



Habib University
shaping futures

CS343 Graph Data Science

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Updating Data

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Creating Nodes / Relationships

- **CREATE**

- create nodes, relationships, or both in the graph.
- do not check duplicates
- specified node or relationship pattern already exists in the graph, a new one will be created

CREATE (n:Person {name: 'John'})

CREATE (n:Person {name: 'John'}) – [:KNOWS]-> (n:Person {name: 'Alien'})

- **MERGE**

- match existing graph elements or create them if they don't already exist
- either match an existing element or create it if it doesn't exist

MERGE (n:Person {name: 'John'})

MERGE (n:Person {name: 'John'}) – [:KNOWS]-> (n:Person {name: 'Alien'})

Update

- SET clause
 - modify or update properties of nodes, relationships
 - used in conjunction with MATCH or MERGE clauses to specify the elements we want to update

```
MATCH (person:Person {name: 'John'})  
SET person.age = 30, person.city = 'New York'
```

- For array properties

```
MATCH (person:Person {name: 'John'})  
SET person.interests = person.interests + 'Cooking'
```

```
MATCH (person:Person {name: 'John'})  
SET person.interests = [interest IN person.interests WHERE  
interest <> 'Traveling']
```

Update Labels

- We can use SET clause to assign labels

```
MATCH (person:Person {employeeId: '123'})  
SET person:Employee
```

Remove

- Opposite to SET
- Remove properties or labels
- Removing properties

```
MATCH (person:Person {name: 'John'})  
REMOVE person.age
```

- Removing Labels

```
MATCH (person:Person:Employee {employeeId: '123'})  
REMOVE person:Employee
```

Delete

- delete nodes and relationships
- Deleting relationship only

```
MATCH (:Person {name: 'John'})-[r:KNOWS]->(:Person)  
DELETE r
```

- Deleting a node

```
MATCH (person:Person)  
WHERE person.age > 60  
DELETE person
```

- Deleting node with relationships

```
MATCH (person:Person {name: 'John'})  
DETACH DELETE person
```

Practice!

- Create a node with name “Daniel Kaluuya”
- Daniel Kaluuya acted in movie “Get Out” – make this relationship
- Add the tag line “Gripping, scary, witty and timely!” for the movie “Get Out” and set released year to 2017
- Delete the actor “Emil Eifrem” from the database

More Practice

- Assign :Actor label to all actors
- Assign :Director label to all directors
- Use PROFILE to see the performance of keyword

```
PROFILE MATCH (p:Person)  
RETURN *
```

```
PROFILE MATCH (a:Actor)  
RETURN *
```