- Library Resources

Quiz 10: NoSQL Results for Yufu Liao

Correct answers will be available on Nov 22 at 12am.
Score for this quiz: 24 out of 100 *
* Some questions not yet graded
Submitted Nov 16 at 5:32pm
This attempt took 34 minutes.
Move To... This element is a more accessible alternative to drag & drop reordering. Press Enter or Space to move this question.
PartialQuestion 1
16 / 20 pts

Give the names of the following modifiers in MongoDB:

1. Increment a numeric field in a document $inc .
2. Set a field in a document $set .
3. Add a value to a list field in a document $push .
4. Add a value to a list field in a document, while avoiding duplicates $addToSet .
5. Remove (all occurrences of) a value from a list field $pull .
6. Test if a list field in a document contains a value $in .
7. Test if all values in a query list are contained in a list field $eleMatch .
8. Return part of the values in a list field $slice .
9. Test if a field is defined in a document $exists .
10. Use a Javascript function to filter the results in a query Cursors .

Answer 1:
$inc
Answer 2:
$set
Answer 3:
$push
Answer 4:
$addToSet
Answer 5:
$pull
Answer 6:
$in
Answer 7:
$eleMatch
Answer 8:
$slice
Answer 9:
$exists
Answer 10:
Cursors
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question.
PartialQuestion 2
8 / 20 pts

What are the MongoDB commands for:

1. Checking that an update operation is committed on the server commitTransaction .
2. Atomically querying and updating a document on the server findAndModify .
3. Partition a collection across multiple servers replSetInitiate .
4. Grouping documents in a collection by a key group .
5. Initiating replication with automatic failover replication .

Answer 1:
commitTransaction
Answer 2:
findAndModify
Answer 3:
replSetInitiate
Answer 4:
group
Answer 5:
replication
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Question 3
Not yet graded / 15 pts

In MongoDB data modeling, when are the situations when it is best to denormalize the data model, representing a relationship by embedding the related entities?

Your Answer:

• One-to-One
• Always queried with parent
• Child data intrinsic to parent
• Similar rate of updates
• One-to-Few

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Question 4
Not yet graded / 15 pts

In MongoDB data modeling, when are the situations when it is best to normalize the data model, representing a relationship by references to the related entities?

Your Answer:

• 1-to-many (unbounded relationship)
• Many-to-many relationships
• Data changes at different rates
• What is referenced, is heavily referenced by many others

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Question 5

Not yet graded / 7.5 pts

Here is a patient record and two related treatments. Show how to represent this relationship as a normalized one-to-many relationship.

```
{
      "id": "12a19206-6eb7-4e68-838c-3e7d0417df74",
      "name": "joe",
      "dob": "1999-06-05",
}

{
      "id": "c5b6abf0-3395-491b-892d-22db094c403e",
      "drug": "aspirin",
      "dosage": 10.0,
      "start-date": "2022-01-01",
      "end-date": "2022-12-31",
      "diagnosis": "pain"
}

{
      "id": "f9ca4d18-c73e-428a-a068-bad84976957e",
      "drug": "prednisone",
      "dosage": 5.0,
      "start-date": "2022-01-01",
      "end-date": "2022-12-31",
      "diagnosis": "inflammation"
}
```

Your Answer:

patient collections

```
{
  "id": "12a19206-6eb7-4e68-838c-3e7d0417df74",
  "name": "joe",
  "dob": "1999-06-05",
  "treatment": [
     {"id": "c5b6abf0-3395-491b-892d-22db094c403e"},
     {"id": "f9ca4d18-c73e-428a-a068-bad84976957e"}
  ]
}
```

treatment collections:

```
{
      "id": "c5b6abf0-3395-491b-892d-22db094c403e",
      "drug": "aspirin",
      "dosage": 10.0,
      "start-date": "2022-01-01",
      "end-date": "2022-12-31",
      "diagnosis": "pain"
}

{
      "id": "f9ca4d18-c73e-428a-a068-bad84976957e",
      "drug": "prednisone",
      "dosage": 5.0,
      "start-date": "2022-01-01",
      "end-date": "2022-12-31",
      "diagnosis": "inflammation"
}
```

Move To... This element is a more accessible alternative to drag & drop reordering. Press Enter or Space to move this question.

Question 6

Not yet graded / 7.5 pts

Repeat the previous question, but show how to represent this relationship as a **denormalized** one-to-many relationship.

Your Answer:


```
{
   "id": "12a19206-6eb7-4e68-838c-3e7d0417df74",
   "name": "joe",
   "dob": "1999-06-05",
   "treatments": [
      {
         "id": "c5b6abf0-3395-491b-892d-22db094c403e",
         "drug": "aspirin",
         "dosage": 10.0,
         "start-date": "2022-01-01",
         "end-date": "2022-12-31",
         "diagnosis": "pain"
      },
      {
         "id": "f9ca4d18-c73e-428a-a068-bad84976957e",
         "drug": "prednisone",
         "dosage": 5.0,
         "start-date": "2022-01-01",
         "end-date": "2022-12-31",
         "diagnosis": "inflammation"
      }
   ]
}
```


Move To... This element is a more accessible alternative to drag & drop reordering. Press Enter or Space to move this question.

Question 7

Not yet graded / 7.5 pts

Repeat the previous question, but show how to represent this relationship as a denormalized **many-to-one** relationship.

Your Answer:


```
{
   "id": "c5b6abf0-3395-491b-892d-22db094c403e",
   "drug": "aspirin",
   "dosage": 10.0,
   "start-date": "2022-01-01",
   "end-date": "2022-12-31",
   "diagnosis": "pain",
   "patient": {
      "id": "12a19206-6eb7-4e68-838c-3e7d0417df74",
      "name": "joe",
      "dob": "1999-06-05"
   }
}

{
   "id": "f9ca4d18-c73e-428a-a068-bad84976957e",
   "drug": "prednisone",
   "dosage": 5.0,
```

```
    "start-date": "2022-01-01",
    "end-date": "2022-12-31",
    "diagnosis": "inflammation",
    "patient": {
      "id": "12a19206-6eb7-4e68-838c-3e7d0417df74",
      "name": "joe",
      "dob": "1999-06-05",
    }
}
```


Move To... This element is a more accessible alternative to drag & drop reordering. Press Enter or Space to move this question.

Question 8

Not yet graded / 7.5 pts

Repeat the previous question, but show how to represent this relationship as a **normalized** many-to-one relationship.

Your Answer:


```
{
    "id": "c5b6abf0-3395-491b-892d-22db094c403e",
    "drug": "aspirin",
    "dosage": 10.0,
    "start-date": "2022-01-01",
    "end-date": "2022-12-31",
    "diagnosis": "pain",
    "patient": [
        {
            "id": "12a19206-6eb7-4e68-838c-3e7d0417df74"
        }
    ]
}

{
    "id": "f9ca4d18-c73e-428a-a068-bad84976957e",
    "drug": "prednisone",
    "dosage": 5.0,
    "start-date": "2022-01-01",
    "end-date": "2022-12-31",
    "diagnosis": "inflammation",
    "patient": [
        {
            "id": "12a19206-6eb7-4e68-838c-3e7d0417df74"
        }
    ]
}
```


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* Some questions not yet graded

Quiz Submissions

- *This score is pending review, and may change* Attempt 1: 24

Yufu Liao has no attempts left

Back to Quiz