In [11]:
```python
import pandas as pd
import numpy as np
import seaborn as sns
import matplotlib.pyplot as plt
%matplotlib inline
```

In [3]:
```python
crime_state = pd.read_csv('E:/New folder/crime_by_state.csv')
crime_state.head()
```

Out[3]:

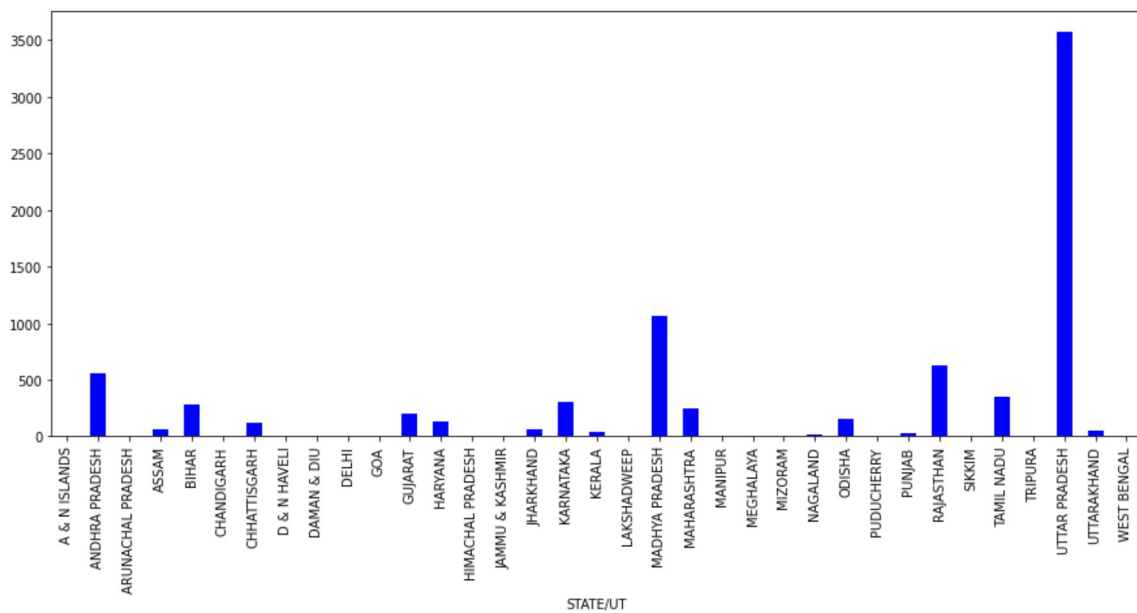|	STATE/UT	Year	Murder	Assault on women	Kidnapping and Abduction	Dacoity	Robbery	Arson	Hurt	Prevention of atrocities (POA) Act	Protection of Civil Rights (PCR) Act
0	ANDHRA PRADESH	2001	45	69	22	3	2	6	518	950	312
1	ANDHRA PRADESH	2002	60	98	18	0	4	12	568	830	459
2	ANDHRA PRADESH	2003	33	79	27	1	15	4	615	1234	165
3	ANDHRA PRADESH	2004	39	66	28	0	7	20	474	1319	68
4	ANDHRA PRADESH	2005	37	74	21	0	0	9	459	1244	61

In [10]:
```python
## Total crime by State, sum of all years
crime_by_state = crime_state.groupby('STATE/UT').sum()
crime_by_state = crime_by_state.drop(['Year'], axis=1)
crime_by_state = crime_by_state.drop(['TOTAL (ALL-INDIA)', 'TOTAL (STATES)', 'TOTAL (UTs)'])
crime_by_state
```

Out[10]:

STATE/UT	Murder	Assault on women	Kidnapping and Abduction	Dacoity	Robbery	Arson	Hurt	Prevention of atrocities (POA) Act	Protection of Civil Rights (PCR) Act	O Cri Aga
A & N ISLANDS	0	0	0	0	0	0	0	0	0	
ANDHRA PRADESH	556	1110	238	9	39	136	7248	15160	1511	1
ARUNACHAL PRADESH	1	0	0	0	1	0	0	0	0	
ASSAM	57	57	96	14	33	25	341	3	1	
BIHAR	286	284	127	29	77	309	4524	23425	466	
CHANDIGARH	0	2	0	0	0	0	0	6	0	
CHHATTISGARH	117	661	43	1	13	17	743	923	24	
D & N HAVELI	0	0	2	0	0	0	0	0	0	
DAMAN & DIU	0	0	0	0	0	0	0	0	0	
DELHI	1	0	0	0	0	0	0	256	6	
GOA	0	1	0	0	0	0	1	17	1	
GUJARAT	204	325	301	85	214	115	3271	3971	55	
HARYANA	128	447	221	1	10	32	524	852	3	
HIMACHAL PRADESH	10	93	2	8	6	1	11	629	35	
JAMMU & KASHMIR	3	7	0	0	0	1	7	0	11	
JHARKHAND	65	129	44	16	2	22	912	2055	19	
KARNATAKA	302	329	70	17	19	20	1939	13773	482	
KERALA	36	782	23	5	9	21	2023	1092	4	
LAKSHADWEEP	0	0	0	0	0	0	0	0	0	
MADHYA PRADESH	1062	4107	510	9	96	446	9993	2855	11	3(
MAHARASHTRA	243	979	151	122	97	109	766	3210	378	
MANIPUR	0	0	0	0	0	0	0	0	0	
MEGHALAYA	0	0	0	0	0	0	0	0	0	
MIZORAM	0	0	1	0	1	0	0	0	0	
NAGALAND	12	6	1	0	0	0	0	0	0	
ODISHA	158	574	135	18	67	170	3281	9711	18	
PUDUCHERRY	4	0	1	0	0	0	5	12	231	
PUNJAB	32	115	18	0	1	0	134	705	5	
RAJASTHAN	630	1909	365	1	33	481	5984	7939	7	3
SIKKIM	8	17	8	0	4	2	39	3	0	
TAMIL NADU	352	259	62	5	15	89	2269	10845	500	
TRIPURA	4	15	6	0	1	1	64	8	0	
UTTAR PRADESH	3577	3625	2225	55	214	715	4889	26378	501	3
UTTARAKHAND	50	65	27	0	1	4	160	619	0	
WEST BENGAL	2	19	1	0	0	1	26	111	1	

In [19]: ```
Plotting murders state-wise
state_murders = crime_by_state['Murder']
fig = plt.figure()
state_murders.plot.bar(figsize=(15,6),color='blue')
```

Out[19]: `<matplotlib.axes._subplots.AxesSubplot at 0x231b46920c8>`

```
In [48]:  # Plotting subplots for top 5 crimes
          cw = crime_by_state.sort_values(by = 'Assault on women', ascending=False).head()
          ck = crime_by_state.sort_values(by = 'Kidnapping and Abduction', ascending=Fals
          e).head()
          cd = crime_by_state.sort_values(by = 'Dacoity', ascending=False).head()
          cr = crime_by_state.sort_values(by = 'Robbery', ascending=False).head()
          #cw = crime_by_state['Assault on women']

          plt.figure()
          f, ((a1, a2), (a3, a4)) = plt.subplots(2,2, figsize=(20,8))
          cw['Assault on women'].plot.bar(ax=a1)
          ck['Kidnapping and Abduction'].plot.bar(ax=a2)
          cd['Dacoity'].plot.bar(ax=a3)
          cr['Robbery'].plot.bar(ax=a4)

          a1.set_title('Assault on women')
          a2.set_title('Kidnapping and Abduction')
          a3.set_title('Dacoity')
          a4.set_title('Robbery')
```

Out[48]: Text(0.5, 1.0, 'Robbery')

          <Figure size 432x288 with 0 Axes>


```
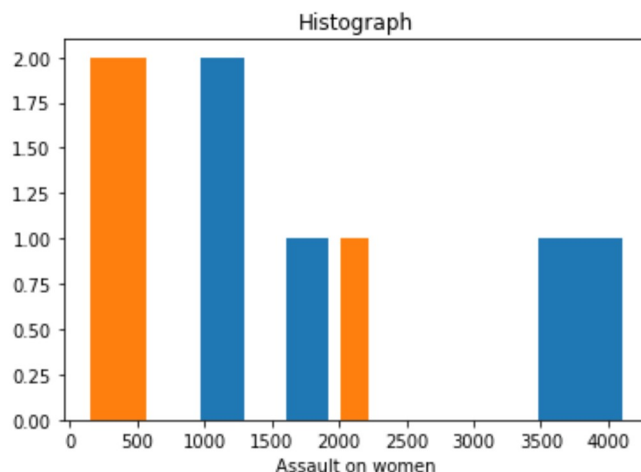In [54]:  plt.hist(cw['Assault on women'])
          plt.hist(cw['Kidnapping and Abduction'])
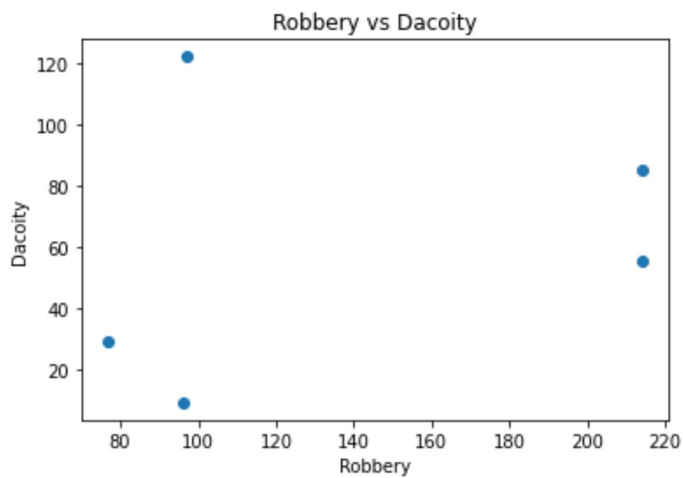          plt.xlabel('Assault on women')
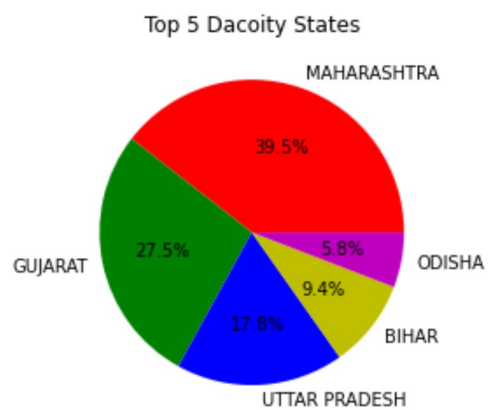          plt.title('Histograph')
```

Out[54]: Text(0.5, 1.0, 'Histograph')

In [55]:
```python
plt.scatter(cr['Robbery'], cr['Dacoity'])
plt.xlabel('Robbery')
plt.ylabel('Dacoity')
plt.title('Robbery vs Dacoity')
```
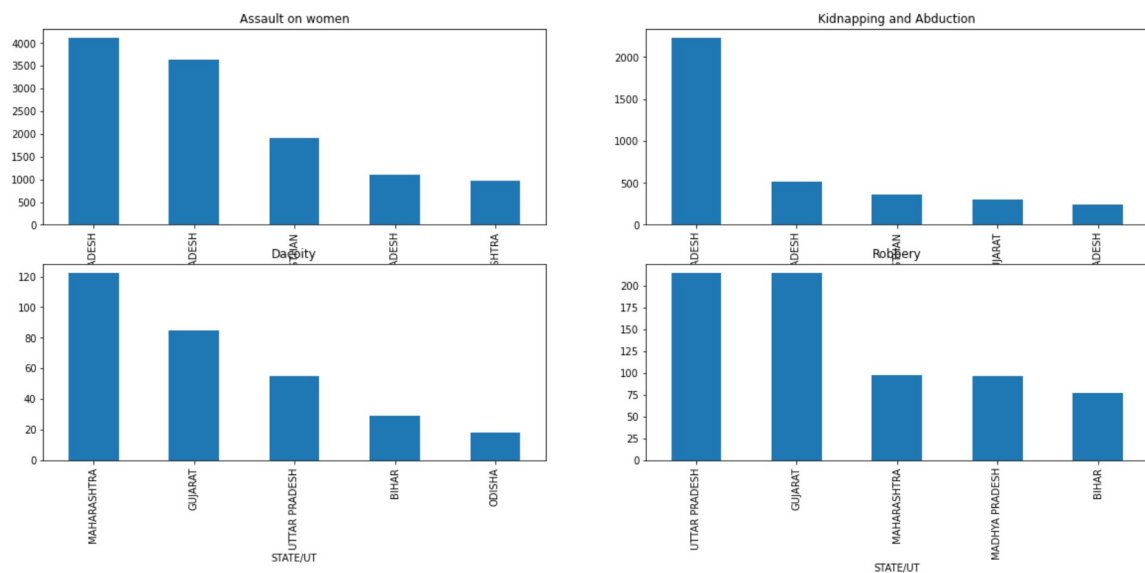
Out[55]: Text(0.5, 1.0, 'Robbery vs Dacoity')

In [74]:
```python
label = ['MAHARASHTRA', 'GUJARAT', 'UTTAR PRADESH', 'BIHAR', 'ODISHA']
plt.pie(cd['Dacoity'], labels=label, colors=['r', 'g', 'b', 'y', 'm'], autopct =
'%1.1f%%')
#plt.legend()
plt.title('Top 5 Dacoity States')
plt.show()
```


In [ ]:

In [ ]: