List of Dataset names:

1. facebook_combined
2. test
3. test1
4. test2
5. test3
6. test4
7. test5

Steps to execute the program:-

step 1 : Navigate to the folder "Social Network Analysis" on your command shell

```
C:\Users\hp\Desktop\New folder\Social Network Analysis>
```

        If you are running the program for the first time on your System then goto step 2, else goto step 3

step 2 : run the command "pip install -r requirements.txt"

```
(Social Network Analysis) C:\Users\hp\Desktop\New folder\Social Network Analysis>pip install -r requirements.txt
Collecting cycler==0.11.0
  Using cached cycler-0.11.0-py3-none-any.whl (6.4 kB)
Collecting fonttools==4.28.4
  Using cached fonttools-4.28.4-py3-none-any.whl (885 kB)
Collecting kiwisolver==1.3.2
  Using cached kiwisolver-1.3.2-cp310-cp310-win_amd64.whl (52 kB)
Collecting matplotlib==3.5.1
  Using cached matplotlib-3.5.1-cp310-cp310-win_amd64.whl (7.2 MB)
Collecting networkx==2.6.3
  Using cached networkx-2.6.3-py3-none-any.whl (1.9 MB)
Collecting numpy==1.21.4
  Using cached numpy-1.21.4-cp310-cp310-win_amd64.whl (14.0 MB)
Collecting packaging==21.3
  Using cached packaging-21.3-py3-none-any.whl (40 kB)
Collecting pandas==1.3.5
  Using cached pandas-1.3.5-cp310-cp310-win_amd64.whl (10.2 MB)
Collecting Pillow==8.4.0
  Using cached Pillow-8.4.0-cp310-cp310-win_amd64.whl (3.2 MB)
Collecting pyparsing==3.0.6
  Using cached pyparsing-3.0.6-py3-none-any.whl (97 kB)
Collecting python-dateutil==2.8.2
  Using cached python_dateutil-2.8.2-py2.py3-none-any.whl (247 kB)
Collecting pytz==2021.3
  Using cached pytz-2021.3-py2.py3-none-any.whl (503 kB)
Collecting scipy==1.7.3
  Using cached scipy-1.7.3-cp310-cp310-win_amd64.whl (34.3 MB)
Collecting six==1.16.0
  Using cached six-1.16.0-py2.py3-none-any.whl (11 kB)
Installing collected packages: pytz, six, pyparsing, Pillow, numpy, networkx, kiwisolver, fonttools, cycler, scipy, pyth
on-dateutil, packaging, pandas, matplotlib
Successfully installed Pillow-8.4.0 cycler-0.11.0 fonttools-4.28.4 kiwisolver-1.3.2 matplotlib-3.5.1 networkx-2.6.3 nump
y-1.21.4 packaging-21.3 pandas-1.3.5 pyparsing-3.0.6 python-dateutil-2.8.2 pytz-2021.3 scipy-1.7.3 six-1.16.0
WARNING: You are using pip version 22.0.4; however, version 22.1.2 is available.
You should consider upgrading via the 'C:\Users\hp\Desktop\New folder\Social Network Analysis\Scripts\python.exe -m pip
install --upgrade pip' command.

(Social Network Analysis) C:\Users\hp\Desktop\New folder\Social Network Analysis>
```

step 3 : run the command "python main.py"

```
(Social Network Analysis) C:\Users\hp\Desktop\New folder\Social Network Analysis>python main.py
Database name:
```

step 4 : it will ask for the dataset name (provide the name from the above dataset list)

```
(Social Network Analysis) C:\Users\hp\Desktop\New folder\Social Network Analysis>python main.py
Database name: facebook_combined
Choose 1 for Pagerank
Choose 2 for Degree Centrality
Choose 3 for Betweenness Centrality
Choose 4 for Closeness Centrality
Choose 5 for Eigenvector Centrality
Choose 6 to draw Graph
Give the number of seed selection:
```

step 5 : it will provide list of seed selection algorithms type the respective number of the seed selection algorithm

```
(Social Network Analysis) C:\Users\hp\Desktop\New folder\Social Network Analysis>python main.py
Database name: facebook_combined
Choose 1 for Pagerank
Choose 2 for Degree Centrality
Choose 3 for Betweenness Centrality
Choose 4 for Closeness Centrality
Choose 5 for Eigenvector Centrality
Choose 6 to draw Graph
Give the number of seed selection: 1
No of seed to be selected:
```

step 6 : type the number of seed nodes to be selected

```
(Social Network Analysis) C:\Users\hp\Desktop\New folder\Social Network Analysis>python main.py
Database name: facebook_combined
Choose 1 for Pagerank
Choose 2 for Degree Centrality
Choose 3 for Betweenness Centrality
Choose 4 for Closeness Centrality
Choose 5 for Eigenvector Centrality
Choose 6 to draw Graph
Give the number of seed selection: 1
No of seed to be selected: 5
['3437', '107', '1684', '0', '1912']
Please type Y/N to calculate the number nodes influenced.
```

step 7 : It will show the list of selected seed nodes and will ask whether want to calculate the number influenced nodes if yes type "y" and it will goto step 8, else goto step 9

```
(Social Network Analysis) C:\Users\hp\Desktop\New folder\Social Network Analysis>python main.py
Database name: facebook_combined
Choose 1 for Pagerank
Choose 2 for Degree Centrality
Choose 3 for Betweenness Centrality
Choose 4 for Closeness Centrality
Choose 5 for Eigenvector Centrality
Choose 6 to draw Graph
Give the number of seed selection: 1
No of seed to be selected: 5
['3437', '107', '1684', '0', '1912']
Please type Y/N to calculate the number nodes influenced.Y
Choose 1 for Independent Cascading
Choose 2 for Count Neighbours
```

step 8 : it will provide list of influence spreading algorithms type the respective number of the influence spreading algorithm

```
(Social Network Analysis) C:\Users\hp\Desktop\New folder\Social Network Analysis>python main.py
Database name: facebook_combined
Choose 1 for Pagerank
Choose 2 for Degree Centrality
Choose 3 for Betweenness Centrality
Choose 4 for Closeness Centrality
Choose 5 for Eigenvector Centrality
Choose 6 to draw Graph
Give the number of seed selection: 1
No of seed to be selected: 5
['3437', '107', '1684', '0', '1912']
Please type Y/N to calculate the number nodes influenced.Y
Choose 1 for Independent Cascading
Choose 2 for Count Neighbours
1
Number of influenced nodes: 3945
```

step 9 : end