

Graph Analytics CQL – Neo4J

MS Big Data Analytics | Big Data Management | Sachin | 23235298

1. chat_item_team_chat.csv

```
LOAD CSV WITH HEADERS FROM 'file:///chat_item_team_chat.csv' AS row

MERGE (u:User {id: toInteger(row.user_id)})

MERGE (t:TeamChatSession {id: toInteger(row.team_chat_session_id)})

MERGE (c:ChatItem {id: toInteger(row.chat_item_id)})

MERGE (u)-[:CreatesChat {timeStamp: toInteger(row.timestamp)}]->(c)

MERGE (c)-[:PartOf {timeStamp: toInteger(row.timestamp)}]->(t)


MATCH (u:User)-[creates:CreatesChat]->(c:ChatItem)-[partOf:PartOf]-
>(t:TeamChatSession)

RETURN u, c, t, 'Chat Items Created in Team Chat Sessions' AS title
```

2. chat_create_team_chat.csv

```
LOAD CSV WITH HEADERS FROM "file:///chat_create_team_chat.csv" AS row

MERGE (u:User {id: toInteger (row.source_id)})

MERGE (t:Team {id: toInteger (row.target_id)})

MERGE (c:TeamChatSession {id: toInteger (row.message_id)})

MERGE (u)-[:CreatesSession {timeStamp: toInteger (row.timestamp)}]->(c)

MERGE (c)-[:OwnedBy {timeStamp: toInteger (row.timestamp)}]->(t)


MATCH (u:User)-[creates:CreatesSession]->(c:TeamChatSession)-[ownedBy:OwnedBy]-
>(t:Team)

RETURN u, c, t, 'Team Chat Sessions Created' AS title
```

3. chat_join_team_chat.csv

```
LOAD CSV WITH HEADERS FROM "file:///chat_join_team_chat.csv" AS row

MERGE (u:User {id: toInteger (row.user_id)})

MERGE (c:TeamChatSession {id: toInteger (row.team_chat_session_id)})

MERGE (u)-[:Joins {timeStamp: toInteger (row.timestamp)}]->(c)

MATCH (u:User)-[joins:Joins]->(c:TeamChatSession)

RETURN u, c, 'User Joins Team Chat Session' AS title
```

4. chat_leave_team_chat.csv

```
LOAD CSV WITH HEADERS FROM "file:///chat_leave_team_chat.csv" AS row

MERGE (u:User {id: toInteger (row.user_id)})

MERGE (c:TeamChatSession {id: toInteger (row.team_chat_session_id)})

MERGE (u)-[:Leaves {timeStamp: toInteger (row.timestamp)}]->(c)

MATCH (u:User)-[leaves:Leaves]->(c:TeamChatSession)

RETURN u, c, 'User Leaves Team Chat Session' AS title
```

5. chat_mention_team_chat.csv

```
LOAD CSV WITH HEADERS FROM "file:///chat_mention_team_chat.csv" AS row

MERGE (c:ChatItem {id: toInteger (row.chat_item_id)})

MERGE (u:User {id: toInteger (row.user_id)})

MERGE (c)-[:Mentioned {timeStamp: toInteger (row.timestamp)}]->(u)

MATCH (c:ChatItem)-[mentioned:Mentioned]->(u:User)

RETURN c, u, 'Users Mentioned in Chat Items' AS title
```

6. chat_respond_team_chat.csv

```
LOAD CSV WITH HEADERS FROM "file:///chat_respond_team_chat.csv" AS row

MERGE (c:ChatItem {id: toInteger (row.chat_item_id)})

MERGE (u:User {id: toInteger (row.user_id)})

MERGE (c)-[:Responded {timeStamp: toInteger (row.timestamp)}]->(u)

MATCH (c:ChatItem)-[responded:Responded]->(u:User)

RETURN c, u, 'Users Responding to Chat Items' AS title
```

7. Team Chat Session Contains Chat Item

```
// Create relationships between team chat sessions and chat items

LOAD CSV WITH HEADERS FROM "file:///chat_item_team_chat.csv" AS row

MATCH (c:ChatItem {id: toInteger(row.chat_item_id)})

MATCH (t:TeamChatSession {id: toInteger(row.team_chat_session_id)})

MERGE (t)-[:CONTAINS]->(c)

// Visualize the graph with a title

MATCH (t:TeamChatSession)-[:CONTAINS]->(c:ChatItem)

RETURN t, c, 'Team Chat Session Contains Chat Item' AS title
```

8. User Created Chat Item

```
// Create relationships between chat items and users who created them

LOAD CSV WITH HEADERS FROM "file:///chat_item_team_chat.csv" AS row

MATCH (c:ChatItem {id: toInteger(row.chat_item_id)})

MATCH (u:User {id: toInteger(row.user_id)})

MERGE (u)-[:CREATED]->(c)

// Visualize the graph with a title

MATCH (u:User)-[:CREATED]->(c:ChatItem)

RETURN u, c, 'User Created Chat Item' AS title
```