Working with COVID-19 DataSet

Represented by visualization

In [1]:
```
import matplotlib.pyplot as plt
```

In [ ]:
```

```

In [2]:
```
import requests
from pandas.io.json import json_normalize
URL = "https://api.covid19india.org/data.json"
data = requests.get(url=URL).json()
covid19_df = json_normalize(data['statewise'])
print("Total Confirmed Cases: "+str(covid19_df[covid19_df.state == "Total"]['con
print("Total Active Cases: "+str(covid19_df[covid19_df.state == "Total"]['active
print("Total Recovered Cases: "+str(covid19_df[covid19_df.state == "Total"]['rec
print("Total Deceased Cases: "+str(covid19_df[covid19_df.state == "Total"]['deatl
print(covid19_df[['state','confirmed','active','recovered','deaths']].sort_value
```

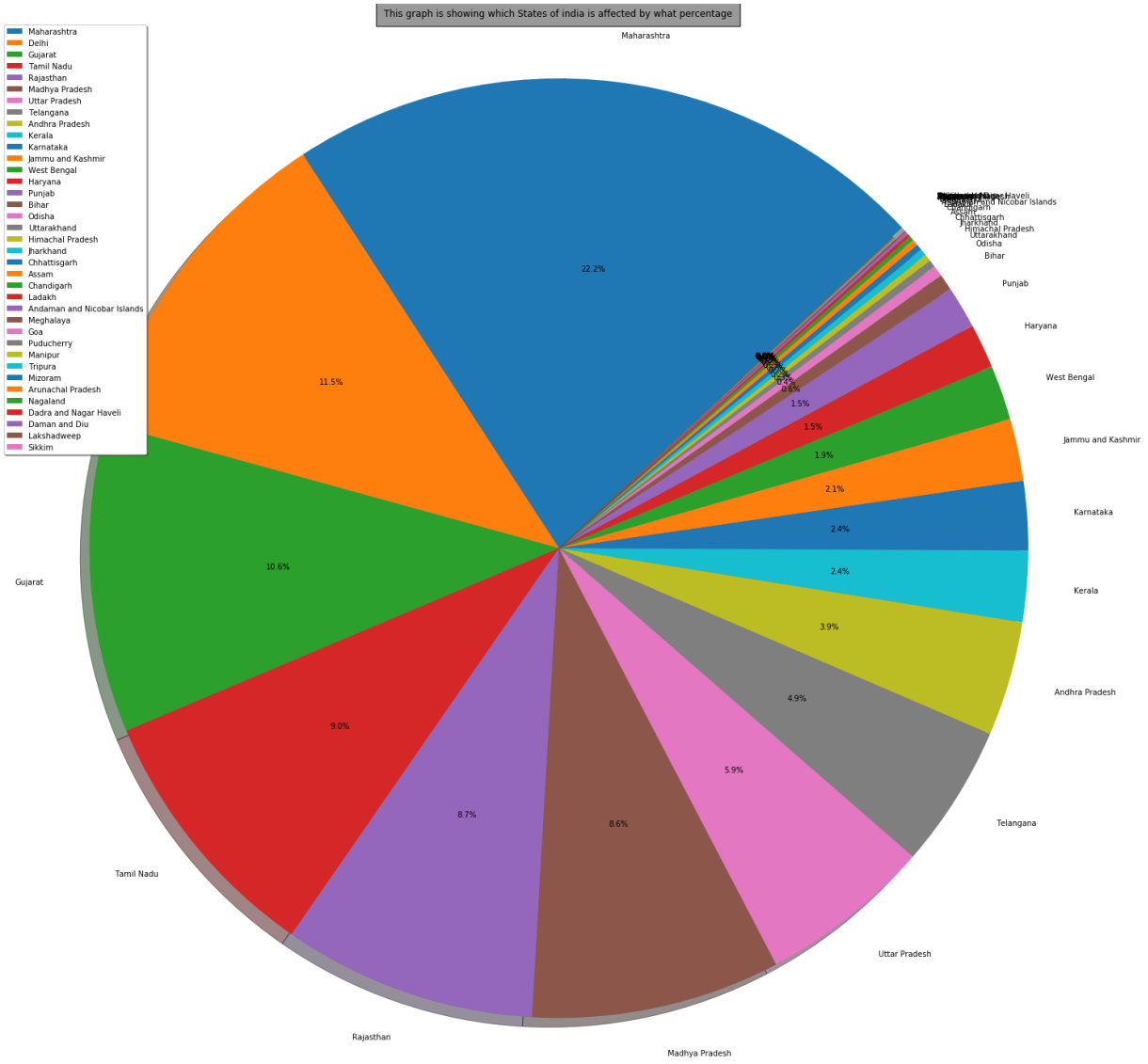
```
Total Confirmed Cases: 0    16402
Name: confirmed, dtype: object
Total Active Cases: 0    13263
Name: active, dtype: object
Total Recovered Cases: 0    2601
Name: recovered, dtype: object
Total Deceased Cases: 0    538
Name: deaths, dtype: object
                         state confirmed active recovered deaths
7                  Uttar Pradesh       974    852       108     14
16                         Bihar        93     49        42      2
8                      Telangana       809    605       186     18
28                    Puducherry         7      3         4      0
27                           Goa         7      0         7      0
9                 Andhra Pradesh       647    565        65     17
17                        Odisha        61     36        24      1
18                   Uttarakhand        42     33         9      0
10                        Kerala       401    129       270      2
11                     Karnataka       390    263       111     16
19               Himachal Pradesh        39     21        16      2
20                      Jharkhand        38     36         0      2
1                     Maharashtra      3648   3072       365    211
21                   Chhattisgarh        36     11        25      0
12              Jammu and Kashmir       350    294        51      5
22                          Assam        34     16        17      1
13                    West Bengal       310    236        62     12
23                    Chandigarh        26     13        13      0
14                       Haryana       250    143       104      3
15                        Punjab       238    187        35     16
29                        Manipur         2      1         1      0
30                        Tripura         2      1         1      0
2                           Delhi      1893   1643       207     43
24                          Ladakh        18      4        14      0
3                         Gujarat      1743   1575       105     63
0                           Total     16402  13263      2601    538
25  Andaman and Nicobar Islands        15      4        11      0
4                       Tamil Nadu      1477   1051       411     15
5                        Rajasthan      1431   1204       205     22
6                   Madhya Pradesh      1407   1204       131     72
26                       Meghalaya        11     10         0      1
31                         Mizoram         1      1         0      0
32              Arunachal Pradesh          1      0         1      0
33                        Nagaland         1      1         0      0
34       Dadra and Nagar Haveli            0      0         0      0
35                   Daman and Diu         0      0         0      0
```

36	Lakshadweep	0	0	0	0
37	Sikkim	0	0	0	0

Visualize By Pie-Chart

State wise total confirm percentage

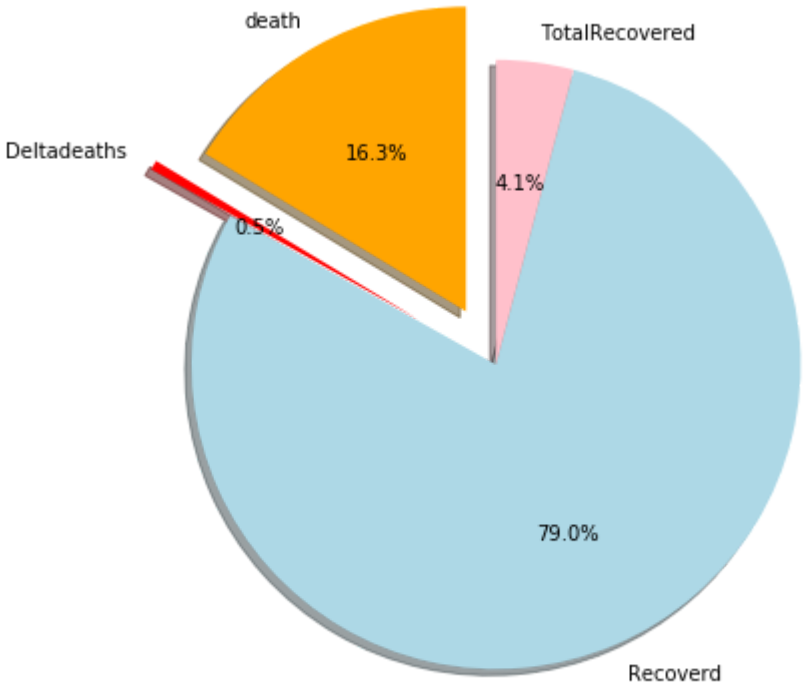
In [4]:
```
import matplotlib.pyplot as plt
import requests
from pandas.io.json import json_normalize
URL = "https://api.covid19india.org/data.json"
data = requests.get(url=URL).json()
covid19_df = json_normalize(data['statewise'])
T='This graph is showing which States of india is affected by what percentage'
labels=covid19_df['state'][covid19_df["state"]!='Total']
fig = plt.figure(figsize=(26,25))
size=covid19_df['confirmed'][covid19_df["state"]!='Total']
plt.pie(size, labels=labels, autopct='%1.1f%%',shadow=True,startangle=43)
plt.legend(labels, loc="best",shadow=True)
plt.axis('equal')
plt.title(T,bbox={'facecolor':'0.6', 'pad':10})
plt.show()
```



In [ ]:
```
```

In [7]:
```
labels=['death','Deltadeaths','Recoverd','TotalRecovered']
sizes=[deaths,deltadeaths,recovered,deltarecovered]
explode=[0.2,0.3,0,0]
colors = ['orange','red','lightblue','pink']
plt.figure(figsize = (10, 7))
plt.pie(sizes,labels=labels,colors=colors,shadow='true',autopct='%1.1f%%',explod
```

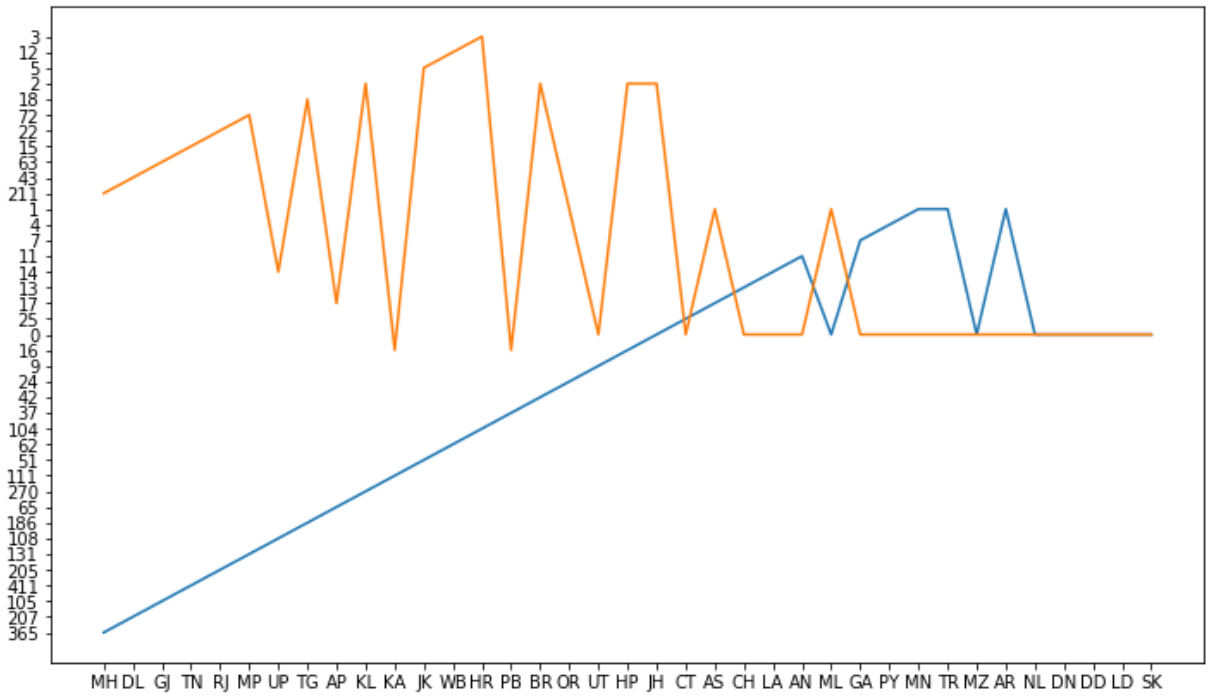
Out[7]:
```
([<matplotlib.patches.Wedge at 0x29997b10dd8>,
  <matplotlib.patches.Wedge at 0x29997b2e0f0>,
  <matplotlib.patches.Wedge at 0x29997b2ea90>,
  <matplotlib.patches.Wedge at 0x29997b4cd68>],
 [Text(-0.6386829861967008, 1.1322915009585055, 'death'),
  Text(-1.2097538808534476, 0.7046244019050312, 'Deltadeaths'),
  Text(0.4293047701793341, -1.0127672063713702, 'Recoverd'),
  Text(0.14136630626560195, 1.0908783467705372, 'TotalRecovered')],
 [Text(-0.39303568381335435, 0.6967947698206187, '16.3%'),
  Text(-0.7776989234057876, 0.45297282979609144, '0.5%'),
  Text(0.23416623827963673, -0.5524184762025655, '79.0%'),
  Text(0.07710889432669198, 0.5950245527839293, '4.1%')])
```



Line Plot - Deaths and Recovered

In [13]:
```
covid19_dfnew=covid19_df.drop(covid19_df.index[[0]])
plt.figure(figsize = (12, 7))
statecode=covid19_dfnew['statecode']
recovered=covid19_dfnew['recovered']
deaths=covid19_dfnew['deaths']
plt.plot(statecode, recovered, label='covid-19')
plt.plot(statecode, deaths, label='covid-19')
```

Out[13]: [<matplotlib.lines.Line2D at 0x299983f7898>]



Bar Plot

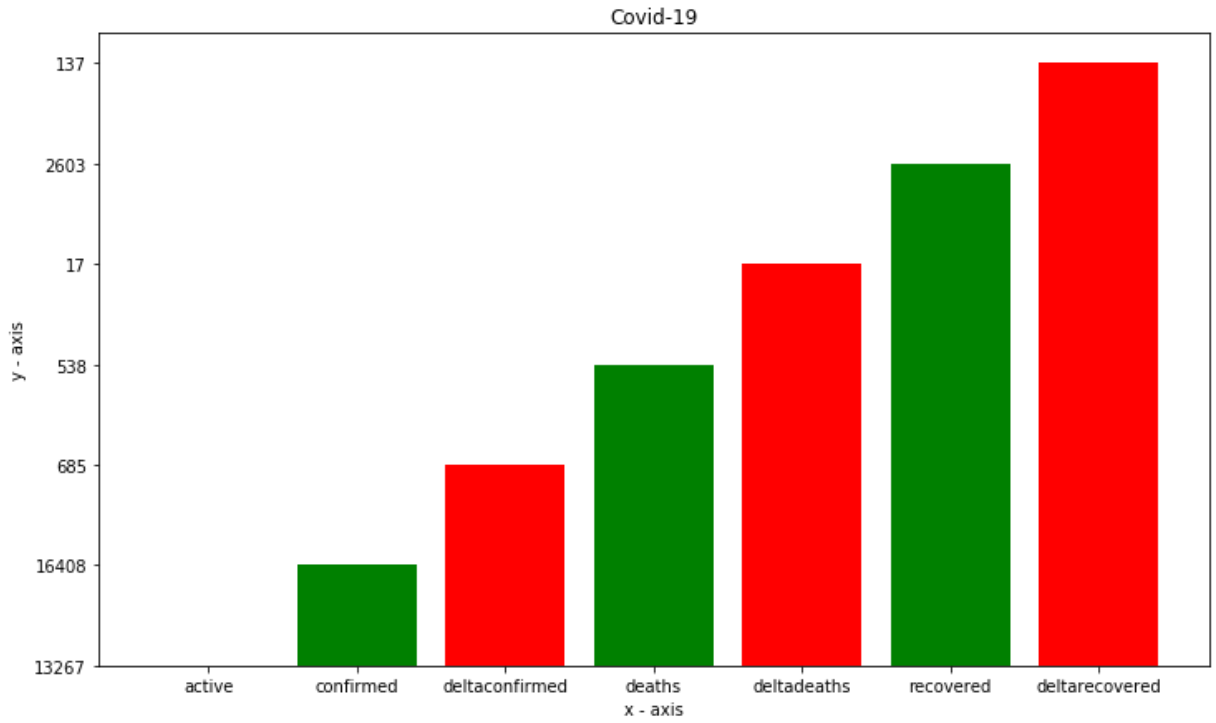
In [14]:
```
active=covid19_df['active'][0]
confirmed=covid19_df['confirmed'][0]
deltaconfirmed=covid19_df['deltaconfirmed'][0]
deaths=covid19_df['deaths'][0]
deltadeaths=covid19_df['deltadeaths'][0]
recovered=covid19_df['recovered'][0]
deltarecovered=covid19_df['deltarecovered'][0]
time=covid19_df['lastupdatedtime'][0]
# x-coordinates of left sides of bars
left = [1,2,3,4,5,6,7]

# heights of bars
height = [active,confirmed,deltaconfirmed,deaths,deltadeaths,recovered,deltareco

# labels for bars
tick_label = ['active','confirmed','deltaconfirmed','deaths','deltadeaths','reco
plt.figure(figsize = (12, 7))
# plotting a bar chart
plt.bar(left, height, tick_label = tick_label,
        width = 0.8, color = ['red', 'green'])

# naming the x-axis
plt.xlabel('x - axis')
# naming the y-axis
plt.ylabel('y - axis')
# plot title
plt.title('Covid-19')

plt.show()
print('last updated time = ' , time)
```



```
last updated time =  19/04/2020 20:38:18
```

In [ ]: