## **EXPERIMENT NO.6**

**AIM:** To Develop Structure based social media analytics model for any business.

**RESOURCES REOUIRED:** Windows/MAC/Linux O.S, Compatible version of Python.

## **THEORY:**

Structured analytics in social media is the process of discovering the structure of the relationships emerging from this social media use. It focuses on identifying the users involved, the activities they undertake, the actions they perform, and the items (e.g., movies, restaurants, blogs, etc.) they create and interact with. There are two key challenges facing these tasks: how to organize and model social media content, which is often unstructured in its raw form, in order to employ structured analytics on it; and how to employ analytics algorithms to capture both explicit link-based relationships and implicit behavior-based relationships.

Communities are a property of many networks in which a particular network may have multiple communities such that nodes inside a community are densely connected. Community detection methods can be broadly categorized into two types; **Agglomerative Methods and Divisive Methods**. In **Agglomerative methods**, edges are added one by one to a graph which only contains nodes. Edges are added from the stronger edge to the weaker edge. **Divisive methods** follow the opposite of agglomerative methods. In there, edges are removed one by one from a complete graph. There can be any number of communities in a given network and they can be of varying sizes. These characteristics make the detection procedure of communities very hard. However, there are many different techniques proposed in the domain of community detection.

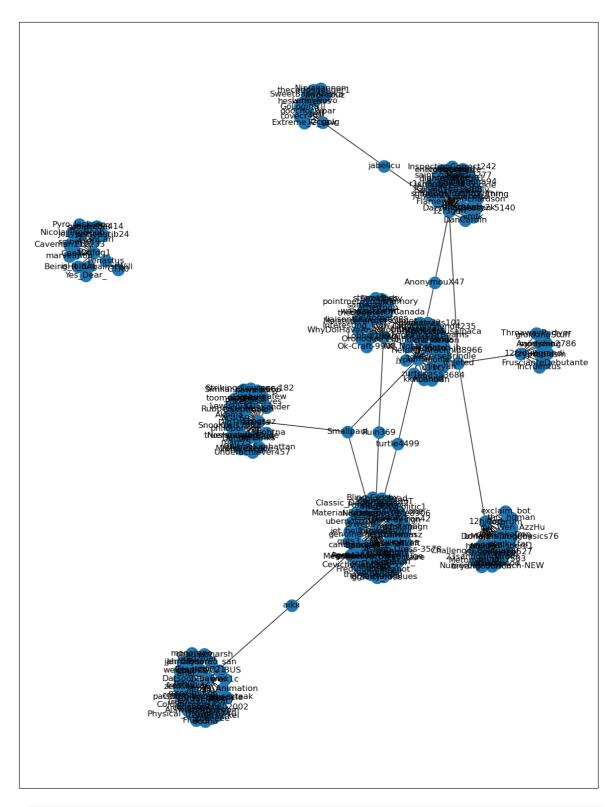
Online social networks such as Weibo, Twitter, and Facebook provide valuable platforms for information diffusion among their users. During this process, social influence occurs when a person's opinions, emotions, or behaviors are affected by other people. Thus, changes occur in an individual's attitudes, thoughts, feelings, or behaviors as a result of interaction with other people or groups. Social influence analysis (SIA) is becoming an important research field in social networks. SIA mainly studies how to model the influence diffusion process in networks, and how to propose an efficient method to identify a group of target nodes in a network

**CONCLUSION:** Hence, we have successfully studied to Develop Structure based social media analytics model for any business.

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```
In [1]: import pandas as pd
        import numpy as np
        import networkx as nx
        from pyvis.network import Network
        import matplotlib.pyplot as plt
In [2]: comment_df = pd.read_csv('comment.csv')
        comment df.info()
      <class 'pandas.core.frame.DataFrame'>
      RangeIndex: 325 entries, 0 to 324
      Data columns (total 8 columns):
       # Column Non-Null Count Dtype
       --- ----
                        -----
          comment_id 325 non-null object
       1 post_id 325 non-null object
2 parent_id 325 non-null object
3 body 325 non-null object
       4
           created_on 325 non-null object
       5
          upvotes 325 non-null int64
           author_id 325 non-null
                                        object
       6
       7
           author_name 325 non-null
                                        object
       dtypes: int64(1), object(7)
      memory usage: 20.4+ KB
In [3]: Graph = nx.from pandas edgelist(
            comment_df,
            source='post id',
            target='author_name',
            edge_attr='upvotes'
        plt.figure(figsize=(15,20))
        nx.draw_networkx(Graph,with_labels=True)
```

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```
In [4]: net = Network(notebook=True,cdn_resources='remote')
net.from_nx(Graph)
net.show("comments_network.html")
```

comments\_network.html

