Discussion 13

Matplotlib

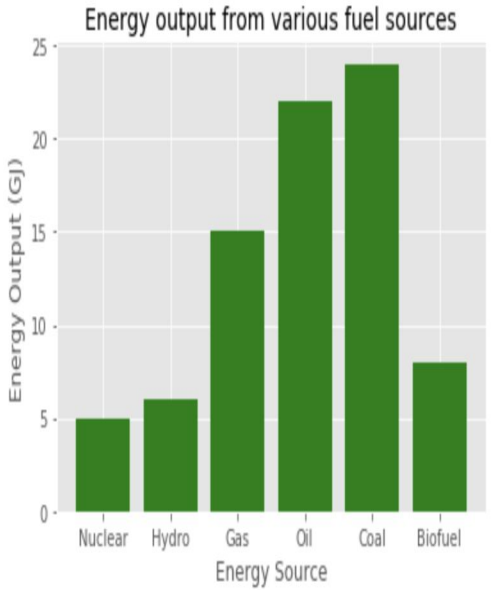
```
x = ['Nuclear', 'Hydro', 'Gas', 'Oil', 'Coal', 'Biofuel']
energy = [5, 6, 15, 22, 24, 8]

x_pos = [i for i, _ in enumerate(x)]

plt.bar(x_pos, energy, color='green')
plt.xlabel("Energy Source")
plt.ylabel("Energy Output (GJ)")
plt.title("Energy output from various fuel sources")

plt.xticks(x_pos, x)

plt.show()
```



Plotly

```
import plotly.express as px
the_dict = {'dates': ['2020-01-01', '2020-01-02'], 'y_vals': [100,200]}
fig = px.bar(the_dict, x='dates', y='y_vals')
fig.show()
```

Make sure to install the packages before using them

pip install plotly

pip install matplotlib

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

Task 1

Grab data from https://en.wikipedia.org/wiki/Grand_Slam_(tennis)

Note : Just the names from the red box and return a dictionary

Tournaments [edit]

Event	Dates	Venue	Surface	Current champion(s)				
				Men's Singles	Women's Singles	Men's Doubles	Women's Doubles	Mixed Doubles
Australian Open	mid/late January	Melbourne Park, Melbourne	Hard	Novak Djokovic	Sofia Kenin	Rajeev Ram Joe Salisbury	Tímea Babos Kristina Mladenovic	Barbora Krejčíková Nikola Mektić
French Open	late May/ early June	Stade Roland Garros, Paris	Clay	Rafael Nadal	Iga Świątek	Kevin Krawietz Andreas Mies	Tímea Babos Kristina Mladenovic	Latisha Chan Ivan Dodig
Wimbledon	late June/ early July	All England Lawn Tennis and Croquet Club, London	Grass	Novak Djokovic	Simona Halep	Juan Sebastián Cabal Robert Farah	Hsieh Su-wei Barbora Strýcová	Latisha Chan Ivan Dodig
US Open	late August/ early September	USTA Billie Jean King National Tennis Center, New York City	Hard	Dominic Thiem	Naomi Osaka	Mate Pavić Bruno Soares	Laura Siegemund Vera Zvonareva	Bethanie Mattek-Sands Jamie Murray

Task 2

name	number_of_wins
Novak Djokovic	2
Sofia Kenin	1
Rafael Nadal	1

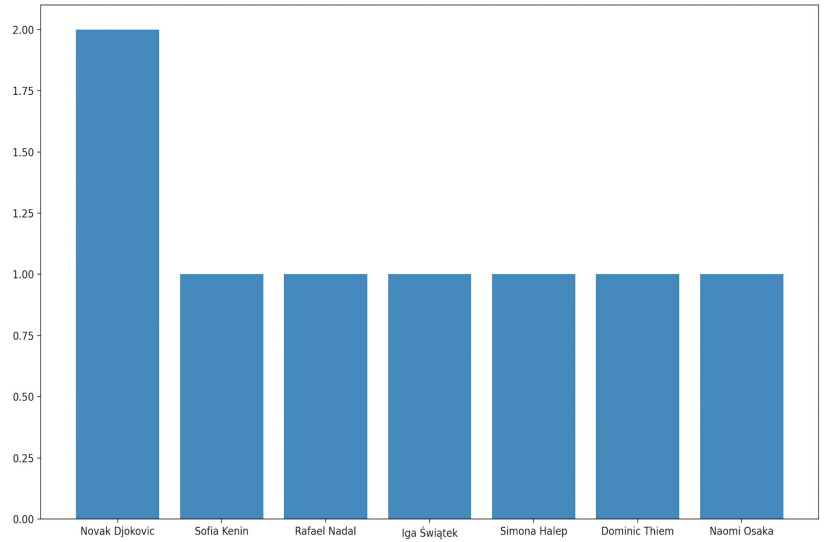
Create a tennis.db table called tennis with name and number_of_wins columns using only Men’s singles and Women’s singles

Task 3

Create a visualization using matplotlib

X = name

Y = number_of_wins



If you have more time

Create another visualization using plotly