

22/9/25

## Topic 9: CRUD Operations in Graph Database

Aim: To Perform CRUD operation like creating, inserting, querying, finding, deleting operations on graph spaces.

The steps to get started with Neo4j's Aura Graph Database:

STEP 1: Copy and paste the following link to your web browser:

<https://neo4j.com/cloud/platform/aura-graph-database/?ref=docs-get-started> - dropdown

STEP 2: Click on "Start Free".

STEP 3: Choose the option to "Continue with Google".

STEP 4: Click the "Open" button.

STEP 5: After clicking "Open", a text file will be automatically downloaded. This file contains your user ID and password details.

STEP 6: Copy the password from downloaded text file and paste it where required.

STEP 7: Close the "Get Started with Neo4j With beginners guides" if it's open.

STEP 8: You're now ready to begin practicing with the Graph Database.

### Create Node with Properties.

Properties are the key-value pairs using which a node stores data. Create a node with properties using the CREATE clause and need to specify those properties separated by commas within the flower braces "{}".

Syntax:

```
CREATE (node:label1 {key1: value, key2: value, ...}) return node
```

### Create CricketBoard Node:

Create (cb: CricketBoard {BoardID: 'B1001', Name: 'Chennai Cricket Board',  
Address: 'Chennai', Phone: '99 887766999'}) return cb

### Create Team Nodes:

Create (t1: Team {teamID: 'CCB01', BoardID: 'B1001', Name: 'ARS  
Express', Coach: 'G.D. RAMESH', Captain: 'SAMPATH KUMAR'})  
return t1.

Create (t2: Team {team ID: 'CCB02', BoardID: 'B2001', Name: 'AUG  
Express', Coach: 'T. KARTHICK', Captain: 'Y. JAY'} return t2.

### Create Player Node:

Create (p1: Player {PlayerID: '1', TeamID: 'CCB01', Name: 'Raj', Age: 23,  
Date of Birth: '29-Jul-1996', Playing Role: 'Bowler', email: 'rajn@gmail.com'}) return p1

Create (p2: Player {PlayerID: '33', TeamID: 'CCB01', Name: 'Anand', Age: 23,  
Date of Birth: '02-Jul-1999',  
Playing role: 'Batsman', email: 'balajid@gmail.com'}) return p2

Create (p3: Player ID: '25', TeamID: 'CCB02', Name: 'Rohit',  
Age: 33, Date of Birth: '02-Jul-1991', 'Playing role': 'Batsman',  
email: 'srohit@gmail.com'}) return p3.

### Creating Relationship among Cricket Board and Teams:

match (cb: CricketBoard {BoardID: 'B1001'}, (t1: Team {teamID: 'CCB01'})  
Create (cb) - [r: has] -> (t1) return p1, t1, t1.

match (cb: CricketBoard {BoardID: 'B1001'}, (t2: Team {teamID: 'CCB02'})  
Create (cb) - [r: has] -> (t2).

### Creating Relationship among Players and Teams:

match (p1: Player ID: '1'), (t1: Team {teamID: 'CCB01'})

Create (p1) - [r: play for] -> (t1) return p1, t1

match (p2: Player ID: '33'), (t1: Team {teamID: 'CCB01'})

Create (p2) - [r: play for] -> (t1) return p2, t1

match (p3: Player ID: '25'), (t2: Team ID: 'CCB02')

Create (p3) - [r: play for] -> (t2) return p3, t2



match (p1: Player {playerID: '75'}) , (t2: Team {teamID: 'CCBot'})

match (p3) - [r4: play for] -> (t2) return p1, t2, t2.

Display All nodes: match(n) return n



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Result: Thus the CRUD operation like Create, inserting, querying, finding, ~~deleting~~ operation on graph space executed Successfully.