Java Assignment

Test Pre-requisite:

The following assignment can be done using any Java framework.

Note: *It is a must to use MS Access as the DB!*

We care about the Code Quality.

- SonarQube Report must be attached with the assignment.
- Object Oriented Design.
- Logging and Exception Handling.
- Code Maintainability, Reusability & Scalability.
- API Security and Session management.
- Unit Test Coverage Report must be attached with the assignment.
- README.md that explains how the code and the test can be run.
- The source code must be uploaded to GIT and the URL must be shared over e-mail.

Introduction:

The server will handle requests to view statements by performing simple search on date and amount ranges.

- The request should specify the account id.
- The request can specify from date and to date (the date range).
- The request can specify from amount and to amount (the amount range).
- If the request does not specify any parameter, then the search will return three months back statement.
- If the parameters are invalid a proper error message should be sent to user.
- The account number should be hashed before sent to the user.
- All the exceptions should be handled on the server properly.

Authentication and Security:

The authenticated users are:

User1: Username: admin *&* Password: admin

User2: Username: user & Password: user

Access Control Specifications:

- The 'admin' can perform all the requests (specify date and amount range).
- The 'user' can only do a request without parameters which will return the three months back statement.
- When the test user tries to specify any parameter, then HTTP unauthorized (401) access error will be sent.
- The user cannot login twice (the user should logout before login).
- The session time out is 5 minutes.

Database information:

Database file: **accountsdb.accdb** is given as part of this assignment

Table Specifications:

Account:

- ID: Autonumber
- account_type: Text
- account_number: Text

Statement:

- ID: Autonumber
- account_id: Number
- datefield: Text
- amount: Text

(Note that datefield and amount are in text format so applying range cannot be in the database level)

All the Best!