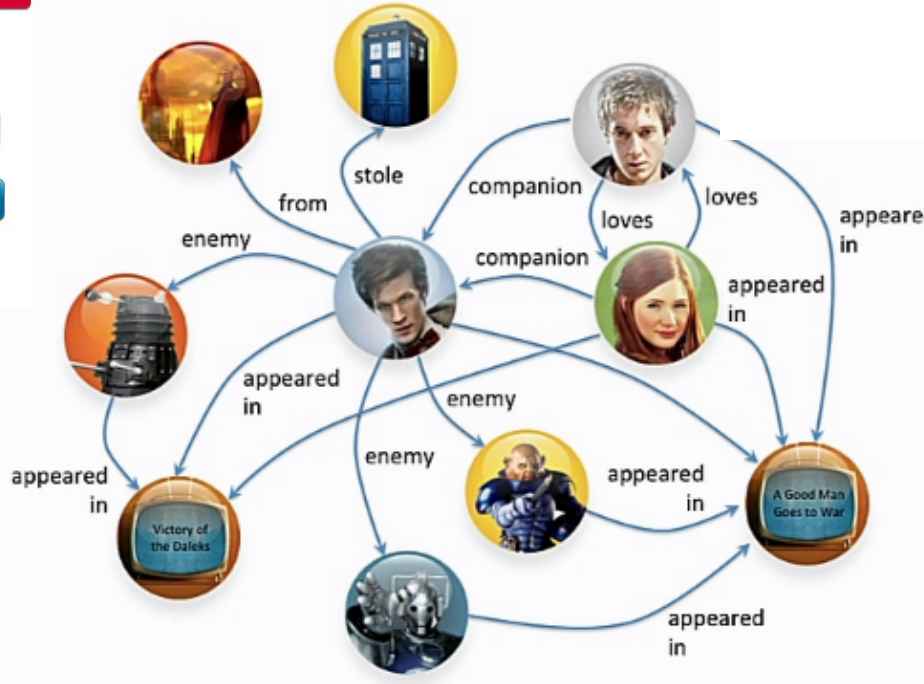
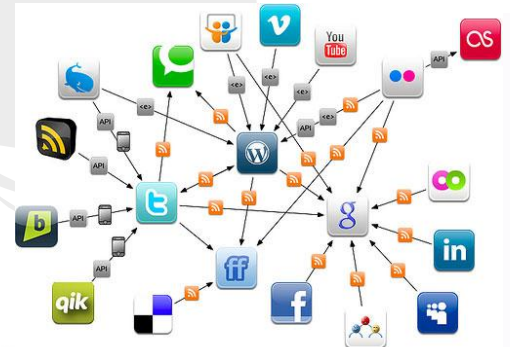
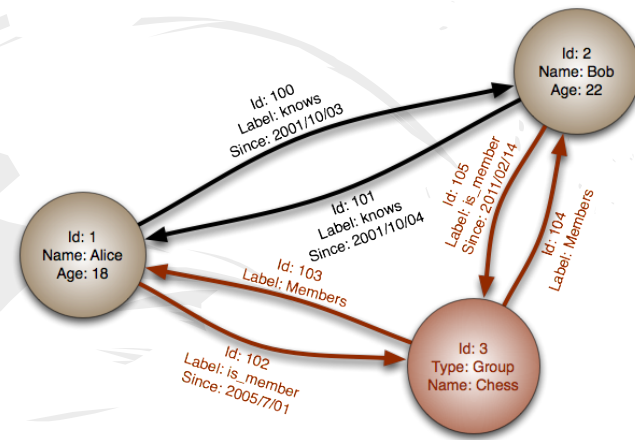
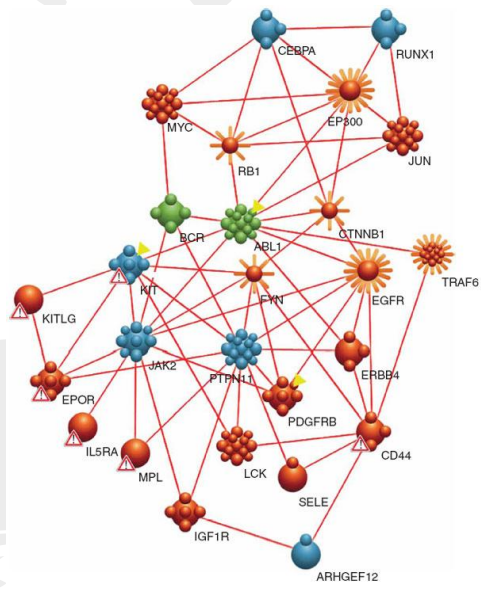
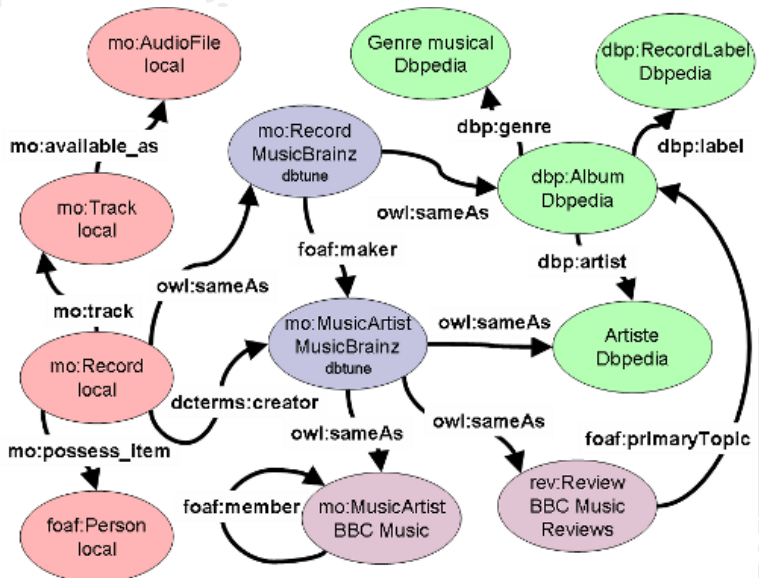
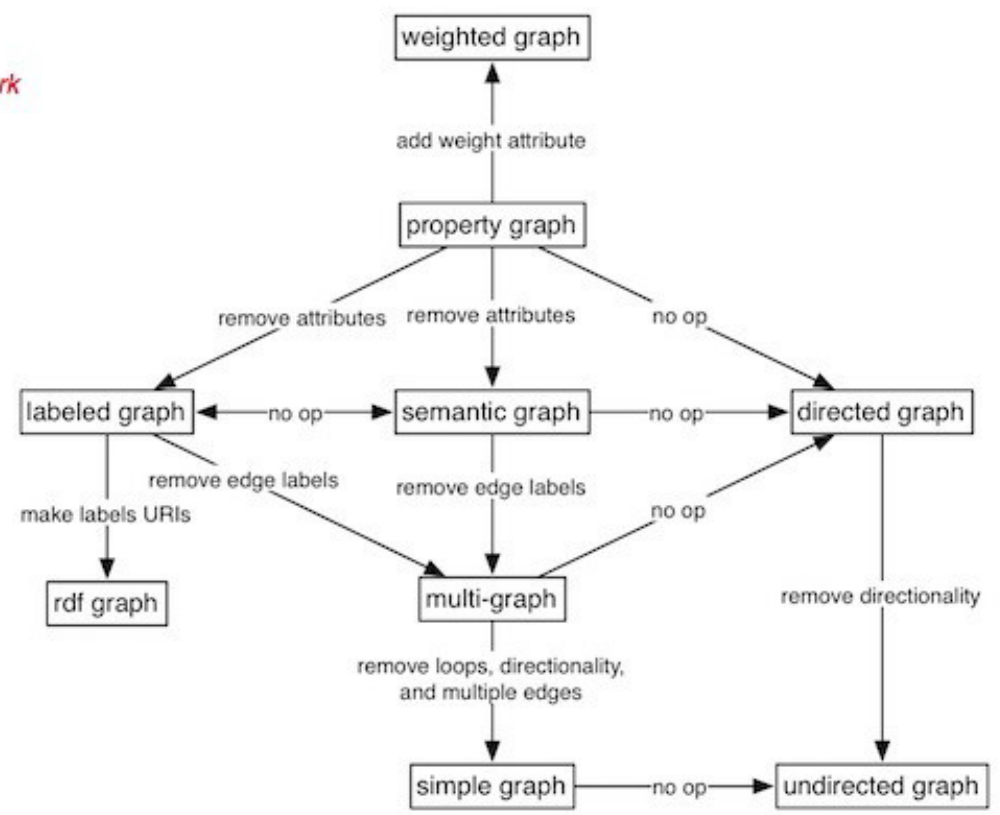
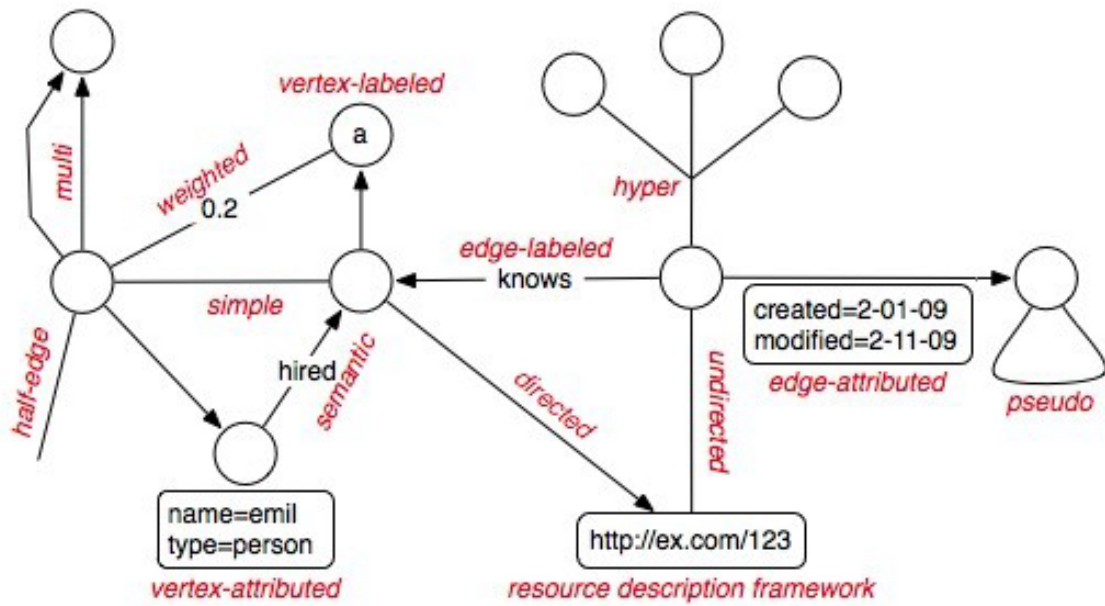


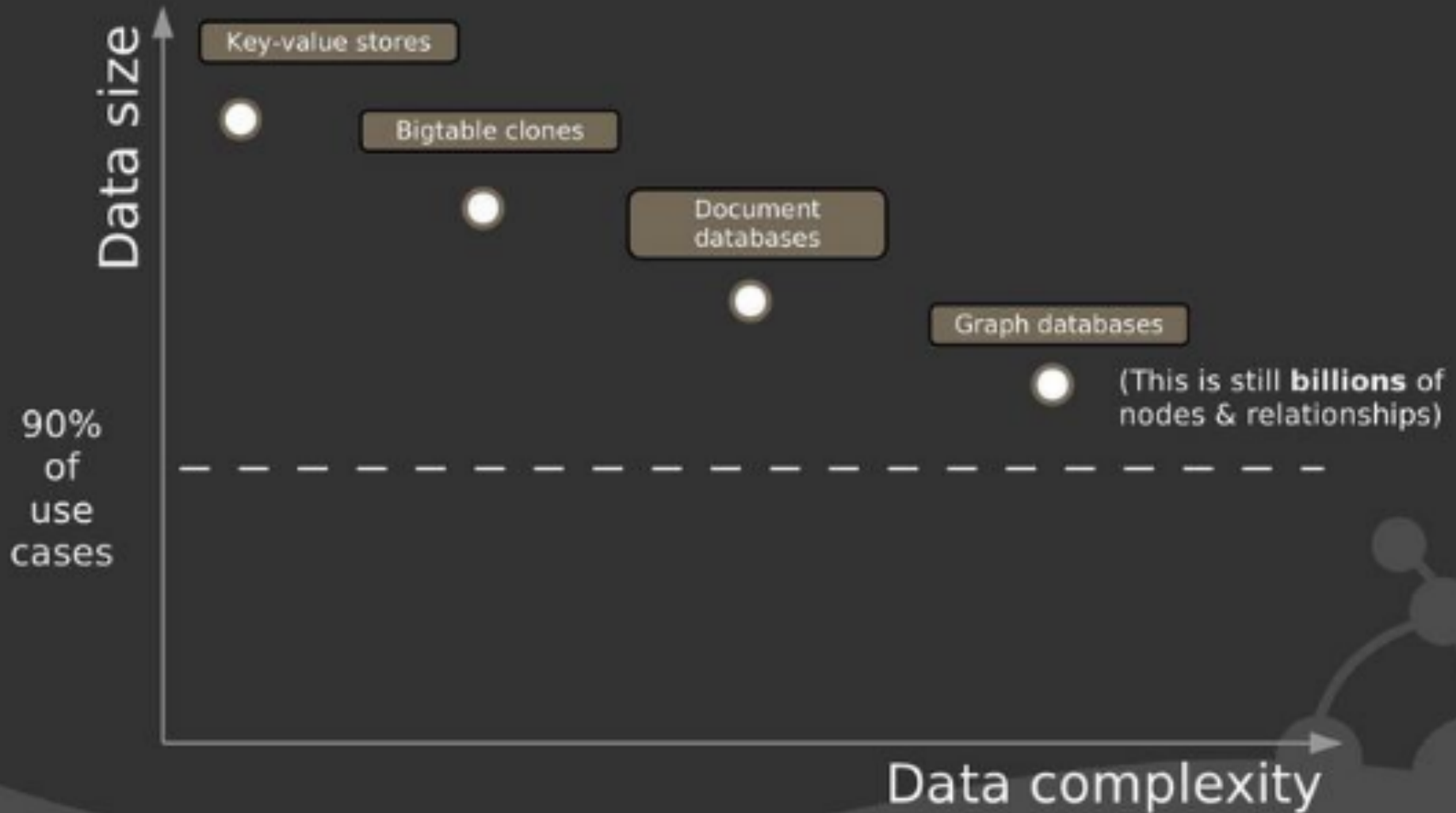
Neo4J

RÁCZ GÁBOR





NOSQL data models



Gráf adatbázisok



Neo4j
the graph database



AllegroGraph



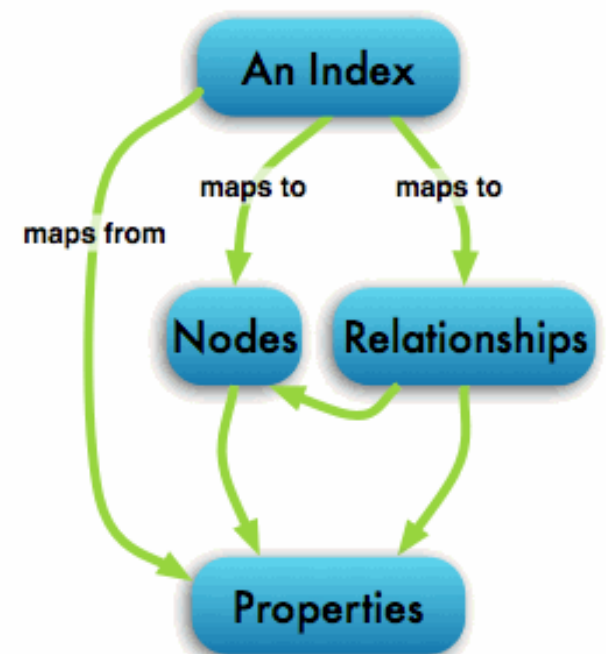
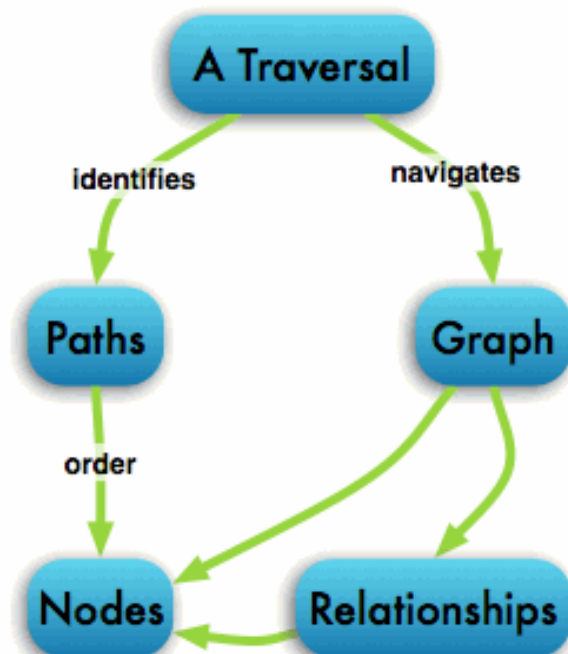
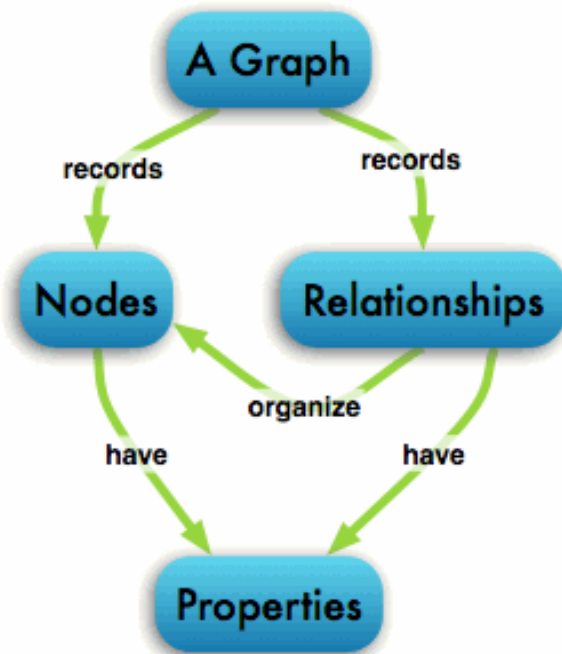
Neo4J

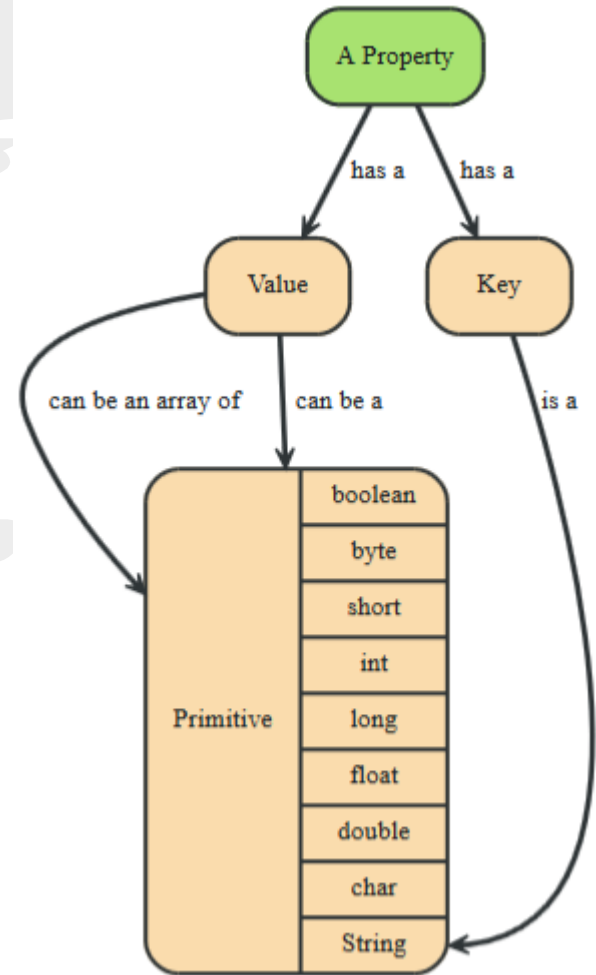
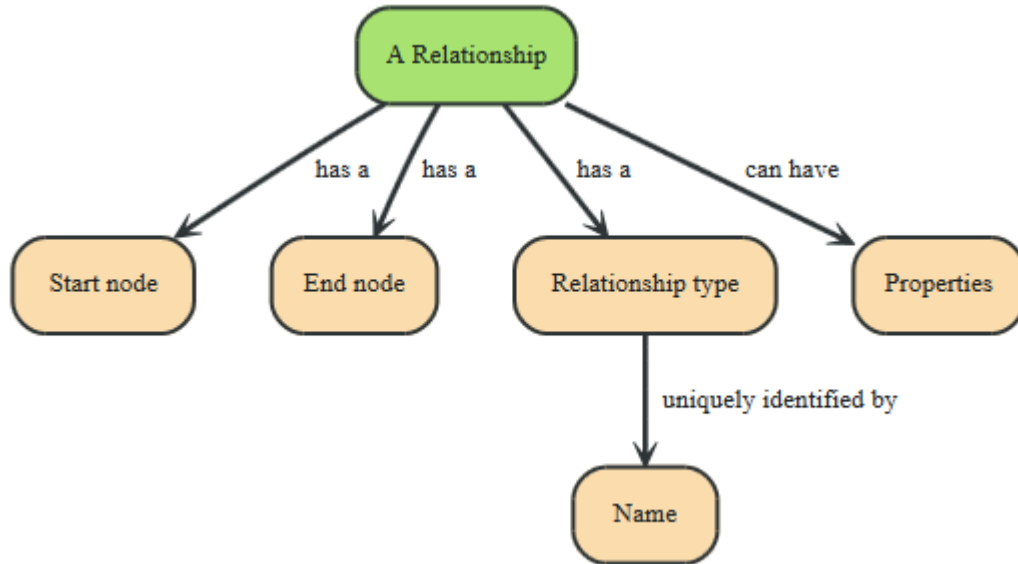
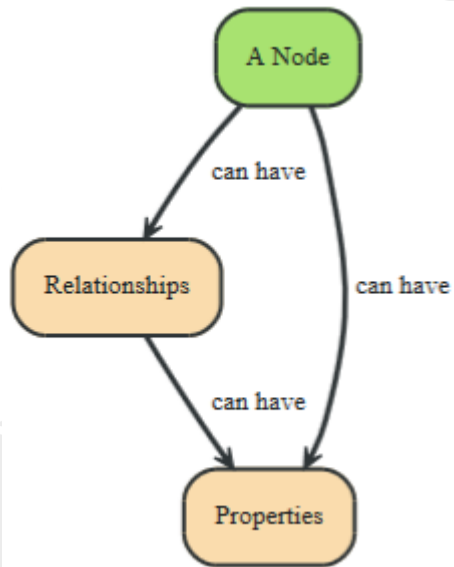


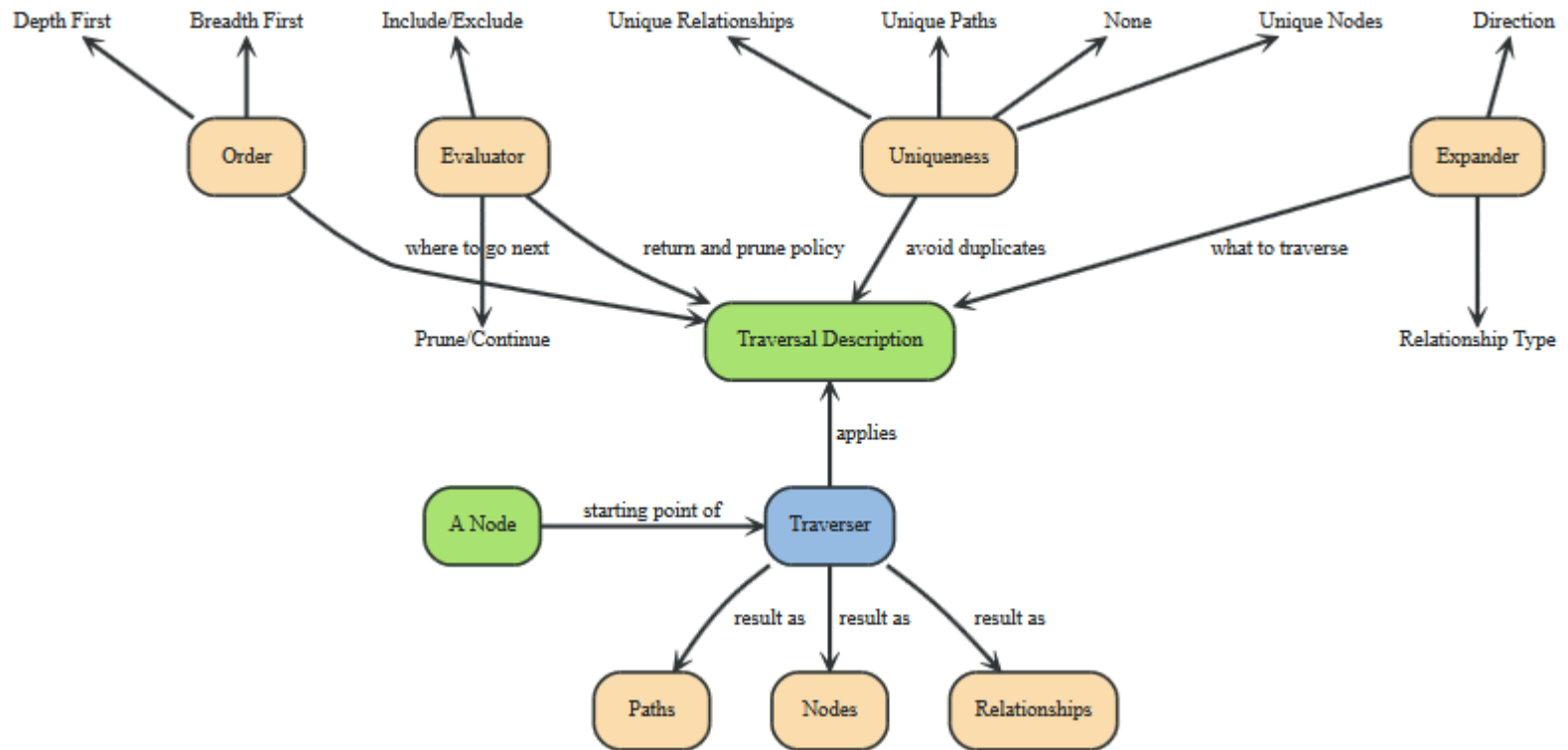
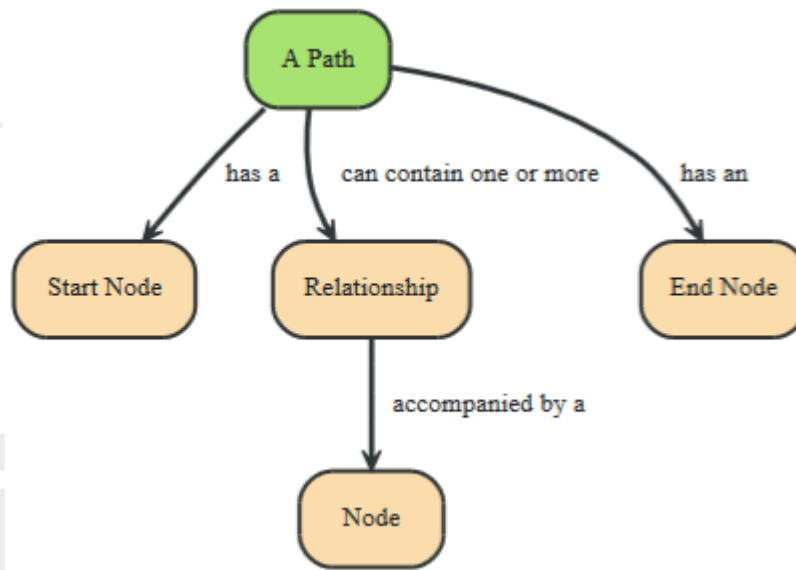
Neo4j
the graph database

- Nyílt forráskód
- Java
- diszk alapú
- ACID tranzakciós modell
- beágyazható
- sémafüggetlen

Alapok

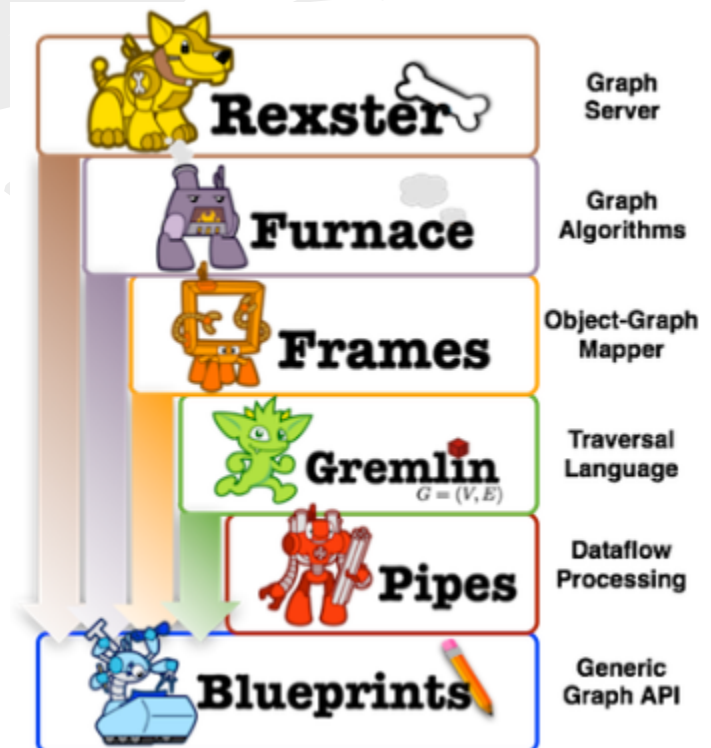




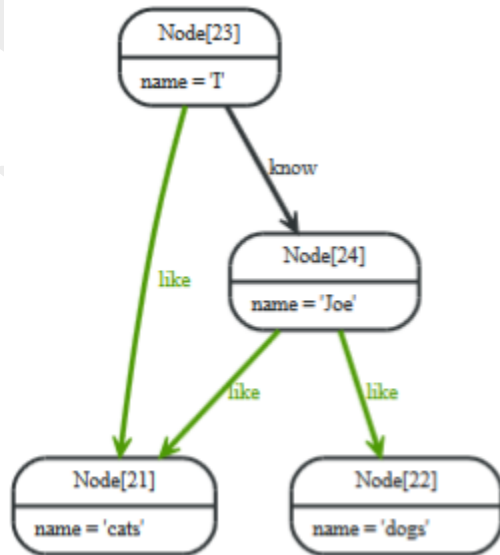


Lekérdezések

- Cypher
 - Native
- Gremlin
 - REST



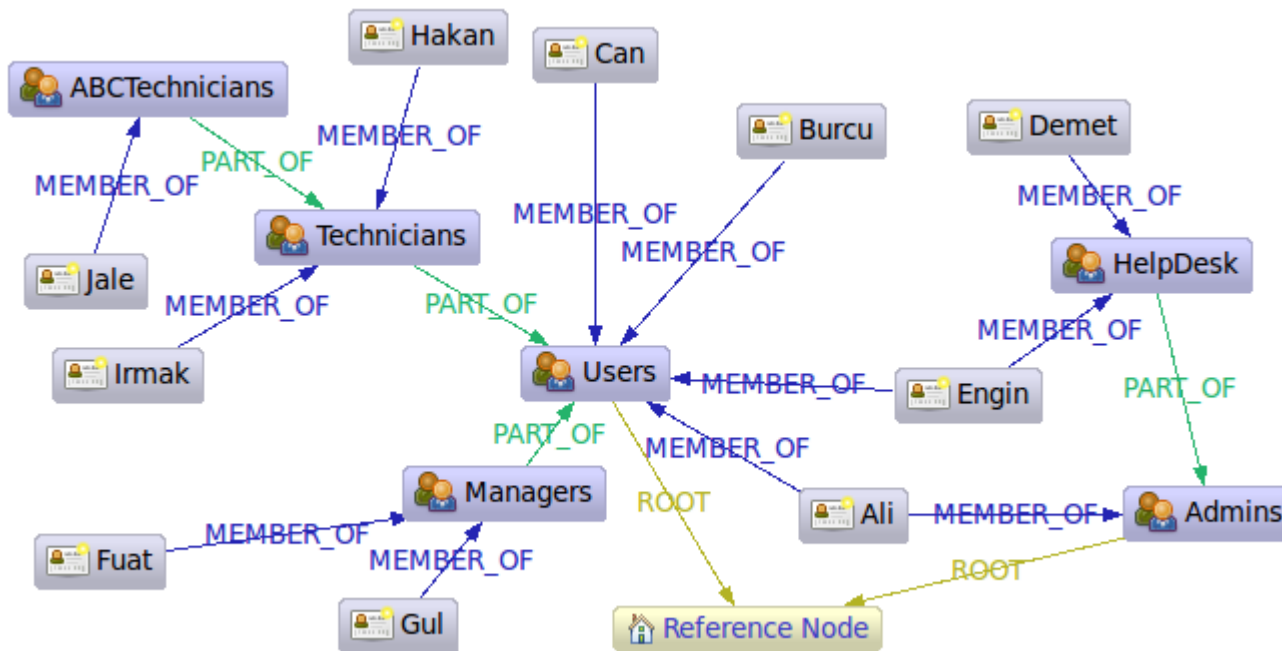
Gremlin példa



```
{  
  "script" : "t= new Table();  
g.v(23).as('I').out('know').as('friend').out('like')  
.as('likes').table(t,['friend','likes']){it.name}{it.name}  
.iterate();  
t";  
  "params" : {}  
}
```

```
{  
  "columns" : [ "friend", "likes" ],  
  "data" : [ [ "Joe", "cats" ], [ "Joe", "dogs" ] ]  
}
```

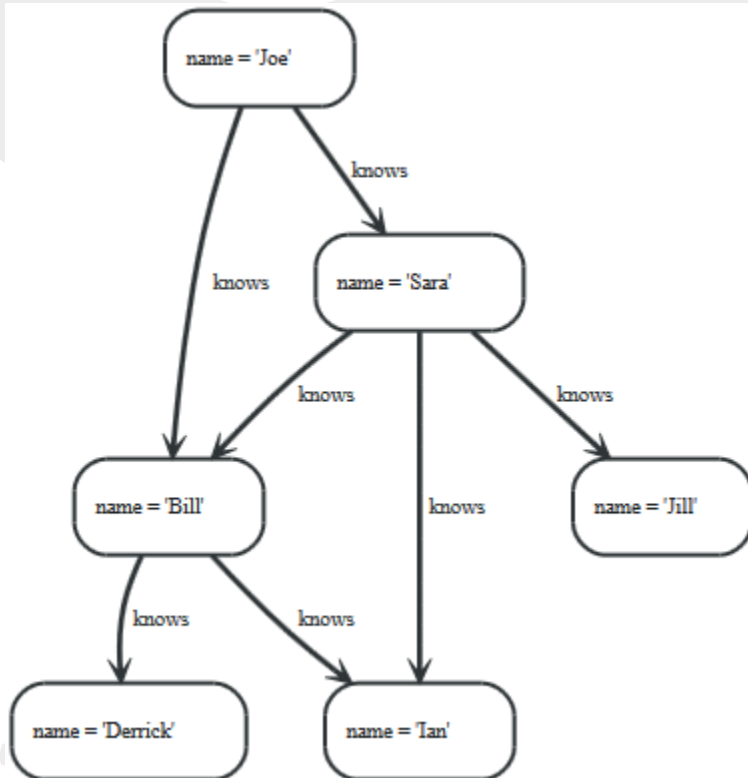
Cypher példa



```
START admins=node(14)
MATCH admins<-[:PART_OF*0..]-group<-[:MEMBER_OF]-user
RETURN user.name, group.name
```

user.name	group.name
"Ali"	"Admins"
"Engin"	"HelpDesk"
"Demet"	"HelpDesk"
3 rows	
59 ms	

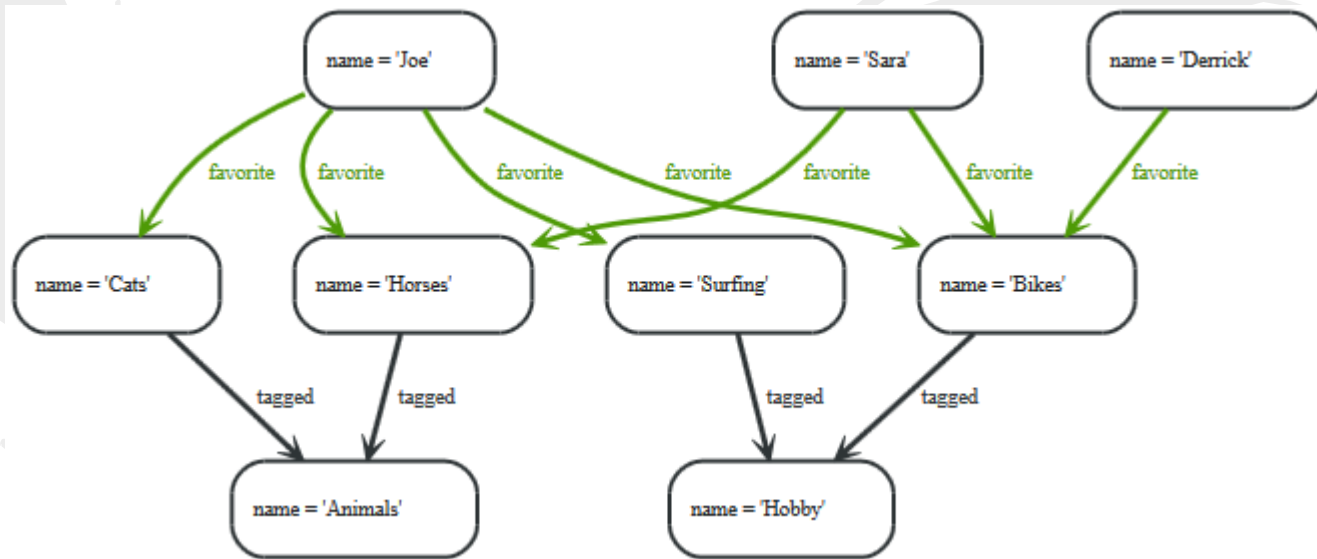
Cypher példa 2



```
START joe=node:node_auto_index(name = "Joe")
MATCH joe-[:knows*2..2]-friend_of_friend
WHERE not(joe-[:knows]-friend_of_friend)
RETURN friend_of_friend.name, COUNT(*)
ORDER BY COUNT(*) DESC, friend_of_friend.name
```

friend_of_friend.name	COUNT(*)
"Ian"	2
"Derrick"	1
"Jill"	1
3 rows	
0 ms	

Cypher példa 3



```
START me=node:node_auto_index(name = "Joe")
MATCH me-[:favorite]->myFavorites-[:tagged]->tag<-[:tagged]-theirFavorites<-[:favorite]-people
WHERE NOT(me=people)
RETURN people.name as name, count(*) as similar_favs
ORDER BY similar_favs DESC
```

name	similar_favs
"Sara"	2
"Derrick"	1
2 rows	
0 ms	

Sebesség

Friend of a friend of ...
1000 user

Depth	Execution Time – MySQL	Execution Time –Neo4j
2	0.016	0.010
3	30.267	0.168
4	1,543.505	1.359
5	Not Finished in 1 Hour	2.132



Köszönöm a figyelmet!