In [1]:

```
import numpy as np
import pandas as pd
import seaborn as sns
import matplotlib.pyplot as plt
```

In [2]:

```
data = pd.read_csv("Punjab Assembly Elections 2022.csv")
```

In [3]:

```
data.head()
```

Out[3]:

	AC Name	AC No.	Type	District	Winning Candidate	Party	EVM Votes	Postal Votes\t	Total Votes\t	% of Votes
0	Abohar	81	GEN	Firozpur	SANDEEP JAKHAR	Indian National Congress	49390	534	49924	37.51
1	Adampur	38	SC	Jalandhar	SUKHWINDER SINGH KOTLI	Indian National Congress	39373	181	39554	34.77
2	Ajnala	11	GEN	Amritsar	KULDEEP SINGH DHALIWAL	Aam Aadmi Party	43257	298	43555	35.69
3	Amargarh	106	GEN	Sangrur	PROF. JASWANT SINGH GAJJAN MAJRA	Aam Aadmi Party	44294	229	44523	34.28
4	Amloh	56	GEN	Fatehgarh Sahib	Gurinder Singh Garry Birring	Aam Aadmi Party	52648	264	52912	46.43

In [4]:

```
data.tail()
```

Out[4]:

	AC Name	AC No.	Type	District	Winning Candidate	Party	EVM Votes	Postal Votes\t	Total Votes\t	% of Votes
112	Sunam	101	GEN	Sangrur	AMAN ARORA	Aam Aadmi Party	94274	520	94794	61.28
113	Talwandi Sabo	94	GEN	Bathinda	Prof. Baljinder Kaur	Aam Aadmi Party	48358	395	48753	37.04
114	Tarn Taran	21	GEN	Amritsar	Dr. Kashmir Singh Sohal	Aam Aadmi Party	52469	466	52935	40.45
115	Urmar	41	GEN	Hoshiarpur	Jasvir Singh Raja Gill	Aam Aadmi Party	42029	547	42576	34.01
116	Zira	75	GEN	Firozpur	Naresh Kataria	Aam Aadmi Party	63709	325	64034	42.35

In [5]:

```
data.shape
```

Out[5]:

```
(117, 10)
```

In [6]:

```
data.columns
```

Out[6]:

```
Index(['AC Name', 'AC No.', 'Type', 'District', 'Winning Candidate', 'Part
y',
       'EVM Votes', 'Postal Votes\t', 'Total Votes\t', '% of Votes'],
      dtype='object')
```

In [7]:

```
data.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 117 entries, 0 to 116
Data columns (total 10 columns):
 #   Column             Non-Null Count  Dtype 
---  ------             --------------  ----- 
 0   AC Name            117 non-null    object
 1   AC No.             117 non-null    int64 
 2   Type               117 non-null    object
 3   District           117 non-null    object
 4   Winning Candidate  117 non-null    object
 5   Party              117 non-null    object
 6   EVM Votes          117 non-null    int64 
 7   Postal Votes             117 non-null    int64 
 8   Total Votes               117 non-null    int64 
 9   % of Votes         117 non-null    float64
dtypes: float64(1), int64(4), object(5)
memory usage: 9.3+ KB
```

In [8]:

```
data.describe()
```

Out[8]:

	AC No.	EVM Votes	Postal Votes\t	Total Votes\t	% of Votes
count	117.000000	117.000000	117.000000	117.000000	117.000000
mean	59.000000	57795.444444	413.128205	58208.572650	43.479231
std	33.919021	15281.053220	239.501765	15394.568338	8.287270
min	1.000000	29606.000000	70.000000	29903.000000	26.410000
25%	30.000000	46802.000000	232.000000	46916.000000	36.550000
50%	59.000000	55715.000000	396.000000	56155.000000	43.110000
75%	88.000000	65698.000000	523.000000	66096.000000	49.610000
max	117.000000	99200.000000	1548.000000	100023.000000	64.290000

In [9]:

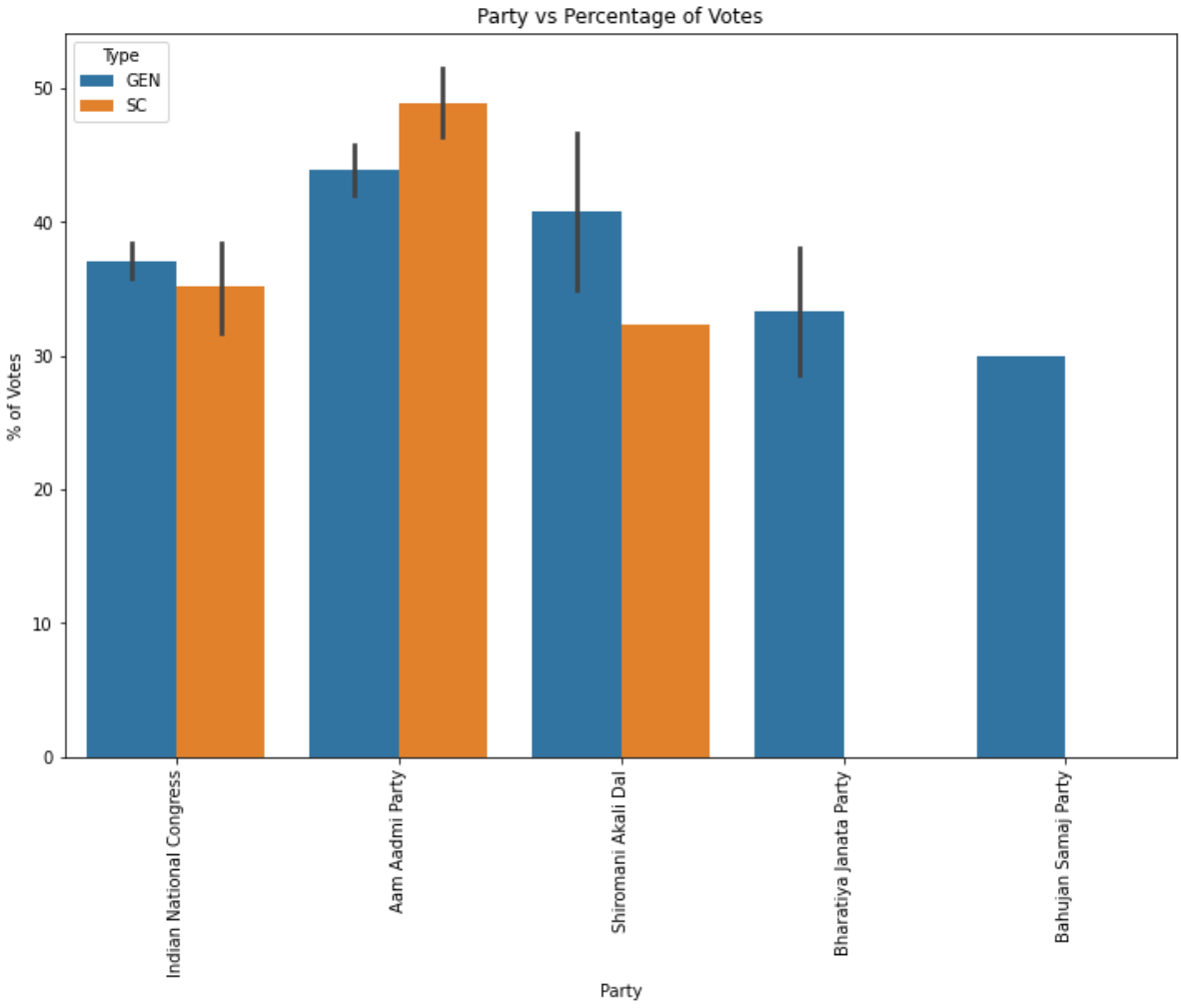
```
data.isnull().sum()
```

Out[9]:

```
AC Name              0
AC No.               0
Type                 0
District             0
Winning Candidate    0
Party                0
EVM Votes            0
Postal Votes\t       0
Total Votes\t        0
% of Votes           0
dtype: int64
```

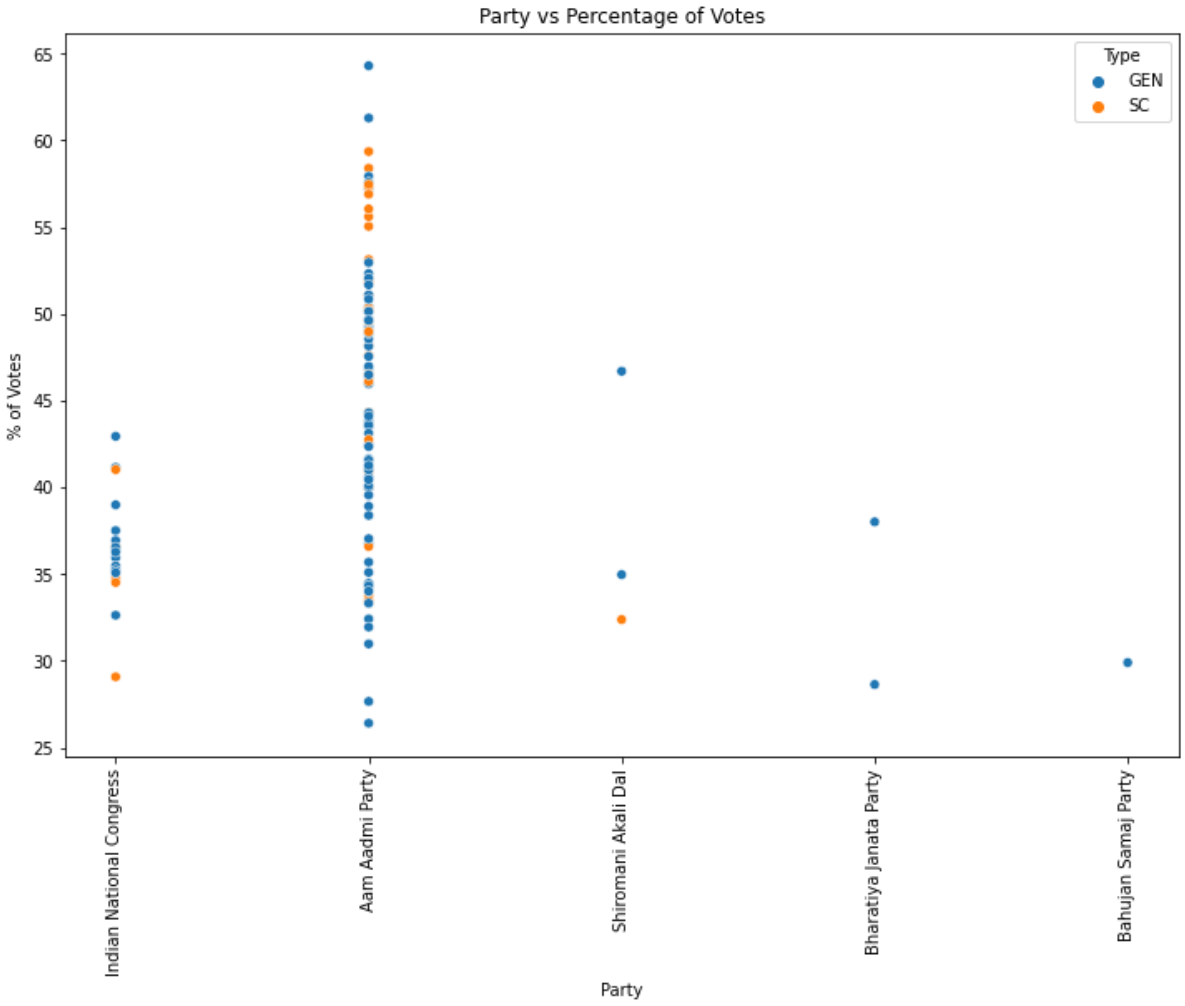
In [12]:

```
plt.figure(figsize = (12,8))
plt.xticks(rotation = 90)
sns.barplot(x="Party", y="% of Votes", hue="Type" ,data=data)
plt.title("Party vs Percentage of Votes")
plt.show()
```



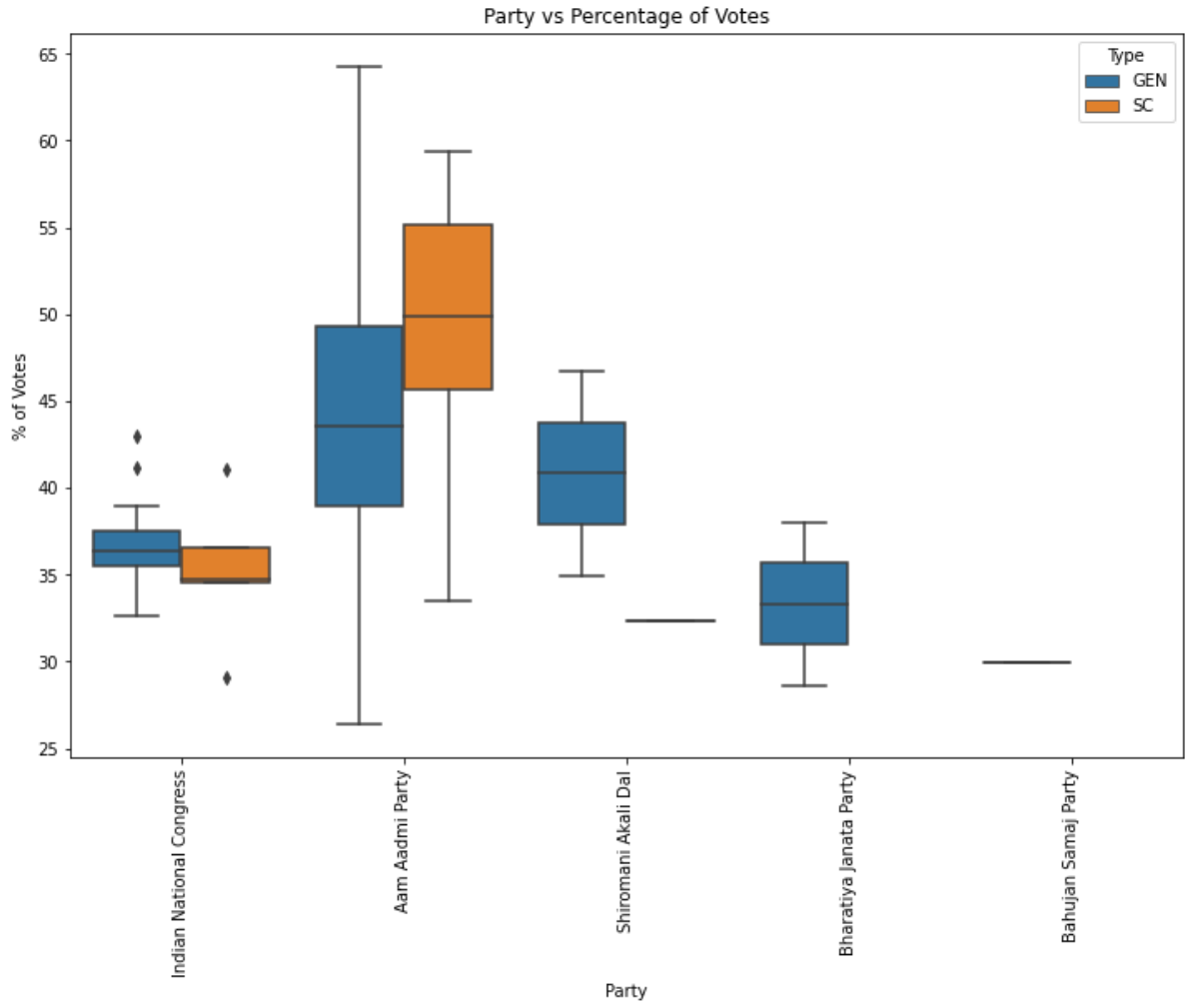
In [13]:

```
plt.figure(figsize = (12,8))
plt.xticks(rotation = 90)
sns.scatterplot(x="Party", y="% of Votes", hue="Type" ,data=data)
plt.title("Party vs Percentage of Votes")
plt.show()
```



In [14]:

```
plt.figure(figsize = (12,8))
plt.xticks(rotation = 90)
sns.boxplot(x="Party", y="% of Votes", hue="Type" ,data=data)
plt.title("Party vs Percentage of Votes")
plt.show()
```

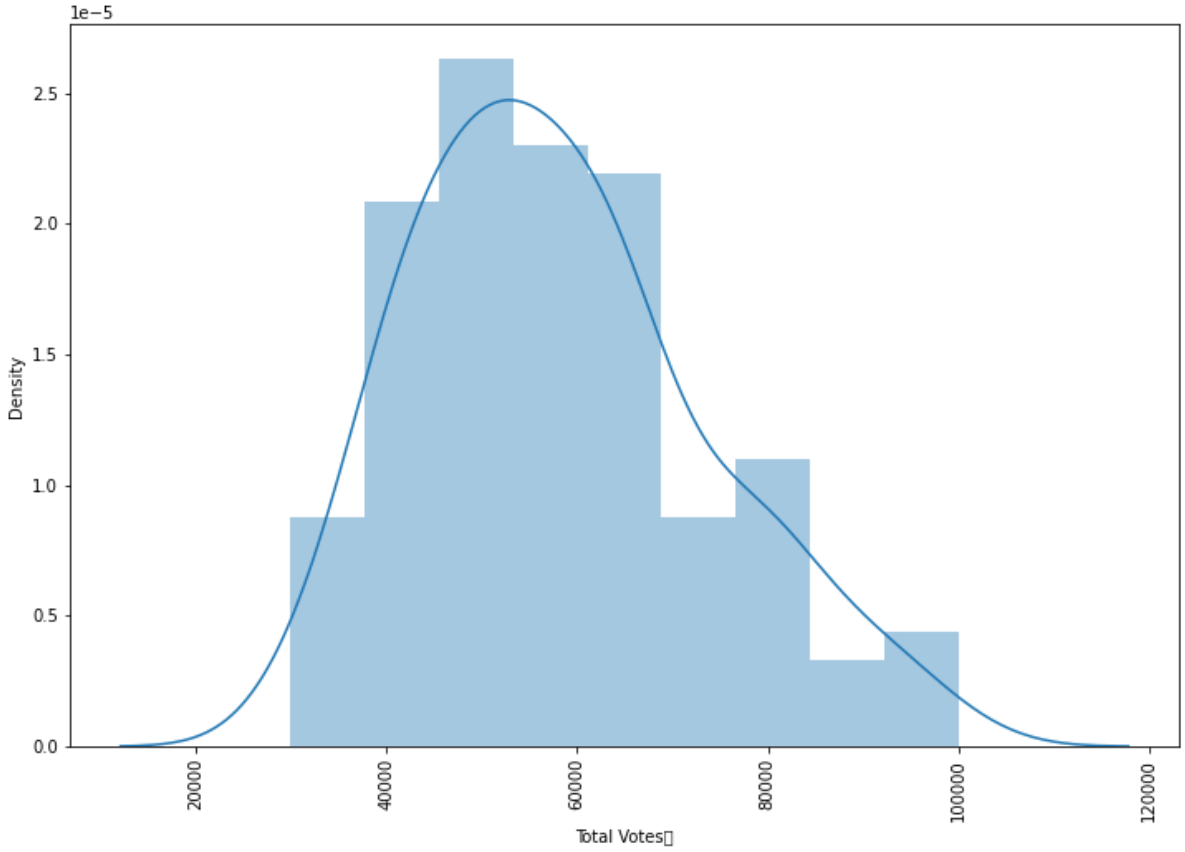


In [19]:

```
import warnings
warnings.filterwarnings('ignore')
```

In [20]:

```
plt.figure(figsize = (12,8))
plt.xticks(rotation = 90)
sns.distplot(data['Total Votes\t'], kde=True)
plt.show()
```



In [18]:

```
sns.heatmap(data.corr(), fmt = ".2f")
```

Out[18]:

<AxesSubplot:>