In [3]:
```
%matplotlib inline
```

In [4]:
```
import matplotlib as mpl
import matplotlib.pyplot as plt
import numpy as np
import pandas as pd
data = pd.read_csv('district.csv')
```

In [7]:
```
data.head(4)
```

Out[7]:

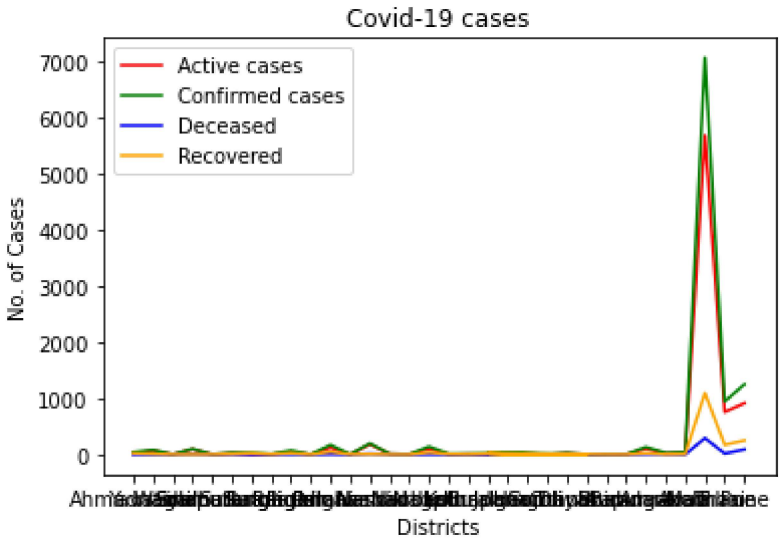
	districtData/0/district	districtData/0/active	districtData/0/confirmed	districtData/0/deceased	distri
0	Ahmadnagar	17	42	2	
1	Yavatmal	69	79	0	
2	Washim	1	2	0	
3	Solapur	93	99	6	

In [6]:
```
data.describe()
```

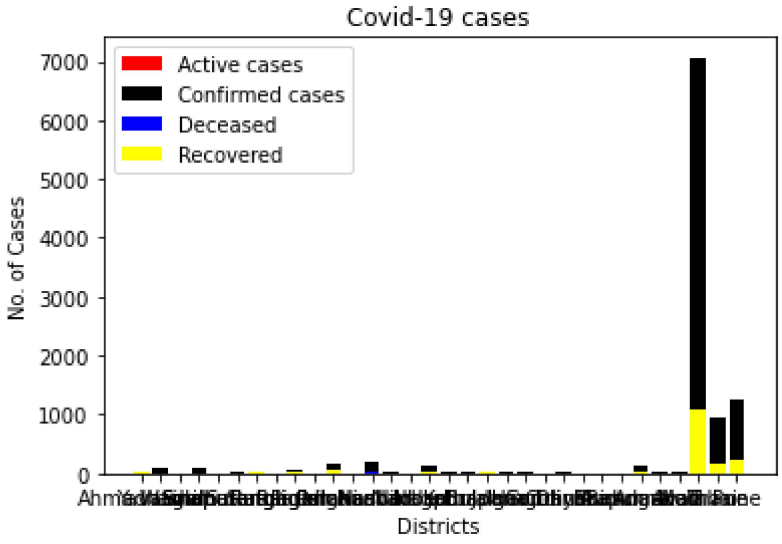
Out[6]:

	districtData/0/active	districtData/0/confirmed	districtData/0/deceased	districtData/0/recovered
count	33.000000	33.000000	33.000000	33.000000
mean	249.818182	317.909091	13.878788	54.212121
std	994.971936	1238.750034	51.887955	193.105016
min	0.000000	1.000000	0.000000	0.000000
25%	2.000000	3.000000	0.000000	1.000000
50%	14.000000	25.000000	1.000000	5.000000
75%	69.000000	79.000000	4.000000	22.000000
max	5679.000000	7061.000000	290.000000	1092.000000

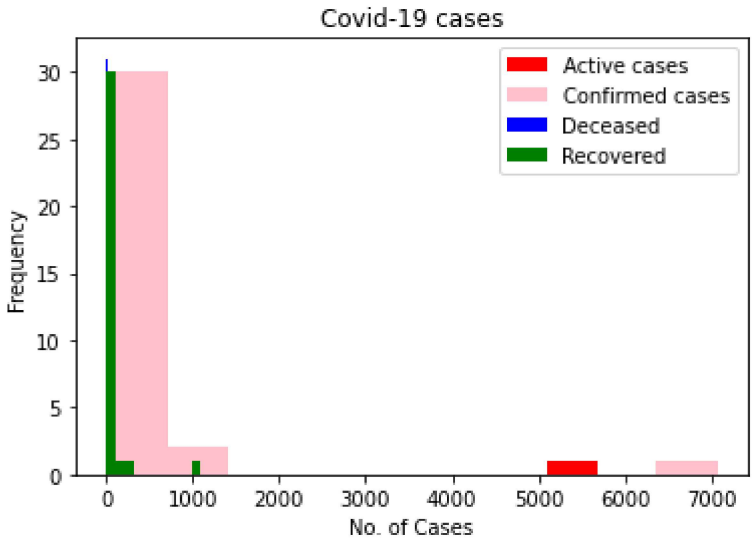
In [12]:
```
A = data.iloc[0:,1].values
B = data.iloc[0:,2].values
C = data.iloc[0:,3].values
D = data.iloc[0:,4].values
X = data.iloc[0:,0]

plt.plot(X, A, label= "Active cases", color="red")
plt.plot(X, B, label= "Confirmed cases", color="green")
plt.plot(X, C, label= "Deceased", color="blue")
plt.plot(X, D, label= "Recovered", color="orange")
plt.xlabel('Districts')
plt.ylabel('No. of Cases')
plt.title('Covid-19 cases')
plt.legend()
plt.show()
```



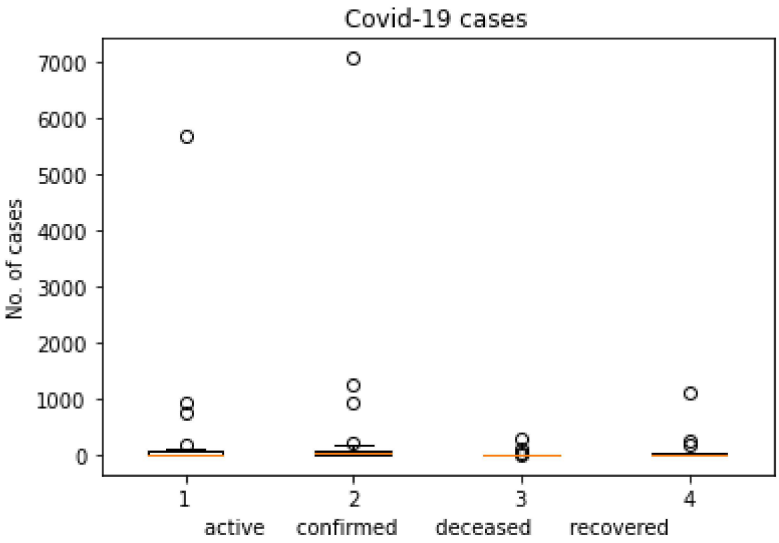
In [15]:
```
plt.bar(X, A, label= "Active cases", color="red")
plt.bar(X, B, label= "Confirmed cases", color="black")
plt.bar(X, C, label= "Deceased", color="blue")
plt.bar(X, D, label= "Recovered", color="yellow")
plt.xlabel('Districts')
plt.ylabel('No. of Cases')
plt.title('Covid-19 cases')
plt.legend()
plt.show()
```



In [16]:
```
plt.hist(A, label= "Active cases", color="red")
plt.hist(B, label= "Confirmed cases", color="pink")
plt.hist(C, label= "Deceased", color="blue")
plt.hist(D, label= "Recovered", color="green")
plt.xlabel('No. of Cases')
plt.ylabel('Frequency')
plt.title('Covid-19 cases')
plt.legend()
plt.show()
```



In [17]:
```
Covidcases= [A, B, C, D]
plt.boxplot(Covidcases)
plt.title("Covid-19 cases")
plt.xlabel("active     confirmed      deceased      recovered")
plt.ylabel("No. of cases")
plt.show()
```



In [18]:
```
data.sort_values(['districtData/0/active', 'districtData/0/district'], ascending = Fal
```

Out[18]:

	districtData/0/district	districtData/0/active	districtData/0/confirmed	districtData/0/deceased	dist
30	Mumbai	5679	7061	290	
32	Pune	912	1248	88	
31	Thane	755	943	16	
12	Nashik	179	197	12	
10	Palghar	119	169	4	
27	Aurangabad	102	131	7	
15	Nagpur	100	139	2	
3	Solapur	93	99	6	
1	Yavatmal	69	79	0	
8	Raigarh	44	71	3	
19	Jalgaon	30	40	9	
29	Akola	30	39	1	
22	Dhule	22	25	3	
5	Satara	21	32	2	
28	Amravati	17	28	7	
0	Ahmadnagar	17	42	2	
20	Hingoli	14	15	0	
13	Nandurbar	10	11	1	
17	Kolhapur	10	14	0	
6	Sangli	3	29	1	
14	Nanded	3	3	0	
16	Latur	3	12	1	
18	Buldana	3	21	1	
24	Buldana	3	21	1	
7	Ratnagiri	2	8	1	
2	Washim	1	2	0	
4	Sindhudurg	1	2	0	
9	Parbhani	1	2	0	
26	Bhandara	1	1	0	
11	Osmanabad	0	3	0	
21	Gondiya	0	1	0	
23	Chandrapur	0	2	0	
25	Bid	0	1	0	

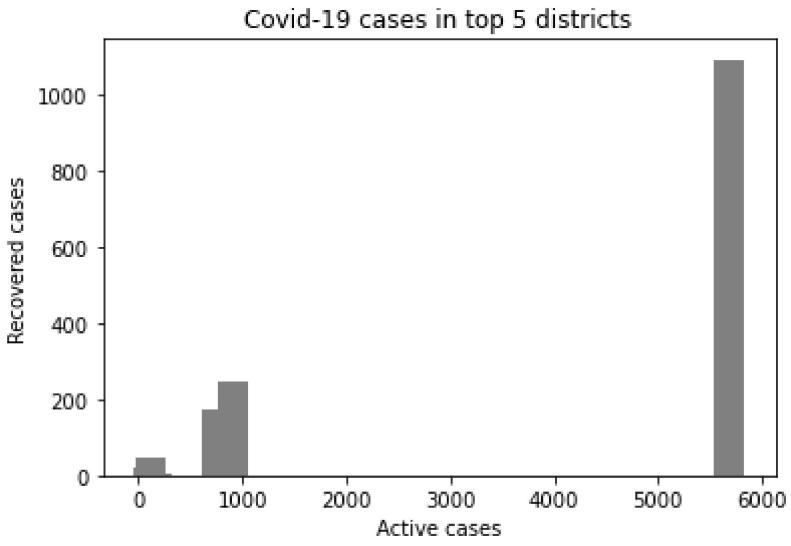
In [23]:
```
Sortedcases= data.sort_values(['districtData/0/active', 'districtData/0/district'], as
Sortedcases.head(6)
```

Out[23]:

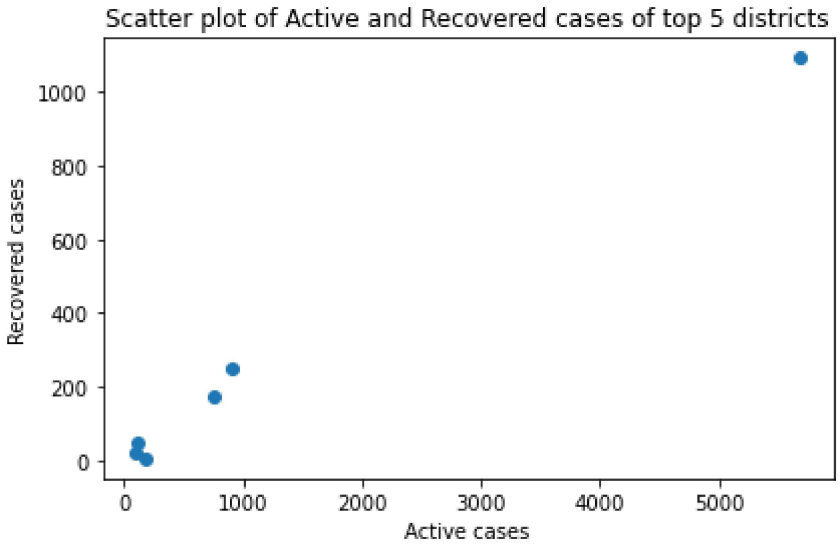
	districtData/0/district	districtData/0/active	districtData/0/confirmed	districtData/0/deceased	dist
30	Mumbai	5679	7061	290	
32	Pune	912	1248	88	
31	Thane	755	943	16	
12	Nashik	179	197	12	
10	Palghar	119	169	4	
27	Aurangabad	102	131	7	

In [26]:
```
Highestcases= Sortedcases.head(6)
```

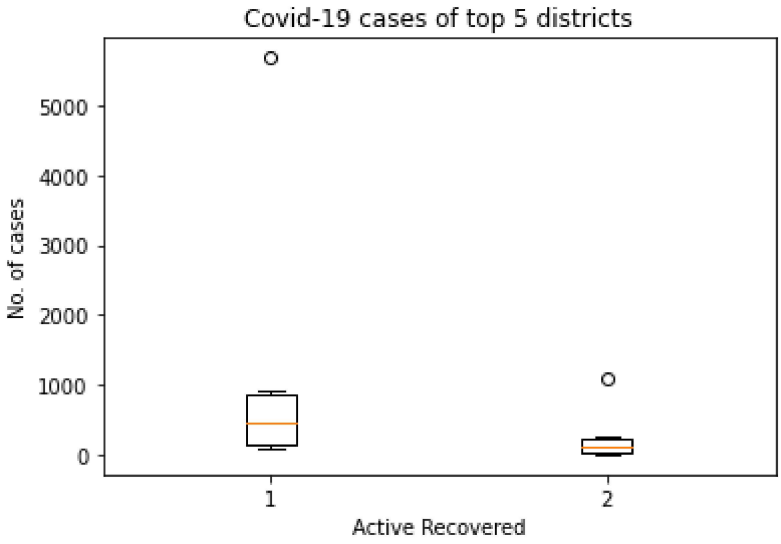
In [28]:
```
A = Highestcases.loc[:, "districtData/0/active"]
R = Highestcases.loc[:, "districtData/0/recovered"]
plt.bar(A,R, width= 300, color = "grey")
plt.xlabel("Active cases")
plt.ylabel("Recovered cases")
plt.title("Covid-19 cases in top 5 districts")
plt.show()
```



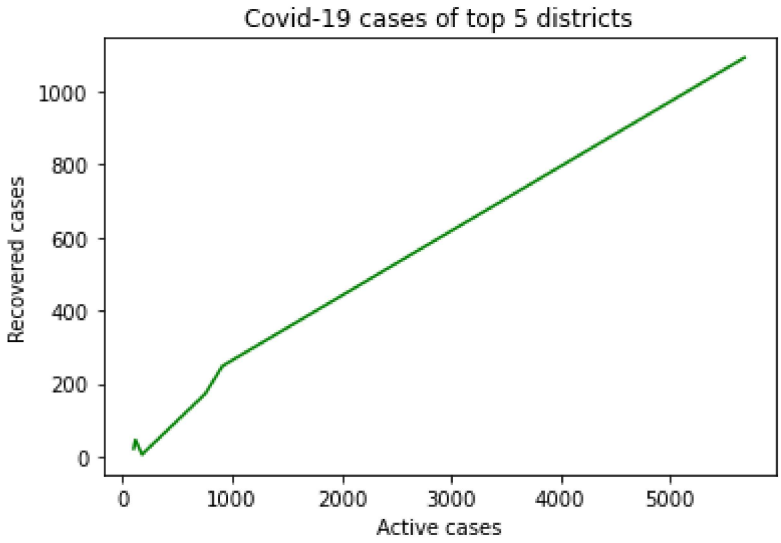
In [29]:
```
plt.scatter(A,R)
plt.xlabel("Active cases")
plt.ylabel("Recovered cases")
plt.title("Scatter plot of Active and Recovered cases of top 5 districts")
plt.tight_layout()
plt.show()
```



In [30]:
```
Covidcases = [A,R]
plt.boxplot(Covidcases)
plt.xlabel("Active Recovered")
plt.ylabel("No. of cases")
plt.title("Covid-19 cases of top 5 districts")
plt.show()
```



In [32]:
```
plt.plot (A,R, color="green")
plt.xlabel("Active cases")
plt.ylabel("Recovered cases")
plt.title("Covid-19 cases of top 5 districts")
plt.show()
```



In [33]:
```
plt.hist(A, label="Active Cases", color= "red")
plt.hist(R, label="Recovered Cases", color="yellow")
plt.xlabel("No. of COVID cases")
plt.ylabel("Frequency")
plt.title("Covid-19 cases in top 5 districts")
plt.legend()
plt.show()
```