

14/10/25

## Task-11- CRUD Operations IN Graph databases.

Aim: To perform CRUD operations like creating, inserting, querying, 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 clause. You need to specify these properties separated by commas within the flower braces "{}".

Syntax:

Following is the syntax to create a node with properties.

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

Creating Relationships:

We can create a relationship using CREATE clause. We will specify Relationship within the square braces "[]" depending on the direction of the relationship.

Syntax:

Following is the syntax to create a relationship using CREATE clause.

~~CREATE (node1)-[Relationship Type]->(node2)~~

Creating Relationship Between the Existing Nodes.

You can also create a relationship between the existing nodes using the MATCH clause.

Syntax:

Following is the syntax to create a relationship using the MATCH clause.

```
MATCH(a:Labelofnode),(b:Labelofnode)
WHERE a.name = "nameofnode1" AND b.name =
      "nameofnode2"
RETURN a,b
```

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

Syntax:  
Following is the syntax to delete a particular node from Neo4j using DELETE clause.

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

Create a graph database for student course registration, create student and dept node and insert values of properties.

```
Create(n:student{sid:"VTU1US00",
  Sname:"John",
  deptname:"CSE"})
```

OUTPUT

Added 1 label created 1 node, set 3 properties,  
Completed after 232ms.

```
Create(n:student{sid:"VTU1US01",
  Sname:"Dharshana",
  deptname:"EEE"})
```

OUTPUT

Added 1 label, created 1 node, set 3 properties,  
Completed after 16ms.

```
create(n:dept{deptname:'cse',deptid:'d001'})
```

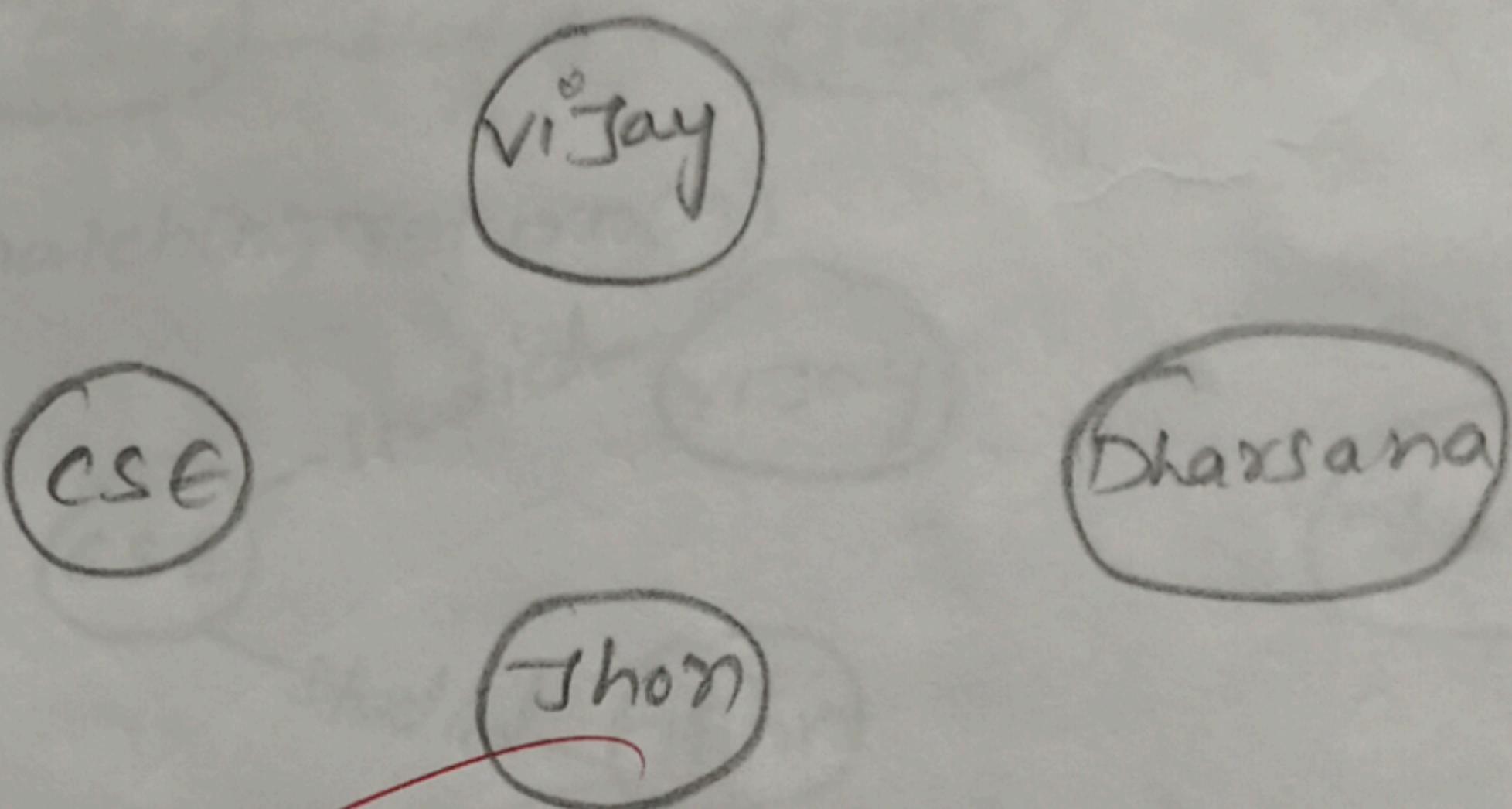
OUTPUT

Added 1 label, Created 1 node, set 2 properties; completed after 72 ms.

Select all nodes in your database using match command.

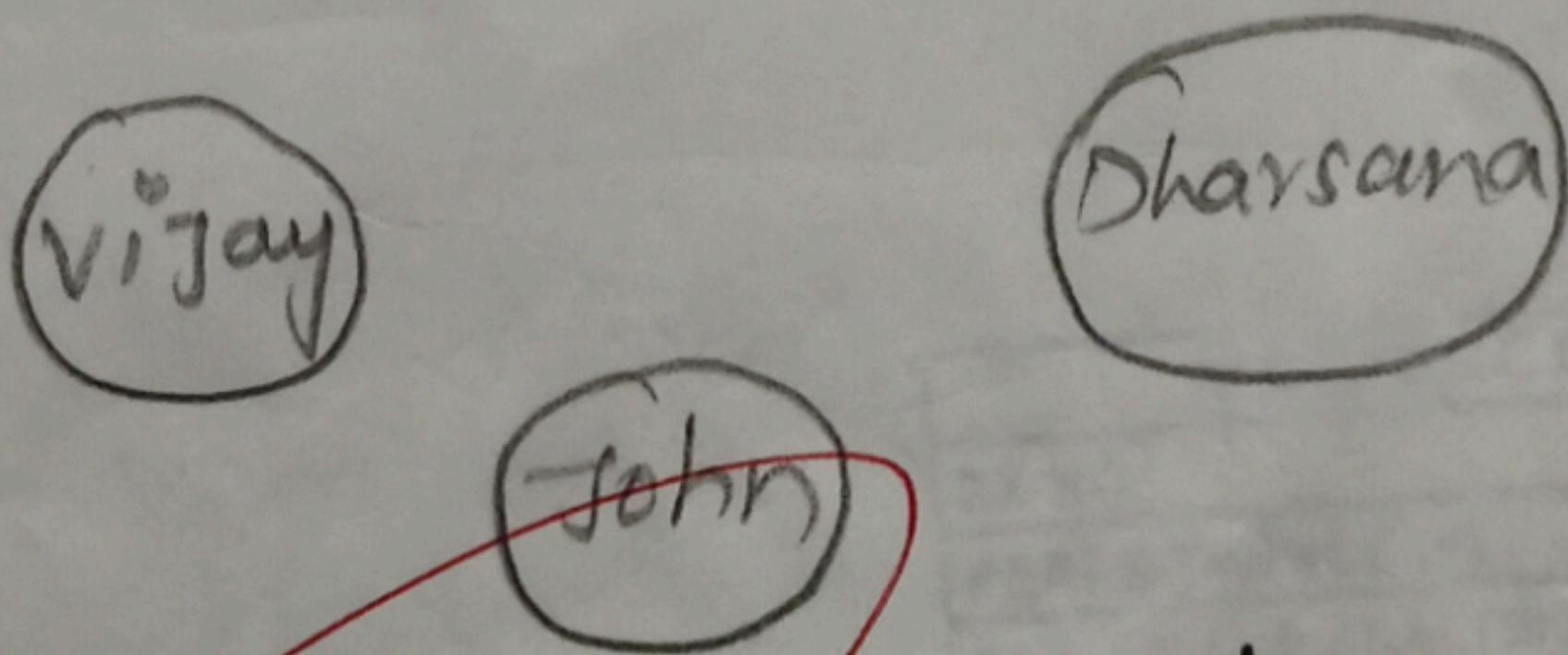
```
*match(n) return(n)
```

OUTPUT



```
*match(n:student) return(n)
```

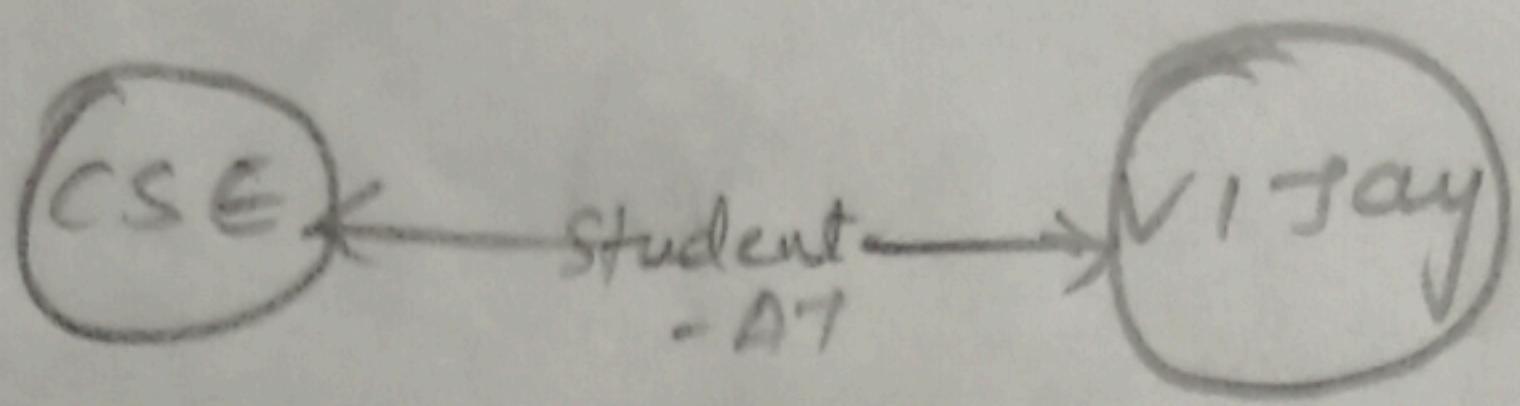
OUTPUT:



a) Create a relationship between students and CSE.

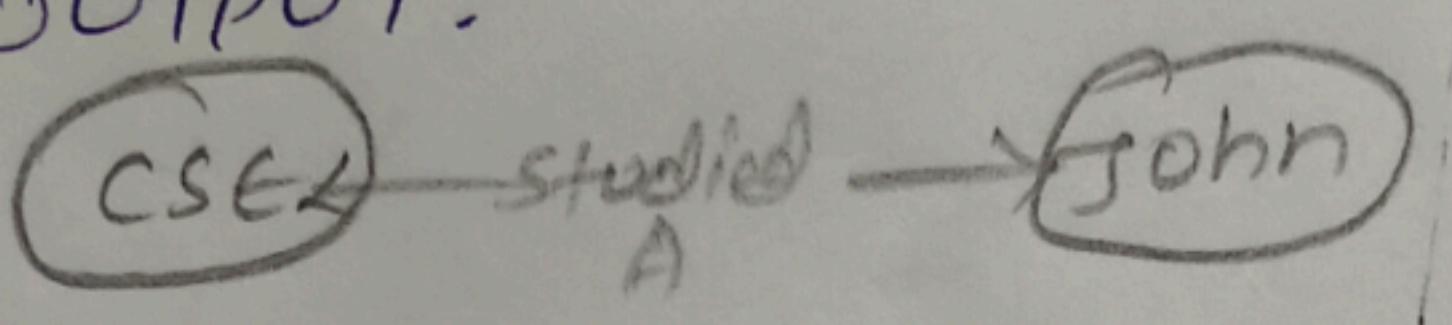
```
MATCH(s:student) (d:dept) WHERE s.name =  
'Vijay' AND d.deptname = 'cse'  
return s,d.
```

OUTPUT:

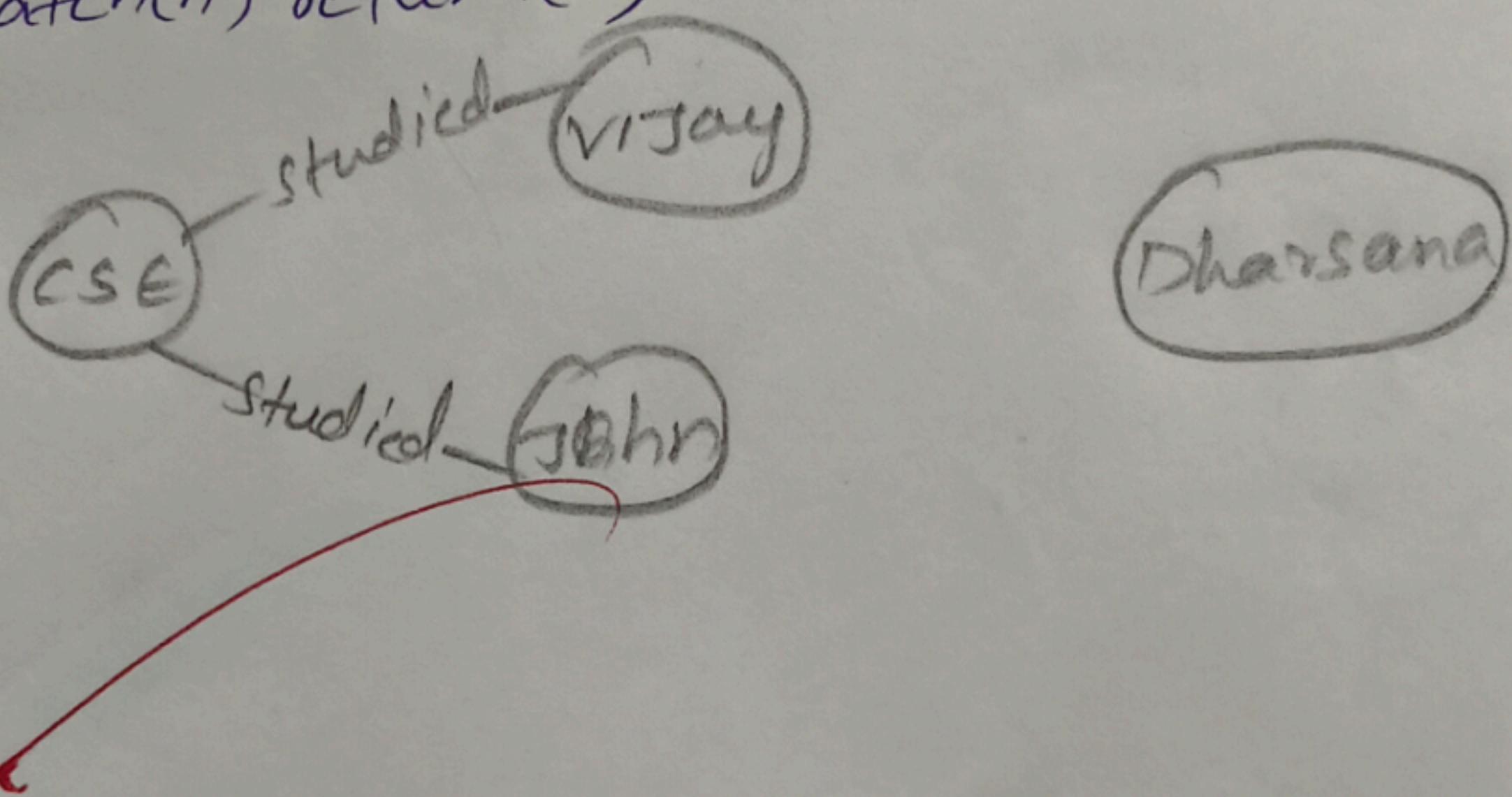


```
MATCH(s:Student), (d:dept) WHERE s.sname='John'  
AND d.deptname='CSE'  
CREATE (s)-[t:STUDIED_AT]->(d)  
return s,d
```

OUTPUT:



match(n) return(n)



VEL TECH	
EX NO.	81
PERFORMANCE (5)	7
RESULT AND ANALYSIS (5)	7
VIVA VOCE (5)	5
RECORD (5)	5
TOTAL (20)	27

~~Result: The Implementation of CRUD operations like Creating, Inserting, finding and removing operations using GraphDB is successfully executed.~~