TASK-9

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 Data base:

step1:- copy and paste the following link into your web browser.

step2:- click on "start Free"

step3:- chose the option to continue "with google."

step4:- click the "open" buttons.

step5:- After clicking "open", a text file will be automatically downloaded. this file contains your userID and password details.

step6:- copy the password from the downloaded text file and paste it where reqiured.

step7:- close the "Get started with Neo4j with beginer guides" if it's open.

step8:- you're now ready to begin practicing with the Graph database.

create Node with propertise

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 these properties separated by commas within the flower braces "{ }"

syntax

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

To verify the creation of the node, type and execute the following query in the dollar prompt

syntax:

```
MATCH (n) Return n
```

Creating Relations

To create a relationship using the CREATE clause and specify relationship within the square brac "[]" depending on the direction of the relation ship it is placed between hyphen "_" and arrow as shown in the following syntax.

syntax:

CREATE (node-1)-[Relationship type]->(node2

syntax:

MATCH (a : Labeofnode1), (b : Labeofnode2)
WHERE a.name = "nameofnode1" AND b.name
"nameofnod 2"

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

Deleting a particular Node

To delete a particular node and need to specify the details of the node in the place of "n" in the above query.

syntax

MATCH (node : label {properties ......}) DEL
TE node

create a graph database for student course registration, create student and dept node and Insert value of properties.

CREATE a cricket Board Node:

Create (cb : Cricketboard {BoardID:', Name:'
Chennai cricket Board', Adress:'Chennai",
phone : 9988776 (997}) return cb

CREATE TEAM Node :

CREATE (t1 : team {teamID: 'CCB01', Board ID':
BID01', name:' ABS express;
coach:' GD-Ramesh ; captain:' SAMPATH
KUMAR'}) return t1

create(t2: team {teamID: 'CCB02', BoardID: 'BFD01',
Name: 'AVC express', coach: 'Y. KARTHICK',
captain: 'Y. JOHN'}) return t2

CREATE player Nodes:
create (p1: player {playerID: '1', teamID: 'CC
B01' Name: 'Raj', Age 23, Date of Birth '29 -
JUN - 1996', playing Role: 'Bowler', email:'
balaji'd . 'Bower', email: rajin@gmail.
comm'}) return p1

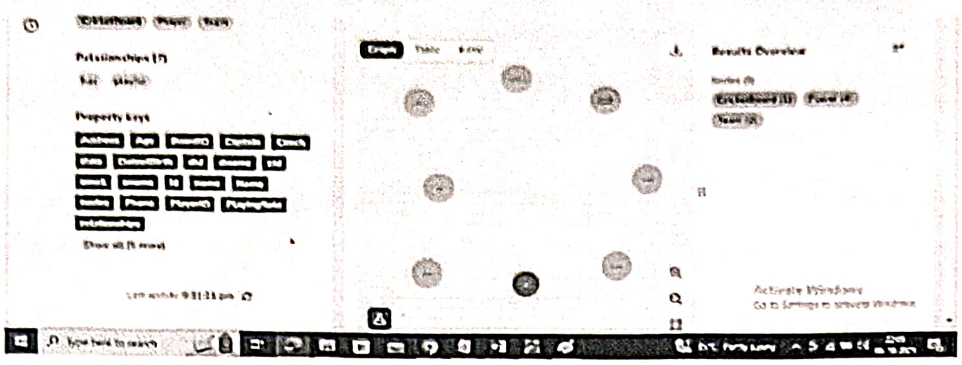
CReate (P2: player {playerID '33', TeamID: '
CC B01' Name: 'Anand', Age 23, Date of Birth: '02
- JAN - 1999', playing: 'Batsman', email: 'balaji
@gmail.comm'}) return P2

cReate (P3: Player {player ID': 65-1, teamID: '
CC B02' Name: 'suresh', Age: 27, Date of Birth 'E2
JUN - 1996', playing Role: 'Batman', email: '
suresh@gmail.comm'}) return P3

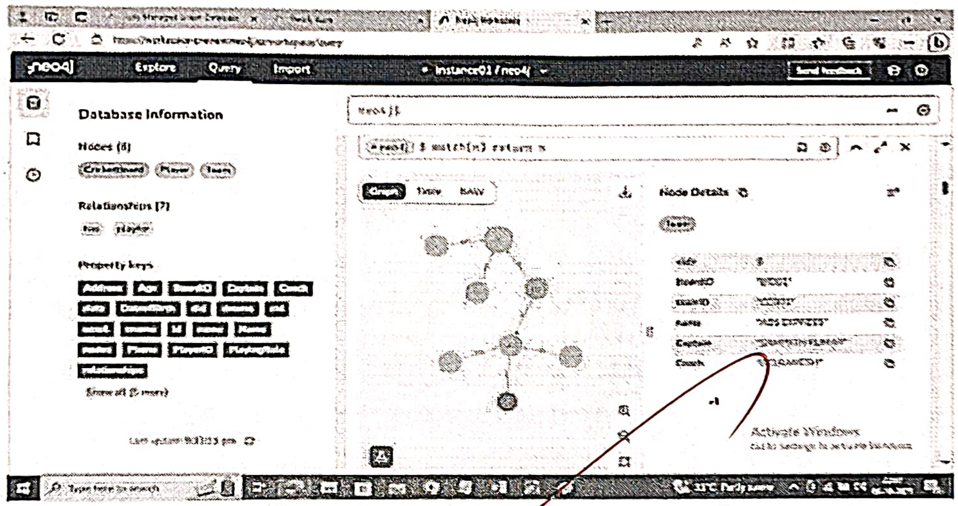
CREATE Relationship among cricket Board and
teams:
match (cb: cricketboard {BoardID: 'BID01'}),
(t1: team {teamID: 'CCB01'}) create (cb) -
[r: has] -> (t1) return cb, r, t1
match (cb: cricket Board {BoardID: 'BID01'}),
(t2: team {teamID: 'CCB02'}) create (cb)-[r: has]
-> (t2) return cb, r, t2

CREATING RELATIONSHIP AMONG PLAYER
and teams:
match (p1: player {playerID: '1'}), (t1: team
{teamID: 'CCB01'}) create (p1) [r1: playsfor] ->
(t1) return p1, r1, t1
match (p2: player {playerId: '33'}), (t1: team
{teamID: 'CCB01'}) create (p2) -[r2: playsfor] -> (t1)

```
match (p3:player {playerID:'65'}),(t2:team {team
  :'CCB02'}) create (p3)-[r3:playsfor]->(t2)
   return p3,r3,t2
 match (p4:player {playerID:'75'}), (t2:team
  {teamID:'CCB02'}) create (p4)-[r4:playsfor]
 return p4,r4,t2
```



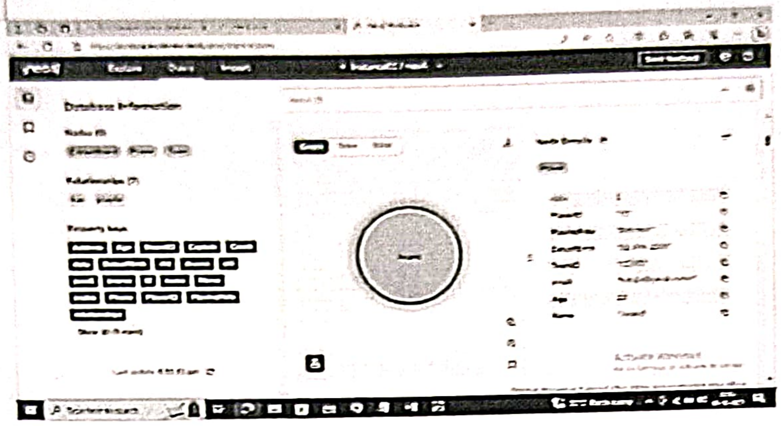
OUTPUT:



```
neo4j$ match(n) return n
```

Retrieve particular player details:

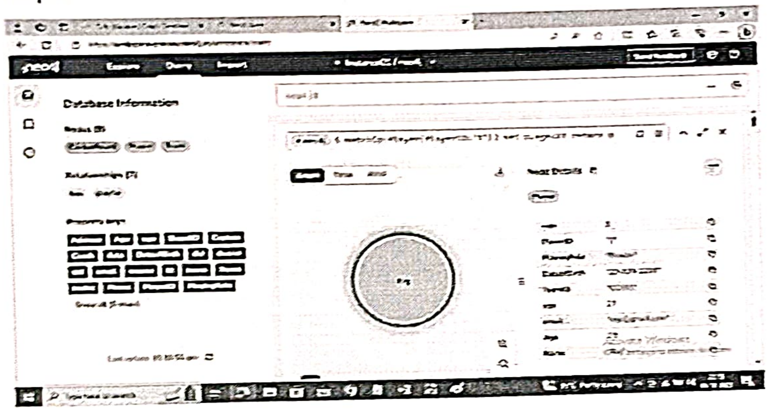
match(p:Player{PlayerID:'33'}) return p



Update particular player details:

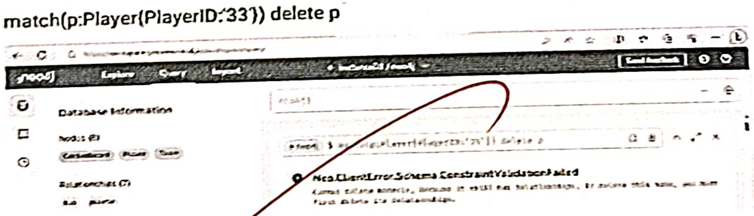
match(p:Player{PlayerID:'1'}) set p.age=27 return p

Output:



Delete particular player from the team:

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



Neo.ClientError.Schema.ConstraintValidationFailed

Cannot delete node<[illegible]>, because it still has relationships. To delete this node, you must first delete its relationships.

Result:

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

VEL TECH - CSE

EX NO.	
PERFORMANCE (5)	
RESULT AND ANALYSIS (3)	
VIVA VOCE (3)	
RECORD (4)	
TOTAL (15)	
N WITH DATE	

Result:- thus the CRUD operation like creating, Inserting, quering ,finding ,deleting operations on graph spaces were executed succesfully.

[illegible]