CRUD Operations in graph Databases

Aim:

To perform CRUD operations like creating, inserting, querying, finding, deleting queries on graph Spaces

* create Node with properties

Properties are 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 with in flower braces "{}"

Syntax

following is the syntax to create a node with properties

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

* Returning the created Nodes

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

MATCH (n) return n

* creating Relationships

We can create a relationship using the CREATE clause. We will specify relationship within the square braces "[]" depending on the direction of the relationship it is placed between hyphen "-" and arrow "→" as shown in following syntax

Syntax

CREATE (node1)-[:Relationship type]-(node2)

* creating Relationship Between the Existing Node

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

Syntax:

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

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

```
Create (n:Student {Sid: "1TU25661",
Sname: "John",
deptname: "CSE"})
```

Output

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

```
Create (n:Student {Sid: "1TU25661",
Sname: "Rishi",
deptname: "EEE"})
```

Output

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

```
Create (n:dept {dept_name: "CSE",
deptid: "01cx"})
```

Output

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

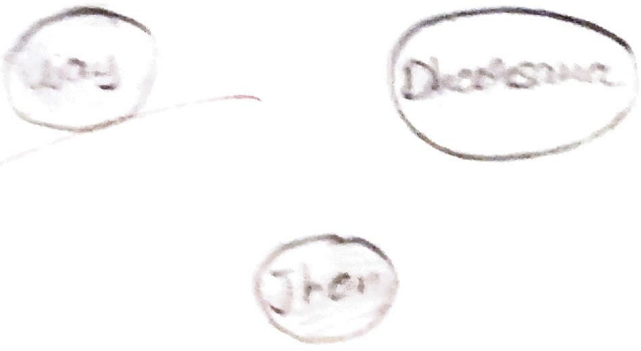
Select all

match(n) return(n)

output

match(n:Student) return(n)

output



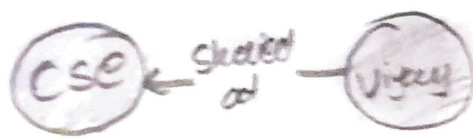
a) create relationship between student and CSE

~~Hat~~

MATCH(s:Student),(d:dept) WHERE s.Sname = "vijay" AND d.deptname = "cse"

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

output

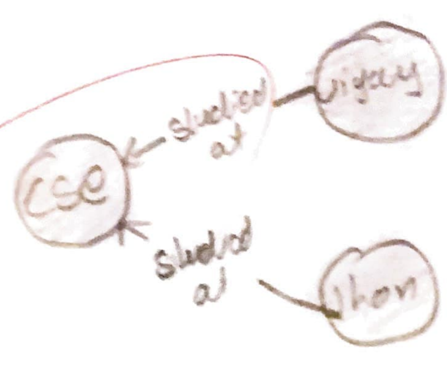


MATCH (s:student), (d:dept) WHERE s.Sname=" Jhon AND d.department = "cse"

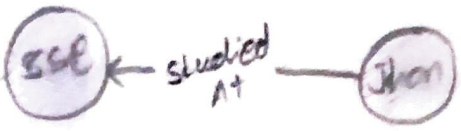
CREATE (s)-[st: STUDIED-AT]->(d)

return s,d

output



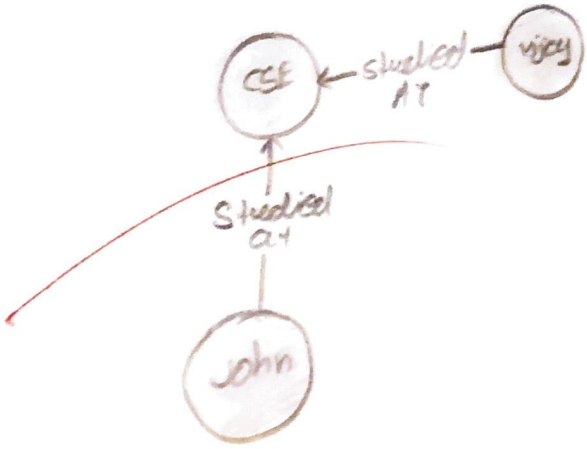
match (n) return (n)



b) Delete a node from student

match (n : student { Sname : "Deepthana" })
Delete (n)

Output



VEL TECH - CSE	
EX NO.	11
PERFORMANCE (5)	5
RESULT AND ANALYSIS (5)	5
VIVA VOCE (5)	5
RECORD (5)	
TAL (20)	15

13/4/25

Result:
The implementation of CRUD operations like creating, inserting, finding and removing the nodes using Graph DB is successfully done.