Task-11: CRUD Operations in Graph Databases

Aim: To perform CRUD operation 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 seperated by commas within the flower braces "{}".

Syntax:

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

* Creating Relationships: we can create a relationship using the CREATE clause. we will specify relationship within the square braces "[]".

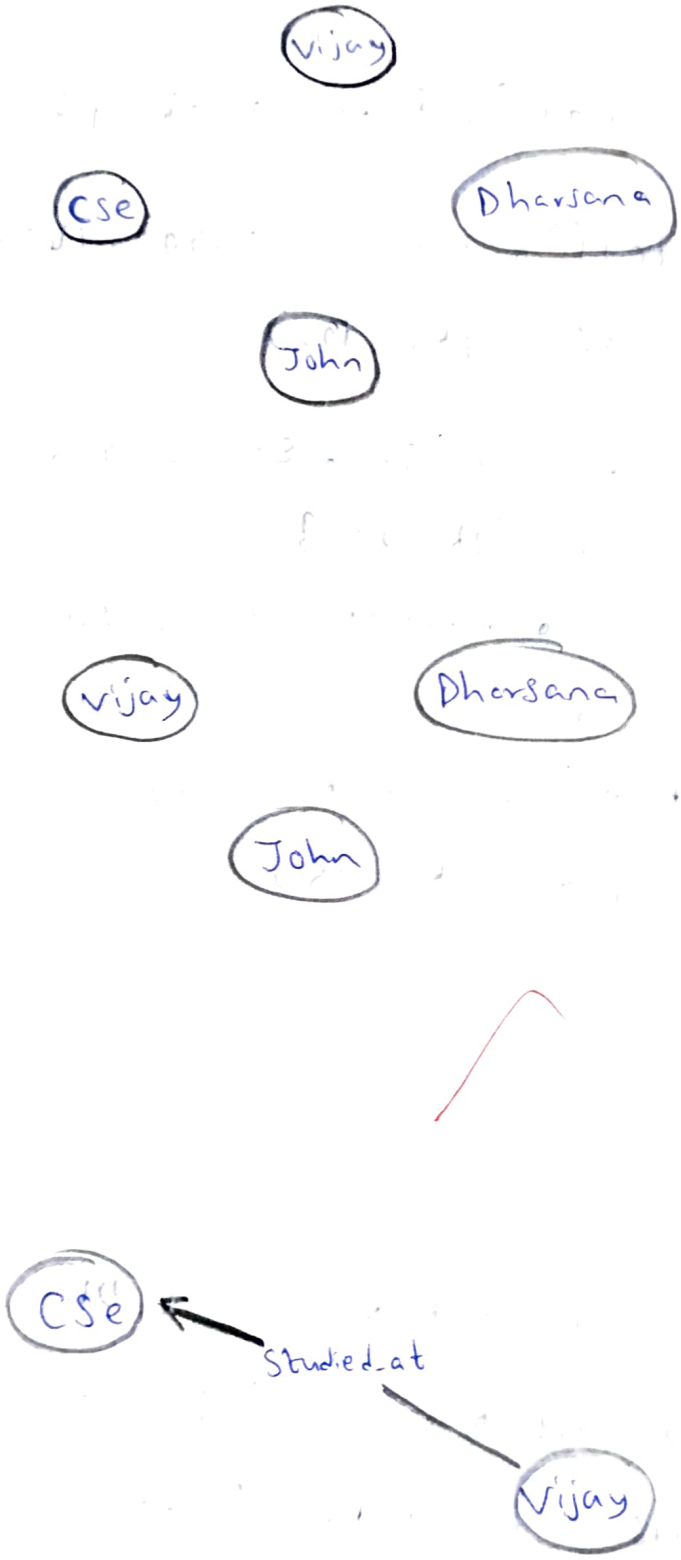
Syntax:

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

* Creating a Relationship b/w the existing Nodes: You can also create a relationship between the existing nodes using the MATCH clause.

Syntax:

MATCH (a: Label of Node 1), (b: Label of Node 2)
WHERE a.name = "name of node 1" AND
b.name = "name of node 2"
CREATE (a) - [: Relation] → (b)
RETURN a, b


Vijay
Cse
Dharsana
John
Vijay
Dharsana
John
Cse
Studied_at
Vijay

* Deleting a particular Node:

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

Syntax:

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:"VTU14500",

Sname:"John",

deptname:"CSE"]}

Output

Added 1, label created 1 node, set 3 properties.

Completed after 232 ms.

create (n:student{sid:"VTU14501", Sname:"Dhar

sana", deptname:"EEE"})

Output:

Added 1 label, created 1 node, set 3 properties.

Completed after 16 ms

Create (n:student{sid:"VTU14502", "sname:

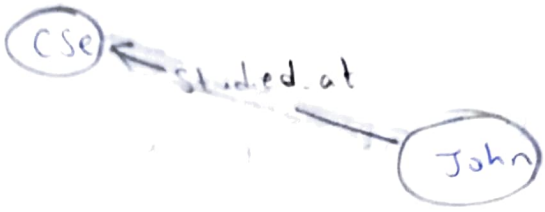
"vijay", deptname:"CSE"})

Output:

Added 2 label 1, Created 1 node, set 3 Properties.

completed after 12 ms

Create (n:dept{deptname:"CSE", deptid:"dool"})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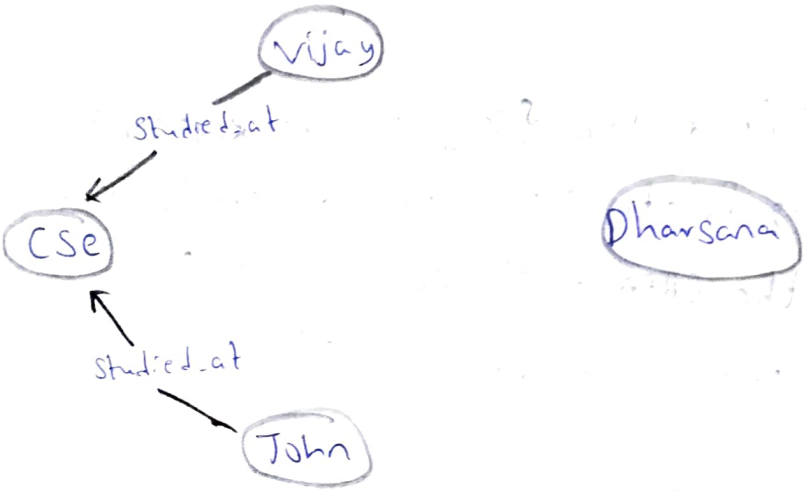
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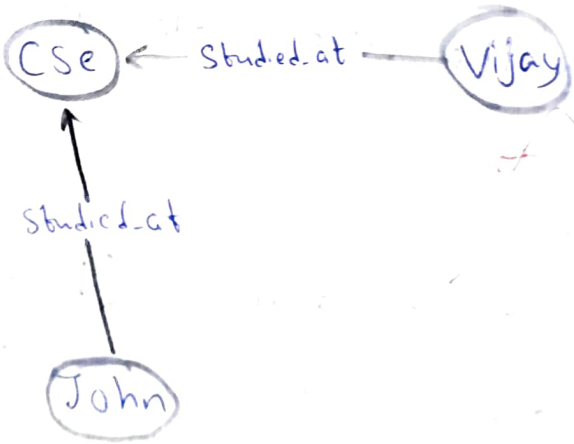
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John

Output:

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

Select all the nodes in your database using match command.

* match (n) return (n).

* match (n:student) return (n)

(a) Create relationship blw 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.

* MATCH (s: student), (d: dept) WHERE S.Sname = 'John' AND d.deptname = 'CSE'.

CREATED (s) - [st: STUDIED_AT] -> (d)

return S, d.

* match (n) return (n)

(b) Delete a node from student:

match (n: student {Sname: 'Dharsana'}) DELETE (n)

output:

Deleted 1 node, completed after 10834 ms

Result: The implemented of CRUD operations like Creating, inserting, finding and removing operations using Graph DB is successfully executed.

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EX NO.	11
PERFORMANCE (5)	5
RESULT AND ANALYSIS (5)	5
VIVA VOCE (5)	5
RECORD (5)	5
TOTAL (20)	20
SIGN WITH DATE	