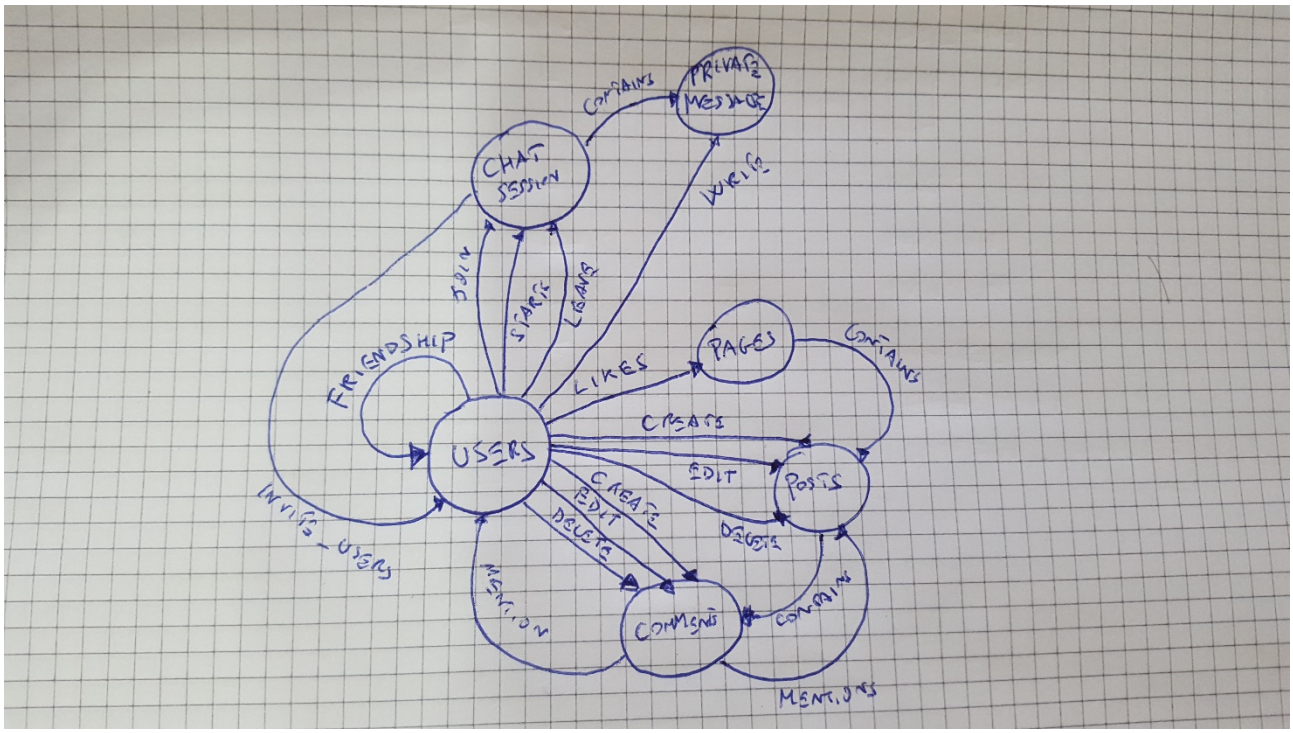
Graphs in Every Day Life Assignment

Yasaman Mirmohammad– April 2020 - Coursera, Big Data Graph Analytics – UC San Diego



I thought a simple Social Network with a basic functionality such as create posts, comments them, ask friendship, chat and likes pages. Below the lists of nodes and edges.

A Social Network like this could provide tons of questions and answers, for example:

- **Who are the influencer of the network?** Users with lots of friends and Pages with lots of likes are the best candidates to be defined as such. A useful metric is Degree of Centrality.
- **What are the trending topic/posts?** We can retrieve the trending topic based on the numbers of interactions such comments and likes and compute TF-IDF for each returned comment.
- **What are the most active Users?** Users (or Pages) with N likes or comments X day (maybe 10?) is very active!
- **What are the suggested Users for each User?** We should find the closest non-friend neighbors and suggest to each user respectively.

ID	NODE
1	Users
2	Pages
3	Posts
4	Comments
5	Chat Sessions
6	Private Messages

SRC_ID	DST_ID	EDGE_TYPE (E)
1	1	Friendships
1	2	Likes
1	3	Creates
1	3	Edits
1	3	Deletes
1	4	Creates
1	4	Edits
1	4	Deletes
1	4	Likes
1	5	Starts
1	5	Leaves
1	5	Joins
1	6	Writes
2	3	Creates
2	3	Edits
2	3	Deletes
2	4	Creates
2	4	Edits
2	4	Deletes
4	1	Mentions
4	2	Mentions
5	1	Invite
5	6	Contains
2	3	Contains
3	4	Contains