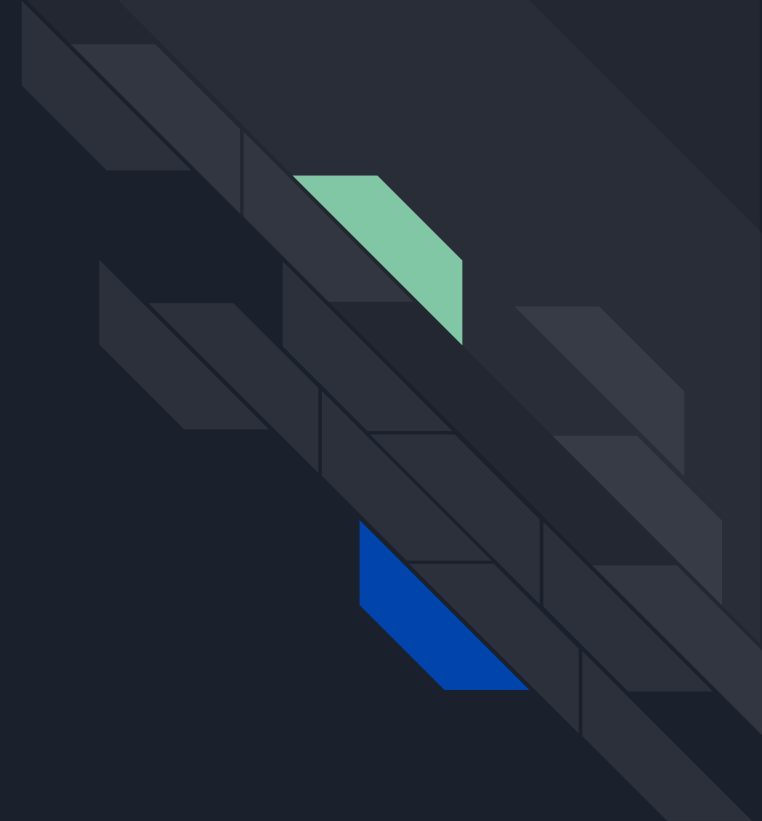


Question 7: Cypher querying / MongoDB CRUD

IT-NSQ1Y-S22

Jordi Lazo

Explain the clauses of the
Cypher language and
demonstrate how it is used
for querying data





Clauses of the Cypher language

- The Cypher language enables users to perform standard database operations by using clauses.
- There are a total of 13 categories for all clauses.

- Reading clauses
- Projecting clauses
- Reading sub-clauses
- Reading hints
- Writing clauses
- Reading/Writing clauses
- Set operations
- Subquery clauses
- Multiple graphs
- Importing data
- Listing functions and procedures
- Transaction commands
- Administration clauses



Clauses of the Cypher language

- Most important clauses are:

- **CREATE** - creates new nodes and relationships
- **DELETE** - deletes nodes and relationships
- **LOAD CSV** - loads data from CSV file
- **MATCH** - searches for patterns
- **MERGE** - creates patterns if they don't exist
- **OPTIONAL MATCH** - behaves the same as **MATCH**, but when it fails to find the pattern it fills missing parts of the pattern with null values
- **REMOVE** - removes labels and properties
- **RETURN** - defines what will be presented to the user in the result set
- **SET** - adds new or updates existing labels and properties
- **UNION** and **UNION ALL** - combines results from multiple queries
- **UNWIND** - unwinds a list of values as individual rows
- **WHERE** - filters the matched data
- **WITH** - combines multiple reads and writes

Querying in Cypher language

- The following diagram shows a graphic representation of nodes and relationship types in the Movies dataset using Tom Hanks, both an actor and director, as an example:
- [Working with Cypher and the Movies Graph \(cambridgesemantics.com\)](http://cambridgesemantics.com)





Querying in Cypher language

- In this example, the MATCH pattern identifies and returns all the directors of Movies in which Tom Hanks acted:
- MATCH (actor:Person)-[:ACTED_IN]-(film:Movie),
(director:Person)-[:DIRECTED]-(film:Movie)
- WHERE actor.name='Tom Hanks'
- RETURN actor.name, film.title, director.name ;

Present your hand-in to course
assignment 2 with a focus on
updating the data

