1

```
import sqlite3

class Test:
    def score():
        conn = sqlite3.connect('test3.db')
        a1= int(input("ID:"))
        a2= int(input("請問這次成績如何:"))
        cursor = conn.cursor()
        sqlstr = "insert into Grade values(a1,a2)"
        cursor.execute(sqlstr)
        conn.commit()
        conn.close()
Test.score()

#sqlstr = "insert into Grade values('1','2')"

#sqlstr = "delete from Grade where ID = '1'"
```

2.A

```
import pandas as pd
csvdata = pd.read_csv("COVID19_line_list_data.csv")
csvdata
```

| | id | case_in_country | reporting date | Unnamed: 3 | summary | location | country | gender | age | symptom_onset | ... | recovered | s |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 1 | NaN | 1/20/2020 | NaN | First confirmed imported COVID-19 pneumonia pa... | Shenzhen, Guangdong | China | male | 66.0 | 01/03/20 | ... | 0 | |
| 1 | 2 | NaN | 1/20/2020 | NaN | First confirmed imported COVID-19 pneumonia pa... | Shanghai | China | female | 56.0 | 1/15/2020 | ... | 0 | |
| 2 | 3 | NaN | 1/21/2020 | NaN | First confirmed imported cases in Zhejiang: pa... | Zhejiang | China | male | 46.0 | 01/04/20 | ... | 0 | |

```
csvdata[(csvdata['location']=="Tianjin")&(csvdata['age']>35)]
```

| | id | case_in_country | reporting date | Unnamed: 3 | summary | location | country | gender | age | symptom_onset | ... | recovered | symptom |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | 4 | NaN | 1/21/2020 | NaN | new confirmed imported COVID-19 pneumonia in T... | Tianjin | China | female | 60.0 | NaN | ... | 0 | NaN |
| 4 | 5 | NaN | 1/21/2020 | NaN | new confirmed imported COVID-19 pneumonia in T... | Tianjin | China | male | 58.0 | NaN | ... | 0 | NaN |
| | | | | | new confirmed COVID-19 | | | | | | | | |

| | id | case_in_country | reporting date | Unnamed: 3 | summary | location | country | gender | age | symptom_onset | ... | recovered | symptom |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | 4 | NaN | 1/21/2020 | NaN | new confirmed imported COVID-19 pneumonia in T... | Tianjin | China | female | 60.0 | NaN | ... | 0 | NaN |
| 4 | 5 | NaN | 1/21/2020 | NaN | new confirmed imported COVID-19 pneumonia in T... | Tianjin | China | male | 58.0 | NaN | ... | 0 | NaN |
| 80 | 81 | NaN | 1/23/2020 | NaN | new confirmed COVID-19 pneumonia in Tianjin, m... | Tianjin | China | male | 46.0 | NaN | ... | 0 | NaN |
| 95 | 96 | NaN | 1/24/2020 | NaN | new confirmed imported COVID-19 pneumonia pati... | Tianjin | China | male | 39.0 | NaN | ... | 0 | NaN |
| 117 | 118 | NaN | 1/21/2020 | NaN | confirmed imported COVID-19 pneumonia patient ... | Tianjin | China | female | 59.0 | 1/14/2020 | ... | 0 | NaN |
| 118 | 119 | NaN | 1/21/2020 | NaN | confirmed imported COVID-19 | Tianjin | China | male | 57.0 | 1/18/2020 | ... | 0 | NaN |

2B

```
num = int(len(csvdata))
i=0
for i in range(num):
    csvdata['county']=csvdata['location'].apply(lambda x: x[:3])
csvdata
```

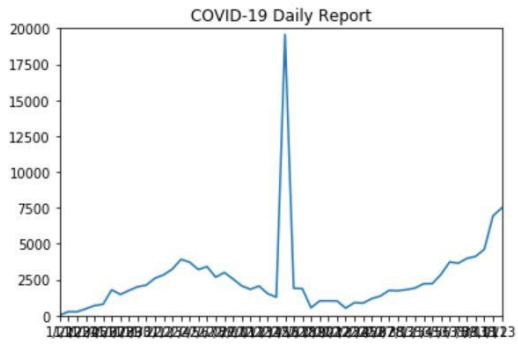
| | id | case_in_country | reporting date | Unnamed: 3 | summary | location | country | gender | age | symptom_onset | ... | exposure_st |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 1 | 0 | 1/20/2020 | NaN | First confirmed imported COVID-19 pneumonia pa... | Shenzhen, Guangdong | China | male | 66.0 | 2001/3/20 | ... | 12/29/20 |
| 1 | 2 | 0 | 1/20/2020 | NaN | First confirmed imported COVID-19 pneumonia pa... | Shanghai | China | female | 56.0 | 1/15/2020 | ... | N |
| 2 | 3 | 0 | 1/21/2020 | NaN | First confirmed imported cases in | Zhejiang | China | male | 46.0 | 2001/4/20 | ... | N |

```
csvdata[csvdata['case_in_country']==0].groupby(by = 'county')['age'].mean()
```

```
county
Afg    35.000000
Aic    59.285714
Ala          NaN
Alg          NaN
Ami    55.000000
         ...
Yun    45.894737
Zab          NaN
Zar    27.000000
Zhe    46.000000
Zhu    58.000000
Name: age, Length: 139, dtype: float64
```

3.

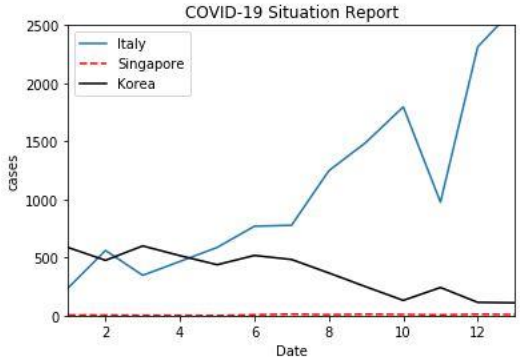
```
x=[0,'1/21','1/22','1/23','1/24','1/25','1/26','1/27','1/28','1/29','1/30','1/31','2/1','2/2','2/3','2/4','2/5','2/6
y=[0,32,266,262,467,691,783,1792,1468,1750,2006,2121,2604,2834,3239,3913,3712,3205,3405,2672,2996,2549,2068,1826,205
plt.plot(x,y)
plt.xlim('1/21','3/13')
plt.ylim(0,20000)
plt.title("COVID-19 Daily Report")
plt.xlabel("Date")
plt.show()
```




4.

```
import matplotlib.pyplot as plt

c=[1,2,3,4,5,6,7,8,9,10,11,12,13]
d=[240,561,347,466,587,769,778,1247,1492,1797,977,2313,2651]
plt.plot(c,d,label = "Italy")
a=[1,2,3,4,5,6,7,8,9,10,11,12,13]
b=[4,4,2,2,0,7,13,8,12,10,6,12,9]
plt.plot(a,b,color = 'red',linestyle='--',label = "Singapore")
e=[1,2,3,4,5,6,7,8,9,10,11,12,13]
f=[586,476,600,516,438,518,483,367,248,131,242,114,110]
plt.plot(e,f,color = 'black',label = "Korea")
plt.legend()
plt.xlim(1,13)
plt.ylim(0,2500)
plt.title("COVID-19 Situation Report")
plt.xlabel("Date")
plt.ylabel("cases")
plt.show()
```


COVID-19 Situation Report
Italy
Singapore
Korea
cases
Date
2500
2000
1500
1000
500
0
2
4
6
8
10
12