

```
# Creation of 2 types of nodes.  
# COMPANY: name, activity_area, description, size  
# USER: firstname, lastname, description, list_skills  
# index of COMPANY: name  
# index of COMPANY: lastname
```

```
CREATE(:COMPANY {name:"Facebook", activity_area:"Internet", description:"a popular  
free social networking website", size:44942})
```

```
CREATE(:COMPANY {name:"Airbus", activity_area:"aeronautics, space and defense  
industry", description:"an international pioneer in the aerospace industry", size:133671})
```

```
CREATE(:COMPANY {name:"Orange", activity_area:"telecommunication", description:"a  
French multinational telecommunications corporation", size:135619})
```

```
CREATE INDEX ON :COMPANY(name)
```

```
CREATE (:USER {firstname: "Johnny" , lastname:"Smith", description:"23 years  
old",list_skills:"Java"})
```

```
CREATE (:USER {firstname: "Crystal" , lastname:"Williams", description:"25 years  
old",list_skills:"Python"})
```

```
CREATE (:USER {firstname: "Lukas" , lastname:"Miller", description:"31 years  
old",list_skills:"C++"})
```

```
CREATE (:USER {firstname: "Melody" , lastname:"Taylor", description:"28 years  
old",list_skills:"Javascript"})
```

```
CREATE (:USER {firstname: "Rafael" , lastname:"Jackson", description:"20 years  
old",list_skills:"PHP"})
```

```
CREATE (:USER {firstname: "Heidi" , lastname:"Martin", description:"33 years  
old",list_skills:"C"})
```

```
CREATE (:USER {firstname: "Frank" , lastname:"Clark", description:"42 years  
old",list_skills:"MySQL"})
```

```
CREATE INDEX ON :USER(lastname)
```

```
# Creation of relationship between USER and COMPANY: WORKS_FOR  
# The time data (from and to) will be stored in the form 'YYYYMMDD'.  
# This will allow them to be compared with each other.
```

```
MATCH (u1:USER{lastname:"Smith"}),(c1:COMPANY{name:"Facebook"})
```

MERGE (u1)-[wf:WORKS_FOR{from:20181212,to:20200219,as:"employee"}]->(c1)

MATCH (u2:USER{lastname:"Williams"}),(c2:COMPANY{name:"Airbus"})

MERGE (u2)-[wf:WORKS_FOR{from:20160912,to:20200201,as:"employee"}]->(c2)

MATCH (u3:USER{lastname:"Miller"}),(c3:COMPANY{name:"Orange"})

MERGE (u3)-[wf:WORKS_FOR{from:20130210,to:201911230,as:"subcontractor"}]->(c3)

MATCH (u4:USER{lastname:"Taylor"}),(c4:COMPANY{name:"Orange"})

MERGE (u4)-[wf:WORKS_FOR{from:20190225,to:20200110,as:"intern"}]->(c4)

MATCH (u5:USER{lastname:"Jackson"}),(c5:COMPANY{name:"Airbus"})

MERGE (u5)-[wf:WORKS_FOR{from:20120327,to:20180513,as:"employee"}]->(c5)

MATCH (u6:USER{lastname:"Martin"}),(c6:COMPANY{name:"Facebook"})

MERGE (u6)-[wf:WORKS_FOR{from:20180108,to:20191229,as:"employee"}]->(c6)

MATCH (u7:USER{lastname:"Clark"}),(c7:COMPANY{name:"Airbus"})

MERGE (u7)-[wf:WORKS_FOR{from:20141019,to:20200210,as:"subcontractor"}]->(c7)

Creation of relationship between USER and USER: WORKS_WITH

MATCH (u:USER{lastname:"Smith"}),(uu:USER{lastname:"Martin"})

MERGE (u)-[ww1:WORKS_WITH]->(uu)

MERGE (uu)-[ww2:WORKS_WITH]->(u)

MATCH (u:USER{lastname:"Williams"}),

(uu:USER{lastname:"Jackson"}),(uuu:USER{lastname:"Clark"})

MERGE (u)-[ww1:WORKS_WITH]->(uu)

MERGE (uu)-[ww2:WORKS_WITH]->(u)

MERGE (u)-[ww3:WORKS_WITH]->(uuu)

MERGE (uuu)-[ww4:WORKS_WITH]->(u)

MERGE (u)-[ww5:WORKS_WITH]->(uuu)

MERGE (uuu)-[ww6:WORKS_WITH]->(uu)

MATCH (u:USER{lastname:"Miller"}),(uu:USER{lastname:"Taylor"})

MERGE (u)-[ww1:WORKS_WITH]->(uu)

MERGE (uu)-[ww2:WORKS_WITH]->(u)

Creation of relationship between USER and USER: KNOWS

MATCH (u:USER{lastname:"Smith"}),(uu:USER{lastname:"Williams"})

MERGE (u)-[k:KNOWS]->(uu)

MATCH (u:USER{lastname:"Miller"}),(uu:USER{lastname:"Taylor"})

MERGE (u)-[k1:KNOWS]->(uu)

MERGE (uu)-[k2:KNOWS]->(u)

MATCH (u:USER{lastname:"Jackson"}), (uu:USER{lastname:"Martin"}),
(uu:USER{lastname:"Clark"})
MERGE (u)-[k1:KNOWS]->(uu)
MERGE (uu)-[k2:KNOWS]->(u)
MERGE (u)-[k3:KNOWS]->(uuu)
MERGE (uuu)-[k4:KNOWS]->(u)
MERGE (uu)-[k5:KNOWS]->(uuu)
MERGE (uuu)-[k6:KNOWS]->(uu)

MATCH (u:USER{lastname:"Smith"}), (uu:USER{lastname:"Jackson"})
MERGE (u)-[k:KNOWS]->(uu)

MATCH (u:USER{lastname:"Miller"}), (uu:USER{lastname:"Martin"})
MERGE (u)-[k1:KNOWS]->(uu)
MERGE (uu)-[k2:KNOWS]->(u)

Search queries of COMPANY by name

MATCH (c:COMPANY {name:"Facebook"}) RETURN c



MATCH (c:COMPANY {name:"Airbus"}) RETURN c



Search queries of USER by lastname

MATCH (u:USER {lastname:"Taylor"}) RETURN u



MATCH (u:USER {lastname:"Jackson"}) RETURN u



MATCH (u:USER {lastname:"Martin"}) RETURN u



Queries of relationship.

Users who worked at the same time as a given user in a given company.

2 conditions:

Users in the same company.

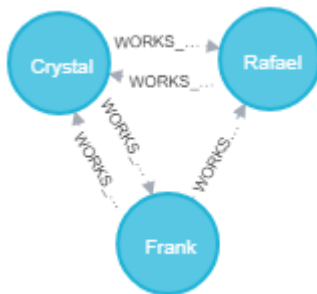
Comparison of start and end times in the company.

```
MATCH (u:USER {lastname:"Williams"})-[wf1:WORKS_FOR]->(c:COMPANY
{name:"Airbus"})
```

```
MATCH (uu:USER)-[wf2:WORKS_FOR]->(c)
```

```
WHERE (wf1.from <= wf2.to AND wf2.from <= wf1.to) OR (wf1.from <= wf2.to AND wf2.from
<= wf1.to)
```

```
RETURN uu
```



Users known by the relationship of a given user

```
MATCH (u:User {lastname:"Jackson"})-[:KNOWS]->(uu:User)
```

```
MATCH (u_query:User)-[:KNOWS]->(uu)
```

```
RETURN u_query
```