**Views And Indexes Lab**

This is a required but ungraded activity to learn about views and indexes.

## Part A: Indexes

Step 1. Import a fresh copy of the northwind database provided on the course webpages.

Step 2. Examine the customers table. Which columns currently have indexes defined?

Step 3. Write an SQL statement that creates a new index on the home phone numbers.

Step 4. Write an SQL statement that removes the index on the home phone numbers.

Discussion question: what are the advantages and disadvantages of creating the new index on home phone numbers?

## Part B: Views

Step 1. Examine the order\_details table. Write an SQL command that selects only the id and order\_id and product\_id columns from the order\_details table, restricting to tuples whose order\_id is less than 40.

SELECT `id`,`order\_id`,`product\_id` FROM `order\_details` WHERE `order\_id`<40

Step 2. Create a new view that contains the information from the previous step. Name your view order\_details\_under40.

CREATE VIEW order\_details\_under40 AS SELECT `id`,`order\_id`,`product\_id` FROM `order\_details` WHERE `order\_id`<40

Step 3. Browse the order\_details\_under40 view and experiment with its properties. In what ways is it similar to a table? How does it differ from a table? Which of the following actions can be performed on the view:

* delete a tuple
* alter a value in one of the tuples
* insert a new tuple

What effect do these actions have on the original table order\_details?

Step 4. Create a new view called order\_details\_under40checked. This view is identical to the previous one except the SQL command will be appended with WITH CHECK OPTION. Experiment with inserting new tuples into this view. Is it possible to insert tuples whose order\_id is greater than 40? How does this compare with the previous view?