

CraftVerify

Low Level Design Document

Team Wanderer

<https://github.com/JPJ-5/Senior-Project>

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Low Level Design Version Table:

Version	Description	Date
1.0	Initial Low Level Design Requirements <ul style="list-style-type: none">● Feature (Registration, Logging)<ul style="list-style-type: none">○ Sequence Diagrams○ Classes/Interfaces○ User Stories	11/03/2023

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Data Access

Sequence Diagrams are in a separate Document

Success Outcomes

- User Creation: The user can be created with a valid email, password, date of birth, and username.
- CreateLog: Logging Success: The logging operation successfully logs the message or information.

Failure Outcomes

- User Creation: The user inputted an invalid email, password, date of birth, or username and the system was unable to create a user. The system outputs an error with invalid input, retry creates a user.
- UserCreation: The user inputted an email already in use and the system was unable to create a user. The system outputs an email already in use message and prompts the user to use a new email.
- User Creation: The user inputted a valid first and last name and the system was able to create a user, but it took longer than 5 seconds. The system log is recorded and the user stays created.
- CreateLog: Invalid Input: If the provided parameters for timestamp, logLevel, logCategory, or context are invalid (null, empty, or incorrect format), it fails. Retry creates a log.
- CreateLog: Logging Timeout: If the logging operation takes longer than a specified time (e.g., 5 seconds), it fails due to a logging timeout even if the log is successfully created.

Classes/Interface

Public Class Result

- Attributes
 - HasError: Indicates whether the operation resulted in an error.
 - ErrorMessage: Holds the error message if an error occurs during an operation.
 - StatusCode: Represents the status code of the operation.

Public Class DataAccessObject

- Methods:
 - CreateLog(DateTime timestamp, string logLevel, string logCategory, string context): Creates a log entry in the data store.
 - CreateUser(string firstname, string lastname): Creates a user in the data store.

User Stories

- As a User
 - I want to be able to successfully create an account with a valid email, password, date of birth, and username. I want a successful creation within 5 seconds.
- As a Developer
 - If the registration process fails I want the users to be routed to a user admin
 - I want to be able to validate a user's email is not already in use and is a valid working email.
 - I want to validate a user's inputted password based on the requirements:
 - The password cannot be null.
 - The password cannot be an empty string.
 - The password is a one-time password(new password every login).
 - The password must be at least 8 characters consisting of lowercase characters, uppercase characters, and single-digit numbers.
 - One-time password creation is defined in NIST Special Publication 800-63B: Digital Identity Guidelines, Section: 5.1.4.1.
 - The password is created by our system and provided to the unauthenticated user through email.
 - I want to be able to create a log and keep storing the logs of my system