# Discussion 12

# Masks still required in the classroom

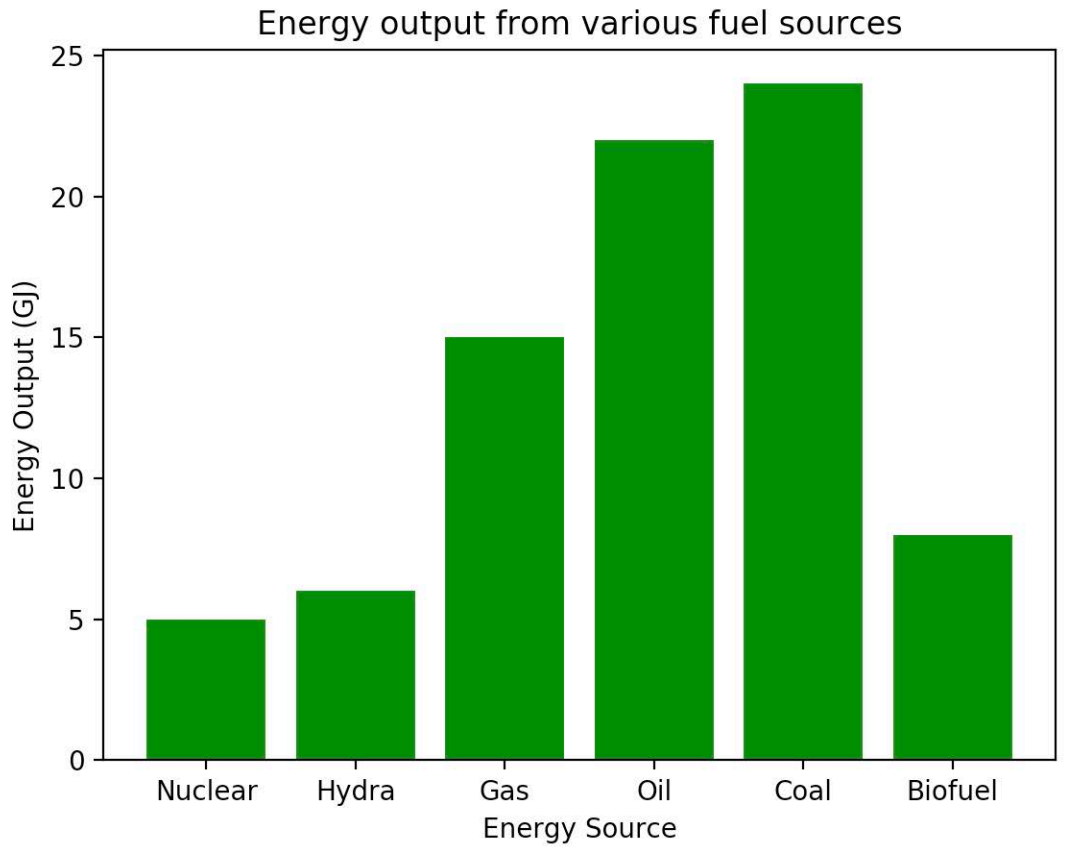
If you haven’t already done so.

Pip install matplotlib

# Matplotlib example

Users > Yasmeen > Desktop > discussion 12 > example.py > ...

```python
import matplotlib.pyplot as plt
import numpy as np

x = ['Nuclear', 'Hydra', 'Gas', 'Oil', 'Coal', 'Biofuel']
energy = [5,6,15,22,24,8]

plt.bar(x, energy, color = 'green')

plt.xlabel("Energy Source")
plt.ylabel("Energy Output (GJ)")
plt.title("Energy output from various fuel sources")

plt.xticks(x)

plt.show()
```



# Tips

Plan and then code

IF NOT EXISTS -> Update the database

DROP TABLE IF EXISTS -> Rewrite the database

Check your database

If your data is huge, limit your data to make sure your code works before implementing the code

Use resources like inspect element, jsoneditoronline, regex101

# Movies.db

You are given a database with two tables

Table: Movies

| | id | title | release_year | length_in_mins |
|---|---|---|---|---|
| | Filter | Filter | Filter | Filter |
| 1 | 1 | Titanic | 1997 | 195 |
| 2 | 2 | Avatar | 2009 | 162 |
| 3 | 3 | Star Wars | 1977 | 121 |
| 4 | 4 | Jurassic Park | 1993 | 128 |
| 5 | 5 | The Fast and the... | 2006 | 104 |

Table: People

| | unique_id | fave_movie_id |
|---|---|---|
| | Filter | Filter |
| 1 | jesbln | 4 |
| 2 | wildk | 1 |
| 3 | mkllln | 1 |
| 4 | jhike | 5 |
| 5 | wilman | 2 |
| 6 | khjah | 3 |
| 7 | obook | 2 |
| 8 | jaspeh | 1 |
| 9 | patmuer | 4 |
| 10 | ytshek | 1 |
| 11 | marksk | 5 |
| 12 | elilust | 5 |

# Task 1

- Count the votes for each movie using SQL
- You will need to use Count and Join
- Return a list of count and movie title tuples as seen below

[(2, 'Avatar'), (2, 'Jurassic Park'), (1, 'Star Wars'), (3, 'The Fast and the Furious: Tokyo Drift'), (4, 'Titanic')]

# Task 2

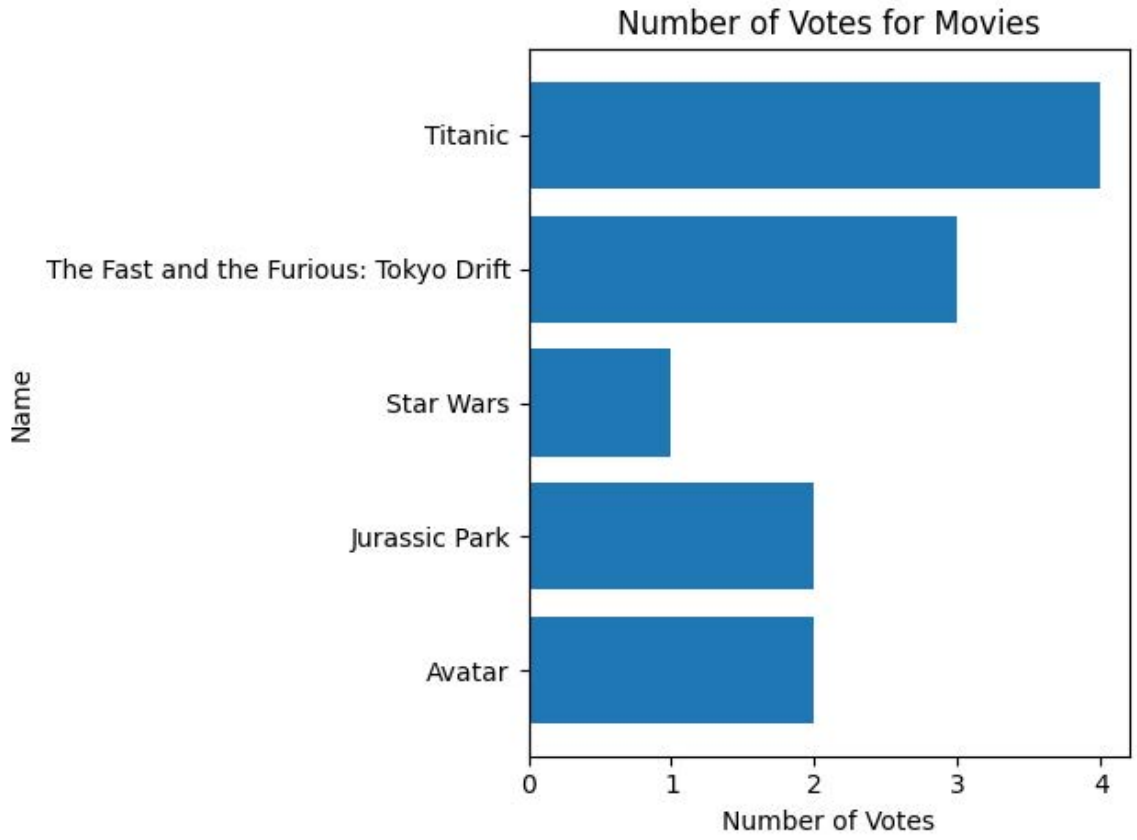
Now let's visualize the data!

Create a bar plot using matplotlib

Y= name

X= number of votes

Hint: difference between bar and barh



# Task 3

- Now let's make another visualization and decide which is the best way to represent the data
- Create a pie chart using matplotlib