```
from mongo_client import CovidClient
import matplotlib.pyplot as plt
import datetime
import numpy as np

uri =
"mongodb://bbddav:MwcC728FK1y98LrjmY0M4dop0SOA6ufv1PfmZ1QvW70gvnuJ4mqY9Lyr
3pxdDEHCcqi3D6w2GZfYpujcHsZfpA==@bbddav.mongo.cosmos.azure.com:10255/?
ssl=true&replicaSet=globaldb&retrywrites=false&maxIdleTimeMS=120000&appNam
e=@bbddav@"

client = CovidClient(uri, 'covid', 'Worldwide')
```

Ejemplos de consultas

Total de casos confirmados

```
client.get_total_cases()
```

```
3807852
```

Total de muertes confirmadas

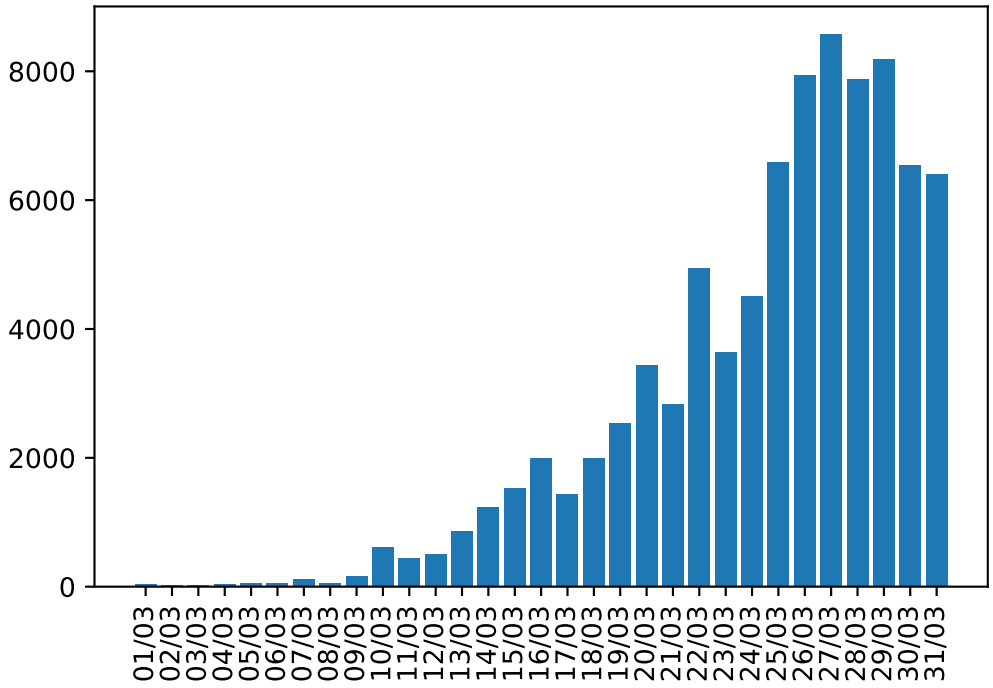
```
client.get_total_deaths()
```

```
269068
```

Casos en España en Marzo

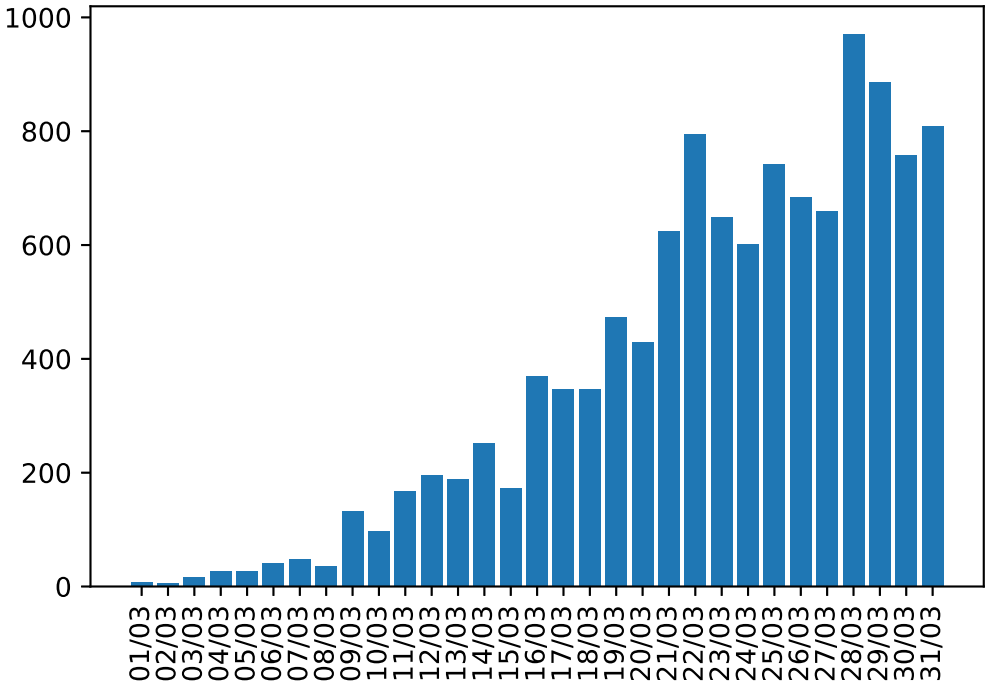
```
data = client.get_data_country('Spain')
month = 3
cases = []
dates = []

# Get data
for d in data:
    date = d['dateRep']
    if date.month == month:
        cases.append(abs(d['cases']))
```

```
        dates.append(date.strftime("%d/%m"))

# Reverse data
cases = cases[::-1]
dates = dates[::-1]
y_pos = np.arange(len(dates))
plt.bar(y_pos, cases)
plt.xticks(y_pos, dates, rotation = 90)
plt.show()
```



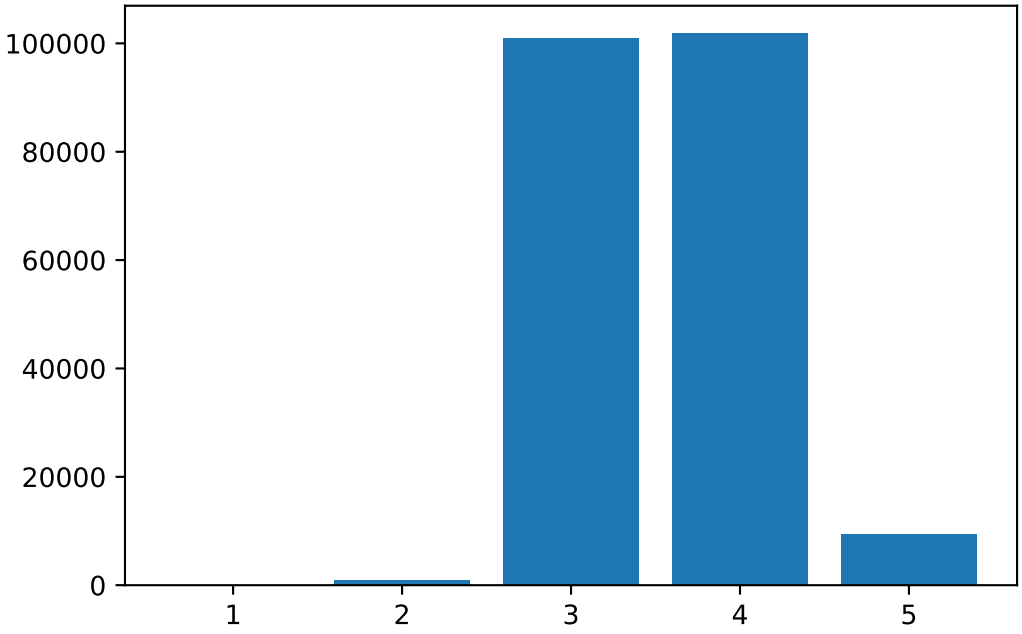
Muertes en Italia en Abril

```
data = client.get_data_country('Italy')
month = 3
deaths = []
dates = []

for d in data:
    date = d['dateRep']
    if date.month == month:
        deaths.append(abs(d['deaths']))
        dates.append(date.strftime("%d/%m"))

# Reverse data
deaths = deaths[::-1]
dates = dates[::-1]
y_pos = np.arange(len(deaths))
plt.bar(y_pos, deaths)
plt.xticks(y_pos, dates, rotation = 90)
plt.show()
```



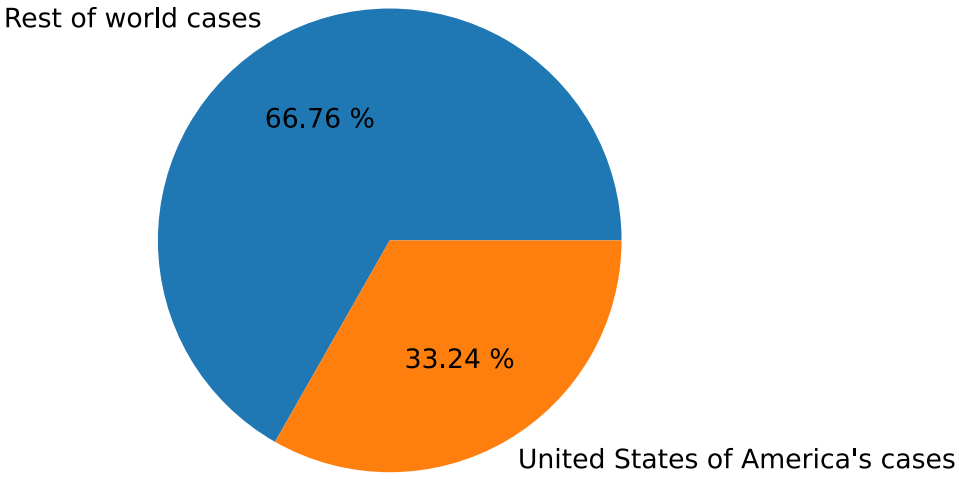
Casos por meses en Italia

```
data = client.get_data_country('Italy')
months = {1:0, 2:0, 3:0, 4:0, 5:0}

for d in data:
    months[d['dateRep'].month] += abs(d['cases'])

y_pos = np.arange(len(months.values()))
plt.bar(y_pos, months.values())
plt.xticks(y_pos, months.keys())
plt.show()
```



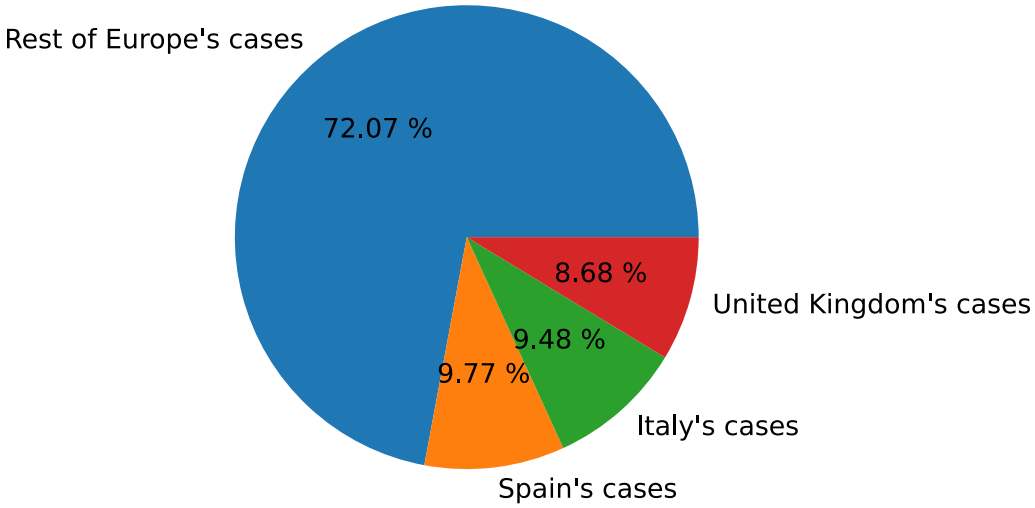
Porcentaje de casos en Estados Unidos respecto al resto del mundo

```
country = "United_States_of_America"
country_cases = client.get_total_cases_country(country)
total_cases = client.get_total_cases() - country_cases

values = [total_cases, country_cases]
names = ["Rest of world cases", (country.replace("_"," ") + "'s cases")]
plt.pie(values, labels=names, autopct="%0.2f %%")
plt.show()
```



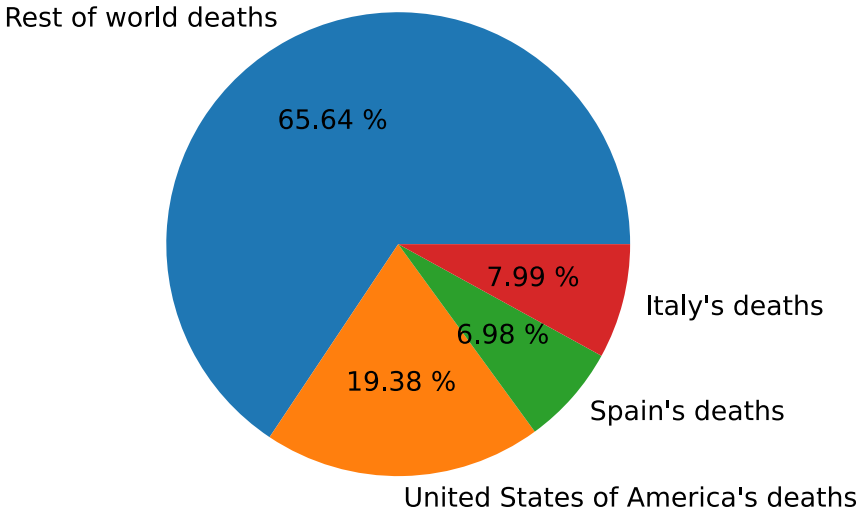
Porcentaje de casos de los tres paises europeos más afectados

```
continent = "Europe"
country1 = "Spain"
country2 = "Italy"
country3 = "United_Kingdom"

country1_cases = client.get_total_cases_country(country1)
country2_cases = client.get_total_cases_country(country2)
country3_cases = client.get_total_cases_country(country3)
continent_cases = client.get_total_cases_continent(continent) -
(country1_cases - country2_cases - country3_cases)

values = [continent_cases, country1_cases, country2_cases, country3_cases]
names = [("Rest of " + continent.replace("_", " ") + "'s cases"),
(country1.replace("_"," ") + "'s cases"), (country2.replace("_"," ") + "'s
cases"), (country3.replace("_"," ") + "'s cases")]
plt.pie(values, labels=names, autopct="%0.2f %%")
plt.show()
```



Porcentaje de muertes de los tres paises más afectados en el mundo

```
country1 = "United_States_of_America"
country2 = "Spain"
country3 = "Italy"
country1_deaths = client.get_total_deaths_country(country1)
country2_deaths = client.get_total_deaths_country(country2)
country3_deaths = client.get_total_deaths_country(country3)
total_cases = client.get_total_deaths() - (country1_deaths -
country2_deaths - country3_deaths)

values = [total_cases, country1_deaths, country2_deaths, country3_deaths]
names = ["Rest of world deaths", (country1.replace("_"," ") + "'s
deaths"), (country2.replace("_"," ") + "'s deaths"),
(country3.replace("_", " ") + "'s deaths")]
plt.pie(values, labels=names, autopct="%0.2f %%")
plt.show()
```


Rest of world deaths
65.64 %
7.99 %
Italy's deaths
6.98 %
19.38 %
Spain's deaths
United States of America's deaths