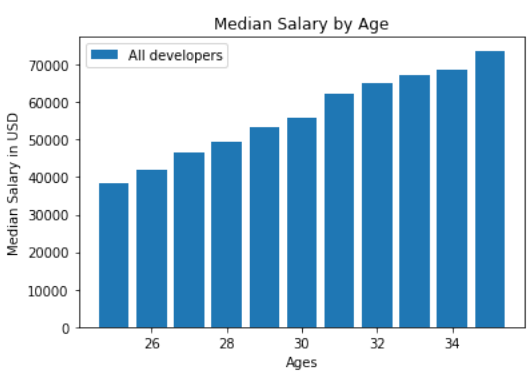
```
import pandas as pd
import matplotlib.pyplot as plt

x = [25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35]

devs_y = [38496, 42000, 46752, 49320, 53200, 56000, 62316, 64928, 67317, 68748, 73752]
```

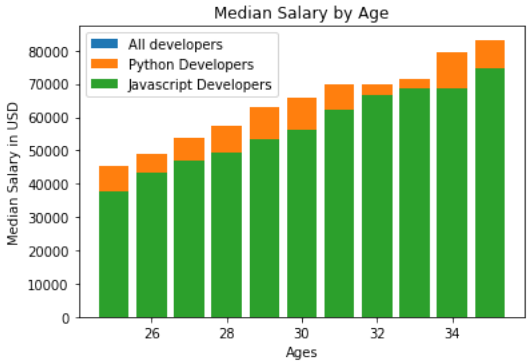
1. Plotting the bar plot

```
plt.bar(x, devs_y, label="All developers")
plt.xlabel("Ages")
plt.ylabel("Median Salary in USD")
plt.title("Median Salary by Age")
plt.legend()
plt.show()
```



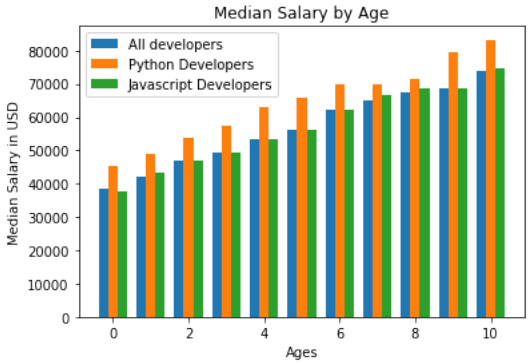
2. Adding more bars to the same plot

```
py_devs_y = [45372, 48876, 53850, 57287, 63016, 65998, 70003, 70000, 71418, 79674, 83238]

js_devs_y = [37810, 43515, 46823, 49293, 53437, 56373, 62375, 66674, 68745, 68746, 74583]

plt.bar(x, devs_y, label="All developers")
plt.bar(x, py_devs_y, label="Python Developers")
plt.bar(x, js_devs_y, label="Javascript Developers")
plt.xlabel("Ages")
plt.ylabel("Median Salary in USD")
plt.title("Median Salary by Age")
plt.legend()
plt.show()
```



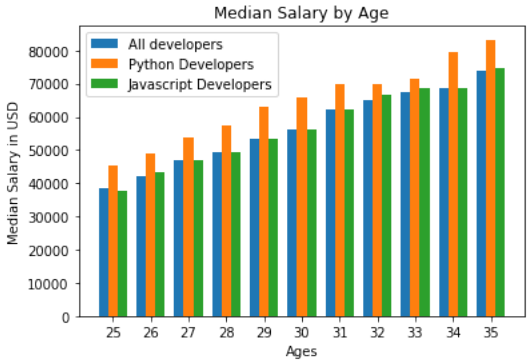
3. Adjusting the width of the plot

```
import numpy as np

x_indexes = np.arange(len(x))


width = 0.25


plt.bar(x_indexes - width, devs_y, width=width, label="All developers")
plt.bar(x_indexes, py_devs_y, width = width, label="Python Developers")
plt.bar(x_indexes + width, js_devs_y, width=width, label="Javascript Developers")
plt.xlabel("Ages")
plt.ylabel("Median Salary in USD")
plt.title("Median Salary by Age")
plt.legend()
plt.show()
```



4. Changing the xlabels

```
plt.bar(x_indexes - width, devs_y, width=width, label="All developers")
plt.bar(x_indexes, py_devs_y, width = width, label="Python Developers")
plt.bar(x_indexes + width, js_devs_y, width=width, label="Javascript Developers")
plt.xlabel("Ages")
plt.ylabel("Median Salary in USD")
plt.title("Median Salary by Age")
plt.xticks(ticks=x_indexes, labels=x) #changing the xlabel
plt.legend()
plt.show()
```



5. Plotting the bar plot from pandas dataframe

```
import pandas as pd

from google.colab import drive
drive.mount('/content/drive')
```

```
Drive already mounted at /content/drive; to attempt to forcibly remount, call drive.mount("/content/drive", force_remount=True).
```

```
data = pd.read_csv('/content/drive/My Drive/data/data.csv')
```

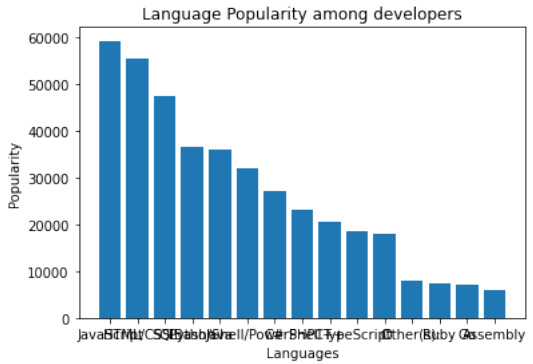
```
data.head()
```

	Responder_id	LanguagesWorkedWith
0	1	HTML/CSS;Java;JavaScript;Python
1	2	C++;HTML/CSS;Python
2	3	HTML/CSS
3	4	C;C++;C#;Python;SQL
4	5	C++;HTML/CSS;Java;JavaScript;Python;SQL;VBA

```
from collections import Counter


ids = data['Responder_id']
language_responses = data['LanguagesWorkedWith']


language_counter = Counter()


for response in language_responses:
    language_counter.update(response.split(";"))


languages = []
popularity = []

for item in language_counter.most_common(15):
    languages.append(item[0])
    popularity.append(item[1])


print(languages)
print(popularity)
```

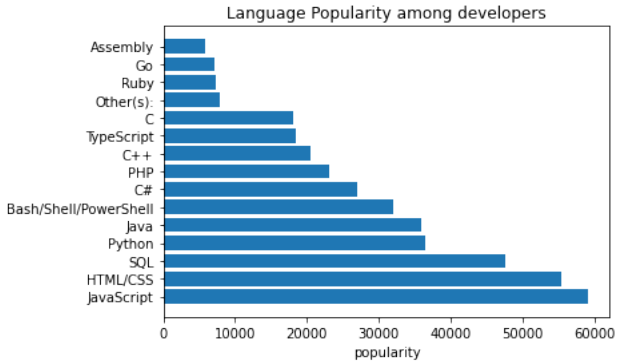
```
['JavaScript', 'HTML/CSS', 'SQL', 'Python', 'Java', 'Bash/Shell/PowerShell', 'C#', 'PHP', 'C++', 'TypeScript', 'C', 'Other(s):', 'Ruby', 'Go', 'Assembly']
[59219, 55466, 47544, 36443, 35917, 31991, 27097, 23030, 20524, 18523, 18017, 7920, 7331, 7201, 5833]
```

```
plt.bar(languages, popularity)
plt.xlabel("Languages")
plt.ylabel("Popularity")
plt.title("Language Popularity among developers")
plt.show()
```

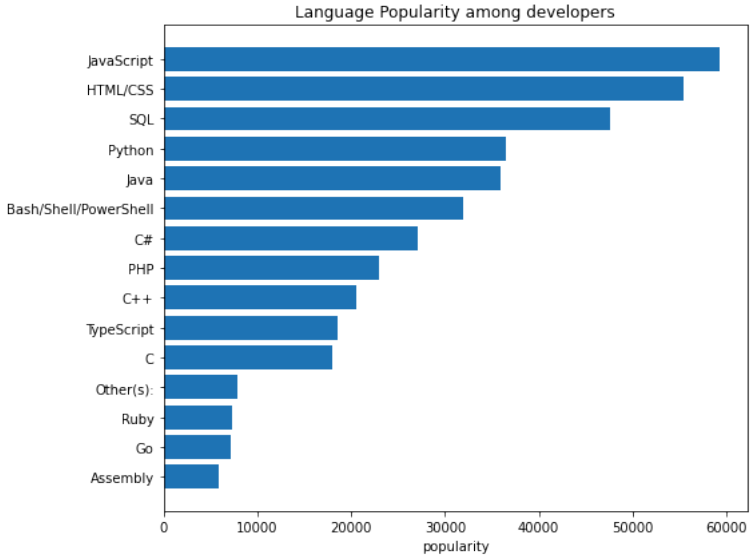


6. Plotting Horizontal bar chart

```
plt.barh(languages, popularity)
plt.xlabel("popularity")
plt.title("Language Popularity among developers")
plt.show()
```




```
languages.reverse()
popularity.reverse()


# https://insights.stackoverflow.com/survey/2020#technology-programming-scripting-and-markup-languages

plt.figure(figsize=(8,6))
plt.barh(languages, popularity)
plt.xlabel("popularity")
plt.title("Language Popularity among developers")
plt.tight_layout()
plt.show()
```



Show Your Creativity

Automobile Land Speed Records (GR 5-10)

In the first recorded automobile race in 1898, Count Gaston de Chasseloup-Laubat of Paris, France, drove 1 kilometer in 57 seconds for an average speed of 39.2 miles per hour(mph) or 63.1 kilometers per hour (kph). In 1904, Henry Ford drove his Ford Arrow across frozen Lake St. Clair, MI, at an average speed of 91.4 mph. Now, the North American Eagle is trying to break a land speed record of 800 mph. The Federation International deL'Automobile (FIA), the world's governing body for motor sport and land speed records,recorded the following land speed records.

```
import matplotlib.pyplot as plt
import pandas as pd
```

```
from google.colab import drive
drive.mount('/content/drive')
```

```
---------------------------------------------------------------------------
MessageError                              Traceback (most recent call last)
<ipython-input-1-d5df0069828e> in <cell line: 2>()
      1 from google.colab import drive
----> 2 drive.mount('/content/drive')

 3 frames
/usr/local/lib/python3.10/dist-packages/google/colab/_message.py in read_reply_from_input(message_id, timeout_sec)
    101     ):
    102       if 'error' in reply:
--> 103         raise MessageError(reply['error'])
    104       return reply.get('data', None)
    105

MessageError: Error: credential propagation was unsuccessful
```

```
data = pd.read_csv('/content/drive/My Drive/data/LandRecords.csv')
```

```
data.head()
```

Start coding or generate with AI.