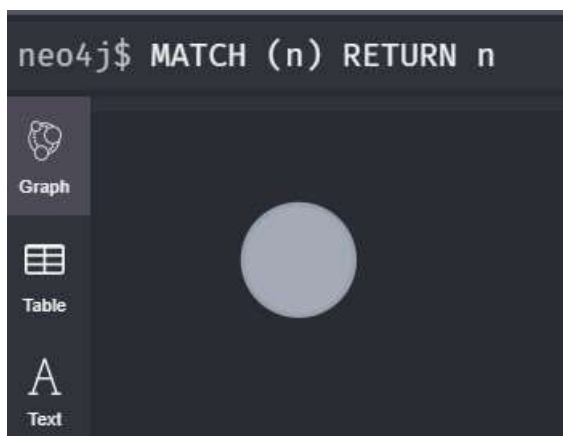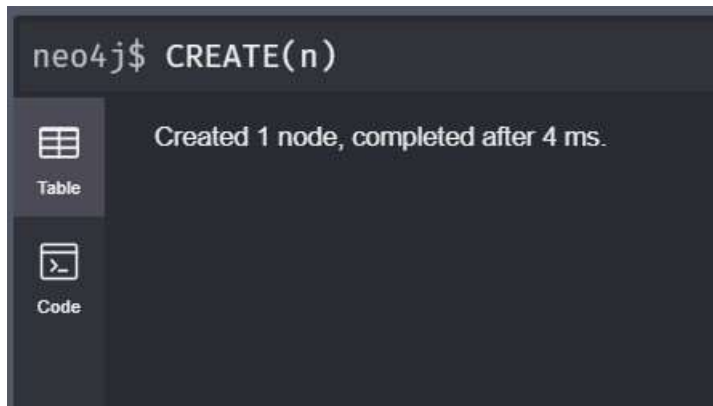Practical-7
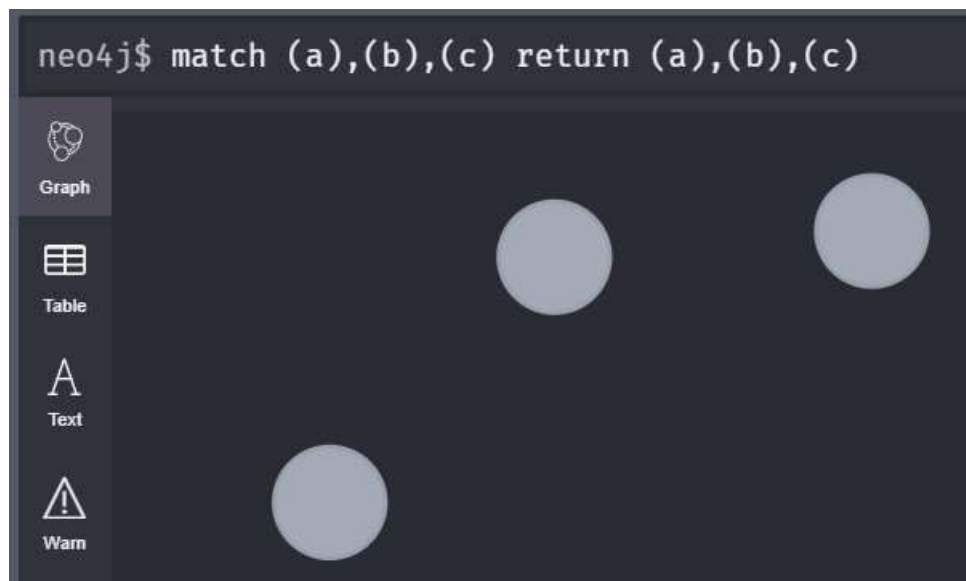
Create a Single Node

1. **To create a single node in Neo4j, specify the name of the node along with CREATE statement.**

```
neo4j$ CREATE(n)
```
Table
Created 1 node, completed after 4 ms.
Code

```
neo4j$ MATCH (n) RETURN n
```
Graph

Table

A
Text

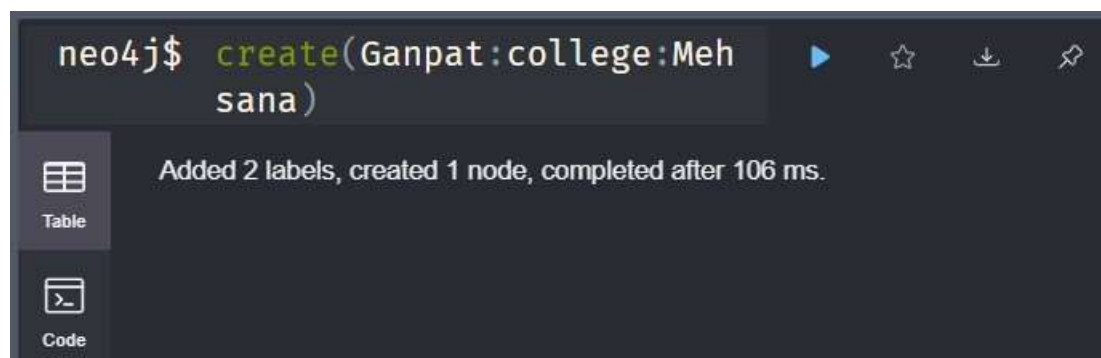2. Create Multiple Nodes To create multiple nodes in Neo4j, use CREATE statement with the name of nodes separated by a comma.

```
neo4j$ create(a),(b),(c)
```
Table
Created 3 nodes, completed after 1 ms.
Code
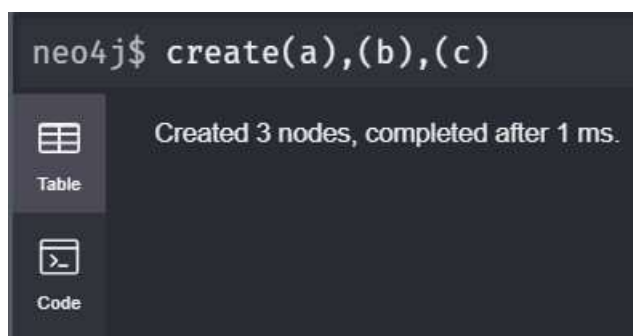
Create a node with a label

3. In Neo4j, a label is used to classify the nodes using labels. CREATE statement is used to create a label for a node in Neo4j.
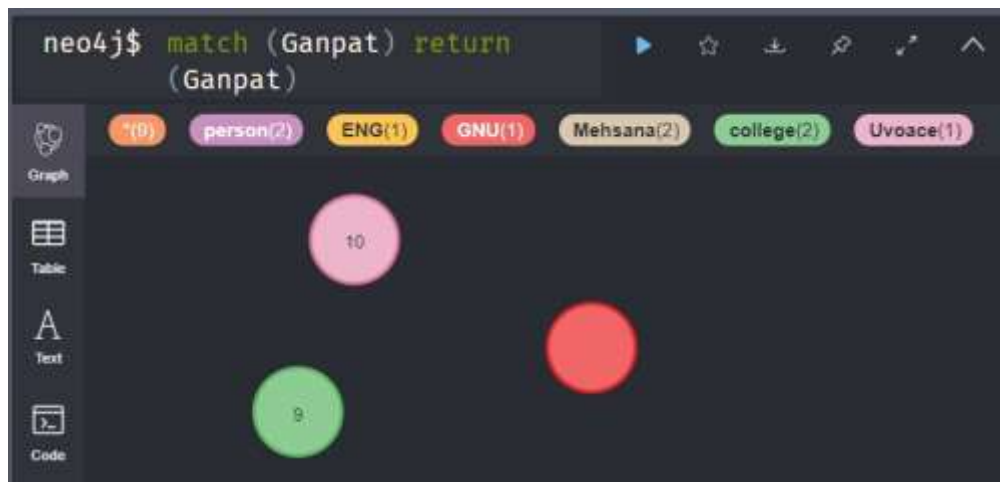

Create a Node with Multiple Labels

4. To create multiple labels with a single node, you have to specify the labels for the node by separating them with a colon " : ".

neo4j$ create(Ganpat:college :Uvoace:Mehsana)

Added 3 labels, created 1 node, completed after 6 ms.

neo4j$ match (Ganpat) return (Ganpat)

Create Node with Properties

5. In Neo4j, properties are the key-value pairs which are used by nodes to store data. CREATE statement is used to create node with properties, you just have to specify these properties separated by commas within the curly braces "{ }".

Creating Relationship

6. While creating a relationship, a relationship should be specified within square braces "[ ]", depending on the direction of the relationship it is placed between hyphen " - " and arrow " > " as shown in the following syntax.

Now create a relationship "Person_of" between these two nodes as...
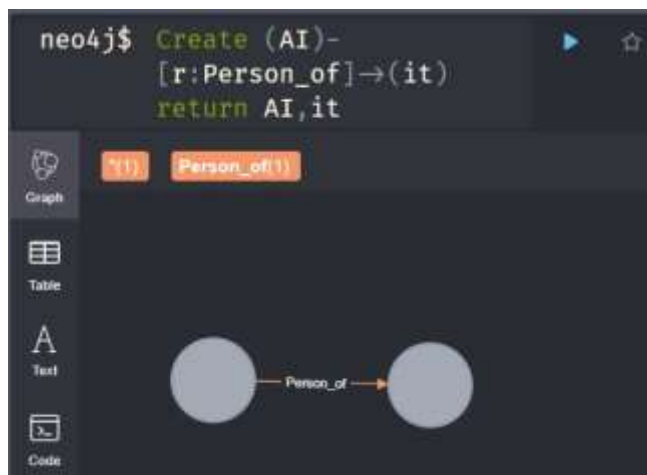
Create a Relationship between existing Nodes

7. MATCH statement is used to create relationships between the existing Nodes.

Neo4j Delete a Node

8. In Neo4j, DELETE statement is always used with MATCH statement to delete whatever data is matched. The DELETE command is used in the same place we used the RETURN clause in our previous examples.

```
neo4j$ match(std:person{name
        :"salman"}) delete
        std

       Deleted 1 node, completed after 2 ms.
Table

Code
```
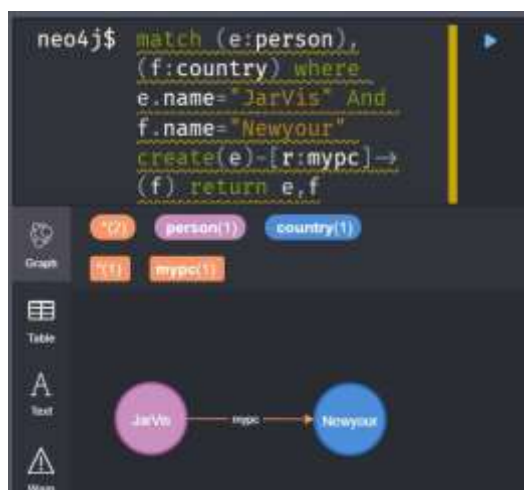
Neo4j Delete a Relationship

9. Deleting relationships is as simple as deleting nodes. Use the MATCH statement to match the relationships you want to delete. You can delete one or many relationships or all relationships by using one statement.

```
neo4j$ match (AI)-
        [r:Person_of]→(it)
        delete r

       Deleted 1 relationship, completed after 3 ms.
Table

Code
```

```
neo4j$ match (e)-[r:mypc]→(f) del...

       Deleted 4 relationships, completed after 2 ms.
Table

Code
```

Delete All Nodes

10. To delete all nodes from the database, don?t use any filter criteria.

MATCH (n) DELETE n

```
neo4j$ match (n) delete n                              ▶  ☆
```

Deleted 18 nodes, completed after 1 ms.

Table

Code

Example:

```
neo4j$ CREATE
       (Dhawan:player{name:
       "Shikar Dhawan", YOB:
       1985, POB: "Delhi"})
       CREATE (Ind:Country
       {name: "India"})
       CREATE (Dhawan)-
       [r:BATSMAN_OF]→(Ind)
       RETURN Dhawan, Ind                              ▶
```

*(2)   player(1)   Country(1)

Graph

*(1)   BATSMAN_OF(1)

Table

Text

Shikar Dhawan BATSMA... → India

Code

```
neo4j$  MATCH (a:player),
        (b:Country) WHERE
        a.name = "Shikar
        Dhawan" AND b.name =
        "India" CREATE (a)-
        [r: BATSMAN_OF]→(b)
        RETURN a,b
```

*(2)   player(1)   Country(1)
*(2)   BATSMAN_OF(2)


```
neo4j$  MERGE
        (CT2013:Tournament{na
        me: "ICC Champions
        Trophy 2013"}) RETURN
        CT2013,
        labels(CT2013)
```

*(1)   Tournament(1)

```
neo4j$  MERGE (Jadeja:player
        {name: "Ravindra
        Jadeja", YOB: 1988,
        POB: "NavagamGhed"})
        RETURN Jadeja
```

*(1)   player(1)

Ravindra
Jadeja

```
1  MATCH (Dhawan:player{name:
   "shikar Dhawan", YOB:
   1985, POB: "Delhi"})
2  SET Dhawan.highestscore =
   187
3  RETURN Dhawan
```

*(1)   player(1)

shikar
Dhawan
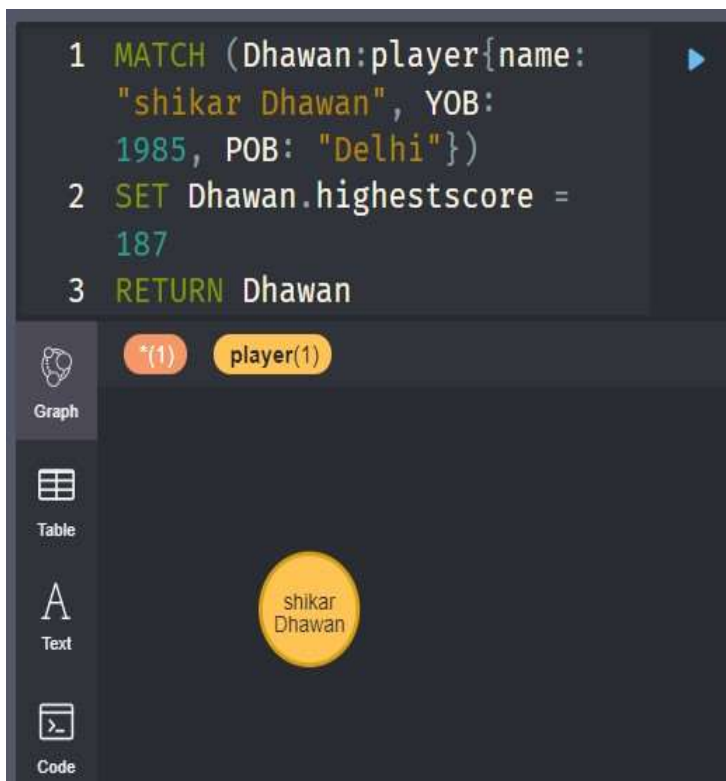
```
neo4j$   MATCH (Jadeja:player
         {name: "Ravindra
         Jadeja", YOB: 1988,
         POB: "NavagamGhed"})
         SET Jadeja.POB = NULL
         RETURN Jadeja
```

`*(1)` `player(1)`

Graph

Table

Text

Code

Ravindra Jadeja

```
1   MATCH (Dhoni:player {name:
    "MahendraSingh Dhoni",
    YOB: 1981, POB: "Ranchi"})
2   REMOVE Dhoni.POB RETURN
    Dhoni
3
```

`*(1)` `player(1)`

Graph

Table

Text

Code

Mahend…

THE COMPLETE DATASET:


```
neo4j$ CREATE (Dhoni:player
       {name: "MahendraSingh
       Dhoni", YOB: 1981,
       POB: "Ranchi"})
```
Added 1 label, created 1 node, set 3 properties, completed in less than 1 ms.


```
neo4j$ CREATE (Ind:Country
       {name: "India",
       result: "Winners"})
```
Added 1 label, created 1 node, set 2 properties, completed after 5 ms.
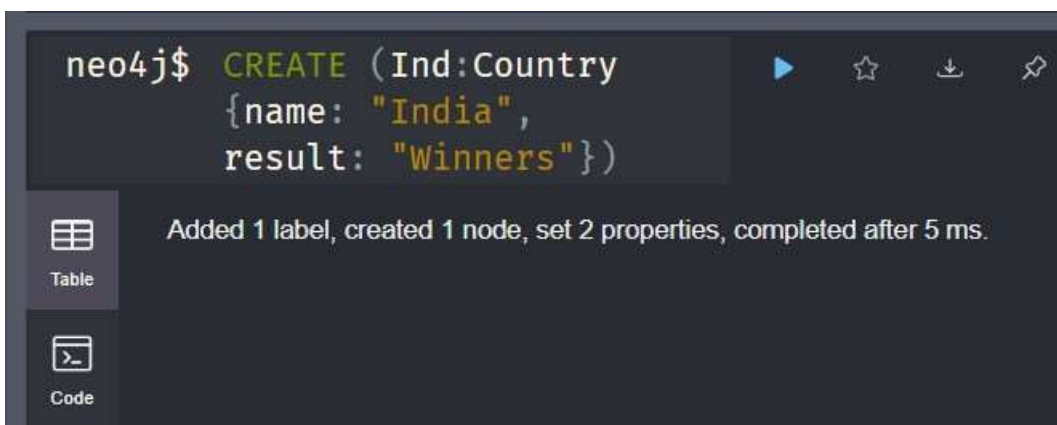
```
neo4j$  CREATE
        (CT2013:Tornament
        {name: "ICC Champions
        Trophy 2013"})
```

Added 1 label, created 1 node, set 1 property, completed after 5 ms.

Table

Code

```
neo4j$  CREATE (Ind)-
        [r1:WINNERS_OF
        {NRR:0.938 ,pts:6}]→
        (CT2013)
```

Created 2 nodes, set 2 properties, created 1 relationship, completed after 150 ms.

Table

Code

```
neo4j$  CREATE(Dhoni)-
        [r2:CAPTAIN_OF]→
        (Ind)
```

Created 2 nodes, created 1 relationship, completed after 5 ms.

Table

Code

```
neo4j$   CREATE
         (Dhawan:player{name:
         "shikar Dhawan", YOB:
         1995, POB: "Delhi"})
```
Added 1 label, created 1 node, set 3 properties, completed after 1 ms.

```
neo4j$ CREATE (Dhawan)-[:TOP_SCORE...
```
Created 2 nodes, set 1 property, created 1 relationship, completed after 7 ms.

```
neo4j$   CREATE (Jadeja)-
         [:HIGHEST_WICKET_TAKE
         R_OF {Wickets:12}]→
         (Ind)
```
Created 2 nodes, set 1 property, created 1 relationship, completed after 11 ms.

```
neo4j$   CREATE(Dhawan:player{
         name:"shikar Dhawan",
         YOB: 1985, runs:363,
         country: "India"})
```
Added 1 label, created 1 node, set 4 properties, completed after 8 ms.

```
neo4j$  CREATE(Jonathan:playe
        r{name:"Jonathan
        Trott", YOB:1981,
        runs:229,
        country:"South
        Africa"})
```

Added 1 label, created 1 node, set 4 properties, completed after 14 ms.

```
neo4j$  CREATE(Sangakkara:pla
        yer{name:"Kumar
        Sangakkara",
        YOB:1977, runs:222,
        country:"Srilanka"})
```

Added 1 label, created 1 node, set 4 properties, completed after 1 ms.

```
neo4j$  CREATE(Rohit:player{n
        ame:"Rohit Sharma",
        YOB: 1987, runs:177,
        country:"India"})
```

Added 1 label, created 1 node, set 4 properties, completed after 1 ms.

```
neo4j$  CREATE(Virat:player{n      ▶   ☆   ⬇   📌
        ame:"Virat Kohli",
        YOB: 1988, runs:176,
        country:"India"})
```

| | Added 1 label, created 1 node, set 4 properties, completed after 2 ms. |

Table

Code

```
neo4j$  CREATE(Ind:Country         ▶   ☆   ⬇   📌
        {name: "India",
        result: "Winners"})
```

| | Added 1 label, created 1 node, set 2 properties, completed after 1 ms. |

Table

Code

```
neo4j$  MATCH (player) WHERE       ▶   ☆
        player.country =
        "India" AND
        player.runs ≥ 175
        RETURN player
```

*(3)   player(3)

Graph

Table

Text

Code

Virat Kohli   Rohit Sharma

shikar Dhawan