TASK 9

16/9/25

CRUD OPERATIONS IN GRAPH DATABASES

AIM: To perform CRUD operations 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 into 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 option to "continue with google".

Step 4: Click on open button.

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

Step 6: copy password from download text file and paste it where required.

Step 7: Close "Get started with neo4j with beginner guides

Step 8: you're now ready to begin practicing with graph database.

Create node with properties:

Properties are the key-value pairs using which node stores data. Create node with properties using CREATE Clause need to specify these properties seprated by commas within flower braces "{}"

Syntax:

```
MATCH (n) RETURN n
```

Creating Relationships

To create relationship using create clause speify relationship within square braces "[ ]" depending on direction of relationship placed between hyphen "–" arrow "→" shown in following syntax

Syntax:

CREATE(node -1) -[: Relation Ship Type]→(node 2)

Syntax:

MATCH (a: labe of Node1), (b: labe of Node 2)
where a.name = "name of node 1" AND b.name = "name of node 2"

CREATE (a) -[: Relation] → (b) RETURN a, b

Deleting a Particular Node:

To delete particular node and need to speify details place "n" in above query

MATCH (node : label {properties ....}) Delete node

Create graph database for student course registration, Create studnt dept node insert value of properties.

CREate team Nodes:

Create (t₁ : Team {team ID: 'CCB01', Board ID: "BID01', name: ' ABS Express coach : 'G.D RAMESH', captain 'SAMPATH KUMAR'}) return t₁

Create (t2 : Team ID: '~~BB~~B02', Board ID : 'BID01' name : Avg express, coach : T. karthik ; captain : ' Y. JOHN'}) return t2

Create player nodes:

Create (P1 :player {player ID:'1': Team ID:CCB01', Name:
'Raj', Age:23, Date of Birth:'02-JAN-1999'.
playing Role: 'Batsman', email:'balajid@gmail.comm'})
return P1

Create (P2 :player {player ID:'33', Team ID:'CCB01', Name:
Anand', Age:23, Date of Birth: 29-JUN-1996
playing Role:"Batsman, email:rajn@gmail.com'}) returnP2

Create (P3: player {player ID:'65', team ID:'CCB02' Name:
'ROHIT', Age: 33, Date of Birth '02-JUN-1991'.
playing Role:"Bower', email@gmail.com'}) return P3

Creating Relationship among cricket Board and teams:
match (cb:Cricket Board {Board ID:'BID01'}), (t1 team
{team ID:'CC B01'}) create (cb)-[r:has]→(t1) return
cb, r, t1

match (cb:crick Board {Board ID:'BID01'}), (t2 team {
Team ID:"CC B02'}) create (cb)-[r:has]→(t2)
return cb, r, t2.

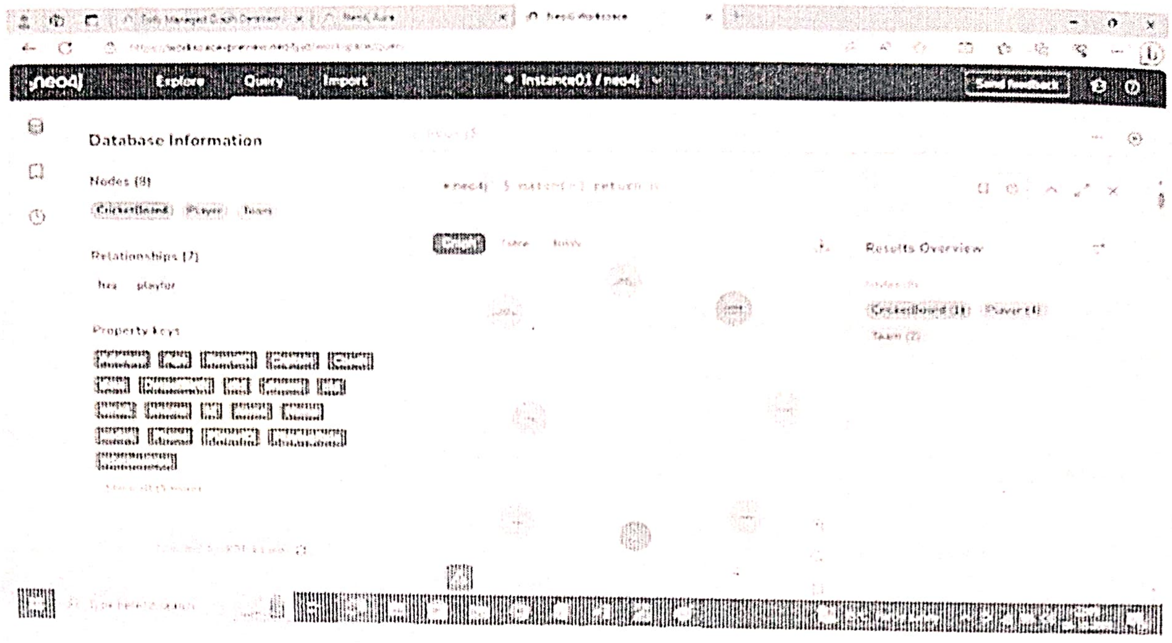
Create Relationship among players and teams:
match (P1:player {player ID:'1'}), (t1:team {team ID:'CCB01'})
create (P1)-[r]:play for]→(t1) return P1, r1, t1

match (P2 : player {player ID:'33'}), (t1:team {team ID:
'CCB01'}) create (P2) -[r2 :play for]→(t1) return P2 r2, t1

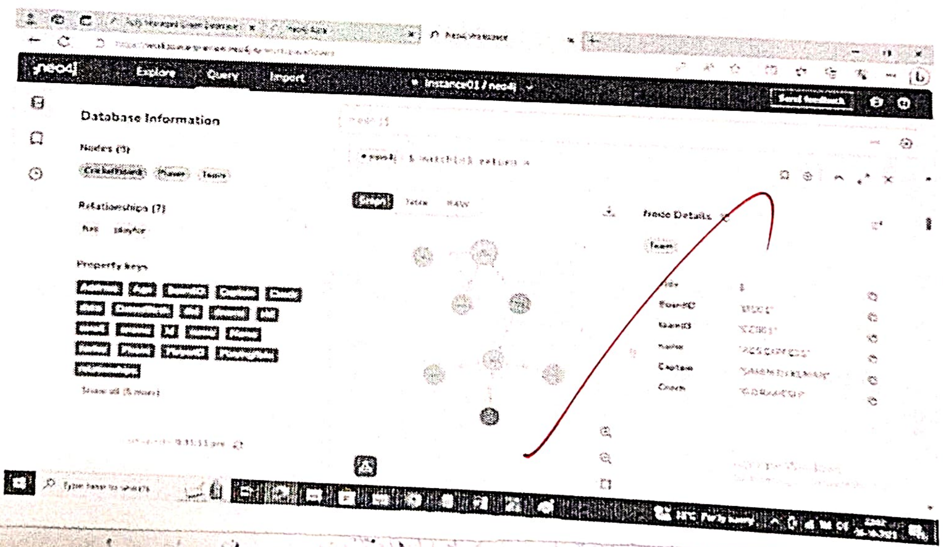
match (P3:player ID:'65'}), (t2:team {team ID:"CC B02"})
create (P3)-[r2:play for]→(t2) return P3, r3, t2

match (P4:player {player ID: '75'}), (t2:Team {team ID:
'CCB02'}) Create (P3)-[r4: playfor]→(t2) return
P4, r4, t2

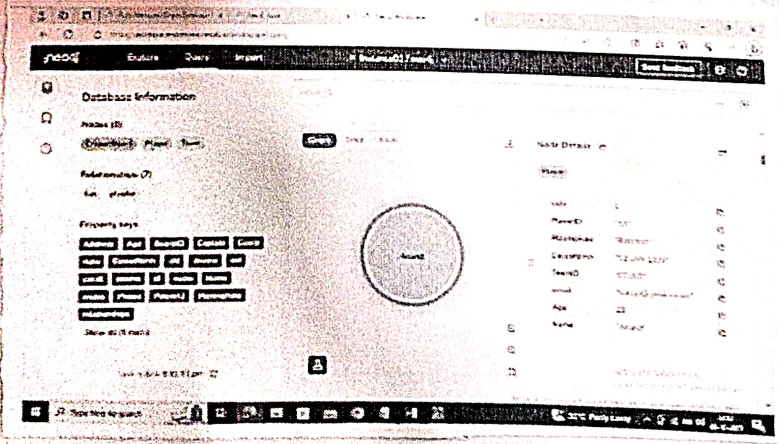
Output:



OUTPUT:



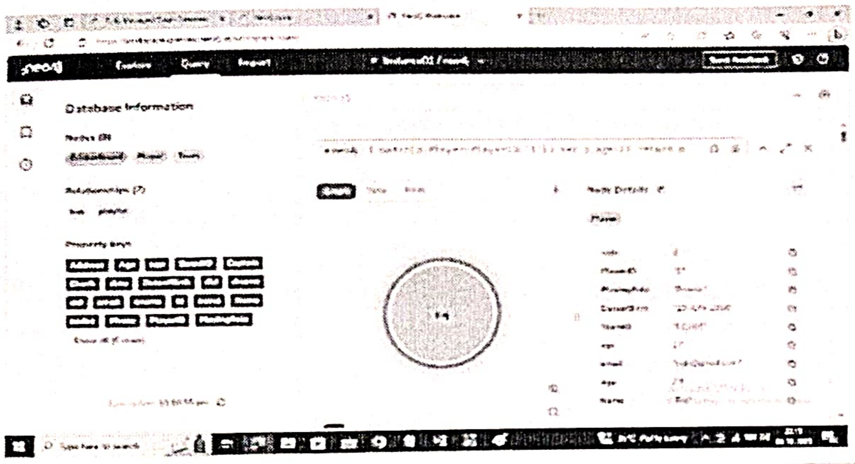
Retrieve particular player details
match(p:player{playerID:'33'})return p.



Update particular player details:

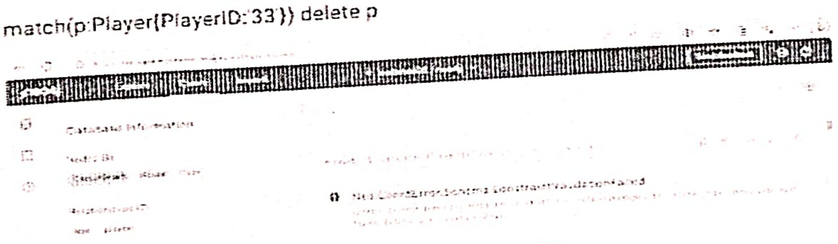
match(p:Player{PlayerID:'1'}) set p.age=27 return p

Output:



Delete particular player from the team:

match(p:Player{PlayerID:'33'}) delete p



Neo.ClientError.Schema.ConstraintValidationFailed

Result:

Thus the CRUD operations like creating, inserting, querying, finding, deleting operations on graph spaces were executed successfully.

Result: Thus CRUD operation like Creating, inserting, querying, finding, deleting operations on graph space were executed successfully.

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