

Homework - 2

Maximum points = 20 (10 each)

In your git repo, create a new repository called DS0553HW.

Do not make this repository public. Keep it private.

Under that repository create folders like HW2, HW3 etc

These homework go under HW2.

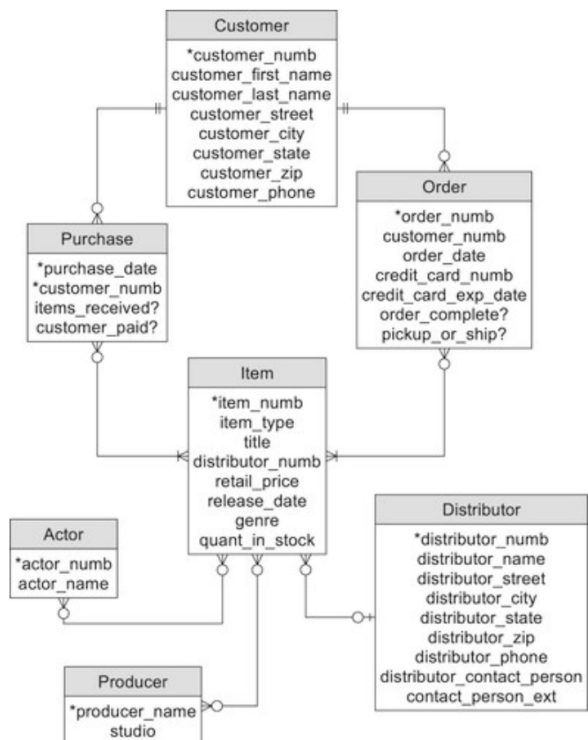
Next homework will go under HW3 etc.

*When you are ready to submit your homework for the first time, you can share your repository with me and the TA. My github -id is **bjoydeep**. Github id for the TA will be shared in the slack channel.*

I will give a sample example of how this will look over the weekend.

If you do not have a github id, here are some very simple instructions - [Signing up for a new GitHub account](#) to get started. And choose the “Free” tier. If you have any issues, please reach out to the TAs asap. Do not wait till the last day of assignment submission.

Question - 1



In the above diagram -

One customer can place zero, one, or more orders. An order comes from one and only one customer.

Design a customer collection with schema validation embedding the order as a sub document.

Also create a customer collection and order collection linking them together.

Please submit the `db.createCollection()` definition and `db.XX.insertMany` to insert 2 customers and 3 orders for each customer.

Someone should be able to run the scripts using mongosh and recreate these collections without any errors. The collections should match the schema definition shown in the ERD above.

Question -2

Create a student collection. Base it on the following:

1. Students will have a home address. Students will have a contact phone number.
2. We should be able to search the collection using zip code of the home address
3. We should also be able to search the collection using a contact phone number.
4. Create 10 records. In reality this may be MUCH larger - 1000s perhaps.
5. What indexes do you recommend?
6. Create indexes.
7. Run the search queries.
8. And proof that indexes are being used.

Someone should be able to run the scripts using mongosh and recreate these collections without any errors.