CIS 8045 Assignment 1 (MongoDB)

Due date: 1/27/2021, after class

What/How to Turn-In (Please closely follow this instruction to turn in your assignment):

- Put all your code (JS code) you develop in a MS Word document. Add necessary denotations for clarity;
- The grading will be based on the correctness/appropriateness of your solution code (not necessarily the specific outcomes as the outcomes may be dependent on the specific sample rather than the general logic of the solution code.)
- Upload the MS Word document to Dropbox in the iCollege.

Part I: What to Do

I. Create a collection named "Media" in your **sample_mflix** database. The commands in Mongo_1_Documents_CreateDB.txt to insert some data.

II. Based on the data you just created, write commands to find the following required information and display it.

Query 1: Find the total number of "CDs";
Query 2: Find the books with a length between 200 and 300 pages, and return the top 5 longest ones;
Query 3: Find all the books published by either "Apress" or "O'Reilly Media";
Query 4: Find all the CDs with 2 tracks or 3 tracks;
Query 5: Find all the books published by "Apress" in 2014. And display their "Title", "Publisher", and "Year";
Query 6: Find all the CDs with the New Price not greater than $16;
Query 7: Find all the books with either "David Hows" or "Peter Membrey" (or both of them) as the authors;
Query 8: Find the CD with a Track 1 of Title "Don't Stop 'Til You Get Enough".
Query 10: Update data as follows:

- For each book published by "Apress", set a price of $100;
- Increase the price of the book "MongoDB Basics" by 20%;
- Insert your name into the author list of the book "MongoDB Basics".

Part II: What to Do

I. Use the file Enron.json (on iCollege) to create a MongoDB database for it, and name the database **Enron**. Import all the documents into a collection, and name the collection **Emails**;

II. Develop a single Aggregation query to find all senders and the total number of emails that each of they sent;

IV. Develop a single Aggregation query to complete the following tasks. (Note that you need to develop a single query rather than separate queries).
First, find all emails sent after 2000-10-20;
Next, among the emails sent after 2000-10-20, find the earliest email sent by each of the unique senders;
Next, list each of the unique senders and his/her earliest email date. The list should be in a descending order of the earliest email dates.