

```
In [1]: import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
```

```
In [39]: andhra_pradesh_mla = pd.read_excel("Andhrapradesh(MLA).xlsx")
df1 = pd.DataFrame(andhra_pradesh_mla)
arunachal_pradesh_mla = pd.read_excel("Arunachal Pradesh(MLA).xlsx")
df2 = pd.DataFrame(arunachal_pradesh_mla)
odisha_mla = pd.read_excel("Odisha(MLA).xlsx")
df3 = pd.DataFrame(odisha_mla)
sikkim_mla = pd.read_excel("Sikkim(MLA).xlsx")
df4 = pd.DataFrame(sikkim_mla)
tamilnadu_mp = pd.read_excel("Tamilnadu(MP).xlsx")
df5 = pd.DataFrame(tamilnadu_mp)
telangana_mp = pd.read_excel("Telangana(MP).xlsx")
df6 = pd.DataFrame(telangana_mp)
```

```
In [40]: df1.shape
```

```
Out[40]: (175, 7)
```

```
In [41]: df2.shape
```

```
Out[41]: (60, 7)
```

```
In [42]: df3.shape
```

```
Out[42]: (147, 7)
```

```
In [43]: df4.shape
```

```
Out[43]: (32, 7)
```

```
In [44]: df5.shape
```

```
Out[44]: (39, 7)
```

```
In [45]: df6.shape
```

```
Out[45]: (17, 7)
```

```
In [48]: df1.head(10)
```

Out[48]:

	Constituency	Const. No.	Leading Candidate	Leading Party	Trailing Candidate	Trailing Party	Margin
0	Achanta	56	SATYANARAYANA PITHANI	Telugu Desam	CHERUKUVADA SRI RANGANADHA RAJU	Yuvarajana Sramika Rythu Congress Party	26554
1	Addanki	105	GOTTIPATI RAVI KUMAR	Telugu Desam	CHINNA HANIMIREDDY PANEM	Yuvarajana Sramika Rythu Congress Party	24890
2	Adoni	146	DR. PARTHA SARATHI VALMIKI	Bharatiya Janata Party	Y. SAI PRASAD REDDY	Yuvarajana Sramika Rythu Congress Party	18164
3	Allagadda	134	AKHILA PRIYA BHUMA	Telugu Desam	BRIJENDRA REDDY GANGULA (NANI)	Yuvarajana Sramika Rythu Congress Party	12037
4	Alur	147	B. VIRUPAKSHI	Yuvarajana Sramika Rythu Congress Party	B. VEERABHADRA GOWD	Telugu Desam	2831
5	Amadalavalasa	6	KOONA RAVI KUMAR	Telugu Desam	THAMMINENI SEETARAM	Yuvarajana Sramika Rythu Congress Party	35032
6	Amalapuram	44	AITHABATHULA ANANDARAO	Telugu Desam	VISWARUPU PINIPE	Yuvarajana Sramika Rythu Congress Party	38628
7	Anakapalle	30	KONATHALA RAMAKRISHNA	Janasena Party	BHARATH KUMAR MALASALA	Yuvarajana Sramika Rythu Congress Party	65764
8	Anantapur Urban	153	DAGGUPATI PRASAD	Telugu Desam	ANANTHA VENKATARAMI REDDY	Yuvarajana Sramika Rythu Congress Party	23023
9	Anaparthi	40	RAMAKRISHNA REDDY NALLAMILLI	Bharatiya Janata Party	DOCTOR.SATHI SURYANARAYANA REDDY	Yuvarajana Sramika Rythu Congress Party	20850

In [49]: df2.head(5)

Out[49]:

	Constituency	Const. No.	Leading Candidate	Leading Party	Trailing Candidate	Trailing Party	Margin
0	Along-EAST	31	KENTO JINI	Bharatiya Janata Party	JARKAR GAMLIN	People's Party of Arunachal	3158
1	Along-WEST	30	TOPIN ETE	Bharatiya Janata Party	NYAMO ETE	National People's Party	1951
2	Anini	41	MOPI MIHU	Bharatiya Janata Party	ERI TAYU	Independent	1173
3	Bameng	8	KUMAR WAI	Indian National Congress	DOBA LAMNIO	Bharatiya Janata Party	635
4	Basar	29	NYABI JINI DIRCHI	Bharatiya Janata Party	GOKAR BASAR	National People's Party	1791

In [50]: df3.head(5)

Out[50]:

	Constituency	Const. No.	Leading Candidate	Leading Party	Trailing Candidate	Trailing Party	Margin
0	Anandapur	22	ABHIMANYU SETHI	Biju Janata Dal	JAYADEV JENA	Indian National Congress	10966
1	Angul	61	PRATAP CHANDRA PRADHAN	Bharatiya Janata Party	SANJUKTA SINGH	Biju Janata Dal	17433
2	Aska	128	SAROJ KUMAR PADHI	Bharatiya Janata Party	MANJULA SWAIN	Biju Janata Dal	8059
3	Athagarh	89	RANENDRA PRATAP SWAIN	Biju Janata Dal	ABHAYA KUMAR BARIK	Bharatiya Janata Party	3584
4	Athamallik	63	NALINI KANTA PRADHAN	Biju Janata Dal	SANJEEB KUMAR SAHOO	Bharatiya Janata Party	16153

In [51]: df4.head(5)

Out[51]:

	Constituency	Const. No.	Leading Candidate	Leading Party	Trailing Candidate	Trailing Party	Margin
0	ARITHANG	26	ARUN KUMAR UPRETI	Sikkim Krantikari Morcha	ASHIS RAI	Sikkim Democratic Front	2729
1	BARFUNG	9	RIKSHAL DORJEE BHUTIA	Sikkim Krantikari Morcha	BHAICHUNG BHUTIA	Sikkim Democratic Front	4346
2	CHUJACHEN	20	PURAN KR. GURUNG	Sikkim Krantikari Morcha	MANI KUMAR GURUNG	Sikkim Democratic Front	3334
3	DARAMDIN	6	MINGMA NORBU SHERPA	Sikkim Krantikari Morcha	PEM NORBU SHERPA	Sikkim Democratic Front	5975
4	DJONGU	30	PINTSO NAMGYAL LEPCHA	Sikkim Krantikari Morcha	SONAM GYATSO LEPCHA	Sikkim Democratic Front	5007

```
In [52]: df5.head(5)
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Out[52]:

	Constituency	Const. No.	Leading Candidate	Leading Party	Trailing Candidate	Trailing Party	Margin
0	ARAKKONAM	7	S JAGATHRATCHAKAN	Dravida Munnetra Kazhagam	L VIJAYAN	All India Anna Dravida Munnetra Kazhagam	306559
1	ARANI	12	THARANIVENTHAN M S	Dravida Munnetra Kazhagam	GAJENDRAN, G.V.	All India Anna Dravida Munnetra Kazhagam	208766
2	CHENNAI CENTRAL	4	DAYANIDHI MARAN	Dravida Munnetra Kazhagam	VINOJ	Bharatiya Janata Party	244689
3	CHENNAI NORTH	2	DR.KALANIDHI VEERASWAMY	Dravida Munnetra Kazhagam	R. MANOHAR	All India Anna Dravida Munnetra Kazhagam	339222
4	CHENNAI SOUTH	3	T.SUMATHY (ALIAS) THAMIZHACHI THANGAPANDIAN	Dravida Munnetra Kazhagam	DR.TAMILISAI SOUNDARARAJAN	Bharatiya Janata Party	225945

```
In [53]: df6.head(5)
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Out[53]:

	Constituency	Const. No.	Leading Candidate	Leading Party	Trailing Candidate	Trailing Party	Margin
0	Adilabad	1	GODAM NAGESH	Bharatiya Janata Party	ATHRAM SUGUNA	Indian National Congress	90652
1	Bhongir	14	CHAMALA KIRAN KUMAR REDDY	Indian National Congress	DR. BOORA NARSAIAH GOUD	Bharatiya Janata Party	222170
2	Chevella	10	KONDA VISHWESHWAR REDDY	Bharatiya Janata Party	DR GADDAM RANJITH REDDY	Indian National Congress	172897
3	Hyderabad	9	ASADUDDIN OWAISI	All India Majlis-E-Ittehadul Muslimeen	MADHAVI LATHA KOMPELLA	Bharatiya Janata Party	338087
4	Karimnagar	3	BANDI SANJAY KUMAR	Bharatiya Janata Party	VELCHALA RAJENDER RAO	Indian National Congress	225209

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In [54]: df1.tail(5)
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Out[54]:

	Constituency	Const. No.	Leading Candidate	Leading Party	Trailing Candidate	Trailing Party	Margin
170	Visakhapatnam West	24	P.G.V.R.NAIDU	Telugu Desam	ADARI ANAND KUMAR	Yuvarajana Sramika Rythu Congress Party	35184
171	Vizianagaram	18	ADITI VIJAYALAKSHMI GAJAPATHI RAJU PUSAPATI	Telugu Desam	KOLAGATLA VEERABHADRA SWAMY	Yuvarajana Sramika Rythu Congress Party	60609
172	Yelamanchili	32	SUNDARAPU VIJAY KUMAR	Janasena Party	UPPALAPATI VENKATA RAMANAMURTHY RAJU	Yuvarajana Sramika Rythu Congress Party	48956
173	Yemmiganur	144	B. JAYANAGESWARA REDDY	Telugu Desam	BUTTA RENUKA	Yuvarajana Sramika Rythu Congress Party	15837
174	Yerragondapalem (SC)	102	CHANDRA SEKHAR TATIPARTHI	Yuvarajana Sramika Rythu Congress Party	ERIXION BABU GUDURI	Telugu Desam	5200

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In [55]: df2.tail(5)
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Out[55]:

	Constituency	Const. No.	Leading Candidate	Leading Party	Trailing Candidate	Trailing Party	Margin
55	Tezu	44	DR. MOHESH CHAI	Bharatiya Janata Party	KARIKHO KRI	National People's Party	2805
56	Thrizin-Buragaon	6	TENZIN NYIMA GLOW	Independent	KUMSI SIDISOW	Bharatiya Janata Party	400
57	Tuting-Yingkiong	34	ALO LIBANG	Bharatiya Janata Party	NOBENG BURANG	People's Party of Arunachal	915
58	Yachuli	16	TOKO TATUNG	Nationalist Congress Party	TABA TEDIR	Bharatiya Janata Party	228
59	Ziro-Hapoli	17	HAGE APPA	Bharatiya Janata Party	NaN	NaN	NaN

```
In [56]: df3.tail(5)
```

Out[56]:

	Constituency	Const. No.	Leading Candidate	Leading Party	Trailing Candidate	Trailing Party	Margin
142	Telkoi	20	DR. FAKIR MOHAN NAIK	Bharatiya Janata Party	MADHABA SARDAR	Biju Janata Dal	9439
143	Tirtol	102	RAMAKANTA BHOI	Biju Janata Dal	RAJKISHORE BEHERA	Bharatiya Janata Party	28495
144	Titlagarh	69	NABIN KUMAR JAIN	Bharatiya Janata Party	TUKUNI SAHU	Biju Janata Dal	17399
145	Udala	31	BHASKAR MADHEI	Bharatiya Janata Party	SRINATH SOREN	Biju Janata Dal	6517
146	Umerkote	73	NITYANANDA GOND	Bharatiya Janata Party	NABINA NAYAK	Biju Janata Dal	10373

```
In [57]: df4.tail(5)
```

Out[57]:

	Constituency	Const. No.	Leading Candidate	Leading Party	Trailing Candidate	Trailing Party	Margin
27	UPPER BURTUK	28	KALA RAI	Sikkim Krantikari Morcha	DILLI RAM THAPA	Bharatiya Janata Party	2568
28	UPPER TADONG	25	G.T. DHUNGEL	Sikkim Krantikari Morcha	DR. CHANDRA BAHADUR CHETTRI	Sikkim Democratic Front	4089
29	WEST PENDAM	18	LALL BAHADUR DAS	Sikkim Krantikari Morcha	ANUP THATAL	Sikkim Democratic Front	1952
30	YANGTHANG	2	BHIM HANG LIMBOO	Sikkim Krantikari Morcha	KESHAM LIMBOO	Sikkim Democratic Front	2556
31	YUKSOM TASHIDING	1	TSHERING THENDUP BHUTIA	Sikkim Krantikari Morcha	MEEWANG GYATSO BHUTIA	Sikkim Democratic Front	4812

In [58]: df5.tail(5)

Out[58]:

	Constituency	Const. No.	Leading Candidate	Leading Party	Trailing Candidate	Trailing Party	Margin
34	TIRUVALLUR	1	Sasikanth Senthil	Indian National Congress	Balaganapathy, V. Pon	Bharatiya Janata Party	572155
35	TIRUVANNAMALAI	11	ANNADURAI, C.N.	Dravida Munnetra Kazhagam	KALIYAPERUMAL M	All India Anna Dravida Munnetra Kazhagam	233931
36	VELLORE	8	DM KATHIR ANAND	Dravida Munnetra Kazhagam	AC SHANMUGAM	Bharatiya Janata Party	215702
37	VILUPPURAM	13	RAVIKUMAR. D	Viduthalai Chiruthaigal Katchi	BHAGYARAJ. J	All India Anna Dravida Munnetra Kazhagam	70703
38	VIRUDHUNAGAR	34	MANICKAM TAGORE B	Indian National Congress	VIJAYAPRABHAKARAN V	Desiya Murpokku Dravida Kazhagam	4379

In [59]: df6.tail(5)

Out[59]:

	Constituency	Const. No.	Leading Candidate	Leading Party	Trailing Candidate	Trailing Party	Margin
12	Nizamabad	4	ARVIND DHARMAPURI	Bharatiya Janata Party	JEEVANREDDY THATIPARTHI	Indian National Congress	109241
13	Peddapalle	2	VAMSI KRISHNA GADDAM	Indian National Congress	SRINIVAS GOMASE	Bharatiya Janata Party	131364
14	Secunderabad	8	G. KISHAN REDDY	Bharatiya Janata Party	DANAM NAGENDER	Indian National Congress	49944
15	Warangal	15	KADIYAM KAVYA	Indian National Congress	AROORI RAMESH	Bharatiya Janata Party	220339
16	Zahirabad	5	SURESH KUMAR SHETKAR	Indian National Congress	B. B. PATIL	Bharatiya Janata Party	46188


```
In [60]: df1.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 175 entries, 0 to 174
Data columns (total 7 columns):
#   Column                Non-Null Count  Dtype
---  ---
0   Constituency           175 non-null    object
1   Const. No.             175 non-null    int64
2   Leading Candidate      175 non-null    object
3   Leading Party          175 non-null    object
4   Trailing Candidate     175 non-null    object
5   Trailing Party         175 non-null    object
6   Margin                 175 non-null    int64
dtypes: int64(2), object(5)
memory usage: 9.7+ KB
```

```
In [61]: df2.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 60 entries, 0 to 59
Data columns (total 7 columns):
#   Column                Non-Null Count  Dtype
---  ---
0   Constituency           60 non-null    object
1   Const. No.             60 non-null    int64
2   Leading Candidate      60 non-null    object
3   Leading Party          60 non-null    object
4   Trailing Candidate     50 non-null    object
5   Trailing Party         50 non-null    object
6   Margin                 52 non-null    object
dtypes: int64(1), object(6)
memory usage: 3.4+ KB
```

In [62]: df3.info()

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 147 entries, 0 to 146
Data columns (total 7 columns):
#   Column                Non-Null Count  Dtype
---  ---
0   Constituency           147 non-null    object
1   Const. No.             147 non-null    int64
2   Leading Candidate      147 non-null    object
3   Leading Party          147 non-null    object
4   Trailing Candidate     147 non-null    object
5   Trailing Party         147 non-null    object
6   Margin                 147 non-null    int64
dtypes: int64(2), object(5)
memory usage: 8.2+ KB
```

In [63]: df4.info()

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 32 entries, 0 to 31
Data columns (total 7 columns):
#   Column                Non-Null Count  Dtype
---  ---
0   Constituency           32 non-null    object
1   Const. No.             32 non-null    int64
2   Leading Candidate      32 non-null    object
3   Leading Party          32 non-null    object
4   Trailing Candidate     32 non-null    object
5   Trailing Party         32 non-null    object
6   Margin                 32 non-null    int64
dtypes: int64(2), object(5)
memory usage: 1.9+ KB
```

```
In [64]: df5.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 39 entries, 0 to 38
Data columns (total 7 columns):
#   Column                Non-Null Count  Dtype
---  -
0   Constituency           39 non-null    object
1   Const. No.             39 non-null    int64
2   Leading Candidate      39 non-null    object
3   Leading Party          39 non-null    object
4   Trailing Candidate     39 non-null    object
5   Trailing Party         39 non-null    object
6   Margin                 39 non-null    int64
dtypes: int64(2), object(5)
memory usage: 2.3+ KB
```

```
In [65]: df6.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 17 entries, 0 to 16
Data columns (total 7 columns):
#   Column                Non-Null Count  Dtype
---  -
0   Constituency           17 non-null    object
1   Const. No.             17 non-null    int64
2   Leading Candidate      17 non-null    object
3   Leading Party          17 non-null    object
4   Trailing Candidate     17 non-null    object
5   Trailing Party         17 non-null    object
6   Margin                 17 non-null    int64
dtypes: int64(2), object(5)
memory usage: 1.1+ KB
```

```
In [37]: df1.describe()
```

```
Out[37]:
```

	Const. No.	Margin
count	175.000000	175.000000
mean	88.000000	32732.091429
std	50.662281	20006.574848
min	1.000000	351.000000
25%	44.500000	18562.500000
50%	88.000000	29371.000000
75%	131.500000	44143.500000
max	175.000000	95235.000000

```
In [66]: df2.describe()
```

```
Out[66]:
```

	Const. No.
count	60.000000
mean	30.500000
std	17.464249
min	1.000000
25%	15.750000
50%	30.500000
75%	45.250000
max	60.000000

```
In [67]: df3.describe()
```

```
Out[67]:
```

	Const. No.	Margin
count	147.000000	147.000000
mean	74.000000	14524.197279
std	42.579338	10849.667915
min	1.000000	37.000000
25%	37.500000	5710.000000
50%	74.000000	11577.000000
75%	110.500000	21358.500000
max	147.000000	51465.000000

```
In [68]: df4.describe()
```

```
Out[68]:
```

	Const. No.	Margin
count	32.000000	32.000000
mean	16.500000	3531.281250
std	9.380832	1863.412327
min	1.000000	851.000000
25%	8.750000	2180.000000
50%	16.500000	3198.500000
75%	24.250000	4860.750000
max	32.000000	7396.000000

```
In [69]: df5.describe()
```

```
Out[69]:
```

	Const. No.	Margin
count	39.000000	39.000000
mean	20.000000	222254.769231
std	11.401754	124963.654574
min	1.000000	4379.000000
25%	10.500000	166201.000000
50%	20.000000	209409.000000
75%	29.500000	275004.000000
max	39.000000	572155.000000

```
In [70]: df6.describe()
```

```
Out[70]:
```

	Const. No.	Margin
count	17.000000	17.000000
mean	9.000000	206619.764706
std	5.049752	163384.082762
min	1.000000	4500.000000
25%	5.000000	90652.000000
50%	9.000000	172897.000000
75%	13.000000	338087.000000
max	17.000000	559905.000000

```
In [71]: df1.isnull().sum()
```

```
Out[71]: Constituency      0  
Const. No.      0  
Leading Candidate  0  
Leading Party    0  
Trailing Candidate  0  
Trailing Party   0  
Margin          0  
dtype: int64
```

```
In [72]: df2.isnull().sum()
```

```
Out[72]: Constituency      0  
Const. No.      0  
Leading Candidate  0  
Leading Party    0  
Trailing Candidate 10  
Trailing Party    10  
Margin          8  
dtype: int64
```

```
In [73]: df3.isnull().sum()
```

```
Out[73]: Constituency      0  
Const. No.      0  
Leading Candidate  0  
Leading Party    0  
Trailing Candidate  0  
Trailing Party    0  
Margin          0  
dtype: int64
```

```
In [74]: df4.isnull().sum()
```

```
Out[74]: Constituency      0  
Const. No.      0  
Leading Candidate  0  
Leading Party    0  
Trailing Candidate  0  
Trailing Party   0  
Margin          0  
dtype: int64
```

```
In [75]: df5.isnull().sum()
```

```
Out[75]: Constituency      0  
Const. No.      0  
Leading Candidate  0  
Leading Party    0  
Trailing Candidate  0  
Trailing Party   0  
Margin          0  
dtype: int64
```

```
In [76]: df6.isnull().sum()
```

```
Out[76]: Constituency      0  
Const. No.      0  
Leading Candidate  0  
Leading Party    0  
Trailing Candidate  0  
Trailing Party   0  
Margin          0  
dtype: int64
```


In []: