Task NO: 11 CRUD Operations in graph Database.

Date: 14/10/25

Aim: To perform CRUD operations like creating inserting, quering, finding, deleting operations on graph spaces.

create node with properties.

Properties are the key value pairs using which a node stores data. You can create a node with properties using the CREATE caluse.

Syntax:

following is the syntax to create a node.

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

*creating the created node.

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

```
Match (n) Return n
```

* Creating a Relationship Between the existing Nodes.

you can also create a relationship between the existing node using the MATCH calause

Syntax

following is the syntax to create relationship using the MATCH clause.

```
MATCH (a: Labeof Node1), (b: babeof Node2)
WHERE a.name = "name of node1" AND b.name =
      "name of node 2"
CREATE (a) - [:Relation] -> (b)
RETURN a,b
```

* Deleting a particular node.

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

Syntax

Following is the Syntax to delete a particular node from NeoLj using DELETE ~~door~~.

```
    MATCH (node: label {Properties.})
    DETACH DELETE node.
```

Create a graph database for Student course registration create Student and dept node and insert values for properties.

```
CREATE (n: Student {sid: "VTU14500",
Sname: "John",
deptname: "CSE"}
)
```

output:

```
Added 1 label 1. Created 1 node, Set 3 properties, Completed
after 232ms.
```

```
create (n: Student {sid: "VTU14501",
Sname: "Dharsana"
deptname: "EEE"
})
```

output

```
added 1 label, created 1 node, Set 3 Properties, Completed
after 16ms.
```

```
create (w: Student {sid: "VTU14502",
Sname: "Vijay"
deptname: "CSE"
})
```

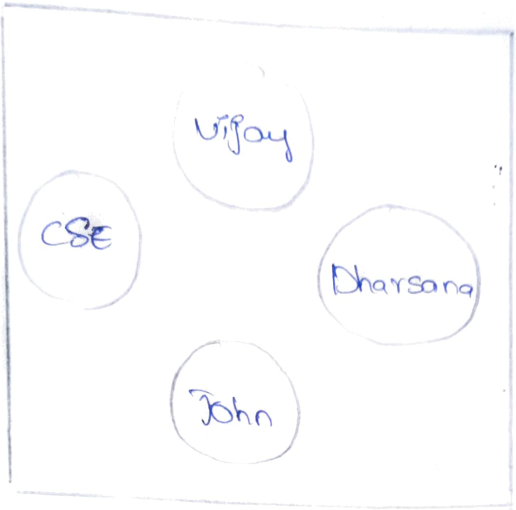
output:

Added 1 label ,created 1 node, Set 2 properties, completed after 72ms.

Select all the nodes in your database using match command

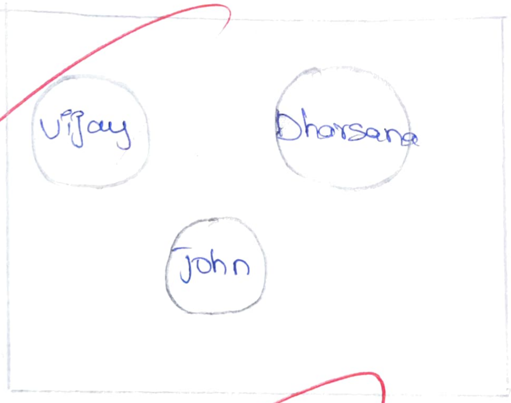
```
>match (n) return(n)
```

output:



```
#match (n: Student)return(n)
```

output:

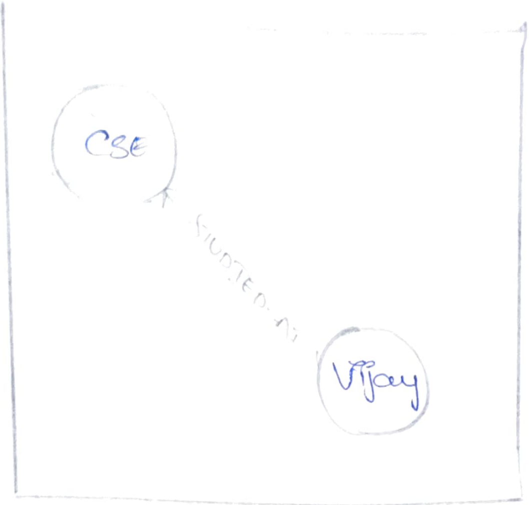


a) creat relationship between Student and cse.

```
MATCH(S:Student),(d:dept)WHERE S.Sname='Vijay'
AND d.deptname='cse'
CREATE (S)-[St:STUDIED_AT]->(d)
return S,d
```

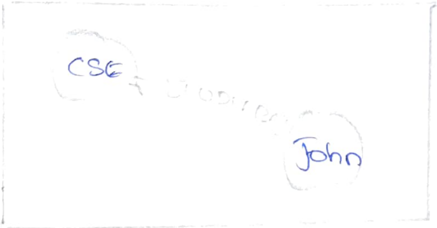
output

```
MATCH(S Student),(d:dept)WHERE s.Sname="Vijay'.
and d.deptname='cse'
CREATE (S)-[St:STUDIED_AT]->(d)
return S,d
```

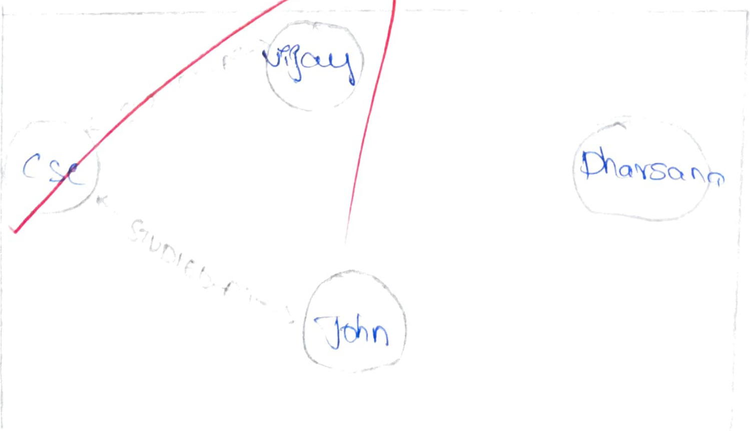


```
MATCH (S:Student),(d:dept)WHERE S.Sname='John' AND
d.deptname='cse'
CREATE (S)-[St: STUDIED_AT]->(d)
return S,d.
```

output:



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

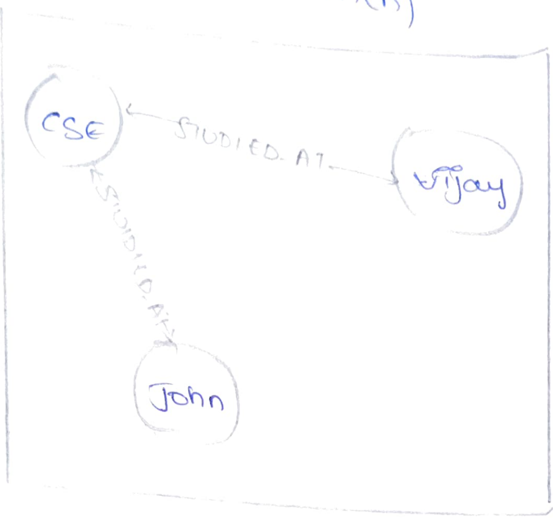


b) Delete a node from Student

```
match (n: Student {Sname:'Dharsana'}) Delete(n)
```

output:

```
Deleted1node, completed after 10834ms
neo4j;$ match (n) return(n)
```



VEL TECH - CSE	
EX NO.	1
PERFORMANCE (5)	5
RESULT AND ANALYSIS (5)	5
VIVA VOCE (5)	5
RECORD (5)	
TOTAL (20)	18
SIGN WITH DATE	14/10/23

Result: The implementation of CRUD operations like creating inserting, finding and removing operations using graphDB is successfully executed.