Summer 2021 CS213 Project Part 2

contributors:

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Overview

It is a one-person group project. Each student should finish the project by himself/herself and submit **one report in PDF**.

You should submit a report before the deadline, the **Topscore will be 100**; for the report submitted after the deadline and before the resubmission date, the **Topscore will be 80** ; for the report submitted after the resubmission date, the **score will be 0** .

Please be honest. DO NOT copy ANY words, figures and others from Internet and others.

DBMS can help us to manage data conveniently, and improve the efficiency of data.

Your work of the project Part 2 is mainly divided into two parts below:

1. Use DML (Data Manipulation Language) to design some experiments to analyse the performan of your database designed in **Project Part1**.
2. Compare the performance between database and file.

Task Requirements:

Task 1: Use DML to analyse your database in Project Part1

Design some experiments to show your database's performance, and record the execution time. Significant expression, such as diagram, comparison will be welcom.

Your design needs to meet the follow the **requirements**:

1. The experiments should contain, but are not limited to these manipulation: SELECT、 DELETE、 UPDATE、 INSERT.
2. The experiments should be designed reasonable, and comprehensive.

Task 2: Compare database and file.

Design programs/scripts to make the comparison between database and files. And design some experiment to discuss their advantages and disadvatages. Significant expression, such as diagram, comparison will be welcom.

Your design needs to meet the follow the **requirements**:

1. The programs/scripts could be any coding language you like.
2. The experiments should be designed reasonable, comparable.
3. Reasonable analysis of the results from your experiments should be given.

Task 3: Bonus part

You can take some exploration to the follow parts or some others to gain some extra bonus:

1. High concurrency and transaction management;
2. User privileges management;
3. Database index and file IO;
4. Compare performance of multiple databases with file system over different operation systems.

Report Structure:

Part 1. Group Info and Contribution

Need to write down your name and sid.

Part 2. Task 1

Provide the performance analysis of your database designed in Project Part1 clearly.

Part 3. Task 2

Provide the comparison between database and file using programs/scripts. Analyse the result of your experiments designed.

Part 4. Task 3

Discuss your exploration of the bonus part.