In [1]:
```
%matplotlib inline
```

In [2]:
```
import matplotlib as mpl
import matplotlib.pyplot as plt
import numpy as np
import pandas as pd
```

In [3]:
```
data = pd.read_csv('covid_dataset.csv')
```

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

Out[4]:

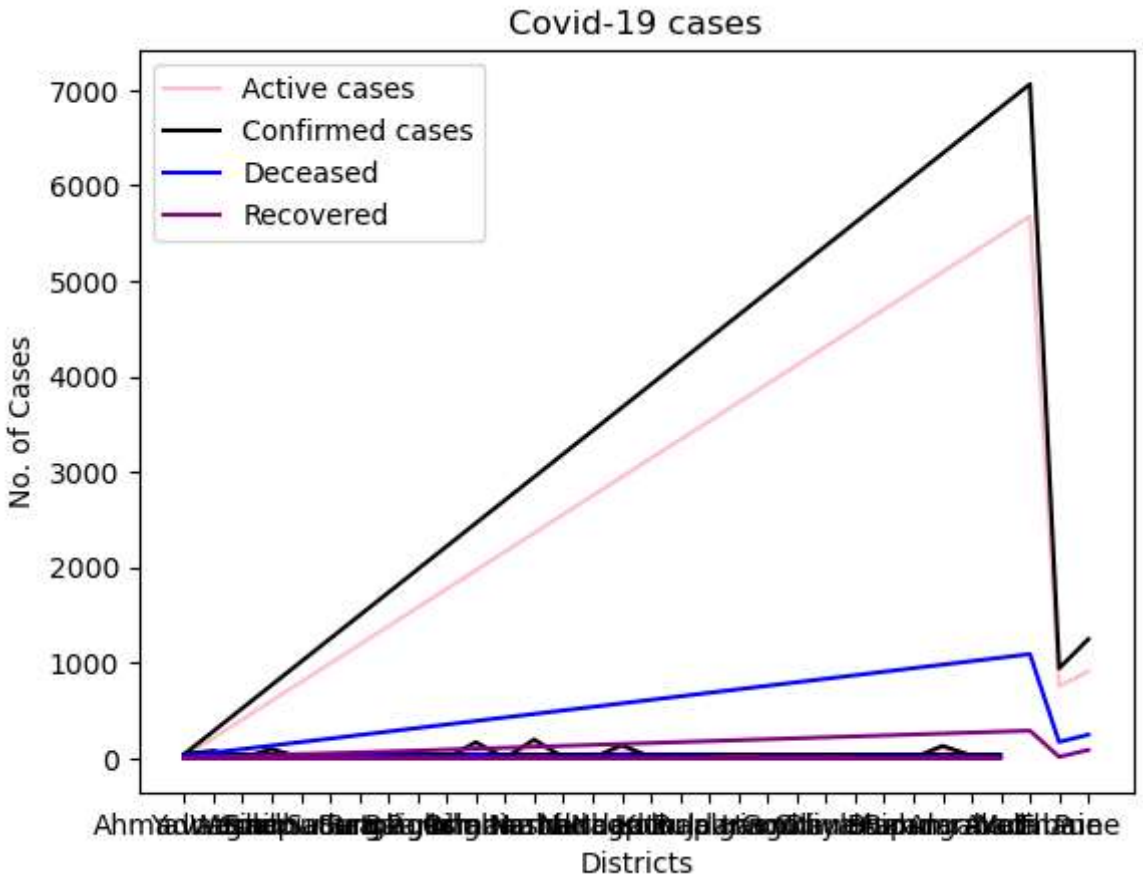
	district	active	confirmed	recovered	deceased
0	Ahmadnagar	17	42	23	2
1	Yavatmal	69	79	10	0
2	Washim	1	2	1	0
3	Solapur	93	99	0	6
4	Sindhudurg	1	2	1	0

In [5]:
```
data.describe()
```

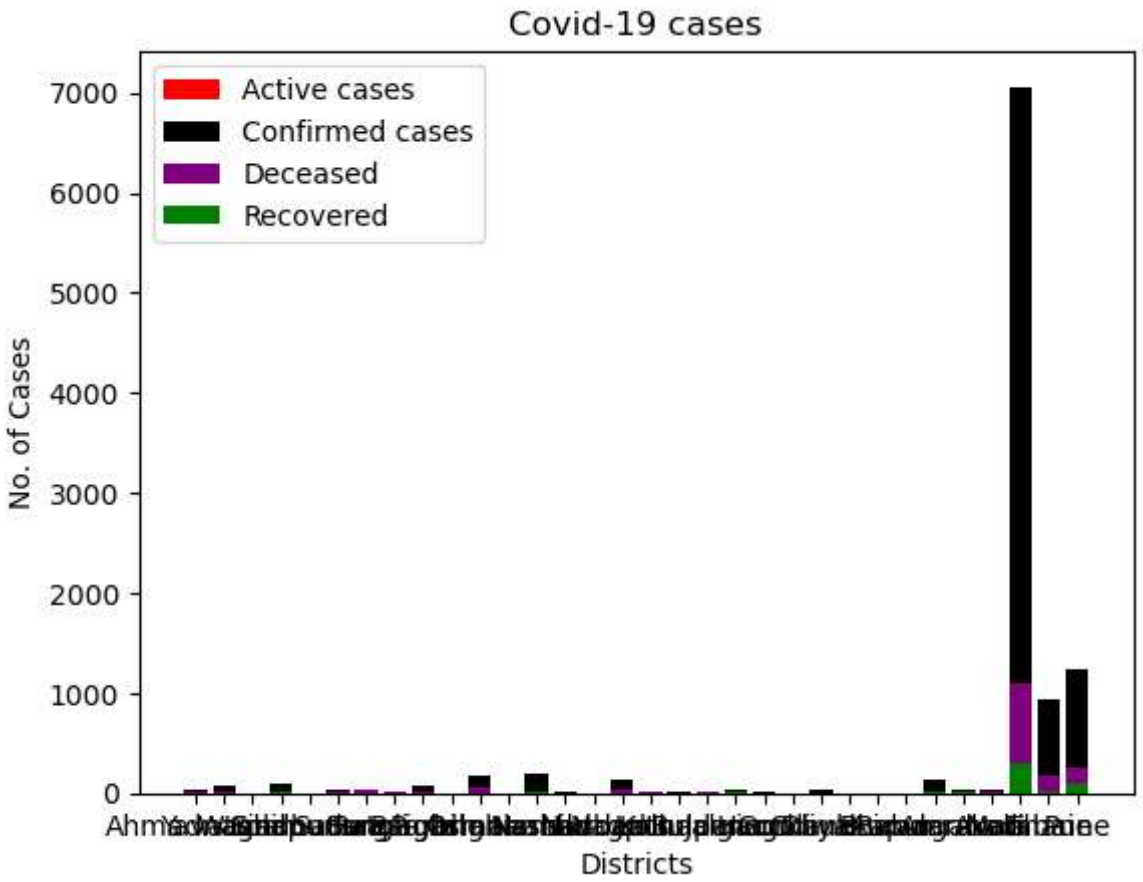
Out[5]:

	active	confirmed	recovered	deceased
count	34.000000	34.000000	34.000000	34.000000
mean	242.970588	309.794118	53.294118	13.529412
std	980.593867	1220.754108	190.232000	51.136321
min	0.000000	1.000000	0.000000	0.000000
25%	2.250000	4.250000	1.000000	0.000000
50%	15.500000	26.500000	5.500000	1.000000
75%	62.750000	77.000000	22.750000	3.750000
max	5679.000000	7061.000000	1092.000000	290.000000

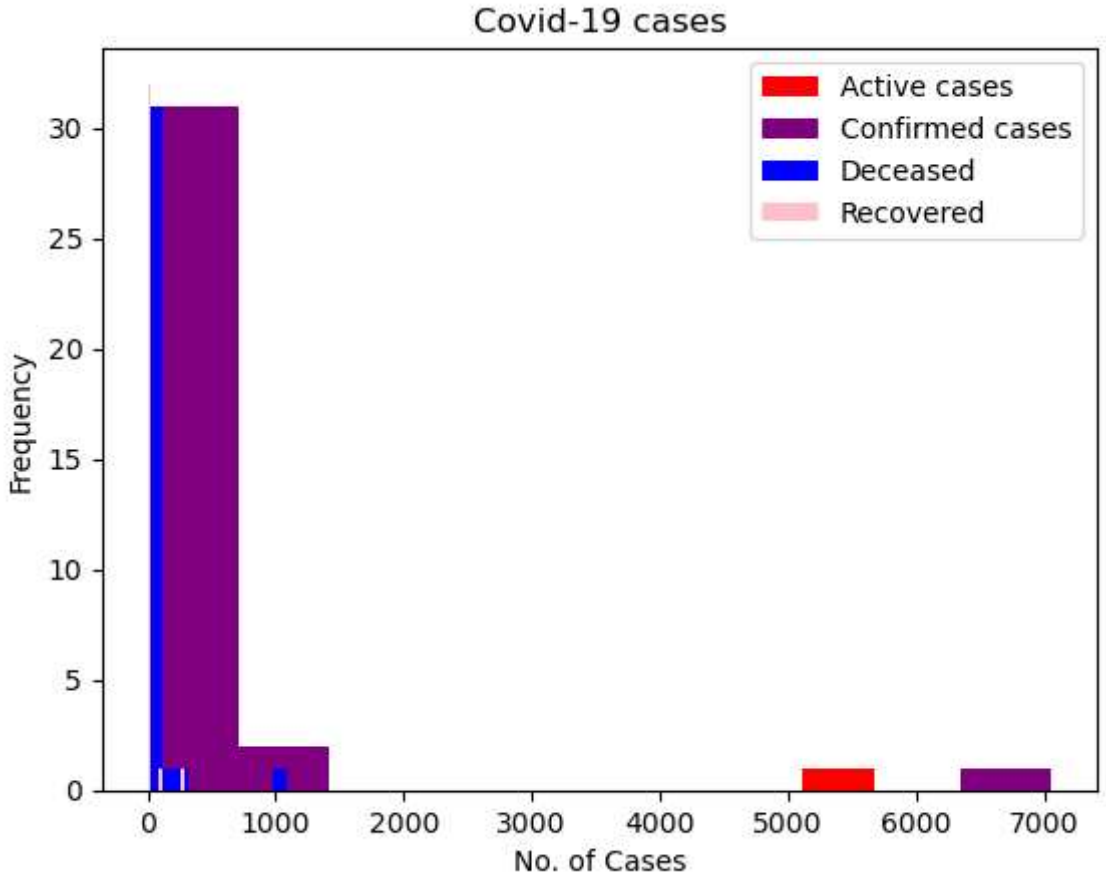
In [6]:
```
A = data.iloc[0:,1].values
B = data.iloc[0:,2].values
C = data.iloc[0:,3].values
D = data.iloc[0:,4].values
X = data.iloc[0:,0]

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



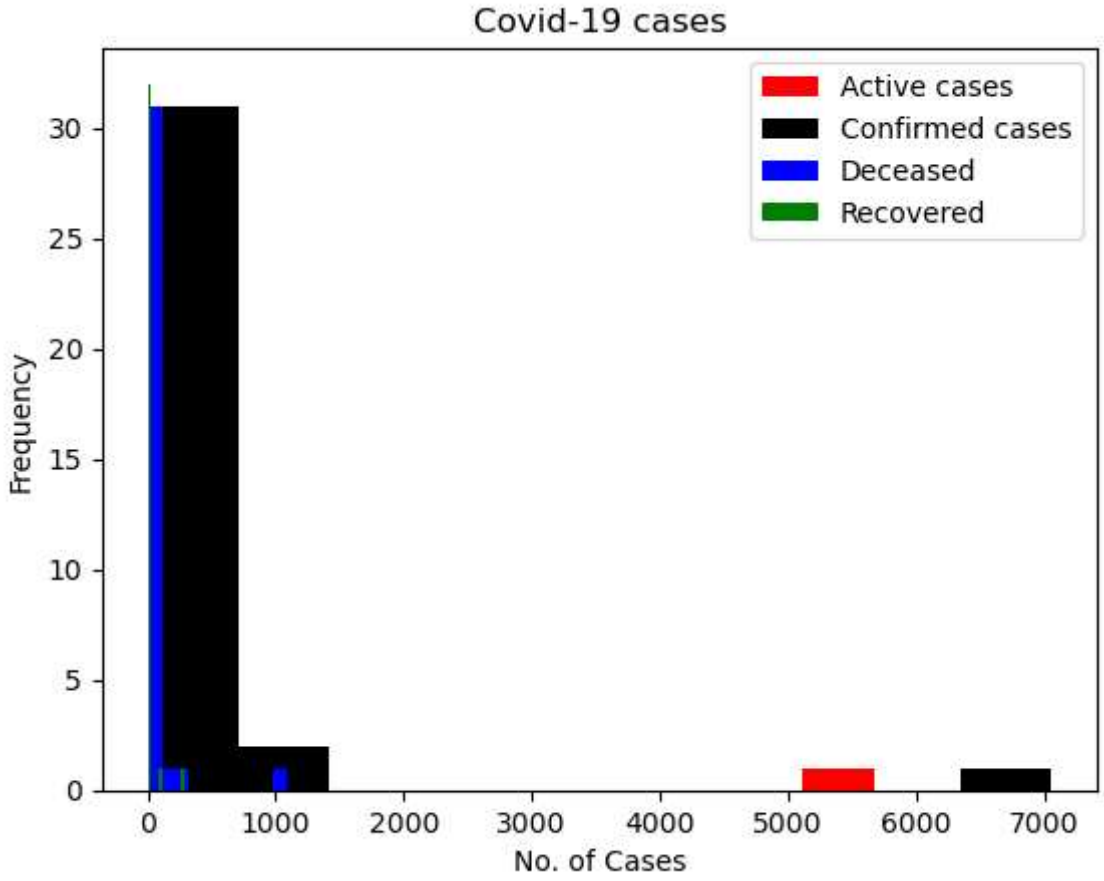
In [7]:
```
plt.bar(X, A, label= "Active cases", color="red")
plt.bar(X, B, label= "Confirmed cases", color="black")
plt.bar(X, C, label= "Deceased", color="purple")
plt.bar(X, D, label= "Recovered", color="green")
plt.xlabel('Districts')
plt.ylabel('No. of Cases')
plt.title('Covid-19 cases')
plt.legend()
plt.show()
```



In [8]:
```
plt.hist(A, label= "Active cases", color="red")
plt.hist(B, label= "Confirmed cases", color="purple")
plt.hist(C, label= "Deceased", color="blue")
plt.hist(D, label= "Recovered", color="pink")
plt.xlabel('No. of Cases')
plt.ylabel('Frequency')
plt.title('Covid-19 cases')
plt.legend()
plt.show()
```



In [9]:
```
plt.hist(A, label= "Active cases", color="red")
plt.hist(B, label= "Confirmed cases", color="black")
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 [14]:
```
data.sort_values(['active', 'district'], ascending = False)
```

Out[14]:

	district	active	confirmed	recovered	deceased
31	Mumbai	5679	7061	1092	290
33	Pune	912	1248	248	88
32	Thane	755	943	172	16
12	Nashik	179	197	6	12
10	Palghar	119	169	46	4
27	Aurangabad	102	131	22	7
15	Nagpur	100	139	37	2
3	Solapur	93	99	0	6
1	Yavatmal	69	79	10	0
8	Raigarh	44	71	24	3
19	Jalgaon	30	40	1	9
29	Akola	30	39	8	1
22	Dhule	22	25	0	3
5	Satara	21	32	9	2
28	Amravati	17	28	4	7
0	Ahmadnagar	17	42	23	2
30	Ahmadnagar	17	42	23	2
20	Hingoli	14	15	1	0
13	Nandurbar	10	11	0	1
17	Kolhapur	10	14	4	0
6	Sangli	3	29	25	1
14	Nanded	3	3	0	0
16	Latur	3	12	8	1
18	Buldana	3	21	17	1
24	Buldana	3	21	17	1
7	Ratnagiri	2	8	5	1
2	Washim	1	2	1	0
4	Sindhudurg	1	2	1	0
9	Parbhani	1	2	1	0
26	Bhandara	1	1	0	0
11	Osmanabad	0	3	3	0
21	Gondiya	0	1	1	0
23	Chandrapur	0	2	2	0
25	Bid	0	1	1	0

In [15]:
```
Sortedcases = data.sort_values(['active', 'district'], ascending = False)
```

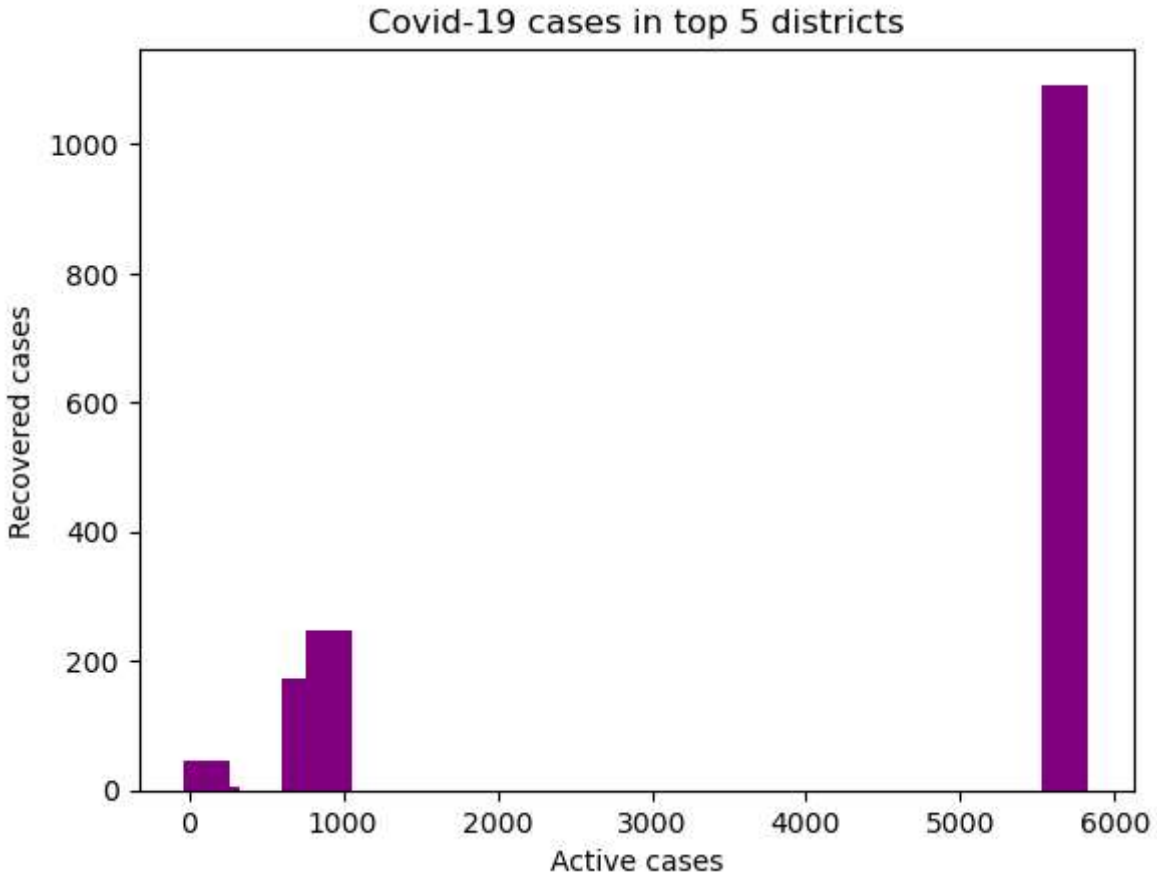
In [16]:
```
Sortedcases.head(5)
```

Out[16]:

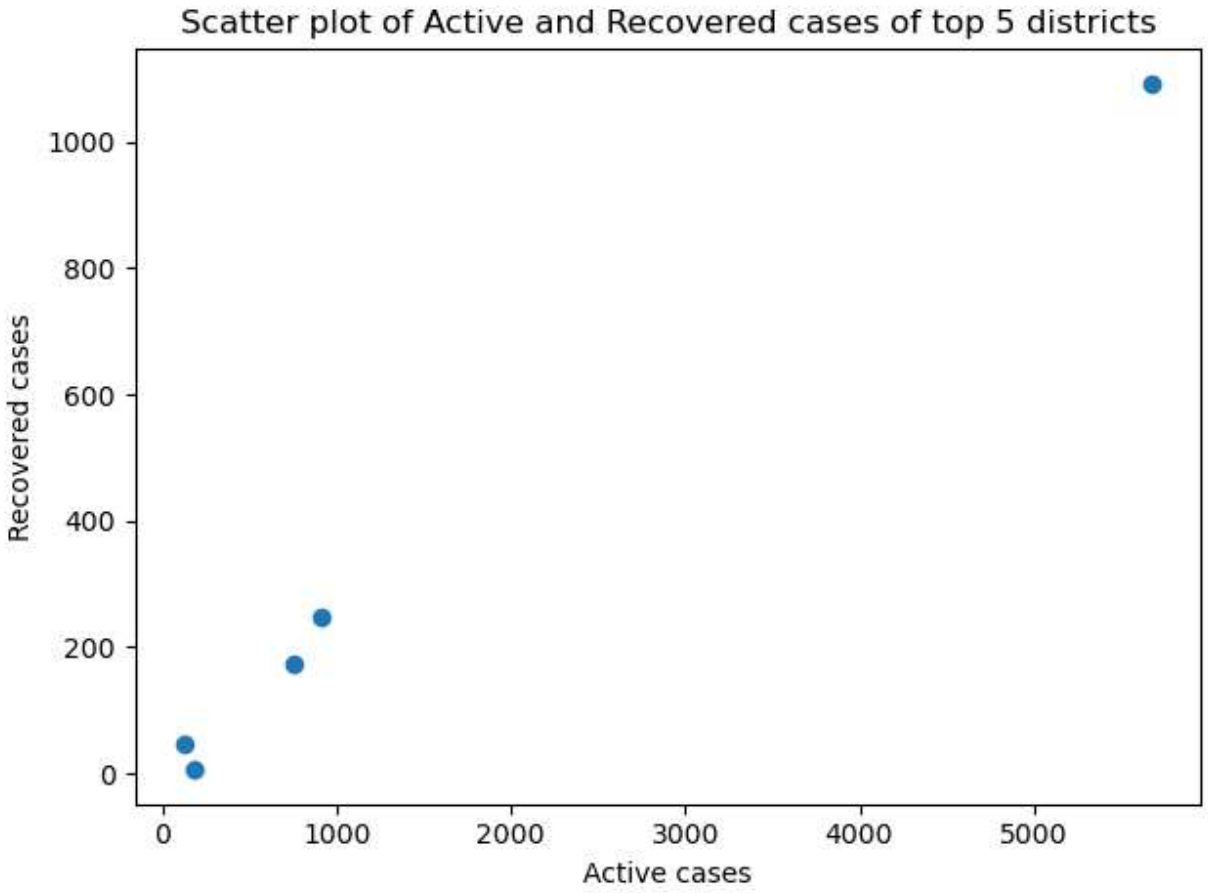
	district	active	confirmed	recovered	deceased
31	Mumbai	5679	7061	1092	290
33	Pune	912	1248	248	88
32	Thane	755	943	172	16
12	Nashik	179	197	6	12
10	Palghar	119	169	46	4

In [17]:
```
Highestcases= Sortedcases.head(5)
```

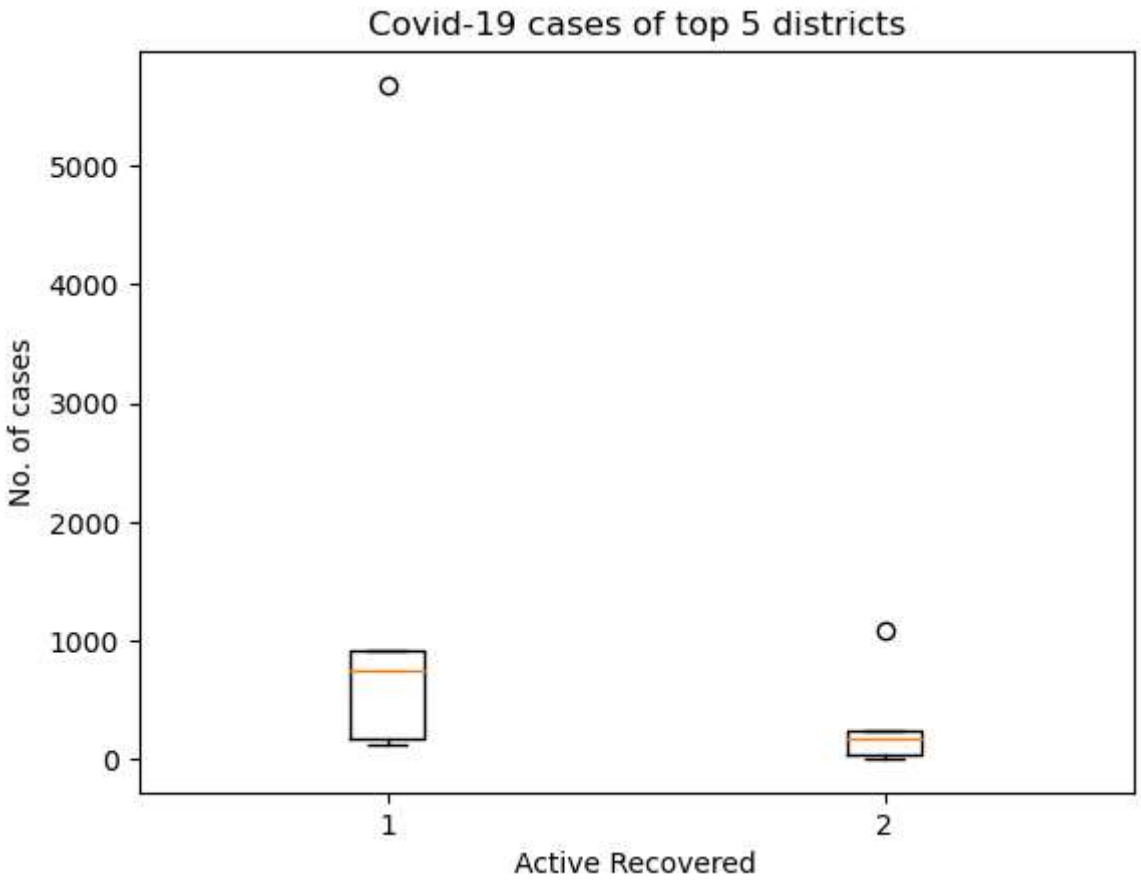
In [20]:
```
A = Highestcases.loc[:, "active"]
R = Highestcases.loc[:, "recovered"]
plt.bar(A,R, width= 300, color = "purple")
plt.xlabel("Active cases")
plt.ylabel("Recovered cases")
plt.title("Covid-19 cases in top 5 districts")
plt.show()
```



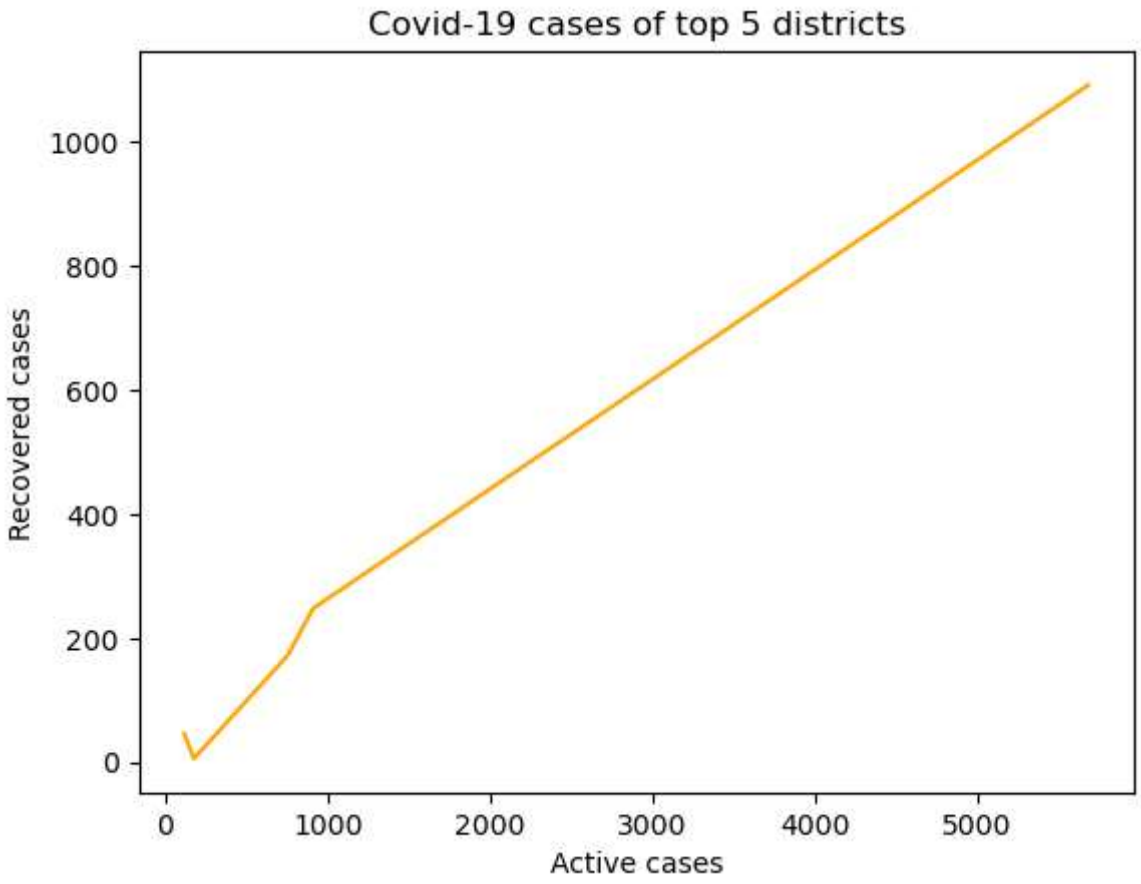
In [21]:
```
plt.scatter(A,R)
plt.xlabel("Active cases")
plt.ylabel("Recovered cases")
plt.title("Scatter plot of Active and Recovered cases of top 5 districts")
plt.tight_layout()
plt.show()
```



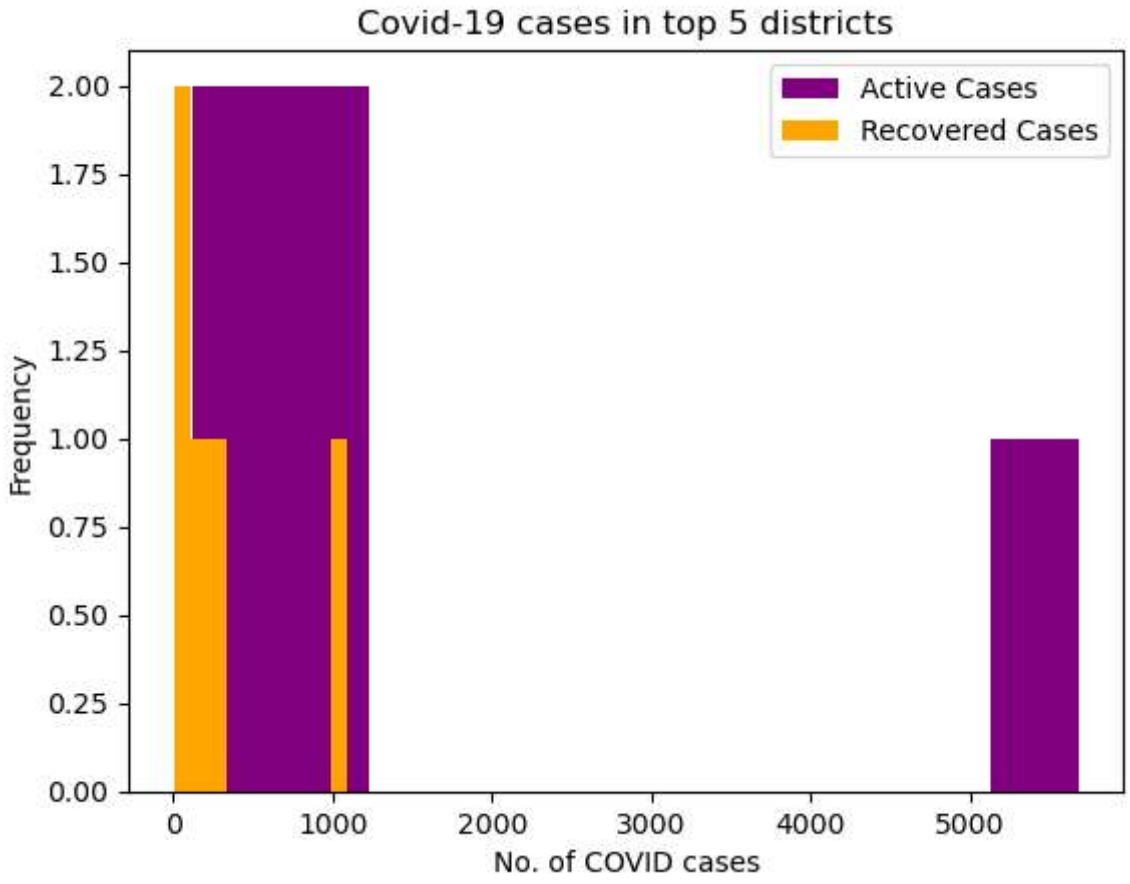
In [22]:
```
Covidcases = [A,R]
plt.boxplot(Covidcases)
plt.xlabel("Active Recovered")
plt.ylabel("No. of cases")
plt.title("Covid-19 cases of top 5 districts")
plt.show()
```



In [23]:
```
plt.plot (A,R, color="orange")
plt.xlabel("Active cases")
plt.ylabel("Recovered cases")
plt.title("Covid-19 cases of top 5 districts")
plt.show()
```



In [25]:
```
plt.hist(A, label="Active Cases", color= "purple")
plt.hist(R, label="Recovered Cases", color="orange")
plt.xlabel("No. of COVID cases")
plt.ylabel("Frequency")
plt.title("Covid-19 cases in top 5 districts")
plt.legend()
plt.show()
```



In [ ]: