INF2003: Database Systems

**Lab 06: MongoDB using MongoDB Server & Shell**

Objectives

To learn MongoDB operations using MongoDB Server and Mongo Shell.

Deliverables

You are required to finish the tasks listed below and submit your report, including the **commands** for each question. All tasks shall be completed.

Format: **ONE (1) PDF** file**.**

Filename: <lab id>\_<student id>\_<name>\_Lab6. pdf,

e.g., P1\_2002008\_your\_name\_Lab6.pdf.

Venue: INF2003@Dropbox in xSiTe.

Deadline: The following Thursday (11:59pm) after the lab is conducted.

Background Problem Statement

In this lab, we explore NoSQL and use MongoDB, a popular software of document database or document-based/orient database system, to work on a simple database.

Please add the screenshot of both the NoSQL commands and the results in the lab report.

Software required

Download and install MongoDB community server from <https://www.mongodb.com/try/download/community> and Mongo Shell from <https://www.mongodb.com/try/download/shell>. Start Mongo server and Mongo Shell.

1. In Mongo Shell, provide the MongoDB queries to check the existing database, create a database called “inf2003-test” and create a collection called “Students”.

Ans:

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|  |

1. Insert the below student data into the Students collection. Each row corresponds to three attributes, namely sname, syear, and major. Display data in the Students collection.

Leo 2023 engineering

Deadpool 2024 biology

Judie 2023 ict

Wolverine 2023 art

Hulk 2022 business

Thor 2021 physics

Rocket 2024 ict

Ans:

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1. Please update Deadpool’s major from biology to art, add a new field campus with the default value “SIT@Punggol” **all** students and show the records of Deadpool.

Ans:

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1. Add a new field address with default value as "" for all students and remove the field address.

Ans:

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1. Find the records of students whose name has a character “a”.

Ans:

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1. Find the records of the engineering students.

Ans:

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1. Return the number of non-physics students.

Ans:

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1. Find the students whose syear > 2022 and major in ict.

Ans:

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1. Display the students in descending order of syear.

Ans:

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| --- |
|  |

1. Display the number of students for each major and display them in descending order of the number of students.

Ans:

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|  |

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