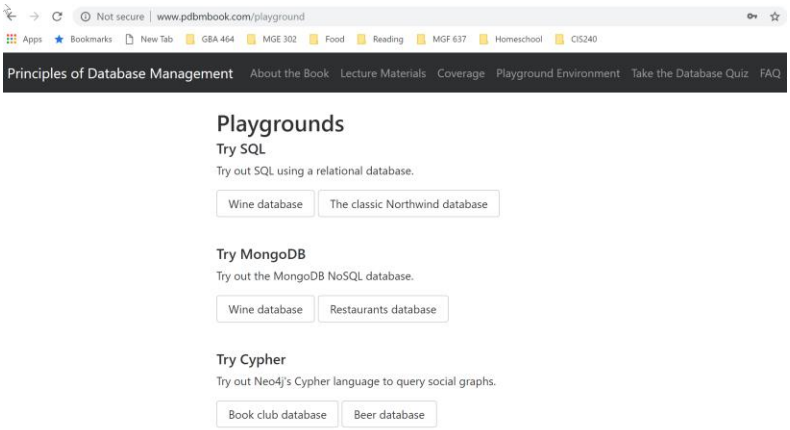
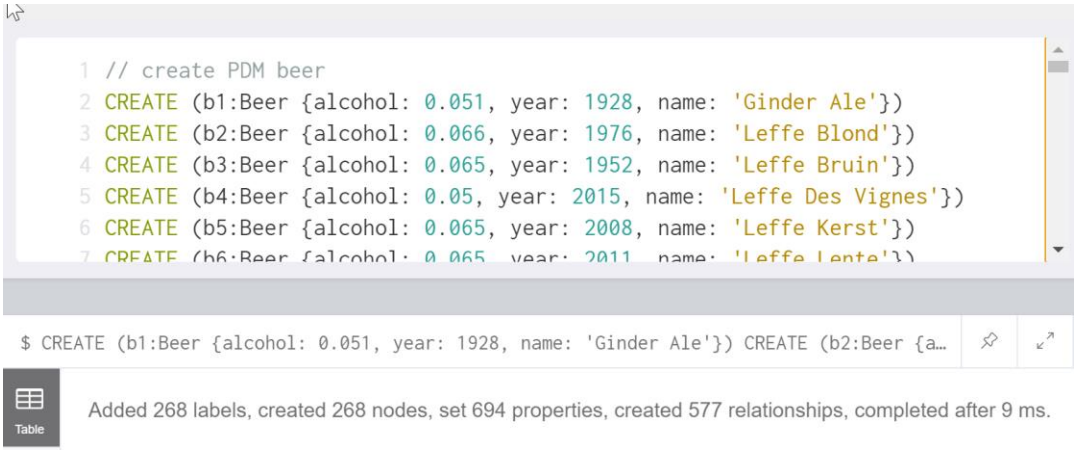
CIS 442 HW 4
Due Monday, April 27 @ 5:30 PM

You may use the Beer database on the Principles of Database Management Playground Environment online OR create the database on your own system by running the Cypher code that is uploaded on Blackboard (the data is the same).

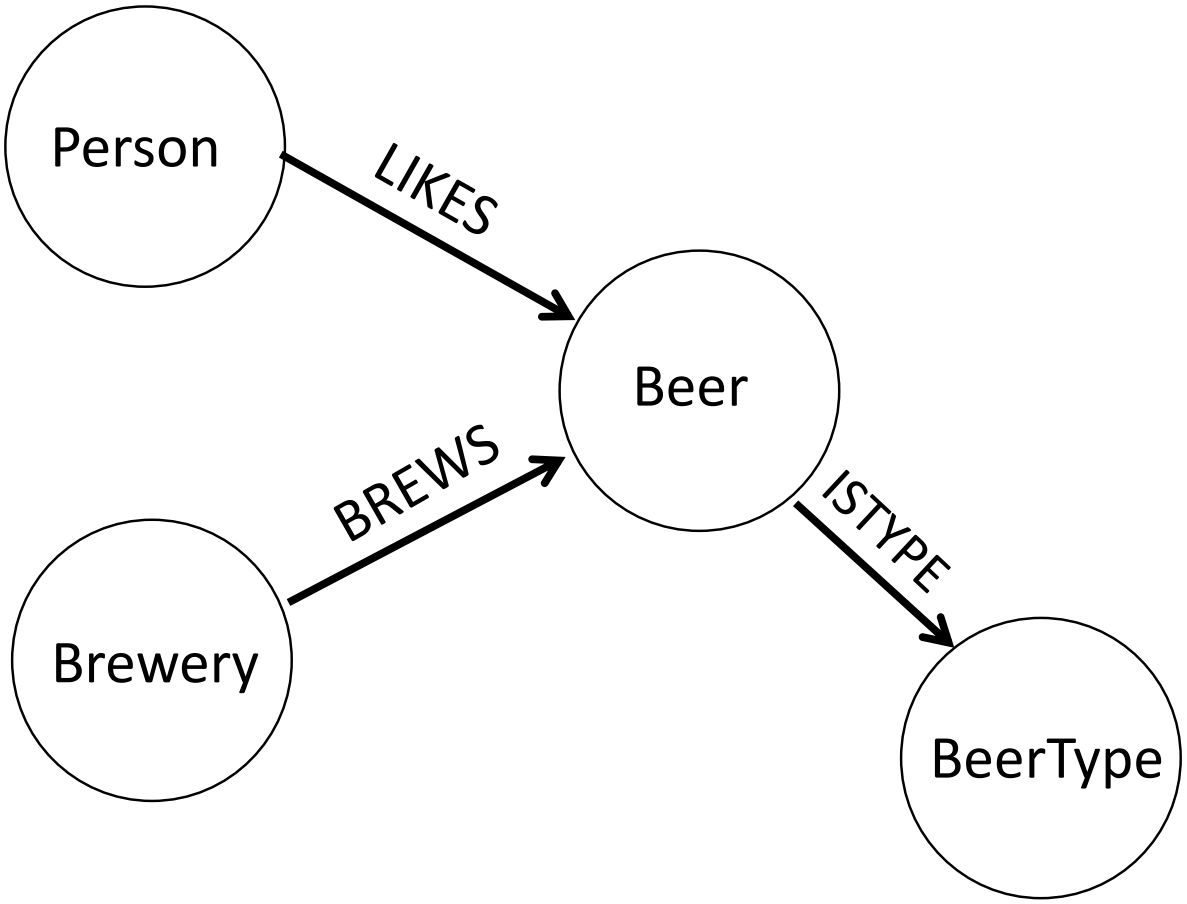
Textbook Playground Environment instructions:
Go to www.pdbmbook.com. Click "Playground Environment" on the top navigator bar. You will need to create a (free) account by entering your email account and then using the link in the confirmation email. Then you should be able to log-on to the Playground Enviroment. Click on the "Beer database" button under "Try Cypher" to open the browser with the Cypher command line and pre-loaded database.



Local Neo4j instructions:
Copy the text from the create_beer file into the command line on the Neo4j browser and run (Control-Enter or click the triangle 'Run" button).



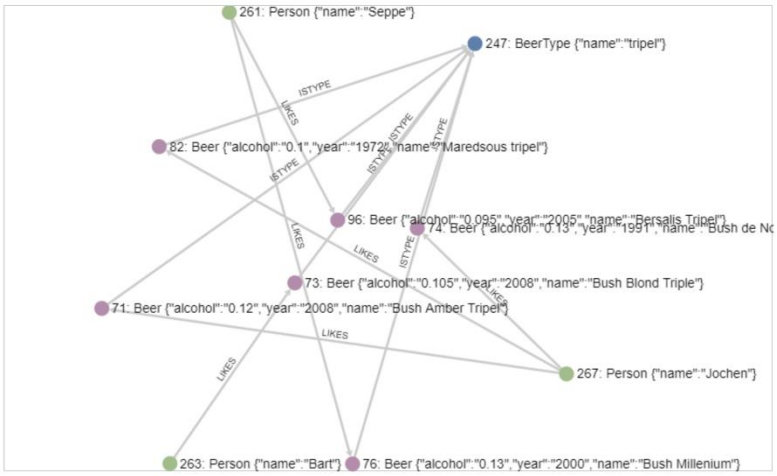
A diagram of the graph model for the Beer database:

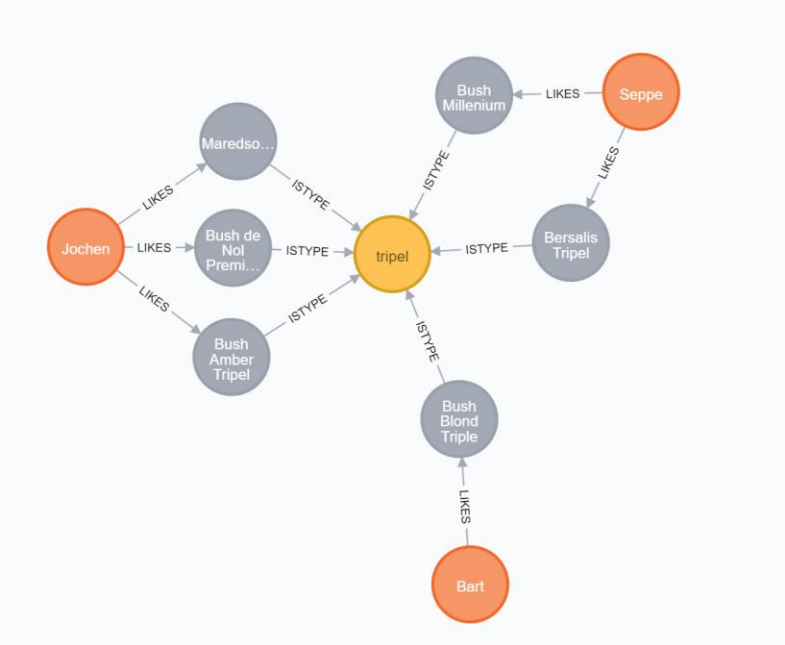


For all questions, please submit a screenshot (or other copy) of the results table or graph described in the problem (whether or not the output is shown in the problem description) AND a copy of the Cypher code that you used to generate your output.

1. Create a graph of all Tripel beers that have an alcohol content higher than 0.09 and the beer drinkers who like them.

Result





2. Create a list of all breweries that brew beers that Seppe likes, sorted by the number of liked beers from each, then alphabetically.

p.name	y.name	num_beers_liked
Seppe	Affligem Brouwerij	4
Seppe	Brouwerij Roman	3
Seppe	Brouwerij Van Steenberge	3
Seppe	AB InBev	2
Seppe	Brouwerij De Halve Maan	2
Seppe	Brouwerij De Koninck (Duvel-Moortgat)	2
Seppe	Brouwerij Huyghe	2
Seppe	Brouwerij De Kluis (InBev)	1
Seppe	Brouwerij Dubuisson	1
Seppe	Brouwerij Duvel Moortgat	1
Seppe	Brouwerij Haacht	1
Seppe	Brouwerij Lefebvre	1
Seppe	Brouwerij Lindemans	1
Seppe	Brouwerij Lupus	1
Seppe	Brouwerij Rodenbach	1
Seppe	Brouwerij Slaghmuylder	1
Seppe	Brouwerij Ter Dolen	1
Seppe	Brouwerij Val-Dieu	1
Seppe	Brouwerij d Achouffe	1
Seppe	Geuzestekerij 3 Fonteinen	1

3. Create a list of all beers that are brewed by one of Seppe's Top Three breweries (the first three from the list above) that Seppe has not already liked.
   *** for full points, write this code without hard-coding the names of the Top Three breweries**

BeerRecommendation	TopThreeBrewery
Florival Bruin	Affligem Brouwerij
Florival Tripel	Affligem Brouwerij
Wieze Tripel	Brouwerij Roman
Gentse Strop	Brouwerij Roman
Ename Dubbel	Brouwerij Roman
Ename Blond	Brouwerij Roman
Uitzet 1730	Brouwerij Van Steenberge
Vlaamsche Leeuw Blondje	Brouwerij Van Steenberge
Queueu de Charrue Triple	Brouwerij Van Steenberge
Spitfire Oud Balegems	Brouwerij Van Steenberge
Vlaamsche Leeuw Tripel	Brouwerij Van Steenberge
Augustijn Donker	Brouwerij Van Steenberge
Augustijn Blond	Brouwerij Van Steenberge
Bornem Dubbel	Brouwerij Van Steenberge
Bierbeekse	Brouwerij Van Steenberge
Abdij van Roosenberg Tripe	Brouwerij Van Steenberge
Ledeberg Tripel	Brouwerij Van Steenberge
Kwets	Brouwerij Van Steenberge
Maerlant	Brouwerij Van Steenberge
Celis White	Brouwerij Van Steenberge
Bornem Tripel	Brouwerij Van Steenberge
Keizersberg	Brouwerij Van Steenberge

4. Create a new relationship called [TOPTHREE] for the edge between every beer drinker and each of their three Top Three Breweries. Top Three = top three on list of breweries sorted by number of beers liked, then alphabetically. (Seppe's Top Three breweries are: Affligem Brouwerij, Brouwerij Roman, Brouwerij Van Steenberge)

   Create a graph showing the new relationship.

5. Which Brewery is on the most Top Three Lists?

6. Create a list of each beer drinker and the number of other beer drinkers with whom they have at least one brewery in common on their Top Three list.

name	num_others
Monique	4
Wilfried	4
Bart	4
Estefania	3
Jochen	3
Jan	2
Seppe	2