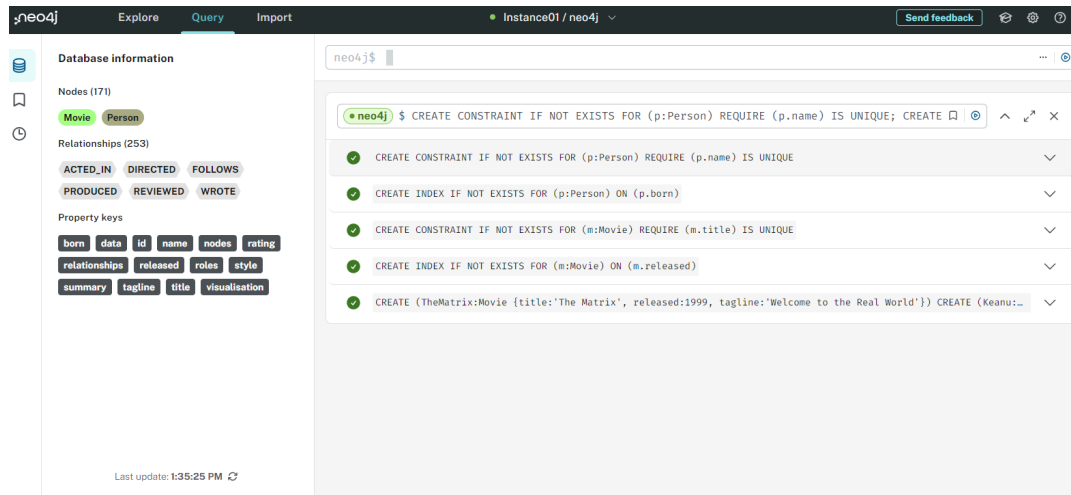


NAMA : SASA RAHMA LIA
NIM : 121450119
KELAS : TBD RC

CODE PRAKTIKUM

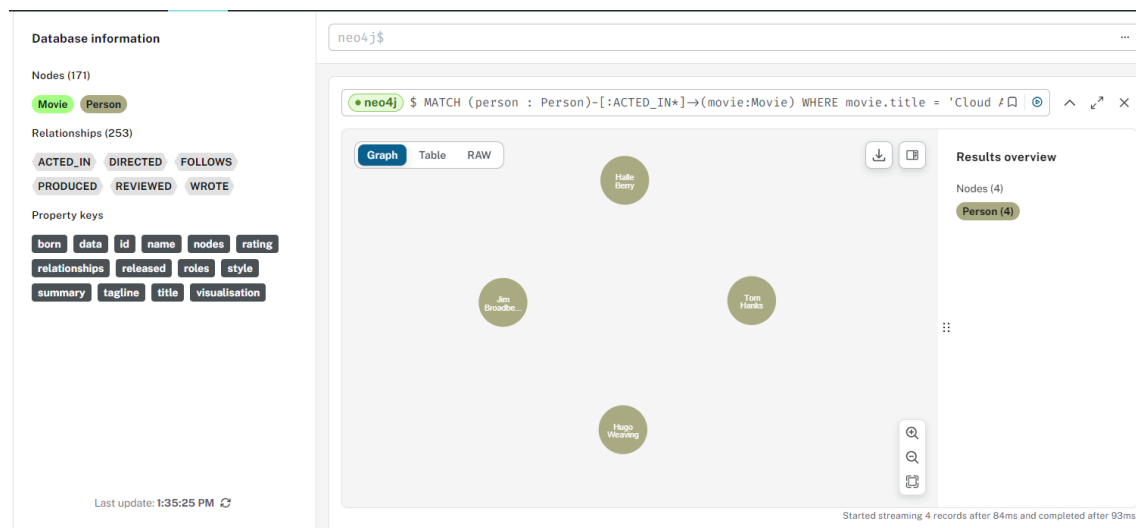
1. Melakukan Create query movie



The screenshot shows the Neo4j Query Editor interface. On the left, the 'Database information' panel displays 171 nodes (Movie, Person) and 253 relationships (ACTED_IN, DIRECTED, FOLLOWS, PRODUCED, REVIEWED, WROTE). The main query editor contains the following Cypher query:

```
neo4j$ CREATE CONSTRAINT IF NOT EXISTS FOR (p:Person) REQUIRE (p.name) IS UNIQUE; CREATE INDEX IF NOT EXISTS FOR (p:Person) ON (p.born); CREATE CONSTRAINT IF NOT EXISTS FOR (m:Movie) REQUIRE (m.title) IS UNIQUE; CREATE INDEX IF NOT EXISTS FOR (m:Movie) ON (m.released); CREATE (TheMatrix:Movie {title:'The Matrix', released:1999, tagline:'Welcome to the Real World'}) CREATE (Keanu:Person {name:'Keanu Reeves', born:1979, role:'Neo'})
```

2. Menampilkan node person yang mempunyai relasi ACTED_IN ke node movie dengan properties title = Cloud Atlas



The screenshot shows the Neo4j Query Editor interface. The main query editor contains the following Cypher query:

```
neo4j$ MATCH (person : Person)-[:ACTED_IN*]-(movie:Movie) WHERE movie.title = 'Cloud Atlas'
```

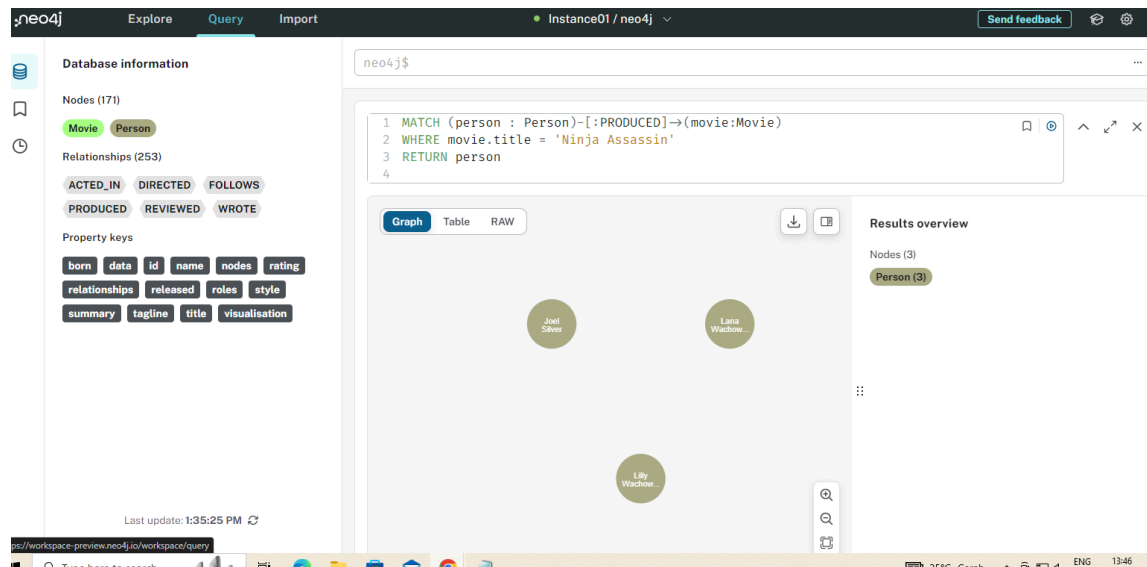
The query results are displayed in the 'Graph' view, showing a graph with 4 nodes (Person) and 1 relationship (ACTED_IN). The nodes are labeled 'Halle Berry', 'Jim Broadbent', 'Tom Hanks', and 'Hugo Weaving'. The relationship is labeled 'ACTED_IN'.

Results overview:

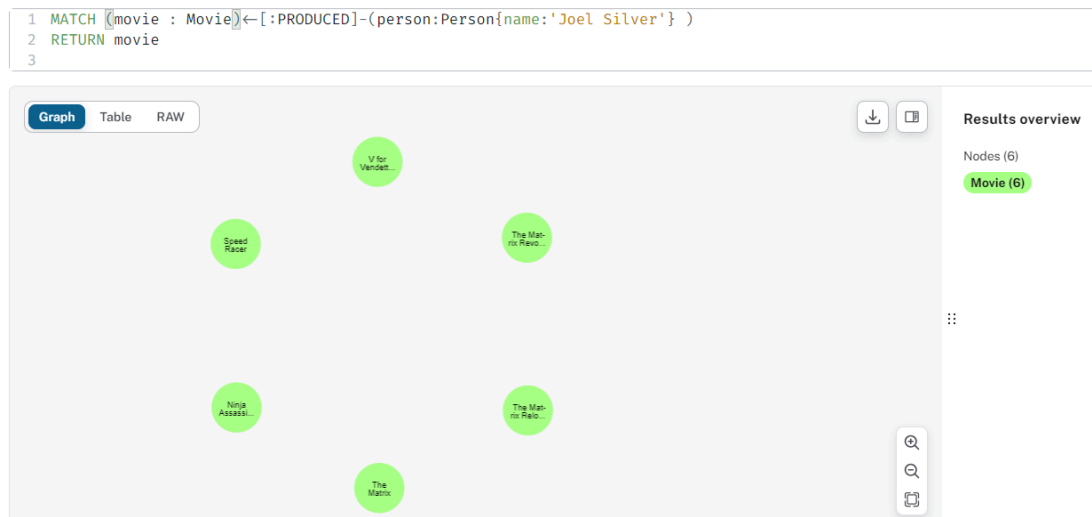
- Nodes (4)
- Person (4)

Started streaming 4 records after 84ms and completed after 93ms.

3. Menampilkan node person yang mempunyai relasi produce ke node movie dengan properties title= Ninja Assassin.



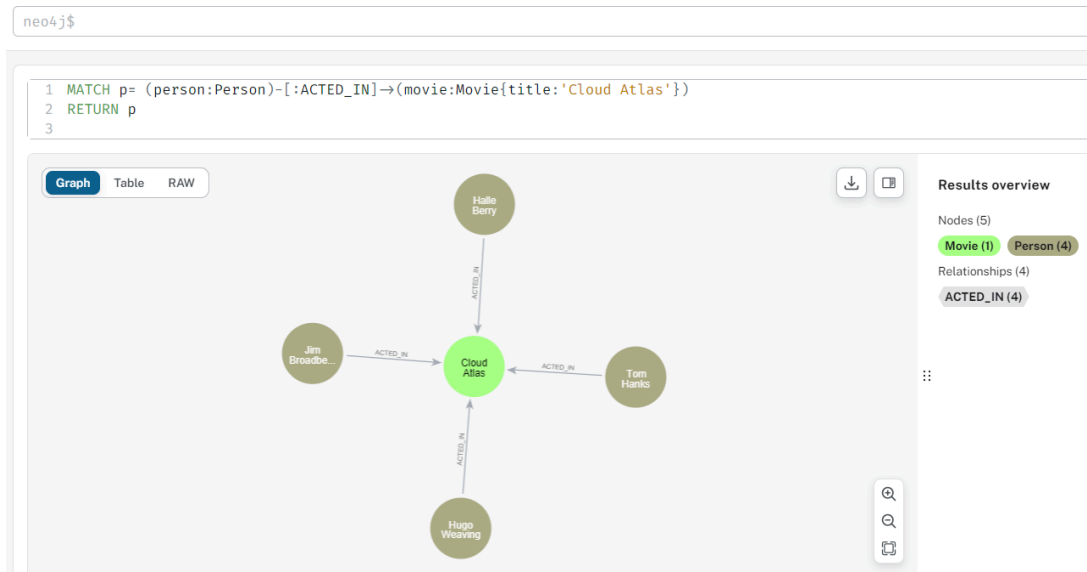
4. Menampilkan node movie yang mempunyai relasi produced ke node person dengan properties name = joel silver



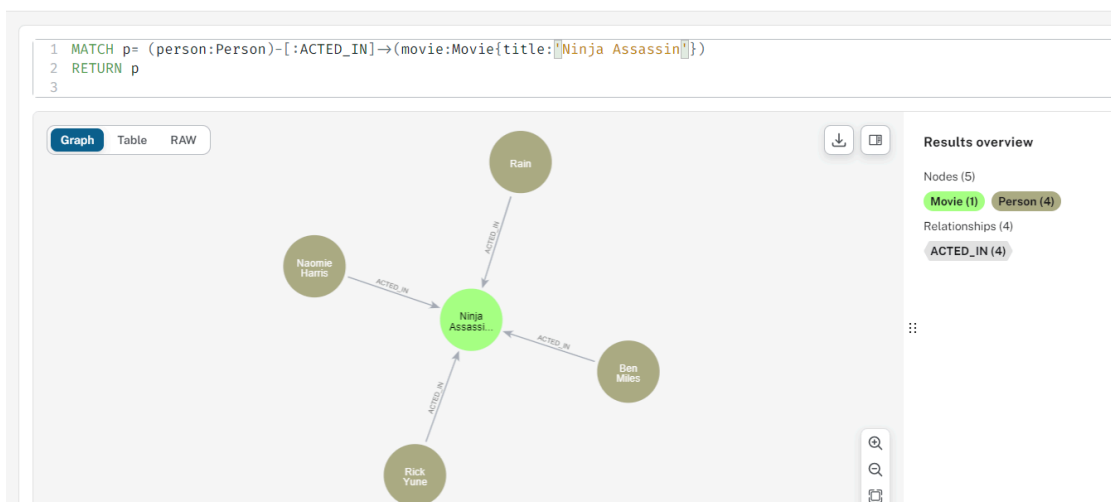
5. Menampilkan node person yang mempunyai relasi produce ke node movie dengan properties title= The Matrix.



6. Pada query Movie Cloud Atlas dibintangi oleh 4 actor yang tercantum pada gambar



7. Pada query Movie Ninja Assassin dibintangi oleh 4 actor yang tercantum pada gambar



CODE TUGAS INDIVIDU

1. Menyimpan node mahasiswa, mata kuliah

Code :

```
// Menyimpan 10 node Mahasiswa
CREATE (:Mahasiswa {nim: '123', nama: 'Sasa Rahma Lia'});
CREATE (:Mahasiswa {nim: '444', nama: 'Annisa Novantika'});
CREATE (:Mahasiswa {nim: '222', nama: 'Syifa Fathonah'});
CREATE (:Mahasiswa {nim: '111', nama: 'Farah Faizah'});
CREATE (:Mahasiswa {nim: '567', nama: 'Salwa Amelia'});
CREATE (:Mahasiswa {nim: '555', nama: 'Salwa Naqwa'});
CREATE (:Mahasiswa {nim: '777', nama: 'Kanaya Dhea'});
CREATE (:Mahasiswa {nim: '666', nama: 'Ayu Novita'});
CREATE (:Mahasiswa {nim: '345', nama: 'Elia Safitri'});
```

```
CREATE (:Mahasiswa {nim: '888', nama: 'Aqilah Alifi'});
```

Sintaks :

```
1 // Menyimpan 10 node Mahasiswa
2 CREATE (:Mahasiswa {nim: '123', nama: 'Sasa Rahma Lia'});
3 CREATE (:Mahasiswa {nim: '444', nama: 'Annisa Novantika'});
4 CREATE (:Mahasiswa {nim: '222', nama: 'Syifa Fathonah'});
5 CREATE (:Mahasiswa {nim: '111', nama: 'Farah Faizah'});
6 CREATE (:Mahasiswa {nim: '567', nama: 'Salwa Amelia'});
7 CREATE (:Mahasiswa {nim: '555', nama: 'Salwa Naqwa'});
8 CREATE (:Mahasiswa {nim: '777', nama: 'Kanaya Dhea '});
9 CREATE (:Mahasiswa {nim: '666', nama: 'Ayu Novita'});
10 CREATE (:Mahasiswa {nim: '345', nama: 'Elia Safitri'});
11 CREATE (:Mahasiswa {nim: '888', nama: 'Aqilah Alifi'});
```

Outputnya :

✓	// Menyimpan 10 node Mahasiswa CREATE (:Mahasiswa {nim: '123', nama: 'Sasa Rahma Li...	▼
✓	CREATE (:Mahasiswa {nim: '444', nama: 'Annisa Novantika'})	▼
✓	CREATE (:Mahasiswa {nim: '222', nama: 'Syifa Fathonah'})	▼
✓	CREATE (:Mahasiswa {nim: '111', nama: 'Farah Faizah'})	▼
✓	CREATE (:Mahasiswa {nim: '567', nama: 'Salwa Amelia'})	▼
✓	CREATE (:Mahasiswa {nim: '555', nama: 'Salwa Naqwa'})	▼
✓	CREATE (:Mahasiswa {nim: '777', nama: 'Kanaya Dhea '})	▼
✓	CREATE (:Mahasiswa {nim: '666', nama: 'Ayu Novita'})	▼
✓	CREATE (:Mahasiswa {nim: '345', nama: 'Elia Safitri'})	▼
✓	CREATE (:Mahasiswa {nim: '888', nama: 'Aqilah Alifi'})	▼

2. Menyimpan 10 node mata kuliah

Code :

```
// Menyimpan 10 node Mata Kuliah
CREATE (:MataKuliah {kode: 'MK1', nama: 'Matematika Dasar', TPB: 'TPB1',
prodi: 'Matematika'});
CREATE (:MataKuliah {kode: 'MK2', nama: 'Fisika Dasar', TPB: 'TPB2', prodi:
'Fisika'});
CREATE (:MataKuliah {kode: 'MK3', nama: 'Kimia Dasar', TPB: 'TPB3', prodi:
'Kimia'});
CREATE (:MataKuliah {kode: 'MK4', nama: 'Biologi Dasar', TPB: 'TPB1',
prodi: 'Biologi'});
CREATE (:MataKuliah {kode: 'MK5', nama: 'Pengantar Komputer dan
Software', TPB: 'TPB4', prodi: 'Sains Data'})
```

```

;
CREATE (:MataKuliah {kode: 'MK6', nama: 'Teknologi Basis Data', TPB:
'TPB3', prodi: 'Sains Data'});
CREATE (:MataKuliah {kode: 'MK7', nama: 'Analisis Basis Data', TPB: 'TPB4',
prodi: 'Sains Data'});
CREATE (:MataKuliah {kode: 'MK8', nama: 'Kriptografi dan Perlindungan
Data', TPB: 'TPB1', prodi: 'Sains Data'})
;
CREATE (:MataKuliah {kode: 'MK9', nama: 'Analisis Data Spasial', TPB:
'TPB2', prodi: 'Sains Data'});
CREATE (:MataKuliah {kode: 'MK10', nama: 'Analisis Multivariat', TPB:
'TPB2', prodi: 'Sains Data'});

```

Sintaks :

```

1 // Menyimpan 10 node Mata Kuliah
2 CREATE (:MataKuliah {kode: 'MK1', nama: 'Matematika
  Dasar', TPB: 'TPB1', prodi: 'Matematika'});
3 CREATE (:MataKuliah {kode: 'MK2', nama: 'Fisika Dasar',
  TPB: 'TPB2', prodi: 'Fisika'});
4 CREATE (:MataKuliah {kode: 'MK3', nama: 'Kimia Dasar',
  TPB: 'TPB3', prodi: 'Kimia'});
5 CREATE (:MataKuliah {kode: 'MK4', nama: 'Biologi
  Dasar', TPB: 'TPB1', prodi: 'Biologi'});
6 CREATE (:MataKuliah {kode: 'MK5', nama: 'Pengantar
  Komputer dan Software', TPB: 'TPB4', prodi: 'Sains
  Data'})
8 CREATE (:MataKuliah {kode: 'MK6', nama: 'Teknologi
  Basis Data', TPB: 'TPB3', prodi: 'Sains Data'});
9 CREATE (:MataKuliah {kode: 'MK7', nama: 'Analisis Basis
  Data', TPB: 'TPB4', prodi: 'Sains Data'});
10 CREATE (:MataKuliah {kode: 'MK8', nama: 'Kriptografi
  dan Perlindungan Data', TPB: 'TPB1', prodi: 'Sains
  Data'})
11 ;
12 CREATE (:MataKuliah {kode: 'MK9', nama: 'Analisis Data
  Spasial', TPB: 'TPB2', prodi: 'Sains Data'});
13 CREATE (:MataKuliah {kode: 'MK10', nama: 'Analisis
  Multivariat', TPB: 'TPB2', prodi: 'Sains Data'});

```

Outputnya :

```
✓ // Menyimpan 10 node Mata Kuliah CREATE (:MataKuliah {kode: 'MK1', nama: 'Matematik...
✓ CREATE (:MataKuliah {kode: 'MK2', nama: 'Fisika Dasar', TPB: 'TPB2', prodi: 'Fisika...
✓ CREATE (:MataKuliah {kode: 'MK3', nama: 'Kimia Dasar', TPB: 'TPB3', prodi: 'Kimia'})
✓ CREATE (:MataKuliah {kode: 'MK4', nama: 'Biologi Dasar', TPB: 'TPB1', prodi: 'Biolo...
✓ CREATE (:MataKuliah {kode: 'MK5', nama: 'Pengantar Komputer dan Software', TPB: 'TP...
✓ CREATE (:MataKuliah {kode: 'MK6', nama: 'Teknologi Basis Data', TPB: 'TPB3', prodi:...
✓ CREATE (:MataKuliah {kode: 'MK7', nama: 'Analisis Basis Data', TPB: 'TPB4', prodi: ...
✓ CREATE (:MataKuliah {kode: 'MK8', nama: 'Kriptografi dan Perlindungan Data', TPB: '...
✓ CREATE (:MataKuliah {kode: 'MK9', nama: 'Analisis Data Spasial', TPB: 'TPB2', prodi...
✓ CREATE (:MataKuliah {kode: 'MK10', nama: 'Analisis Multivariat', TPB: 'TPB2', prodi...
```

berhasil menyimpan 10 node mata kuliah

1. Buat relasi antara mahasiswa dengan mata kuliah dengan nama relasi "MENGAMBIL".

Code :

```
// Menentukan relasi "MENGAMBIL" antara Mahasiswa dan Mata Kuliah
MATCH (mhs:Mahasiswa {nim: '123'}), (mk:MataKuliah {kode: 'MK1'})
CREATE (mhs)-[:MENGAMBIL]->(mk);
MATCH (mhs:Mahasiswa {nim: '444'}), (mk:MataKuliah {kode: 'MK7'})
CREATE (mhs)-[:MENGAMBIL]->(mk);
MATCH (mhs:Mahasiswa {nim: '222'}), (mk:MataKuliah {kode: 'MK6'})
CREATE (mhs)-[:MENGAMBIL]->(mk);
MATCH (mhs:Mahasiswa {nim: '111'}), (mk:MataKuliah {kode: 'MK3'})
CREATE (mhs)-[:MENGAMBIL]->(mk);
MATCH (mhs:Mahasiswa {nim: '567'}), (mk:MataKuliah {kode: 'MK6'})
CREATE (mhs)-[:MENGAMBIL]->(mk);
MATCH (mhs:Mahasiswa {nim: '555'}), (mk:MataKuliah {kode: 'MK6'})
CREATE (mhs)-[:MENGAMBIL]->(mk);
MATCH (mhs:Mahasiswa {nim: '777'}), (mk:MataKuliah {kode: 'MK2'})
CREATE (mhs)-[:MENGAMBIL]->(mk);
MATCH (mhs:Mahasiswa {nim: '666'}), (mk:MataKuliah {kode: 'MK8'})
CREATE (mhs)-[:MENGAMBIL]->(mk);
MATCH (mhs:Mahasiswa {nim: '345'}), (mk:MataKuliah {kode: 'MK9'})
CREATE (mhs)-[:MENGAMBIL]->(mk);
```

```
MATCH (mhs:Mahasiswa {nim: '888'}), (mk:MataKuliah {kode: 'MK10'})
CREATE (mhs)-[:MENGAMBIL]->(mk);
```

Sintaks :

```
1 // Menentukan relasi "MENGAMBIL" antara Mahasiswa dan
  Mata Kuliah
2 MATCH (mhs:Mahasiswa {nim: '123'}), (mk:MataKuliah
  {kode: 'MK1'})
3 CREATE (mhs)-[:MENGAMBIL]->(mk);
4 MATCH (mhs:Mahasiswa {nim: '444'}), (mk:MataKuliah
  {kode: 'MK7'})
5 CREATE (mhs)-[:MENGAMBIL]->(mk);
6 MATCH (mhs:Mahasiswa {nim: '222'}), (mk:MataKuliah
  {kode: 'MK6'})
7 CREATE (mhs)-[:MENGAMBIL]->(mk);
8 MATCH (mhs:Mahasiswa {nim: '111'}), (mk:MataKuliah

9 CREATE (mhs)-[:MENGAMBIL]->(mk);
10 MATCH (mhs:Mahasiswa {nim: '567'}), (mk:MataKuliah {kode:
  'MK6'})
11 CREATE (mhs)-[:MENGAMBIL]->(mk);
12 MATCH (mhs:Mahasiswa {nim: '555'}), (mk:MataKuliah {kode:
  'MK6'})
13 CREATE (mhs)-[:MENGAMBIL]->(mk);
14 MATCH (mhs:Mahasiswa {nim: '777'}), (mk:MataKuliah {kode:
  'MK2'})
15 CREATE (mhs)-[:MENGAMBIL]->(mk);
16 MATCH (mhs:Mahasiswa {nim: '666'}), (mk:MataKuliah {kode:
  'MK8'})

17 CREATE (mhs)-[:MENGAMBIL]->(mk);
18 MATCH (mhs:Mahasiswa {nim: '345'}), (mk:MataKuliah {kode:
  'MK9'})
19 CREATE (mhs)-[:MENGAMBIL]->(mk);
20 MATCH (mhs:Mahasiswa {nim: '888'}), (mk:MataKuliah {kode:
  'MK10'})
21 CREATE (mhs)-[:MENGAMBIL]->(mk);
```

Outputnya :

✓	// Menentukan relasi "MENGAMBIL" antara Mahasiswa dan Mata Kuliah	MATCH (mhs:Mahasi...	✓
✓	MATCH (mhs:Mahasiswa {nim: '444'}), (mk:MataKuliah {kode: 'MK7'})	CREATE (mhs)-[:ME...	✓
✓	MATCH (mhs:Mahasiswa {nim: '222'}), (mk:MataKuliah {kode: 'MK6'})	CREATE (mhs)-[:ME...	✓
✓	MATCH (mhs:Mahasiswa {nim: '111'}), (mk:MataKuliah {kode: 'MK3'})	CREATE (mhs)-[:ME...	✓
✓	MATCH (mhs:Mahasiswa {nim: '567'}), (mk:MataKuliah {kode: 'MK6'})	CREATE (mhs)-[:ME...	✓
✓	MATCH (mhs:Mahasiswa {nim: '555'}), (mk:MataKuliah {kode: 'MK6'})	CREATE (mhs)-[:ME...	✓
✓	MATCH (mhs:Mahasiswa {nim: '777'}), (mk:MataKuliah {kode: 'MK2'})	CREATE (mhs)-[:ME...	✓
✓	MATCH (mhs:Mahasiswa {nim: '666'}), (mk:MataKuliah {kode: 'MK8'})	CREATE (mhs)-[:ME...	✓
✓	MATCH (mhs:Mahasiswa {nim: '345'}), (mk:MataKuliah {kode: 'MK9'})	CREATE (mhs)-[:ME...	✓
✓	MATCH (mhs:Mahasiswa {nim: '888'}), (mk:MataKuliah {kode: 'MK10'})	CREATE (mhs)-[:M...	✓

2. Buat query untuk menampilkan seluruh mahasiswa di salah satu mata kuliah

Code :

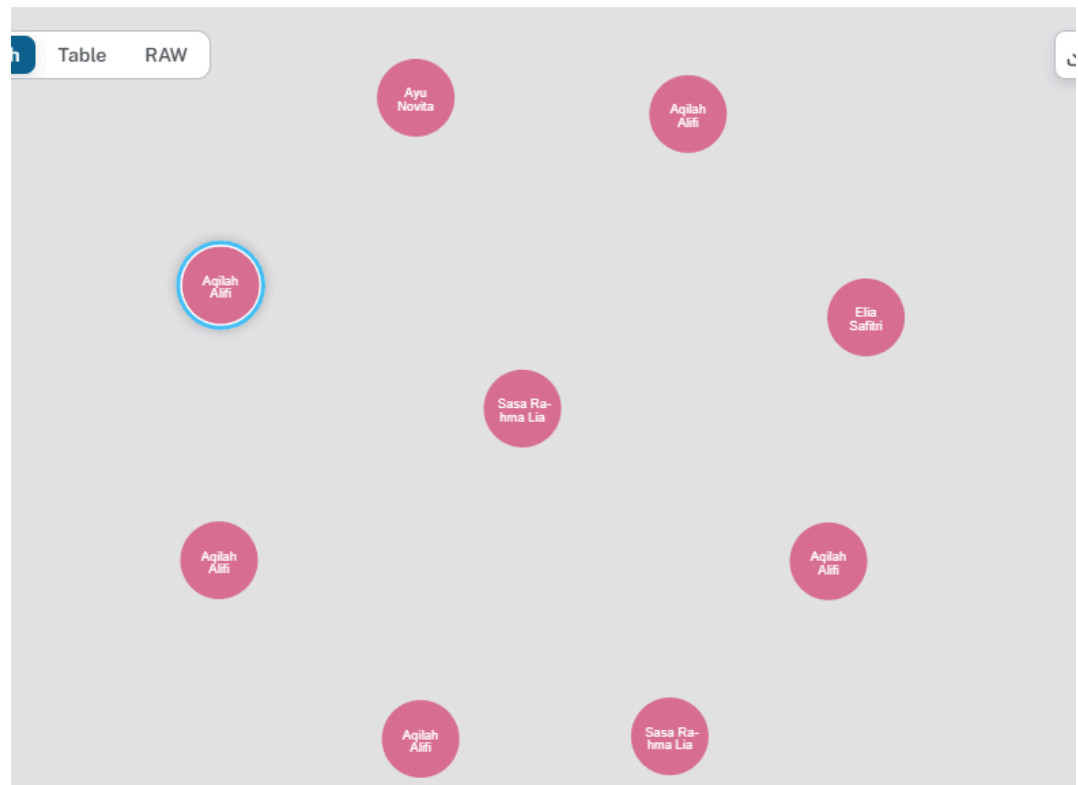
```
MATCH (m:Mahasiswa)-[r:MENGAMBIL]->(mk:MataKuliah {nama: "Analisis  
Multivariat"})  
RETURN m
```

;

Sintaks :

```
1 MATCH (m:Mahasiswa)-[r:MENGAMBIL]->(mk:MataKuliah {nama:  
  "Analisis Multivariat"})  
2 RETURN m  
3
```


Outputnya :



Dapat dilihat yang mengambil mata kuliah analisis multivariat terdiri dari : Sasa rahma lia,Aqilah alifi,Elia safitri dan Ayu novita.

3. Propertis nim dan nama(10 mahasiswa) untuk node mahasiswa.

Code :

```
// Query untuk menampilkan NIM dan nama dari 10 mahasiswa
```

```
MATCH (mhs:Mahasiswa)
RETURN mhs.nim AS nim, mhs.nama AS nama
LIMIT 10;
```

Sintaks :

```
MATCH (mhs:Mahasiswa)
RETURN mhs.nim AS nim, mhs.nama AS nama
LIMIT 10;
```

Output :

nim	nama
1 "123"	"Sasa Rahma Lia"
2 "444"	"Annisa Novantika"
3 "222"	"Syifa Fathonah"
4 "111"	"Farah Faizah"
5 "567"	"Salwa Amelia"
6 "555"	"Salwa Naqwa"
7 "777"	"Kanaya Dhea "
8 "666"	"Ayu Novita"
9 "345"	"Elia Safitri"

4. Propertis TPB dan prodi (10 mata kuliah) untuk node mata kuliah.


Code :

```
// Query untuk menampilkan TPB dan prodi dari 10 mata kuliah
MATCH (mk:MataKuliah)
RETURN mk.TPB AS TPB, mk.prodi AS prodi
LIMIT 10;
```

Sintaks :

```
1
2 MATCH (mk:MataKuliah)
3 RETURN mk.TPB AS TPB, mk.prodi AS prodi
4 LIMIT 10;
```

Output :

TPB		prodi	
1	"TPB1"		"Matematika"
2	"TPB2"		"Fisika"
3	"TPB3"		"Kimia"
4	"TPB1"		"Biologi"
5	"TPB4"		"Sains Data"
6	"TPB3"		"Sains Data"
7	"TPB4"		"Sains Data"
8	"TPB1"		"Sains Data"
9	"TPB2"		"Sains Data"