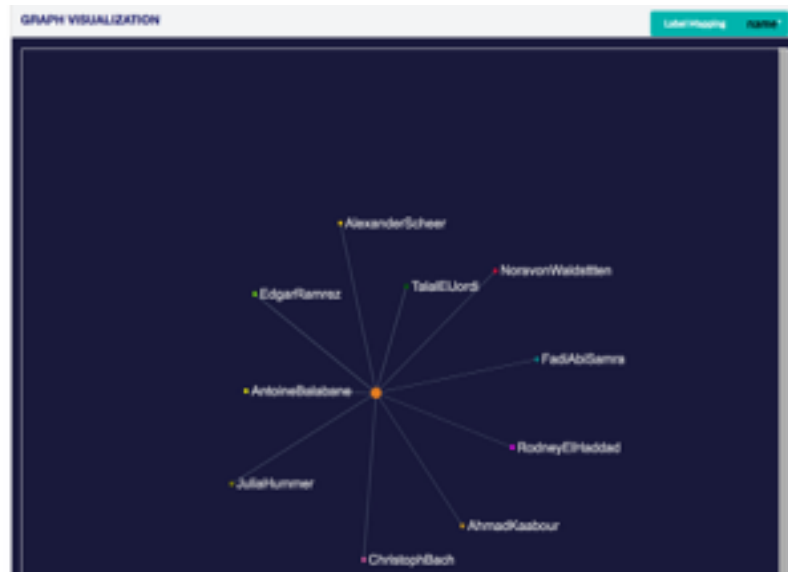


# HW3

## Part 1:

Ego\_net:



Search by value

A dialog box titled "Get Shortest Path test" with fields for Source, Target, and Edge Label. The Source field contains "43434" and the Target field contains "85". The Edge Label field contains "Label". There are buttons for "Close" and "Submit".

Shortest path



```
[{"id": "947", "label": "MOVIE"}, {"id": "907", "label": "MOVIE"}, {"id": "424", "label": "MOVIE"}]
```

Sub graph



### 3 PGQL



SELECT a WHERE (m:MOVIE WITH genres="History")->(e:DIR)->(a:DIRECTOR WITH gender="0")

Query

## GRAPH VISUALIZATION

Label Mapping

name

RichardFleischer

MichaelCurtiz

## Part 2:

```
al3069@bigd:~/HW3$ python pl.py
----Actor with the most total profit----
Name: IanMcKellen Profit: 6040864256
Use james cameron as center to build a ego net with Depth = 3
----Director with the most betweenness----
Name: JamesCameron
----Director with the most closeness----
Name: JamesCameron
```

## PART3:

The first screen shot is the result of example program. I added 2 new features: profit & revenue and got a better result.

```
[dyn-160-39-149-135:HW3 han$ /usr/local/Cellar/python/2.7.14/bin/python2.7 GraphD]
B/MLsrc/ml.py
{'u'status': u'success', u'error': u'None'}
{'u'status': u'success', u'error': u'None'}
{"status": "success", "performance": {"accuracy": 0.5504469987228607}, "best_param": "'C': 2", "error": "none"}
None
```

```
Hans-MacBook-Pro:Graph08 han$ /usr/local/Cellar/python/2.7.14/bin/python2.7 ./MLsrc/ml.py
Data: {'u'status': u'success', u'error': u'None'}
Model: {'u'status': u'success', u'error': u'None'}
Train: {"status": "success", "performance": {"accuracy": 0.5841750841750841}, "best_param": "'C': 3", "error": "none"}
Predict: None
```

## Part 4:

Visualization of the CH wiki page links:



I used a database of the interaction of characters in Homer Poet, Visualized the ego net of Halen:

