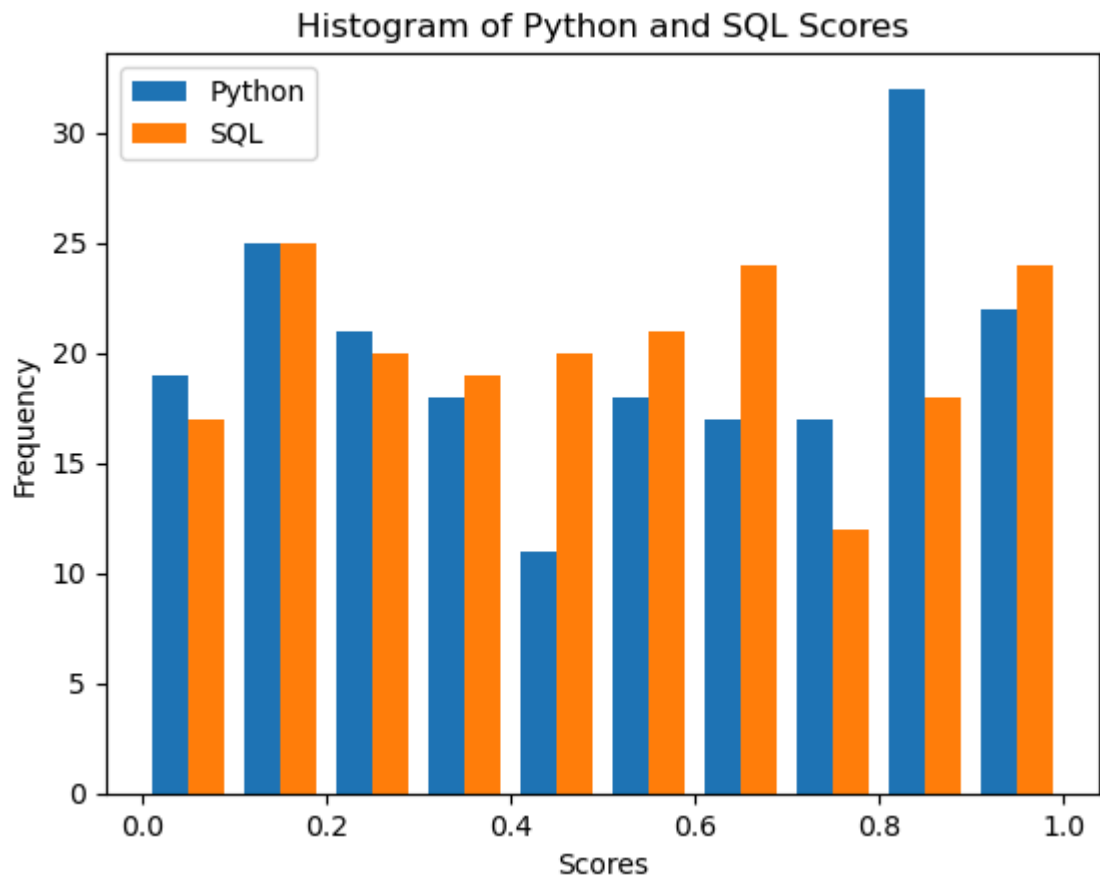
	Python	Sql	ML	Tableau	Excel	Student Placed
<b>0</b>	0.80	0.57	0.63	0.50	0.34	Yes
<b>1</b>	0.81	0.90	0.62	0.71	0.92	No
<b>2</b>	0.49	0.69	0.62	0.64	0.41	No
<b>3</b>	0.40	0.94	0.60	0.26	0.47	No
<b>4</b>	0.31	0.87	1.00	0.23	0.99	No
...	...	...	...	...	...	...
<b>195</b>	0.47	0.13	0.78	0.10	0.11	Yes
<b>196</b>	0.14	0.49	0.19	0.33	0.85	Yes
<b>197</b>	0.95	0.65	0.62	0.74	0.61	Yes
<b>198</b>	0.60	0.99	0.66	0.71	0.93	Yes
<b>199</b>	0.87	0.23	0.97	0.45	0.42	Yes

200 rows × 6 columns

In [7]: #1. Use Matplotlib to draw histograms for 'Python' and 'Sql' together :

```
plt.hist([df['Python'], df['Sql']], label=["Python", "SQL"])

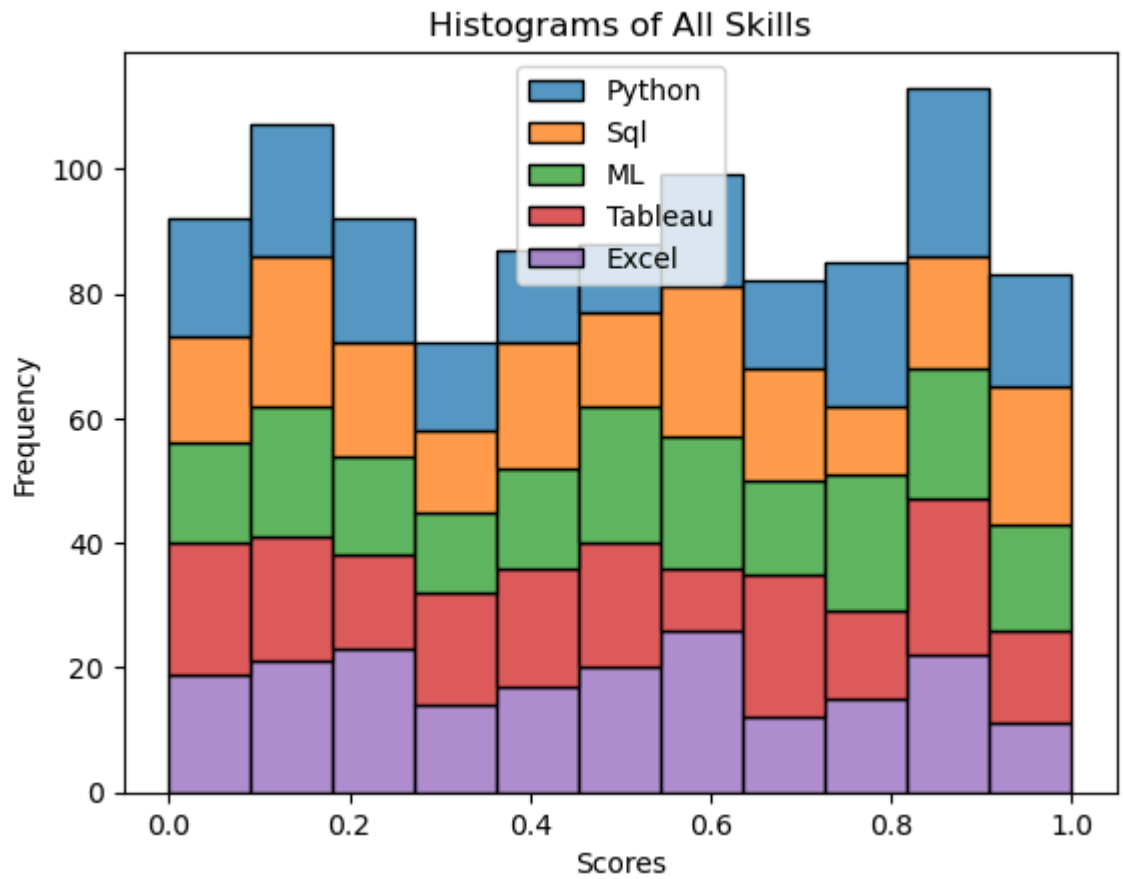
plt.title("Histogram of Python and SQL Scores")
plt.xlabel("Scores")
plt.ylabel("Frequency")
plt.legend()
plt.show()
```



In [40]: #2. Use seaborn to draw Histograms (within a single graph) for all the

```
sns.histplot(data=df,multiple="stack")

plt.title("Histograms for All Data")
plt.xlabel("Scores")
plt.ylabel("Frequency")
plt.show()
```



In [ ]: