

## **EXPERIMENT NO.6**

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

**RESOURCES REQUIRED:** 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.

```
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
---  -
0   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
6   author_id       325 non-null   object
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)
```



