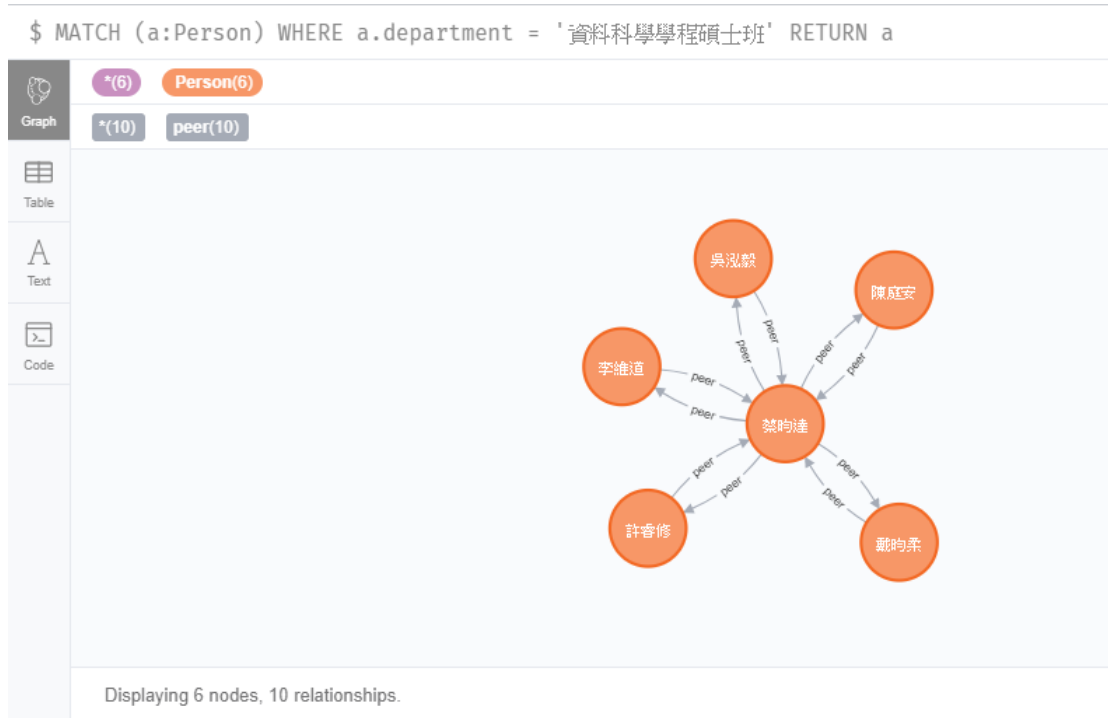


Part 2 Graph Database (20 %)**1. Write a Cypher query to return you and your peer student in a graph. (20%)**

```
MATCH (a:Person)
WHERE a.department = '資料科學學程碩士班'
RETURN a
```

**Part 3 Part III Graph Database****1. Write a cypher query to print out your “foaf” and their associate new hobbies. (15%)**

我嘗試了兩種方法，一種使用 label 來幫每個人標記複數個 hobby，另一個使用 array property 但 query 的語意相同，只差在一個呼叫 n.hooby 一個是 labels(n)

Query 的思路是先 match 有跟我一樣 hobby 的人然後 match 這些跟 hobby friend 相同 hobby 的人，也就是 foaf，然後返回 foaf 的 node 和個別的 hobby

```
match (n{studentID:'r08946007'}), (m)
where any(x in labels(n) where x in labels(m))
with m, n
match (m), (o)
where any(x in labels(m) where x in labels(o)) and (o.studentID <> r08946007')
return DISTINCT o.name, filter(y in labels(o) where not y in labels(n))
```

```
$ match (n{studentID:'r08946007'}), (m) where any(x in n.hobby where x in m.hobby) with m, n
```

Table	o.name	filter(y in o.hobby where not y in n.hobby)
Text	"陳O廷"	["聽音樂", "看netflix", "看youtube", "亂逛", "打球"]
Code	"姜O嬌"	["棒球", "音樂", "旅行", "日劇", "美食"]
	"謝O景"	["音樂", "吃飯", "桌球", "睡覺", "看youtube"]
	"陳O君"	["布袋戲", "睡覺", "看動畫", "聽音樂", "凹鳴狼入殺"]
	"張O婷"	["聽音樂", "看小說", "玩手遊", "慢跑", "拼拼圖"]
	"賴O翰"	["看youtube", "健身房", "跑步", "聽音樂", "睡覺"]
	"陳O得"	["聽音樂", "打籃球", "睡覺", "看youtube", "看書"]
	"蘇O齊"	["籃球", "重訓", "睡覺", "電影", "音樂"]
	"黃O靖"	["電影", "影集", "看書", "音樂", "旅行"]

Started streaming 57 records after 1 ms and completed after 120 ms.

2. Write a cypher query to print out all the new hobbies of your foaf.

和上題思路一模一樣但是把返回 **foaf node** 改成將 **foaf hobby** 展開並且返回 **distinct**

```
match (n{studentID:'r08946007'}), (m)
where any(x in labels(n) where x in labels(m))
with m, n
match (m), (o)
where any(x in labels(m) where x in labels(o)) and (o.studentID <> 'r08946007')
unwind filter(y in labels(o) where not y in labels(n)) as new_hobby
return distinct new_hobby
```

```
$ match (n{studentID:'r08946007'}), (m) where any(x in n.hobby where x in m.hobby) with m,
```

Table	new_hobby
Text	"聽音樂"
Code	"看netflix"
	"看youtube"
	"亂逛"
	"打球"
	"棒球"
	"音樂"
	"旅行"
	"日劇"

Started streaming 110 records after 1 ms and completed after 52 ms.