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

In [4]:
```
df = pd.read_csv("frnds.csv")
df
```

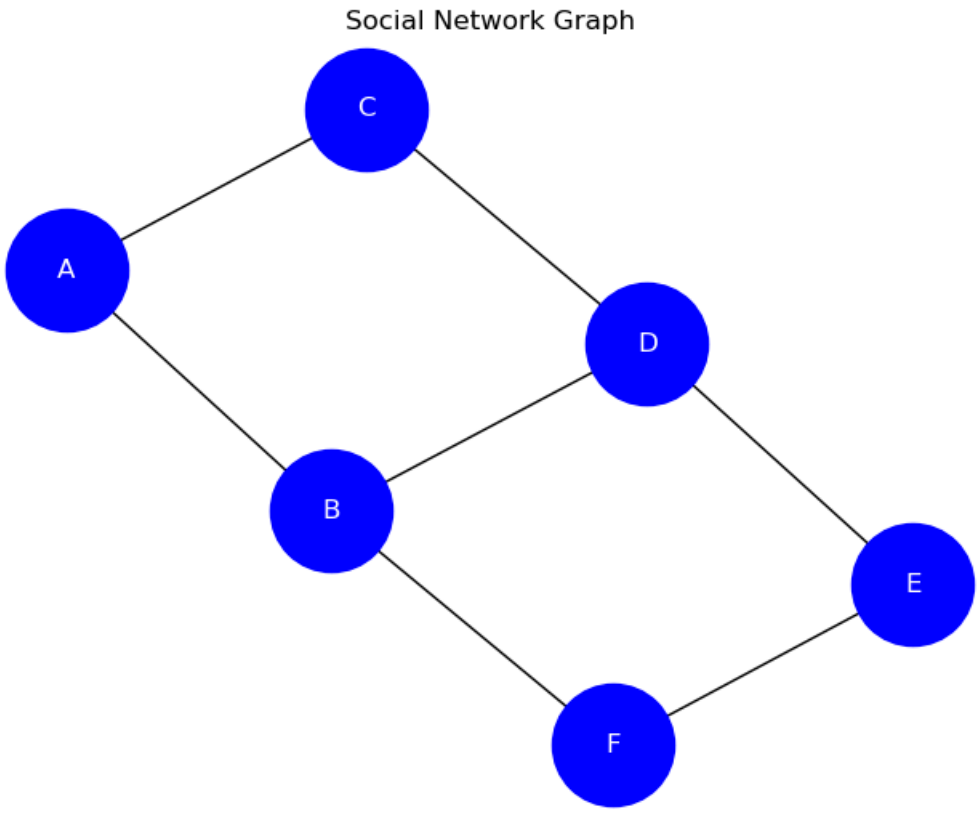
Out[4]:

	Source	Target
0	A	B
1	A	C
2	B	D
3	C	D
4	D	E
5	E	F
6	B	F

In [5]:
```
G = nx.from_pandas_edgelist(df,source = 'Source',target = 'Target')
```

In [9]:
```
nx.draw(G,with_labels = True, node_color = 'blue',font_color = 'white',node_size = 3000)
plt.title('Social Network Graph')
```

Out[9]:
```
Text(0.5, 1.0, 'Social Network Graph')
```



In [10]:
```python
# Step 4: Calculate Betweenness Centrality
betweenness = nx.betweenness_centrality(G)
print("Betweenness Centrality:")
for node, score in betweenness.items():
    print(f"Node {node}: {score}")

# Step 5: Calculate Degree Centrality
degree_centrality = nx.degree_centrality(G)
print("\nDegree Centrality:")
for node, score in degree_centrality.items():
    print(f"Node {node}: {score}")

# Step 6: Calculate Closeness Centrality
closeness_centrality = nx.closeness_centrality(G)
print("\nCloseness Centrality:")
for node, score in closeness_centrality.items():
    print(f"Node {node}: {score}")
```

```
Betweenness Centrality:
Node A: 0.08333333333333333
Node B: 0.3333333333333333
Node C: 0.08333333333333333
Node D: 0.33333333333333337
Node E: 0.08333333333333333
Node F: 0.08333333333333333

Degree Centrality:
Node A: 0.4
Node B: 0.6000000000000001
Node C: 0.4
Node D: 0.6000000000000001
Node E: 0.4
Node F: 0.4

Closeness Centrality:
Node A: 0.5555555555555556
Node B: 0.7142857142857143
Node C: 0.5555555555555556
Node D: 0.7142857142857143
Node E: 0.5555555555555556
Node F: 0.5555555555555556
```