GRAPH ANALYSIS using Neo4j

-Samiksha Ingole (22188113)

//Loading Data in Neo4j

```
LOAD CSV FROM "https://raw.githubusercontent.com/Samiksha-Ingole/Catch-the-
flamingo/main/chat_join_team_chat.csv" as line       MERGE (u:User {id: line[0]})
MERGE (c:TeamChatSession {id: line[1]})
MERGE (u)-[:Joins{timeStamp: line[2]}]->(c)
```

```
LOAD CSV FROM
"https://raw.githubusercontent.com/xahram/catch_the_pink_flamingo/main/chat_leave_team
_chat.csv" AS row
MERGE (u:User {id: row[0]})
MERGE (c:TeamChatSession {id: row[1]})
MERGE (u)-[:Leaves{timeStamp: row[2]}]->(c)
```

```
LOAD CSV FROM "https://raw.githubusercontent.com/Samiksha-Ingole/Catch-the-
flamingo/main/chat_mention_team_chat.csv" AS line
MERGE (c:ChatItem {id: line[0]})
MERGE (u:User {id: line[1]})
MERGE (c)-[:Mentioned{timeStamp: line[2]}]->(u)
```

```
LOAD CSV FROM " https://raw.githubusercontent.com/Samiksha-Ingole/Catch-the-
flamingo/main/chat_respond_team_chat.csv" AS row MERGE (u1:User {id: row[0]})
MERGE (u2:User {id: row[1]}) MERGE (u1)-[:Respondsto{timeStamp: row[2]}]->(u2)
```

//ploting graph of respondsto relation

```
MATCH p=()-[r:Respondsto]->() RETURN p LIMIT 100
```

//ploting graph of Join relation

```
MATCH p=()-[r:Joins]->() RETURN p LIMIT 100
```

//ploting graph of Leave relation

```
MATCH p=()-[r:Leaves]->() RETURN p LIMIT 100
```

//ploting graph of Mentioned relation

```
MATCH p=()-[r: Mentioned]->() RETURN p LIMIT 100
```

// Most Active Players

```
MATCH (u1:ChatItem)-[r:Mentioned*]->(u:User)
RETURN count(u) as count, u.id as users,ORDER BY count DESC LIMIT 5
```

//Most active teams

```
MATCH (u:User)-[:Joins]-
>(c:TeamChatSession) RETURN   count(c) as freq, c.id as team ORDER BY freq DESC
```

//Active teams graph

```
MATCH (u:User)-[:Joins]->(c:TeamChatSession)
WITH u,count(u) as rels, collect(c) as teams
WHERE rels > 1
RETURN u,teams, rels
```

//Group by joins

```
MATCH (c:TeamChatSession)
RETURN  count(c) as mostjoins order by mostjoins desc limit 5
```

//Longest Conversation Chain

```
MATCH p=(j1:User)-[:Respondsto*]->(j2:User)
RETURN p, length(p) ORDER BY length(p) DESC limit 1
```