Lab 4 NEO4J

GIK2NV - Data Storage and Management Technologies

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The project

The 3 most important roles and the actors also the director + 3 top movies of each actor.

1- Interstellar
2- Fight Club
3- Twilight - Part 1

Interstellar

1- Matthew McConaughey (Cooper) - **Filmer: Dallas Buyers Club (2013) Dazed and Confused (1993) Mud (2012)**
2- Jessica Chastain (Murphy) - **Filmer: Zero Dark Thirty (2012)**

The Eyes of Tammy Faye (2021) - The Tree of Life (2011)
3- Anne Hathaway (Amelia Brand) **- Filmer: Rachel Getting Married (2008) - Brokeback Mountain (2006) - Dark Waters (2019)**
4- **Regissör**: Christopher Nolan - **Filmer: Tenet (2020) - Inception (2010) - The Prestige (2006)**

Fight Club

Brad Pitt (Tyler Durden) - Filmer: Se7en (1995), Ocean's Eleven (2001), Inglourious Basterds (2009)

Edward Norton (Narrator) - Filmer: American History X (1998), Moonrise Kingdom (2012), Birdman (2014)

Jared Leto (Angel Face) - Filmer: Morbius (2022), American Psycho (2000), Suicide Squad (2016)

David Fincher(Director) - Filmer: Se7en (1995), The Social Network (2010), Gone Girl (2014)

Twilight

Kristen Stewart (isabella swan) (ålder 32 år) -Filmer: Spencer(2021) , Snow White and the Huntsman (2012) , Charlie's Angels(2019)

Robert Pattinson (Edward Cullen) (ålder 36 år) - Filmer: The Batman (2022), Tenet(2020), The Lighthouse(2019)

Taylor Lautner (Jacob Black) (ålder 30 år) - Filmer: The Twilight Saga: New Moon(2009) , Abduction(2011), The Twilight Saga: Breaking Dawn – Part 2 (2012)
Chris Weitz (Director) - Filmer: The Twilight Saga: New Moon (2009),Om en pojke(2002), Guldkompassen(2007)

Attributes

1- Name
2- Relationship: PlayedAS
3- Age
4- Gender
5- Relationship: DirectedBy
6- Title

All code used:

(We have repeated the code many times to add everything needed)

```
//Create Node for ACTOR
CREATE (n:ACTOR{name:"Matthew McConaughey",
age:52,gender:"Male"})
//Create Node for MOVIE
CREATE(m:MOVIE{title:"Interstellar", released:
2014})
//Create Relation ACTOR to MOVIE
MATCH (ACTOR), (MOVIE)WHERE ACTOR.name =
"Jessica Chastain" AND MOVIE.title =
"Interstellar"
   CREATE(ACTOR)-[:ACTED_IN]->(MOVIE);


//Create Node for Director
CREATE (dr:DIRECTOR{name:"Jonathan Demme",
age:73,gender:"Male"})


//Create Relation DIRECTOR to MOVIE
MATCH (DIRECTOR), (MOVIE)WHERE DIRECTOR.name =
"Christopher Nolan" AND MOVIE.title =
"Interstellar"
   CREATE(MOVIE)-[:DIRECTED_BY]->(DIRECTOR);




//Delete node based on ID
MATCH (n) where id(n) = X
DETACH DELETE n


//Find first 5 movies released after 2000
MATCH (m:MOVIE) WHERE m.released > 2000 RETURN m
limit 5
```

Initially describe in WRITTEN TEXT what type of project is to be developed, and why it is suitable for design in a Graph-Database

The project is meant to be representing a website that is informational about any movie available. The problem is that to do so, the database would be enormous, so in this case we have minimized it to a couple of specific movies which will represent how the graph database is meant to be used perfectly, but just in a smaller form.

What we did is that each of us picked our favorite movie and the director for that specific movie. Then we decided to present the top 3 characters in that movie and their top 3 movies. Finally, we also thought that we could present the director for each of those movies and perhaps we can find a relation between the movies. Our project was suitable to be designed in a Graph-Database because Graph databases are the best way to represent and query any large volume of connected data.

Describe in WRITTEN TEXT which NODE and RELATIONSHIPS the model will contain and justification for these choices as well as which labels and properties they must have / contain.

The project consists of these nodes and relationships:
Nodes:

- ACTOR
- MOVIE
- DIRECTOR

Relationships:

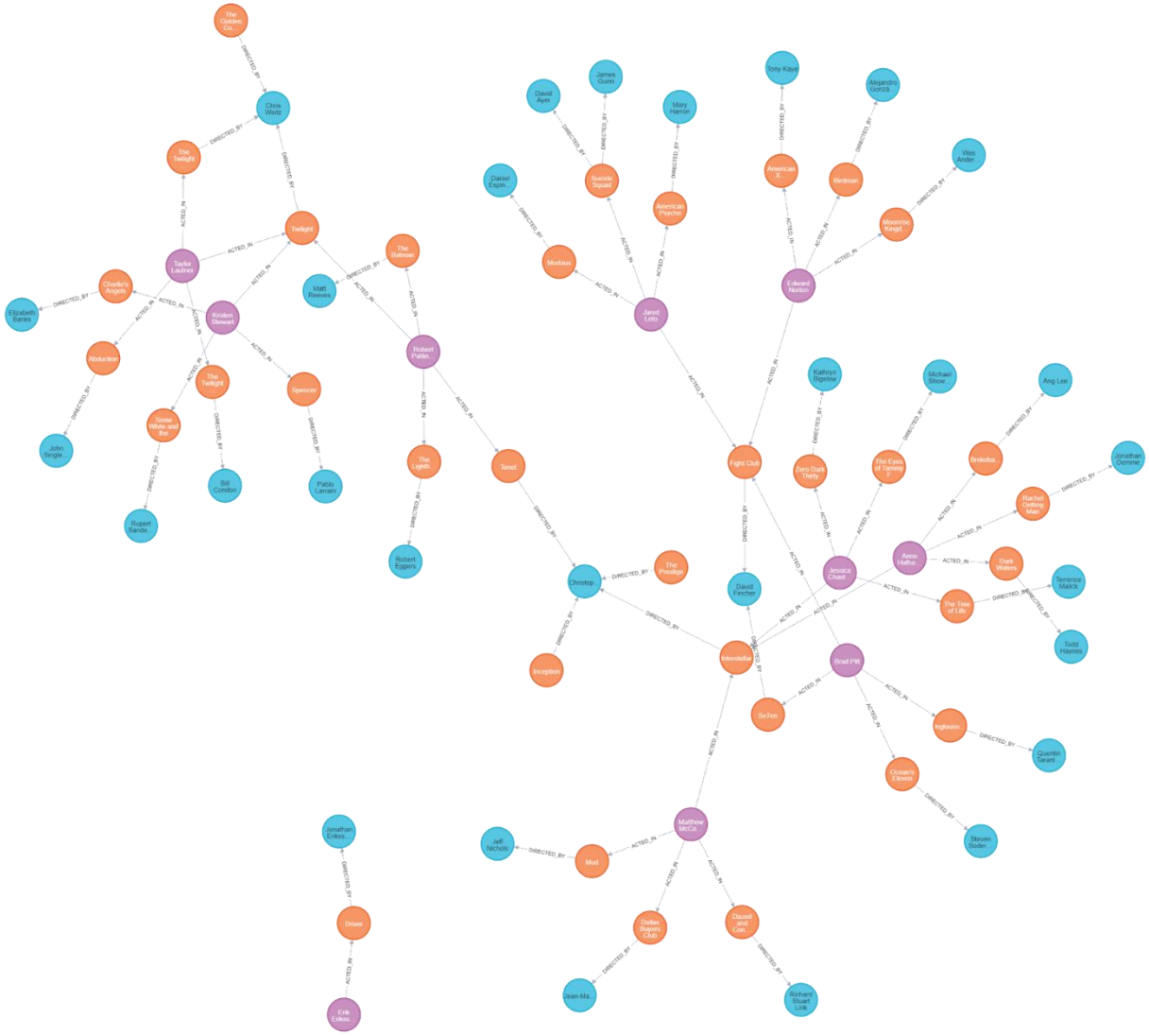
- ACTED_IN
- DIRECTED_BY

Basically each “ACTOR” node is connected to a specific “MOVIE” node that the actor starred in, because node “ACTOR” means an actual actor, and so is the “MOVIE” node, basically an actual movie. We also have a “DIRECTOR” node, which is also a real director and that node is connected with the “MOVIE” node, to represent which movie he/she directed.

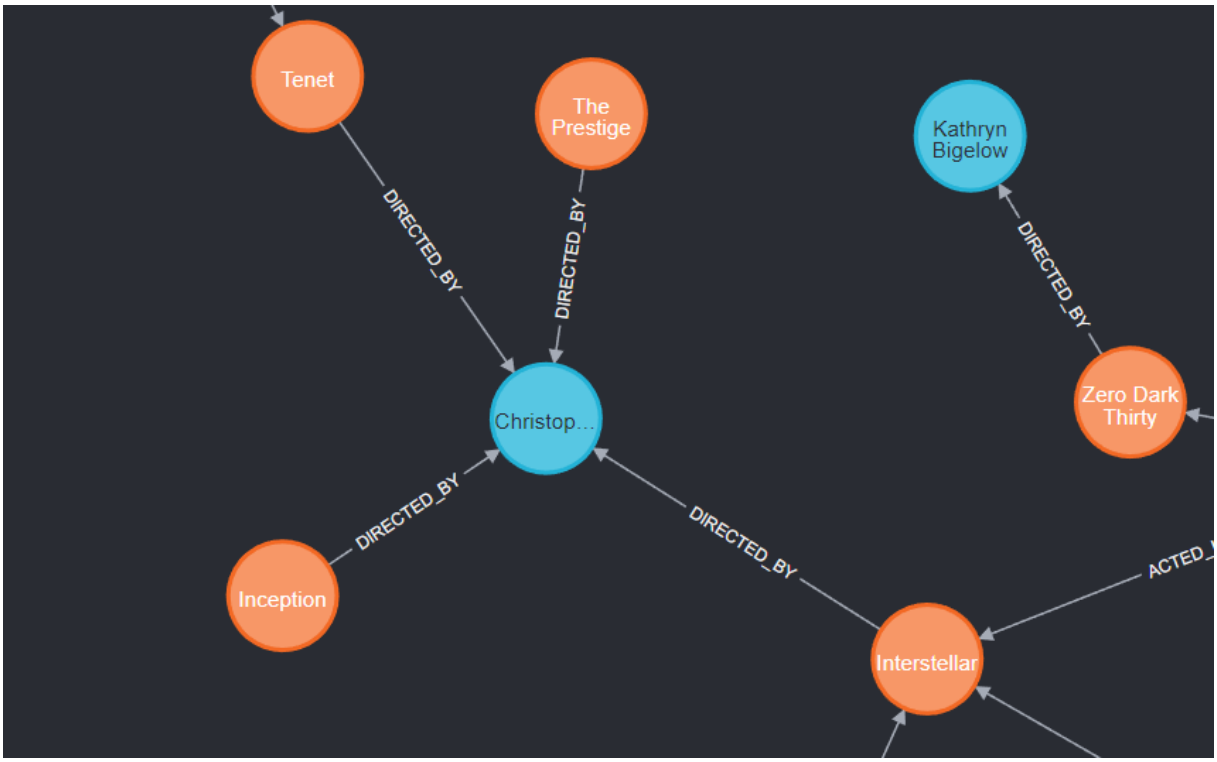
Our database model would be able to track relationships between actors and films. The database could provide us information about which actor played in a specific film and which films that share the same actors. Other information could be provided like personal information, information about directors, which films they had, and we can get film information like actors and directors for each film.

Our database model is able to provide additional information for users, since our project we have decided to add in our own favorite movie. When we do that, we can clearly see which actors and directors are related to each movie. That helps us easier to understand if there is any connection between them. We have for example “Christopher Nolan” who has directed two movies in which Mouayad and Mohamed liked. Without our database we could not see that.

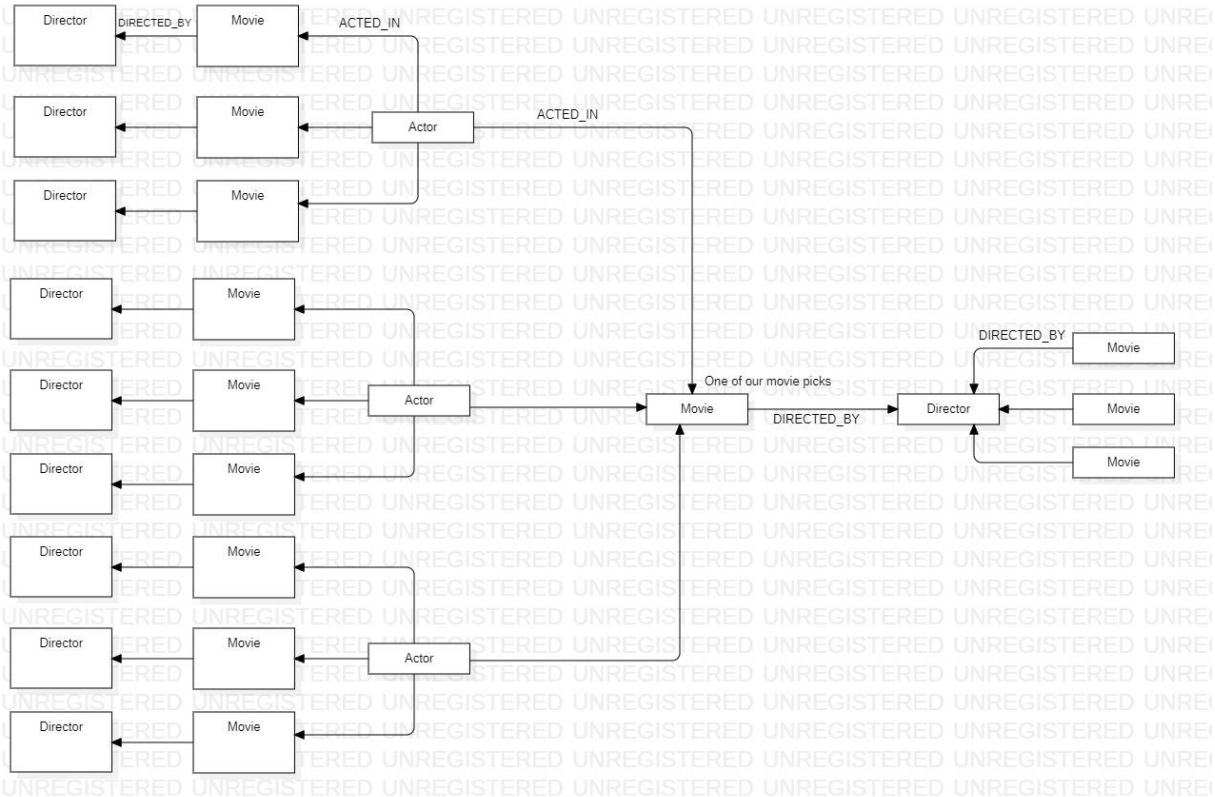
A picture of the entire data model + The code used in the recording:



A picture of the connection with Christopher Nolan and his movies, that Mouayad and Mohamad liked:



A picture of the data model used for the graph database:



Basically this image represents what the core of our idea is. It starts like this and gets repeated several times.