

Practice Problem Workshop 7:

Part I - Individual Practice Questions

INFO 2310, Spring 2026

Student ID:

Solution

NetID:

Overview

Retrieval practice is the act of actively recalling information from memory, like quizzing oneself.

This workshop is designed to help you prepare and study for upcoming exams by engaging in retrieval practice.

Part I: Individual Practice Questions

Credit: 10 points. (completion)

1. Open this booklet and try your best to answer the practice problems **individually**.

If you need to refer to your notes, you can. But you should try to answer the questions on your own first, without looking at your notes. (This will help you prepare for the upcoming exam.)

2. Once a majority of the class has answered the practice questions on their own, **form groups of 3-4 people and go over the questions together**.

Discuss the questions and share your answers with the group.

You should update your answers in this booklet if necessary.

Discussing the answers will help you practice retrieving the information from memory and will also help you learn from your peers.

Submit this booklet for completion credit.

Practice Problem 1

Provide an example "JSON" database schema for music albums. Your example schema should have at least two documents.

Important notes:

- Every music album has a title, an artist, and a release year.
- Every music album has zero or more songs.
- Each song has a title and a duration (in seconds).

```
[ { title: "The Dark Side of the Moon",  
  artist: "Pink Floyd",  
  released: 1973,  
  songs: [ { title: "Speak to Me",  
            duration: 90 },  
           { title: "Breathe",  
            duration: 163 } ]  
}, { title: "Abbey Road",  
  artist: "The Beatles",  
  released: 1969,  
  songs: [ { title: "Come Together",  
            duration: 259 } ]  
}  
]
```

Practice Problem 2

Write a MongoDB Shell command to find all music albums released after the year 2000.

```
db.albums.find({released: { $gt: 2000 } })
```

Write a MongoDB Shell command to find all music albums that have at least two songs.

Hint: Refer to the MongoDB documentation for query operators and look for one that "Selects documents if the array field contains the specified number of elements."

```
db.albums.find({ songs: { $size: 2 } })
```

Write a MongoDB Shell command to add a new song to an existing music album document from the first practice problem. Your answer should append a new song, not replace the existing songs.

```
db.albums.updateOne(
  { title: "The Dark Side of the Moon" },
  { $push: { songs: { title: "Time", duration: 413 } } }
)
```