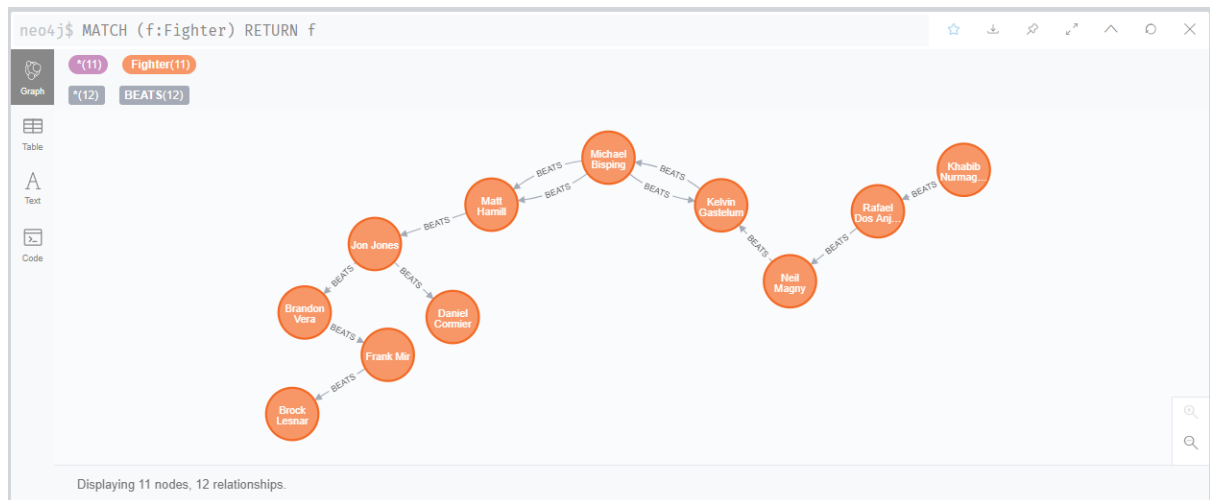# Lab 11. Anna Startseva BS19-04

Exercise 1. Part 1

```
CREATE (khabib:Fighter { name: "Khabib Nurmagomedov", weight: 155 }),
(rafael:Fighter { name: "Rafael Dos Anjos", weight: 155 }),
(neil:Fighter { name: "Neil Magny", weight: 170 }),
(jon:Fighter { name: "Jon Jones", weight: 205 }),
(daniel:Fighter { name: "Daniel Cormier", weight: 205 }),
(michael:Fighter { name: "Michael Bisping", weight: 185 }),
(matt:Fighter { name: "Matt Hamill", weight: 185 }),
(brandon:Fighter { name: "Brandon Vera", weight: 205 }),
(frank:Fighter { name: "Frank Mir", weight: 230 }),
(brock:Fighter { name: "Brock Lesnar", weight: 230 }),
(kelvin:Fighter { name: "Kelvin Gastelum", weight: 185 }),
(khabib)-[:BEATS]->(rafael),
(rafael)-[:BEATS]->(neil),
(jon)-[:BEATS]->(daniel),
(michael)-[:BEATS]->(matt),
(jon)-[:BEATS]->(brandon),
(brandon)-[:BEATS]->(frank),
(frank)-[:BEATS]->(brock),
(neil)-[:BEATS]->(kelvin),
(kelvin)-[:BEATS]->(michael),
(michael)-[:BEATS]->(matt),
(michael)-[:BEATS]->(kelvin),
(matt)-[:BEATS]->(jon)
```
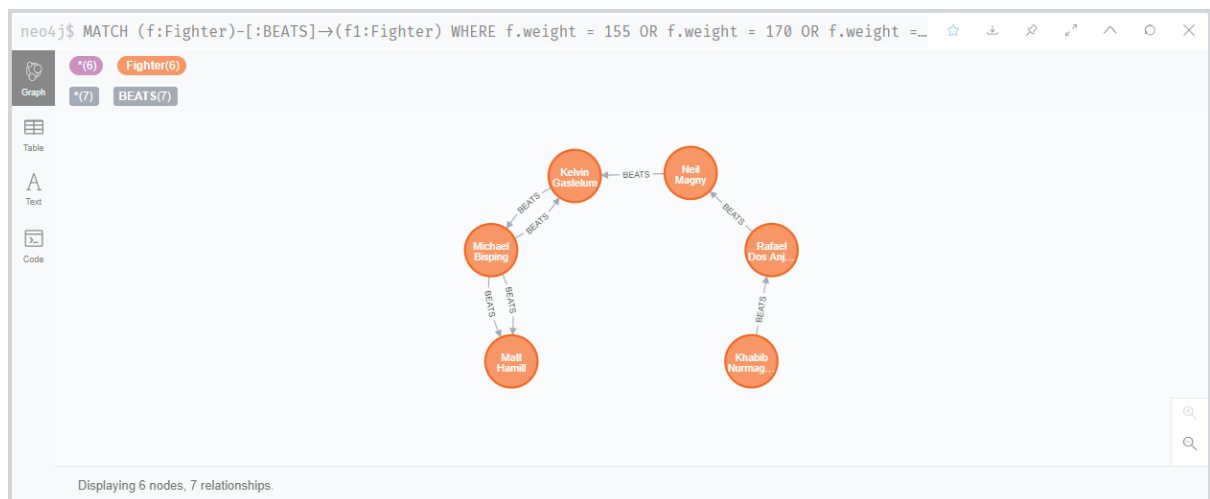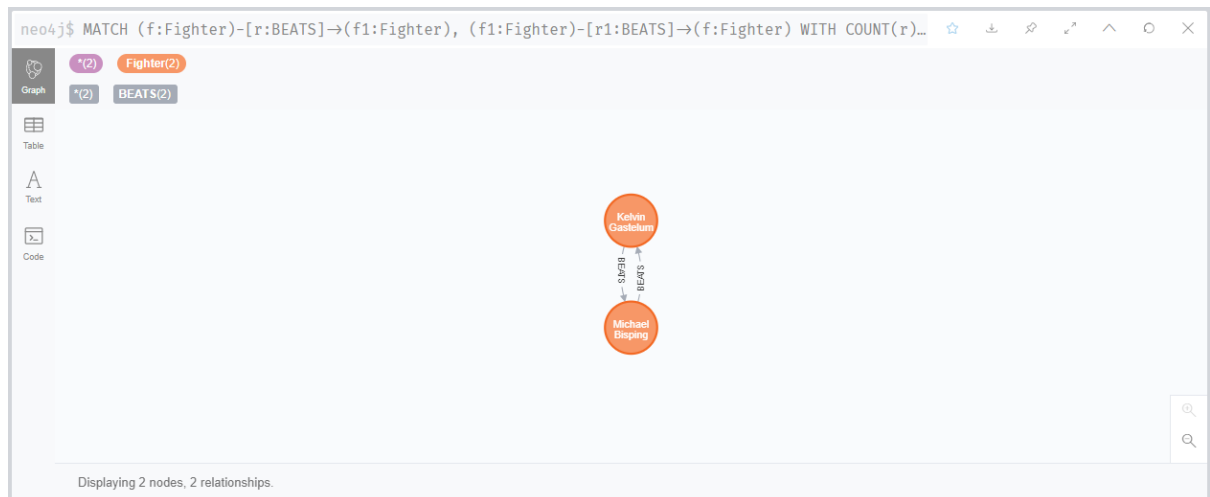
```
MATCH (f:Fighter)
RETURN f
```

Exercise 1. Part 2

Query 1

```
MATCH (f:Fighter)-[:BEATS]->(f1:Fighter)
WHERE f.weight = 155 OR f.weight = 170 OR f.weight = 185
RETURN f
```


Query 2

```
MATCH (f:Fighter)-[r:BEATS]->(f1:Fighter),
(f1:Fighter)-[r1:BEATS]->(f:Fighter)
WITH COUNT(r) AS num_r, COUNT(r1) AS num_r1, f, f1
WHERE num_r = 1 AND num_r1 = 1
RETURN f, f1
```
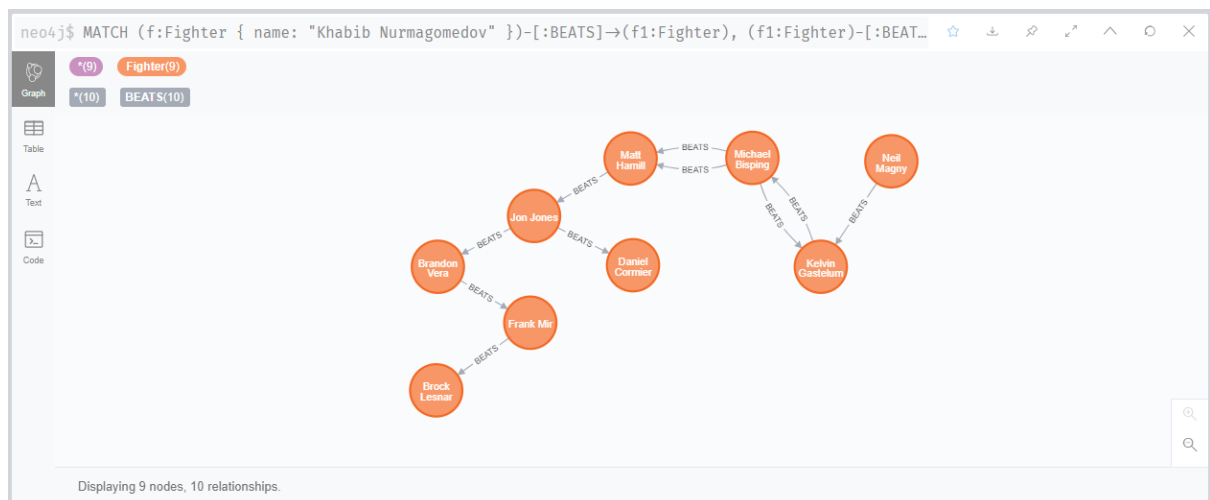
Query 3

```
MATCH (f:Fighter { name: "Khabib Nurmagomedov" })-[:BEATS]->(f1:Fighter),
(f1:Fighter)-[:BEATS*..12]->(f2:Fighter)
WHERE NOT((f:Fighter)-[:BEATS]->(f2:Fighter))
RETURN f2
```


Query 4

Undefeated Fighters

```
MATCH (f:Fighter)
WHERE NOT(()-[:BEATS]->(f:Fighter))
RETURN f
```

Displaying 1 nodes, 0 relationships.

Defeated Fighters

```
MATCH (f:Fighter)
WHERE NOT((f:Fighter)-[:BEATS]->())
RETURN f
```


Displaying 2 nodes, 0 relationships.

Query 5

```
MATCH (f:Fighter)
WITH f, SIZE((f:Fighter)-[:BEATS]->()) AS wins,
SIZE(()-[:BEATS]->(f:Fighter)) AS losses
RETURN f.name, f.weight, wins + "-" + losses AS record
```

```
neo4j$ MATCH (f:Fighter) WITH f, SIZE((f:Fighter)-[:BEATS]→()) AS wins, SIZE(()-[:BEATS]→(f:Fighter)) AS losses RETURN f.name, f.weight, wins + "-"...
```

f.name	f.weight	record
"Khabib Nurmagomedov"	155	"1-0"
"Rafael Dos Anjos"	155	"1-1"
"Neil Magny"	170	"1-1"
"Jon Jones"	205	"2-1"
"Daniel Cormier"	205	"0-1"
"Michael Bisping"	185	"3-1"
"Matt Hamill"	185	"1-2"
"Brandon Vera"	205	"1-1"
"Frank Mir"	230	"1-1"
"Brock Lesnar"	230	"0-1"
"Kelvin Gastelum"	185	"1-2"

Started streaming 11 records after 3 ms and completed after 12 ms.