The StarWars API with Python

Scrape data & Analysis

Import Library

```
import requests
import pandas as pd
import time
```

API method

```
names = []
rotation_periods = []
diameters = []
climates = []
surface_waters = []
populations = []

for i in range(1, 51):
  url = f"https://swapi.dev/api/planets/{i}/"
  resp = requests.get(url)
  result = resp.json()
  names.append(result['name'])
  rotation_periods.append(result['rotation_period'])
  diameters.append(result['diameter'])
  climates.append(result['climate'])
  surface_waters.append(result['surface_water'])
  populations.append(result['population'])
  time.sleep(1)     # delay 2 second by each cyles


df = pd.DataFrame({
  "name" : names,
  "rotation_period" : rotation_periods,
  "diameter" : diameters,
  "climate" : climates,
  "surface_water" : surface_waters,
  "population" : populations
})
```

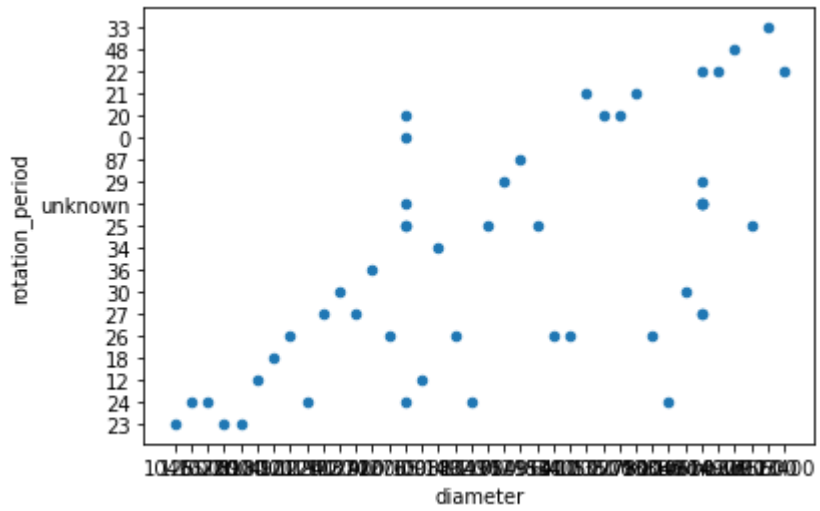
```
df.head(10)
```

	name	rotation_period	diameter	climate	surface_water	population
0	Tatooine	23	10465	arid	1	200000
1	Alderaan	24	12500	temperate	40	2000000000
2	Yavin IV	24	10200	temperate, tropical	8	1000
3	Hoth	23	7200	frozen	100	unknown
4	Dagobah	23	8900	murky	8	unknown
5	Bespin	12	118000	temperate	0	6000000
6	Endor	18	4900	temperate	8	30000000
7	Naboo	26	12120	temperate	12	4500000000
8	Coruscant	24	12240	temperate	unknown	1000000000000
9	Kamino	27	19720	temperate	100	1000000000

Compare the relation between the Rotation_period and Diameter

```
df[['rotation_period', 'diameter']].plot(kind = 'scatter', x = 'diameter', y = 'rotation_peri
```

```
<matplotlib.axes._subplots.AxesSubplot at 0x7f696c4e44d0>
```

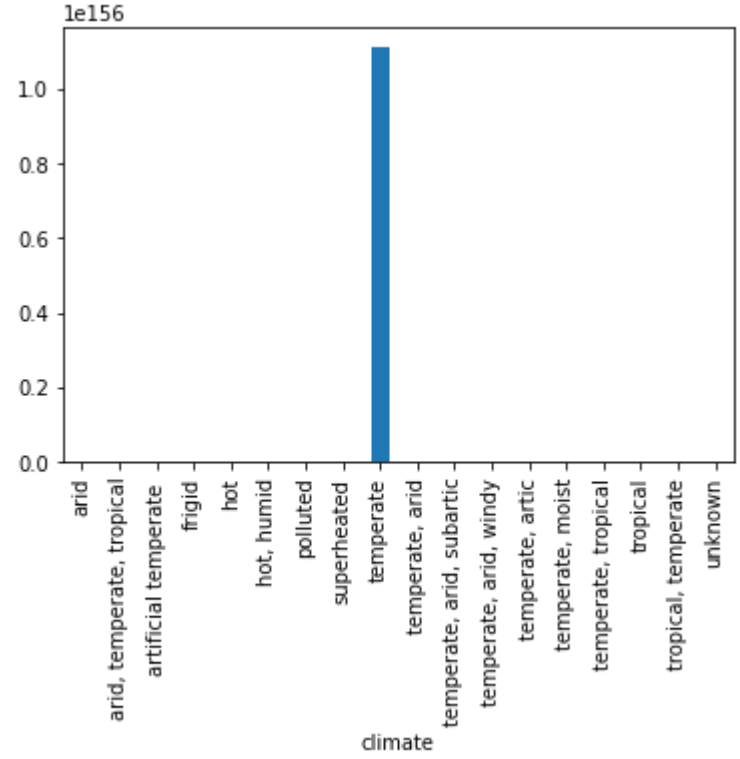


The relationship between diameter and rotation_period is in the same direction.

Compare the relation between Population group by Climate

```
df_filter = df[df['population'] != 'unknown']      #Filter out unknow values from population
df_group = df_filter.groupby(['climate'])['population'].mean()
df_group_graph = df_group.plot(kind = 'bar');
print(df_group_graph)
```

```
AxesSubplot(0.125,0.125;0.775x0.755)
```



The most outstandingly amount on population in the planets is on the climate of 'Temperate'.

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