Programming Assignment-1 100 points
[Due date: February 12, 2026 midnight]
MongoDB Cursor Queries

Description: Import the editions_final.json file into your MongoDB database and answer the following queries.

Requirements:

- Database name: msds697
- Collection name: open_library
- Write complete MongoDB queries to answer the following questions.

Tasks:

1. **Basic Filtering:** Write a MongoDB query to count the total number of book editions where the physical_format is exactly "Paperback".[10 pt]
2. **Array Membership & Projection:** In this dataset, the languages field is an array of objects. Write a MongoDB query to retrieve all editions where the language key is "/languages/eng" **Return list of the records containing only the title, the publish_date, and the languages array.** [10 pt]
3. **Numerical Comparisons:** Write a MongoDB query to find all book editions where the number_of_pages is greater than 500. **Return list of the records containing the title, isbn_13 (or isbn_10), and the number_of_pages.** [15 pt]
4. **Array Length/Existence & Filtering:** Write a query to count the total number of editions that have at least one ISBN-13 listed (i.e., the isbn_13 field exists and is not empty) and were published in the year "1997". (Hint: Since publish_date is a string like "July 1997", you will need to use a regular expression). [15 pt]
5. **Sorting and Limiting:** Write a MongoDB query to find the top 10 longest books (based on number_of_pages) that were published by **"Stationery Office Books"**. **Return list of the records containing only the title and the number_of_pages, sorted from most pages to least.** [20 pt]
6. **Complex Filtering and Array Logic:** Write a MongoDB query to find the first five paperback book editions published in England (country code "enk") during the year 1999 that also contain more than one subject listed in their subjects array. **Your query should return list of the records containing only the title, the subjects list, and the publish date for these specific records.** [30 pt]

Submission:

There is a mongo_queries.py file, which has one function for each of the questions above. Use that file to fill in all the right queries. Supplied is the run_mongo.py file that you can use to run and test your functions properly. Submit the mongo_queries.py file to Canvas. **Remember the database name and the collection name should be the same as indicated in the assignment description above. Don't alter or change the editions_final.json file.**