

San José State University
Department of Computer Science

CS/SE 157B

Section 3

Database Management Systems II

Spring 2018

Instructor: Ron Mak

Assignment #6

Assigned: Thursday, April 5

Due: Friday, April 13 at 11:59 pm

Team assignment, 100 points max

MongoDB database and API

The purpose of this assignment is to give your team experience with the MongoDB NoSQL database and its JavaScript API.

MongoDB server and interactive shell

Download and install the MongoDB Community Edition at <https://docs.mongodb.com/master/administration/install-community/>

Run the `mongod` (no 'b') database server in the background. With the database server running, run the `mongo` interactive command-line shell.

MongoDB API

Use the interactive `mongo` shell and the JavaScript API.

- Create a database.
- Execute at least four (4) different insert operations to create documents. You can convert relational tables from previous assignments or create one or more new collections. Note that the first time you insert a document into a collection, that operation also creates the collection.
- Query your database by executing at least eight (8) different read (find) operations. Output the results in the “pretty” format.
 - At least one query should include a projection.
 - At least one query should use `$or`
 - At least one query should use `$and`
 - At least one query should sort its output.
- Execute at least four (4) different update operations.
- Execute at least four (4) different delete operations.

Cut and paste your API calls and their results into a text document.

What to turn in

In a short report:

- What is your MongoDB database? What data is in there?
- The text of your API queries and their results.

Submit into Canvas: **Assignment #6.**

Rubrics

Criteria	Max points
<ul style="list-style-type: none">• Four (4) insert operations.	<ul style="list-style-type: none">• 20 = 4 x 5
<ul style="list-style-type: none">• Eight (8) find operations with pretty output.<ul style="list-style-type: none">○ Use projection○ Use \$or○ Use \$and○ Sorted○ Other find operations	<ul style="list-style-type: none">• 40<ul style="list-style-type: none">○ 5○ 5○ 5○ 5○ 20 = 4 x 5
<ul style="list-style-type: none">• Four (4) different update operations.	<ul style="list-style-type: none">• 20 = 4 x 5
<ul style="list-style-type: none">• Four (4) different delete operations.	<ul style="list-style-type: none">• 20 = 4 x 5