Date: 14/10/25 TASK - 4

CRUD operations in Graph data bases

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

① create node with properties

properties are the key-value pairs using which a nodes stores data.

you can create a node with properties using the CREATE clause

Syntax:

following is the syntax to create a node with properties

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

② Returning the created node

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

MATCH (n) RETURN n.

③ creating Relationships

we can create a relation using the CREATE clause. we will specify relationship within the square "[]" depending on the direction of relationship is placed between hyphen "-" and arrow "→".

Syntax

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

CREATE

(node1) -[: RelationshipType]-> (node2)

④ creating a Relationship between the Existing nodes

you can also create a relation between the existing nodes using MATCH clause.

Syntax:

Following is the syntax to create relationship using the MATCH clause

MATCH (a: label of Node1), (b: label of Node2)

WHERE a.name = "name of node1" AND b.name = "name of node2"

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

RETURN a, b

⑤ 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.

To delete a particular.

syntax:

Following is the syntax to delete a particular node from neo4j

Using the 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: "VTU14500", sname: "John", deptname: "CSE"})

output:

Added 1 label, create 1 node, set 3 properties, completed after 2132 ms

Create (n:student {sid: "VTU15050", sname: "Shansana", deptname: "EE"})

output:

Add 1 label, create 1 node, set 3 properties, completed after 12 ms.

create (n:dept {deptname: "cse", depid: "d001"})

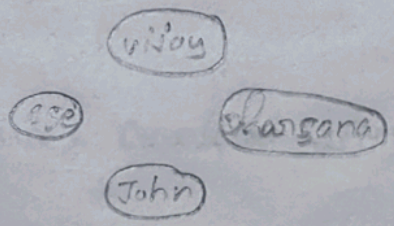
output:

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

Select all the nodes in your database using match command

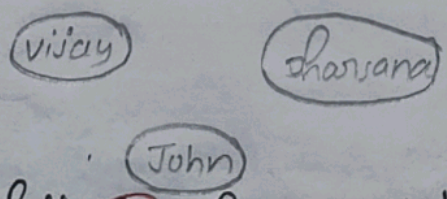
(a) match(n) return(n)

output:



(b) match (n:student) return (n)

output:



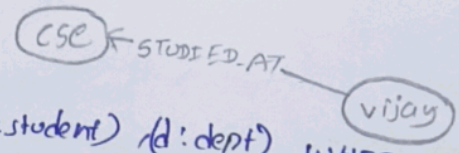
(c) create a relationship between student and cse.

MATCH (s:student), (d:dept) WHERE s.sname = 'vijay' AND d.deptname = 'cse'

CREATE (s) -[st: STUDIED AT]-> (d)

return s,d.

output-

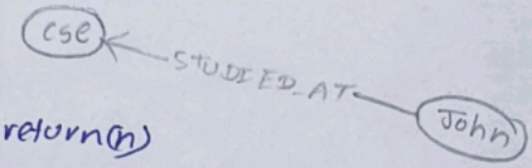


MATCH (s:student) (d:dept) WHERE s.sname = 'John' AND d.dept name = 'cse'

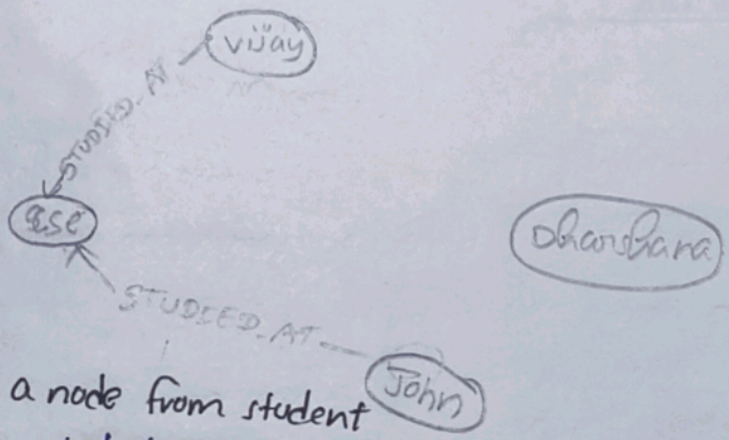
CREATE (s) - [st: STUDIED_AT] -> (d)

return s,d

output:



match (n) return (n)



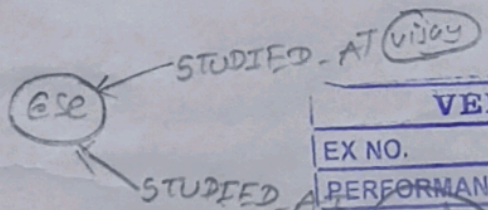
b) delete a node from student

match (n:student {sname: 'dharana'})

DELETE (n)

output:

Delete 1node, completed after 10894ms



VEL TECH	
EX NO.	11
PERFORMANCE (5)	5
RESULT AND ANALYSIS (5)	5
VIVA VOCE (5)	4
RECORD (5)	
TOTAL (20)	14
SIGN WITH DATE	

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