CSCI 4140 – Advanced Database
Assignment 4: Connecting Queries to Front End

(Issue: 29 May, 2018, Due: 13 July, 2018 11:59 PM)

- **TA:** Trishla Shah trishla@dal.ca
- **Tutorial:** Monday (10:35-11:25 am) and Thursday (2:05-2:55 pm)
- **Room:** CS 143

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1. **Objectives:**
   1) Comparing a local database connection and remote database connection.
   2) Establish connection between database and a client application.

2. **Tasks:**
   1) Create the following table in IBM DB2 Warehouse and load data from the CSV file provided into this table.

   Database Description:

   Database/Schema Name: *108thhouse*

Table Name	.csv file	Description
108House	108thhouse.csv	The database shows all bills introduced to the 108th House and how each representative voted on them

   2) Create a NodeJS application to answer the following questions. Also, measure the execution time:

   Question 1:

   Goal: Listing the data

   Query: List the details of members from **ALASKA** from the **REPUBLICAN** party in chronological order.

Question 2:

Goal: Get a list of unique elements

Query: List a set of all questions asked in 108th House.

Question 3:

Goal: A specific vote from a specific state

Query: How many times a member from California(CALIFOR) voted "NAY"

Question 4:

Goal: Least frequent members

Query: Identify **five** members with the least number of votes.

Question 5:

Goal: Count by district

Query: Identify the number of representatives for each district and list them in ascending order of the count.

Question 6:

Goal: Calculating the frequency of each type of vote

Query: Overall, what are the different votes we received in the 108th House and what is the frequency of each of these types of votes?

Question 7:

Goal: Calculating state-wise contribution

Query: What is the total number of votes received from each state in the 108th house?

3. Submit your Assignment 4 electronically:
1) Please use Brightspace to submit your assignment
2) In report, give brief explanation of each query along with the execution time (for both – local and cloud-based system).
3) Include all necessary screenshots in the report.
4) In addition to the report, please also your NodeJS application directory.
5) Submit all items within one Zip file (Your_NAME_Ass4.zip).
6) Students can work in the team of 2 and only one need to submit. (Include your name in the report as well as in the comment/note section on Brightspace (in submission folder).

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