



```
In [1]: import pandas as pd
```

```
In [2]: df=pd.read_csv("election_results_2024.csv")
```

```
In [3]: df
```

Out[3]:

| | Constituency | Const. No. | Leading Candidate | Leading Party | Trailing Candidate | Trailing Party |
|-----|------------------|------------|--------------------------|--------------------------------------------------|-----------------------------------|------------------------------------------|
| 0 | AJMER | 13 | BHAGIRATH CHOUDHARY | Bharatiya Janata Party | RAMCHANDRA CHOUDHARY | Indian National Congress |
| 1 | ALWAR | 8 | BHUPENDER YADAV | Bharatiya Janata Party | LALIT YADAV | Indian National Congress |
| 2 | AMBALA | 1 | VARUN CHAUDHRY | Indian National Congress | BANTO KATARIA | Bharatiya Janata Party |
| 3 | ANANTNAG-RAJOURI | 3 | MIAN ALTAF AHMAD | Jammu & Kashmir National Conference | MEHBOOBA MUFTI | Jammu & Kashmir Peoples Democratic Party |
| 4 | ARAKKONAM | 7 | JAGATHRATCHAKAN S | Dravida Munnetra Kazhagam | L VIJAYAN | All India Anna Dravida Munnetra Kazhagam |
| ... | ... | ... | ... | ... | ... | ... |
| 538 | Wardha | 8 | AMAR SHARADRAO KALE | Nationalist Congress Party – Sharadchandra Pawar | RAMDAS CHANDRABHAN TADAS | Bharatiya Janata Party |
| 539 | Wayanad | 4 | RAHUL GANDHI | Indian National Congress | ANNIE RAJA | Communist Party of India |
| 540 | West Delhi | 6 | KAMALJEET SEHRAWAT | Bharatiya Janata Party | MAHABAL MISHRA | Aam Aadmi Party |
| 541 | Yavatmal-Washim | 14 | SANJAY UTTAMRAO DESHMUKH | Shiv Sena (Uddhav Balasaheb Thackrey) | RAJSHRITAI HEMANT PATIL (MAHALLE) | Shiv Sena |
| 542 | Zahirabad | 5 | SURESH KUMAR SHETKAR | Indian National Congress | B. B. PATIL | Bharatiya Janata Party |

543 rows × 8 columns



In [4]: df.head()

Out[4]:

| | Constituency | Const. No. | Leading Candidate | Leading Party | Trailing Candidate | Trailing Party | Margin |
|---|------------------|------------|---------------------|-------------------------------------|----------------------|------------------------------------------|--------|
| 0 | AJMER | 13 | BHAGIRATH CHOUDHARY | Bharatiya Janata Party | RAMCHANDRA CHOUDHARY | Indian National Congress | 32 |
| 1 | ALWAR | 8 | BHUPENDER YADAV | Bharatiya Janata Party | LALIT YADAV | Indian National Congress | 4 |
| 2 | AMBALA | 1 | VARUN CHAUDHRY | Indian National Congress | BANTO KATARIA | Bharatiya Janata Party | 4 |
| 3 | ANANTNAG-RAJOURI | 3 | MIAN ALTAF AHMAD | Jammu & Kashmir National Conference | MEHBOOBA MUFTI | Jammu & Kashmir Peoples Democratic Party | 28 |
| 4 | ARAKKONAM | 7 | JAGATHRATCHAKAN S | Dravida Munnetra Kazhagam | L VIJAYAN | All India Anna Dravida Munnetra Kazhagam | 30 |

In [5]: df.info()

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 543 entries, 0 to 542
Data columns (total 8 columns):
#   Column                Non-Null Count  Dtype
---  -
0   Constituency          543 non-null   object
1   Const. No.            543 non-null   int64
2   Leading Candidate     543 non-null   object
3   Leading Party         543 non-null   object
4   Trailing Candidate    542 non-null   object
5   Trailing Party       542 non-null   object
6   Margin               543 non-null   object
7   Status               543 non-null   object
dtypes: int64(1), object(7)
memory usage: 34.1+ KB
```

In [6]: df.isnull()

Out[6]:

| | Constituency | Const. No. | Leading Candidate | Leading Party | Trailing Candidate | Trailing Party | Margin | Status |
|-----|--------------|------------|-------------------|---------------|--------------------|----------------|--------|--------|
| 0 | False | False | False | False | False | False | False | False |
| 1 | False | False | False | False | False | False | False | False |
| 2 | False | False | False | False | False | False | False | False |
| 3 | False | False | False | False | False | False | False | False |
| 4 | False | False | False | False | False | False | False | False |
| ... | ... | ... | ... | ... | ... | ... | ... | ... |
| 538 | False | False | False | False | False | False | False | False |
| 539 | False | False | False | False | False | False | False | False |
| 540 | False | False | False | False | False | False | False | False |
| 541 | False | False | False | False | False | False | False | False |
| 542 | False | False | False | False | False | False | False | False |

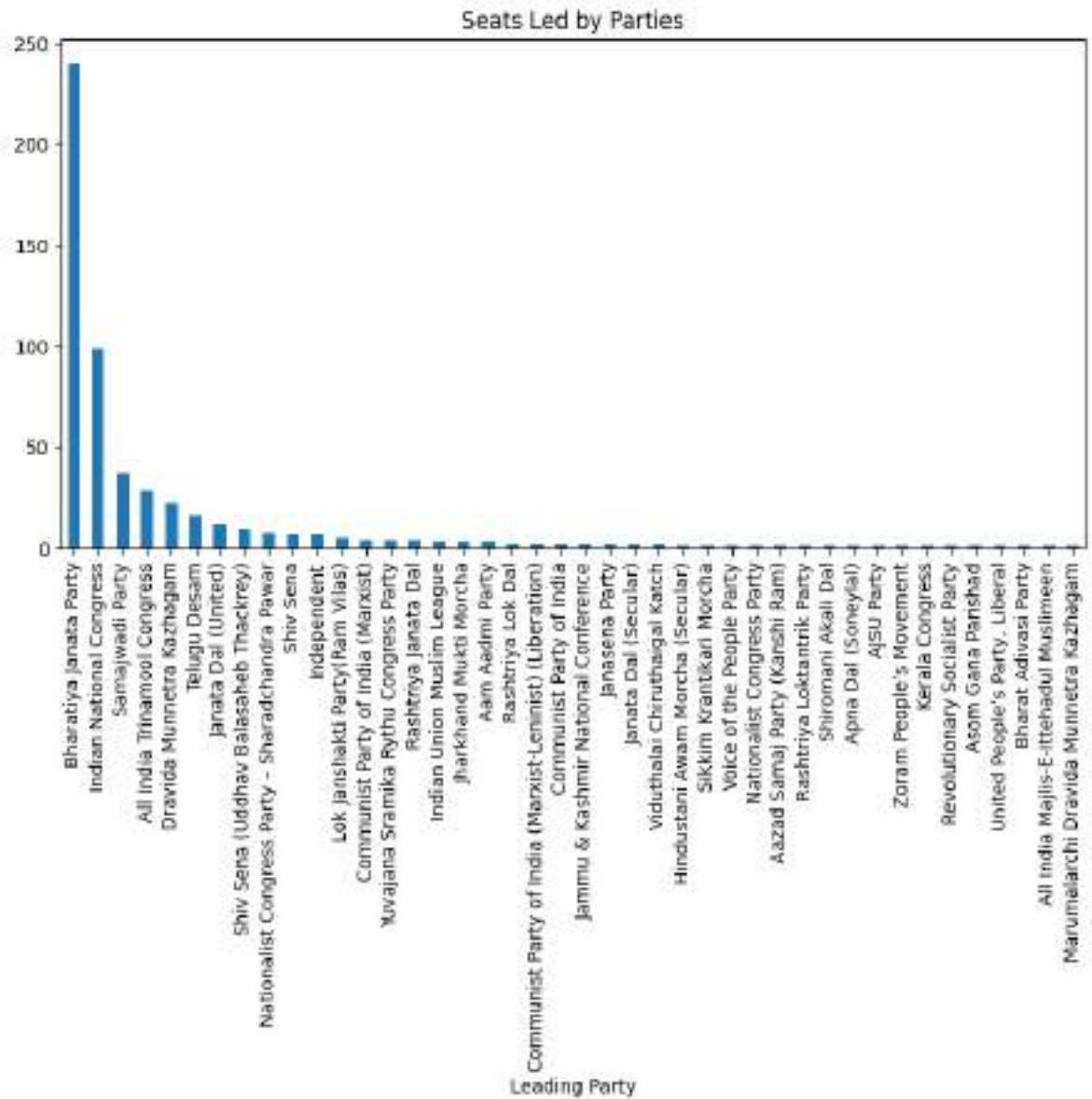
543 rows × 8 columns

In [8]: `df['Leading Party'].value_counts()`

```
Out[8]: Leading Party
Bharatiya Janata Party 240
Indian National Congress 99
Samajwadi Party 37
All India Trinamool Congress 29
Dravida Munnetra Kazhagam 22
Telugu Desam 16
Janata Dal (United) 12
Shiv Sena (Uddhav Balasaheb Thackeray) 9
Nationalist Congress Party - Sharadchandra Pawar 8
Shiv Sena 7
Independent 7
Lok Janshakti Party(Ram Vilas) 5
Communist Party of India (Marxist) 4
Yuva Jansam Sramika Rythu Congress Party 4
Rashtriya Janata Dal 4
Indian Union Muslim League 3
Jharkhand Mukti Morcha 3
Aam Aadmi Party 3
Rashtriya Lok Dal 2
Communist Party of India (Marxist-Leninist) (Liberation) 2
Communist Party of India 2
Jammu & Kashmir National Conference 2
Janasena Party 2
Janata Dal (Secular) 2
Viduthala Chiruthaigal Katch 2
Hindustani Awam Morcha (Secular) 1
Sikkim Krantikari Morcha 1
Voice of the People Party 1
Nationalist Congress Party 1
Aazad Samaj Party (Kanshi Ram) 1
Rashtriya Loktantrik Party 1
Shiromani Akali Dal 1
Apna Dal (Soneylal) 1
AJSU Party 1
Zoram People's Movement 1
Kerala Congress 1
Revolutionary Socialist Party 1
Asom Gana Parishad 1
United People's Party, Liberal 1
Bharat Adivasi Party 1
All India Majlis-E-Ittehadul Muslimeen 1
Marumalarchi Dravida Munnetra Kazhagam 1
Name: count, dtype: int64
```

```
In [10]: df['Leading Party'].value_counts().plot(kind='bar',figsize=(10,5),title='Seats L
```

```
Out[10]: <Axes: title={'center': 'Seats Led by Parties'}, xlabel='Leading Party'>
```



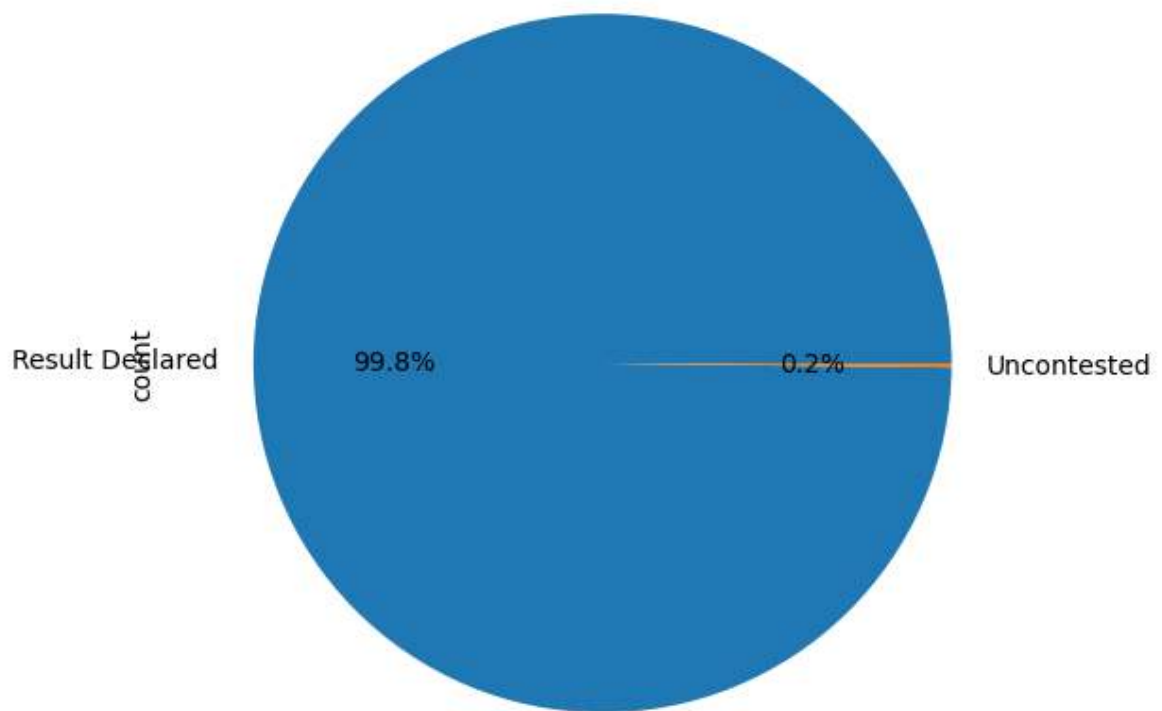
```
In [11]: df['Constituency'].value_counts()
```

```
Out[11]: Constituency
Maharajganj      2
Aurangabad      2
NAGAUUR         1
Munger          1
Murshidabad     1
..
Fatehgarh Sahib 1
Farrukhabad     1
Faridkot        1
Faizabad        1
Zahirabad       1
Name: count, Length: 541, dtype: int64
```

```
In [12]: df['Status'].value_counts().plot.pie(autopct='%1.1f%%', figsize=(6,6),title=' Re
```

```
Out[12]: <Axes: title={'center': ' Result Status'}, ylabel='count'>
```

Result Status



In [13]: `content=df.sort_values('Trailing Candidate').head()`

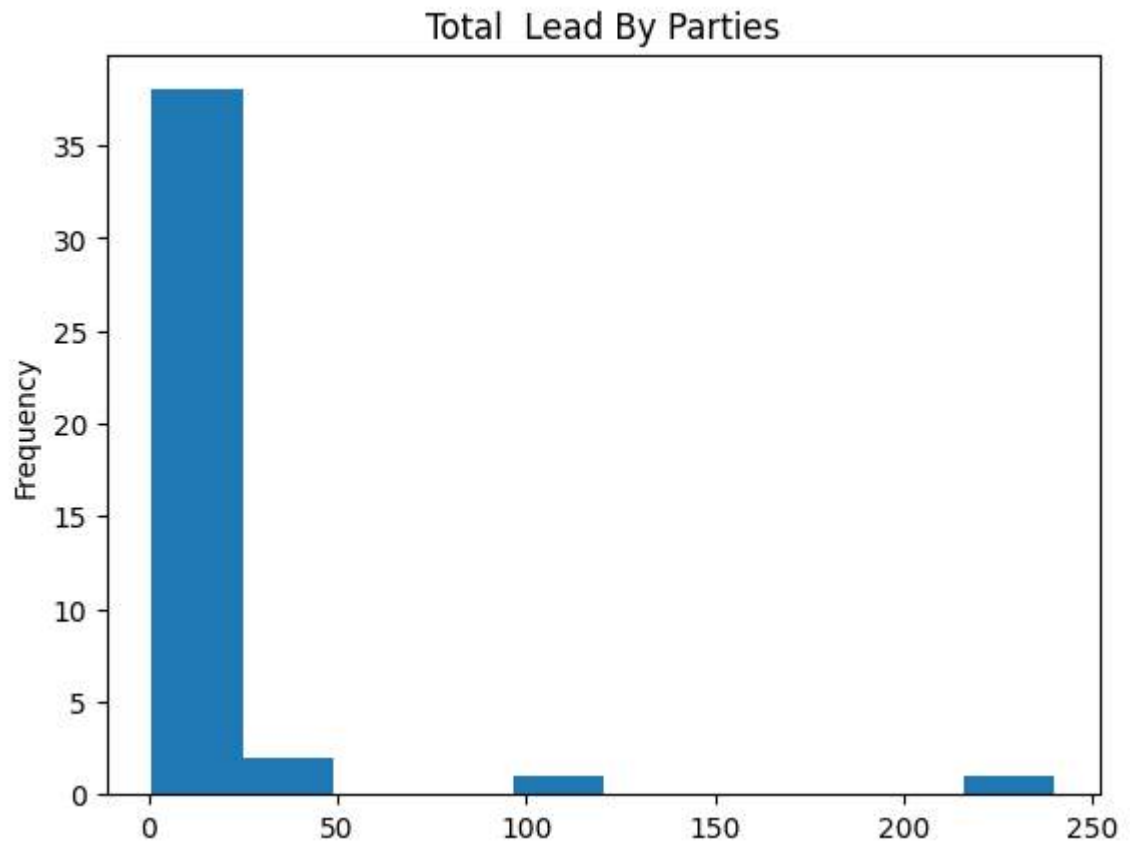
In [14]: `content`

Out[14]:

| | Constituency | Const. No. | Leading Candidate | Leading Party | Trailing Candidate | Trailing Party | Mari |
|-----|--------------|------------|---------------------------------|--------------------------------|-----------------------|---------------------------------------------|------|
| 398 | PUDUCHERRY | 1 | VE VAITHILINGAM | Indian National Congress | A NAMASSIVAYAM | Bharatiya Janata Party | 1365 |
| 399 | Palakkad | 8 | V K SREEKANDAN | Indian National Congress | A VIJAYARAGHAVAN | Communist Party of India (Marxist) | 752 |
| 13 | Alappuzha | 15 | K. C VENUGOPAL | Indian National Congress | A. M ARIFF | Communist Party of India (Marxist) | 635 |
| 333 | Maharajganj | 19 | JANARDAN SINGH "SIGRIWAL" | Bharatiya Janata Party | AAKASH KUMAR SINGH | Indian National Congress | 1026 |
| 90 | Begusarai | 24 | GIRIRAJ SINGH | Bharatiya Janata Party | ABDHESH KUMAR ROY | Communist Party of India | 814 |

```
In [17]: party_leads=df['Leading Party'].value_counts()  
party_leads.plot(kind='hist',title='Total Lead By Parties')
```

```
Out[17]: <Axes: title={'center': 'Total Lead By Parties'}, ylabel='Frequency'>
```



```
In [18]: df.groupby('Status')['Leading Party'].value_counts()
```


| Out[18]: | Status | Leading Party | |
|----------|-----------------|----------------------------------------------------------|----|
| | Result Declared | Bharatiya Janata Party | 23 |
| 9 | | Indian National Congress | 9 |
| 9 | | Samajwadi Party | 3 |
| 7 | | All India Trinamool Congress | 2 |
| 9 | | Dravida Munnetra Kazhagam | 2 |
| 2 | | Telugu Desam | 1 |
| 6 | | Janata Dal (United) | 1 |
| 2 | | Shiv Sena (Uddhav Balasaheb Thackrey) | |
| 9 | | Nationalist Congress Party - Sharadchandra Pawar | |
| 8 | | Independent | |
| 7 | | Shiv Sena | |
| 7 | | Lok Janshakti Party(Ram Vilas) | |
| 5 | | Communist Party of India (Marxist) | |
| 4 | | Rashtriya Janata Dal | |
| 4 | | Yuvajana Sramika Rythu Congress Party | |
| 4 | | Aam Aadmi Party | |
| 3 | | Indian Union Muslim League | |
| 3 | | Jharkhand Mukti Morcha | |
| 3 | | Communist Party of India | |
| 2 | | Communist Party of India (Marxist-Leninist) (Liberation) | |
| 2 | | Jammu & Kashmir National Conference | |
| 2 | | Janasena Party | |
| 2 | | Janata Dal (Secular) | |
| 2 | | Rashtriya Lok Dal | |
| 2 | | Viduthalai Chiruthaigal Katch | |
| 2 | | AJSU Party | |
| 1 | | Aazad Samaj Party (Kanshi Ram) | |
| 1 | | All India Majlis-E-Ittehadul Muslimeen | |
| 1 | | Apna Dal (Soneylal) | |
| 1 | | Asom Gana Parishad | |


```
In [29]: state_party_wins=df.groupby('Status')['Leading Party'].value_counts().fillna(0)
state_party_wins.head()
```

```
Out[29]: Status      Leading Party
Result Declared Bharatiya Janata Party      239
                Indian National Congress      99
                Samajwadi Party              37
                All India Trinamool Congress  29
                Dravida Munnetra Kazhagam    22
Name: count, dtype: int64
```

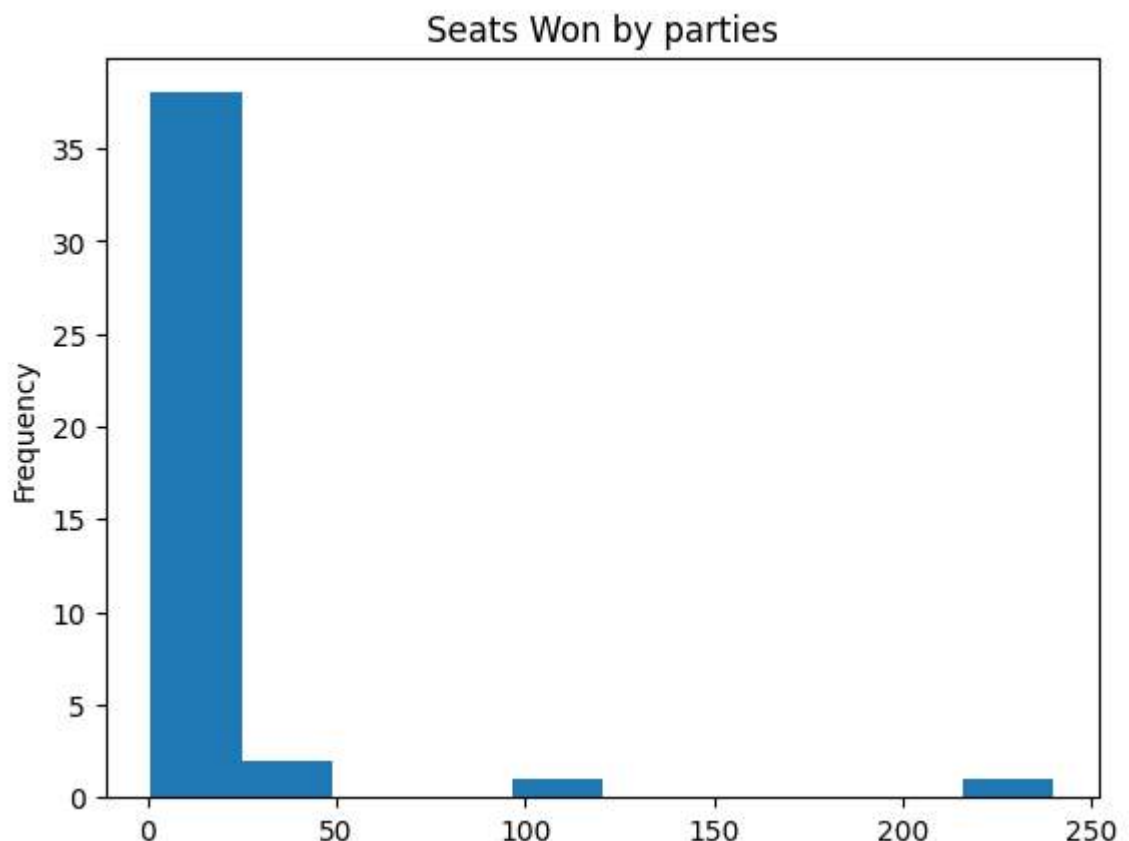
```
In [39]: close_fights=df['Trailing Candidate']
```

```
In [40]: close_fights
```

```
Out[40]: 0      RAMCHANDRA CHOUDHARY
1      LALIT YADAV
2      BANTO KATARIA
3      MEHBOOBA MUFTI
4      L VIJAYAN
...
538     RAMDAS CHANDRABHAN TADAS
539     ANNIE RAJA
540     MAHABAL MISHRA
541     RAJSHRITAI HEMANT PATIL (MAHALLE)
542     B. B. PATIL
Name: Trailing Candidate, Length: 543, dtype: object
```

```
In [45]: party_wins=df['Leading Party'].value_counts()
party_wins.plot(kind='hist',title='Seats Won by parties')
```

```
Out[45]: <Axes: title={'center': 'Seats Won by parties'}, ylabel='Frequency'>
```



```
In [46]: df.describe()
```

```
Out[46]:
```

| | Const. No. |
|-------|------------|
| count | 543.000000 |
| mean | 18.178637 |
| std | 16.427840 |
| min | 1.000000 |
| 25% | 6.000000 |
| 50% | 14.000000 |
| 75% | 25.000000 |
| max | 80.000000 |

```
In [47]: df.info()
```

```
<class 'pandas.core.frame.DataFrame'>  
RangeIndex: 543 entries, 0 to 542  
Data columns (total 8 columns):  
#   Column                Non-Null Count  Dtype    
---  ---  
0   Constituency           543 non-null   object   
1   Const. No.             543 non-null   int64    
2   Leading Candidate      543 non-null   object   
3   Leading Party          543 non-null   object   
4   Trailing Candidate     542 non-null   object   
5   Trailing Party         542 non-null   object   
6   Margin                 543 non-null   object   
7   Status                 543 non-null   object   
dtypes: int64(1), object(7)  
memory usage: 34.1+ KB
```

```
In [54]: df['Margin'].describe()
```

```
Out[54]:
```

| | |
|--------|--------|
| count | 543 |
| unique | 543 |
| top | 329991 |
| freq | 1 |

Name: Margin, dtype: object

```
In [55]: df['Margin'].value_counts()
```

```
Out[55]: Margin
329991    1
48        1
212231    1
50984     1
87536     1
..
2678      1
70053     1
54567     1
172914    1
46188     1
Name: count, Length: 543, dtype: int64
```

```
In [56]: df['Margin'].max()
```

```
Out[56]: '99974'
```

```
In [60]: df['Const. No.']
```

```
Out[60]: 0      13
1       8
2       1
3       3
4       7
..
538     8
539     4
540     6
541    14
542     5
Name: Const. No., Length: 543, dtype: int64
```

```
In [61]: print("Total unique constituency numbers:",df['Const. No.'].unique())
print("Missing values:",df['Const. No.'].isnull().sum())
```

```
Total unique constituency numbers: [13  8  1  3  7 12 18 37 44  6 15  9  2 52 55
14  5 16 19 24 29 32 40 69
20 17 10 23 11 56 72 48 26 25 27 36 67 53 35 38 39 61 78 22  4 42 41 33
21 76 66 60 54 49 75 70 59 64 47 31 28 45 73 46 57 43 50 65 68 74 63 34
79 30 51 80 71 62 58 77]
Missing values: 0
```

```
In [63]: top_winners=df.sort_values('Margin',ascending=False).head(10)
```

```
In [68]: top_winners
```

Out[68]:

| | Constituency | Const. No. | Leading Candidate | Leading Party | Trailing Candidate | Trailing Party | Margin |
|-----|-----------------|------------|----------------------------|---------------------------------------|-----------------------------------|---------------------------------------|--------|
| 39 | Aska | 19 | ANITA SUBHADARSHINI | Bharatiya Janata Party | RANJITA SAHU | Biju Janata Dal | 999 |
| 246 | Jaunpur | 73 | BABU SINGH KUSHWAHA | Samajwadi Party | KRIPASHANKAR SINGH | Bharatiya Janata Party | 993 |
| 92 | Bellary | 9 | E. TUKARAM | Indian National Congress | B. SREERAMULU | Bharatiya Janata Party | 989 |
| 258 | KARAULI-DHOLPUR | 10 | BHAJAN LAL JATAV | Indian National Congress | INDU DEVI | Bharatiya Janata Party | 989 |
| 531 | Valmiki Nagar | 1 | SUNIL KUMAR | Janata Dal (United) | DEEPAK YADAV | Rashtriya Janata Dal | 986 |
| 154 | Dharwad | 11 | PRALHAD JOSHI | Bharatiya Janata Party | VINOD ASOOTI | Indian National Congress | 973 |
| 288 | Keonjhar | 4 | ANANTA NAYAK | Bharatiya Janata Party | DHANURJAYA SIDU | Biju Janata Dal | 970 |
| 344 | Maval | 33 | SHRIRANG APPA CHANDU BARNE | Shiv Sena | SANJOG BHIKU WAGHERE PATIL | Shiv Sena (Uddhav Balasaheb Thackrey) | 966 |
| 541 | Yavatmal-Washim | 14 | SANJAY UTTAMRAO DESHMUKH | Shiv Sena (Uddhav Balasaheb Thackrey) | RAJSHRITAI HEMANT PATIL (MAHALLE) | Shiv Sena | 944 |
| 372 | Nagarkurnool | 12 | DR.MALLU RAVI | Indian National Congress | BHARATH PRASAD POTHUGANTI | Bharatiya Janata Party | 944 |



In [76]: `df['Constituency'].value_counts()`

```
Out[76]: Constituency
Maharajganj      2
Aurangabad      2
NAGAUUR         1
Munger          1
Murshidabad     1
..
Fatehgarh Sahib 1
Farrukhabad     1
Faridkot        1
Faizabad        1
Zahirabad       1
Name: count, Length: 541, dtype: int64
```

```
In [ ]:
```