18/03/24

Lab-3

Neo4j Graph Database

* A graph database uses graph theory to store, map, and query relationships.

Nodes: represent entities such as people, business, or any data item.
Edges: (or) relationships connect nodes and illustrate how entities are related
Properties provide additional information about nodes and relationships

Neo4j Desktop

(i) Follow PPT for installation
(ii) Use Neo4j
(iii) Call . db . schema . visualization
(iv) match (N) return n limit 100

* Create a node

$ create { a: Movie { Tag: "A Movie" } }

* Display a node

$ create ({ a: Movie { Tag: "Movie A" })
({ b: Movie { Tag: "Movie B" })
return a, b.

PAGE NO :
DATE :

→ Find Actor named "Tom Hanks"

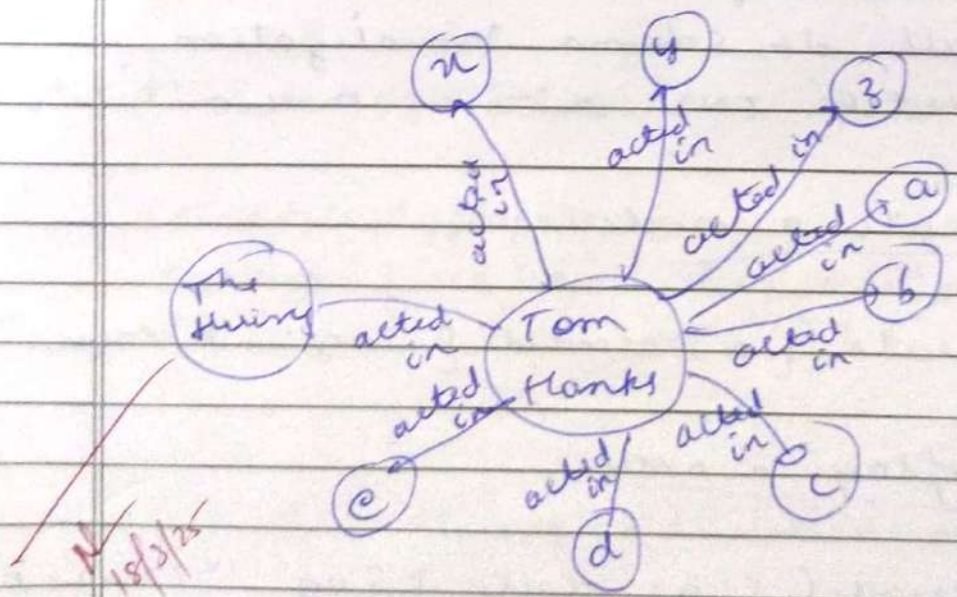
Match (tom { name : "Tom Hanks" })
return tom

→ List all Tom Hanks movies.

Match (Tom: Person { name : "Tom Hanks" })
[: acted_in] →
(tomHanks Movies) return
tom, tomhanks movies.

→ Delete all movies and Person nodes
match (n) detach delete n

Example graph output on movies acted by tom hanks.



18/3/25

→ Count all nodes.

count all nodes match (n)
return count (n)

PAGE NO : 15
DATE :

01/04/25

Working with Cassandra

→ Create keyspace :

Create keyspace Students with Replication = {'class': 'Simple Strategy', 'replication_factor': 1};

→ Describe the existing Keyspaces :

Describe KEYSPACES;

→ For More details on existing keyspaces :

Select * from system_schema.keyspaces;

→ use the keyspace "students" ;
Use Students.

keyspace_name durable_writes replicaton

system_authr True {'class': ...
}

→ To create table (column family) by name Student_Info'

Create Table Students_Info (Roll_No int PRIMARY KEY, StudName text, Date of Joining timestamp, last_exam_Percentage);

→ Lookup the names of all tables in the current keyspace
Describe TABLES;

PAGE NO :
DATE :

→ Describe TABLE student_Info;

CRUD

→ Insert:

```
BEGIN BATCH
INSERT INTO Student_Info ( Roll_No,
StudName, Date of Joining, Last_Exam_Percent
VALUES ( 1, 'Asha', '2012-07-12', 79.9)
.
.
APPLY BATCH;
```

→ View data from the table "Student_Info"

roll no	dateofjoining	last exam percent	studname
1	2012-07-11 ..	67.9	Smitha

→ View data from the table "Student_Info" where Roll no column either has a value 1 or 2 or 3

```
SELECT * FROM Student_Info where
Roll_No in (1,2,3);
```

→ To execute a non-primary key

```
select * from student_info where
Studname = "Asha";
```

→ So, create an INDEX on the Column

```
CREATE INDEX on Student_Info
(StudName);
```

PAGE NO :
DATE :

→ To specify the no of rows returned in the output.

select Roll_No, studname from student_info Limit 2;

roll_no	studname
5	Smitha
1	Asha

→ Alias for column:

Select Roll_No as USN from Student_info;

USN
5
1
2
4
6
3

→ Update

Update student_info SET StudName = 'David' Sheen' where Roll_NO = 2;

→ Delete

DELETE LastExamPercent from student_info where RollNO = 2

DELETE From student_info where RollNO=2;

PAGE NO :
DATE :

Alter

ALTER Table students_info ADD
hobbies set <text> (Set collection)

ALTER Table students_info ADD
language list <text> (List collection)

UPDATE students_info
SET hobbies = hobbies + {'Chess', Table Tennis'}
Where RollNo = 1;

Select * from students_info where
RollNO = 1;

rollno	date of joining	hobbies	stu dname
1	2012-07-11..	(Chess, Table Tennis)	Asha

UPDATE students_info
SET language = language + ['Hindi',
'English'] where RollNo = 1;

Import & Export

export
COPY elearning.lili (id, course_order,
course_id, course_owner, title) TO
'd:\elearning_lili.csv';

Import
COPY elearning.lili (id, course_order,
course_id, course_owner, title) FROM
'd:\elearning_lili.csv';

24/11/15