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# Project Milestone 1

# Project Milestone 2

# Project Milestone 3

## Indexing and Querying Optimization

### Text Description automatically generatedQueries and SQL script to create index

### Why was it chosen?

### Performance Measurement

B-Tree Index Before Implement

Text, table, email

Description automatically generated

Table

Description automatically generated

B-Tree Index After Implement

Table

Description automatically generated

Hash-Cluster Index Before Implement

Text, table

Description automatically generated

Hash-Cluster Index After Implement

Text, application, table, email

Description automatically generated

### Discussion of Performance Measurement

# COMPX323-22A Project Checklist

Kevin Han: (Contributions %)

Bedir Asici: (Contributions %)

Tetsusaburo Kato: (Contributions %)

|  |  |  |
| --- | --- | --- |
| **Project Milestone 1** | |  |
| 1 | 1a. Clear structure of milestone material, including headings, sections, readable screenshots with captions. This checklist should be included and filled in. |  |
| 2 | 1b. Database application description. |  |
| 6 | 1c. Revised ER Diagram. |  |
| **Project Milestone 2** | |  |
| 4 | 2. Relational schema for your ER Diagram. |  |
| 6 | 3. Table definitions in Oracle, include SQL script which creates relevant tables etc. |  |
| 3 | 4a. Dataset: small (screenshots of dataset successfully loaded). |  |
| 4 | 4b. Dataset: large.   1. Description of how data was created (incl code if relevant) 2. Screenshot of large dataset successfully loaded (use count). |  |
|  | 5. Application:   1. Functionality to display and modify the database. 2. System should be error proof with appropriate user messages. 3. Screenshots showing functionality, with appropriate descriptions. |  |
| **Project Milestone 3** | |  |
|  | 6. Indexing and Query Optimization:   1. Show queries used and SQL script that creates the indexes. 2. Discussion of why these indexes were chosen to optimize the queries. 3. Performance measurements with and without indexes (with query plan). 4. Discussion of performance measurements. |  |
|  | 7. Application: extend with MongoDB.   1. MongoDB version of database (show structure) + small dataset (screenshot). 2. Explanation of the data structures you have chosen and comparison to your SQL version. 3. Core functionality of application in second tab/area, using MongoDB (screenshots). |  |