Optional Assignment - MongoDB

- Due: 11:59 PM Mar 30, 2022

- The optional assignment from which you can receive extra 50 professional points is **NOT** this one.

- Like the other optional assignments, you will receive an extra +1 point in **your final grade**. This will be another good opportunity to make up for grades that you have lost in your previous assignments and exams.

Question:

Try these two queries in MongoDB using Restaurant collection in the Restaurant database:

(a) [{$match: {

 $and:

 [{cuisine: "American"},

 {year: 2009},

 {employee: 10}]

}}]

(b) [{$match: {

 cuisine: "American",

 year: 2009,

 employee: 10

}}]

The difference between the two queries is whether $and operator is used. However, the results returned by those two queries are the same. It is not just by coincidence but both of queries are correct and will return the same results. Having said that, that doesn't mean that $and operator is unnecessary (otherwise, why would it exist?).

In this optional assignment, your goal is to find when $and operator must be used and when it can be dropped (for convenience in this assignment, assume that you have multiple conditions and have to use $match query together). To do that, you would have to check an official documentation of MongoDB and many different online sources.

Provide the answer to this question in your own word and preferably give examples corresponding to each of cases where $and operator can be dropped or must be specified.

Hint: The answer is not something logical. In other words, the reason why $and operator works in such a way is simple: it is how it is defined in the MongoDB language (MongoDB developers must have had some reasons in developing this language, but at least to my knowledge, they are not officially described). Thus, your goal is "not" to understand "why" $and works in that way. Rather, it is to do research on "when" it can be dropped or must be specified.

Answer this question in a word document and upload it on Canvas.