

CLI - Requirements Documentation

Functional Requirements for Command Line Interface(mpdb)

R1. Launching CLI

- R1.1. User should be able to run the CLI their local cli/command prompt
- R1.2. User should be able to use the CLI their local cli/command prompt

R2. User authentication

- R2.1. Users should be able to login by typing in their credentials into the mpdb after launching the application.
 - R2.1.1 User credentials should be authenticated by API
- R2.2. Users should be able to type commands into mpdb after being authenticated by API.
- R2.3. Users should be notified if their credentials are incorrect
 - R2.3.1. Users should be prompted to enter their credentials for a limited time.
 - R2.3.1.1 Users should only have 5 attempts to enter the incorrect credentials.

R3. Users

- R3.1. The mpdb should allow a user to have administrative privileges
 - R3.1.1. Users with administrative privileges should be able to view all databases created by different users
 - R3.1.2. Users with administrative privileges should be able to manage and change the roles of users.
- R3.2. The mpdb should allow a user to have general privileges
 - R3.2.1 Users should be able to create new databases

- R3.2.2 Users should be able to read data from their new and old databases
- R3.2.3 Users should be able to update data in their new and old databases
- R3.2.4 Users should be able to delete data from their new and old databases

R4. Commands

- R4.1. Users should be able to type commands to mpdb for querying the database
 - R4.1.1 Users should be able to type in commands for creating new databases
 - R4.1.2 Users should be able to type in commands to read data from their new and old databases
 - R4.1.3 Users should be able to type in commands to update data in their new and old databases
 - R4.1.2 Users should be able to type in commands to delete data from their new and old databases
- R4.2. Users should be notified if their command is not in the correct structure/syntax
 - R4.2.1. Users should have a help menu displayed on their screens if there is an error in their command syntax

R5. Display

- R5.1. Users should be able to view the query results in ascending order
- R5.2. Users should be able to view the query results in descending order

R6. Logout

- R 6.1. Users should be able to logout if they no longer wish to use the mpdb.

Non-functional requirements

- R1. Performance
 - R1.1. The mpdb should display results to the user within a second
- R2. Quality
 - R2.1. The mpdb shall be available 99% of the time
 - R2.2. The mpdb should display query results in a user-friendly manner
- R3. Safety
 - R3.1. The mpdb shall protect database if a query fails
- R4. Security
 - R4.1. The mpdb shall ensure that only authenticated users can query the database
 - R4.2. The mpdb shall ensure that there are two roles for users : Admin and General
 - R4.3. The mpdb shall ensure that all credentials to be authenticated are encrypted.

CLI Activity diagram

