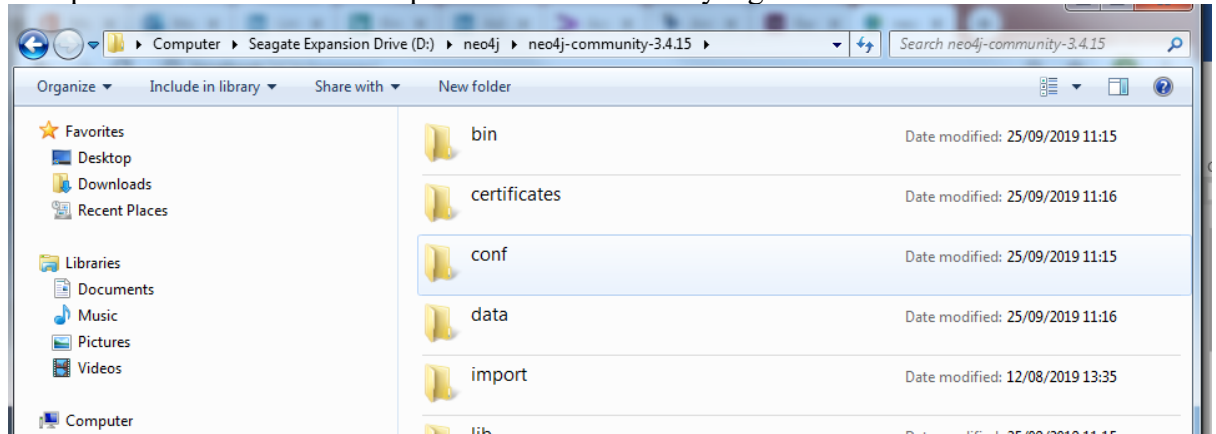## Neo4j Steps

(**Note:** if you have completed the install and have not created the Movies Graph Database
Please go to Step 8)

1. Using the Neo4j Zip copy it to a network drive or portable drive you have access to.
2. Unzip the file and examine the path to the bin directory e.g.

3. Open a **cmd** Window and Change Directory to the top level directory neo4j-
community-3.5.8 (check your path as it may differ to below)

```
C:\>cd D:\neo4j\neo4j-community-3.4.15
C:\>d:
```

4. Run `bin\neo4j console` in the Cmd window. The neo4j Graph Database is
now running e.g.

```
D:\neo4j\neo4j-community-3.4.15>bin\neo4j console
2019-09-25 10:16:28.211+0000 INFO  ======== Neo4j 3.4.15 ========
2019-09-25 10:16:28.242+0000 INFO  Starting...
2019-09-25 10:16:32.471+0000 INFO  Bolt enabled on 127.0.0.1:7687.
2019-09-25 10:16:33.765+0000 INFO  Started.
2019-09-25 10:16:34.639+0000 INFO  Remote interface available at http://loc
t:7474/
2019-09-25 10:17:35.327+0000 WARN  The client is unauthorized due to authen
ion failure.
2019-09-25 10:17:35.669+0000 WARN  The client is unauthorized due to authen
ion failure.
2019-09-25 10:17:41.395+0000 WARN  The client is unauthorized due to authen
ion failure.
```
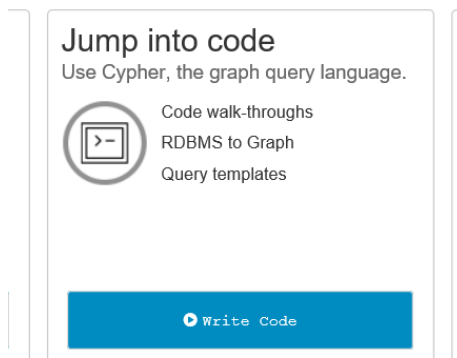
Note: You can stop the server by typing `Ctrl-C` in the console.

5. Launch Neo4j in the browser http://localhost:7474/

6. You will be prompted to log-in. The username and initial password is **neo4j**
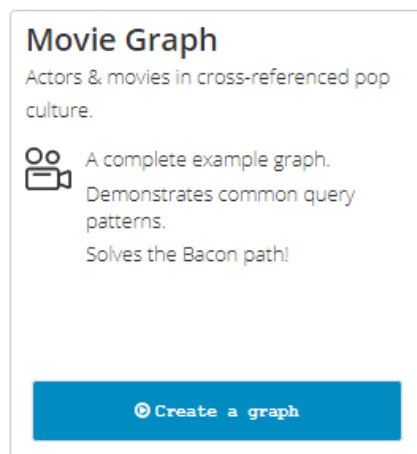
1

7. You will be prompted to change the password. ****IMPORTANT** CHANGE** it to
    neo5j (in lowercase). We will be using generic logins as we will only query the graph
    databases

8. For an easy introduction, get yourself familiar with the environment by **Start
    Learning**

Learn about Neo4j
A graph epiphany awaits you.

What is a graph database?
How can I query a graph?
What do people do with Neo4j?

⊚ Start Learning

9. You will follow the instructions to import the Sample Data to create a Movie Graph.
    You will use Neo4j's Cypher declarative language to carry out a number of tasks.
    Click on:

Jump into code
Use Cypher, the graph query language.

Code walk-throughs
RDBMS to Graph
Query templates

▶ Write Code

10. We will create the Movie Graph database. Now click on "Create a graph".

Movie Graph
Actors & movies in cross-referenced pop
culture.

A complete example graph.
Demonstrates common query
patterns.
Solves the Bacon path!

⊚ Create a graph

11. Follow the steps in this tutorial to create load the Movie data. The script that you run contains the cypher syntax to create the nodes, relationships and associated labels and properties.

12. Complete the short tutorial in Neo4j for a quick orientation. There are a number of sample queries: The first query

      MATCH (tom {name: "Tom Hanks"}) RETURN tom

      Find node(s) with a property called **name** that has a value **"Tom Hanks"** and return the node.

      Note "tom" is a placeholder (i.e. an alias\reference) for a node(s) that meets the condition. We could have used any alias for this e.g. t !

SOME EXERCISES FOR YOU TO COMPLETE!

Using Graph Db terminology (i.e. nodes, relationships, properties etc) put into words the following queries

Exercise 1

      Try out and put into words the meaning of this query

      MATCH (cloudAtlas {title: "Cloud Atlas"}) RETURN cloudAtlas

Exercise 2
Explain
      MATCH (people:Person) RETURN people.name LIMIT 10

Exercise 3
Explain
      MATCH (nineties:Movie) WHERE nineties.released >= 1990 AND
      nineties.released < 2000 RETURN nineties.title

How many titles were returned?

13. Let us look at this sample query
      MATCH (tom:Person {name: "Tom Hanks"})-[:ACTED_IN]->(tomHanksMovies)
      RETURN tom, tomHanksMovies

      This pattern match starts at a Person Node with a property name of Tom Hanks and traverses the ACTED_IN relationship and returns all the associated nodes at the end of that relationship i.e. all Tom Hanks movies including the Tom Hank's Node (the alias tom is a reference\pointer to the Tom Hanks node.) and the associated ACTED_IN relationship.

SOME MORE EXERCISES!

Exercise 4
Explain

**MATCH (cloudAtlas {title: "Cloud Atlas"})<-[:DIRECTED]-(directors)
RETURN directors.name**

What does this query achieve?

Exercise 5
Explain
> **MATCH (tom:Person {name:"Tom Hanks"})-[:ACTED_IN]->(m)<-
> [:ACTED_IN]-(coActors) RETURN coActors.name**

WRITE THE FOLLOWING QUERIES!

Exercise 6
Which directors also acted in their movie?

Exercise 7
Find the node Robin Williams

Exercise 8
Which movies features Tom Hanks the Actor? Return the title of the movie.

Exercise 9
Which movies features both Tom Hanks the Actor and Kevin Bacon the actor? Return the title of the movie.

Exercise 10
Which directors worked with Tom Hanks?

Exercise 11
Display the movies Tom Hanks acted in that were released before 1992.