Team Project #2

Software Requirements Specification

Revision History

Date	Revision	Description	Author
2/17/2022	1.0	Initial Version	Quang Nguyen

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1. Purpose Quang

This document outlines the requirements for the Mine Pump Control System (MPC).

1.1. Scope

This document will catalog the user, system, and hardware requirements for the MPC system. It will not, however, document how these requirements will be implemented.

1.2. Definitions, Acronyms, Abbreviations

List any acronyms, terms etc. that need to be defined.

1.3. References

Use Case Specification Document – Step 2 in assignment description

UML Use Case Diagrams Document – Step 3 in assignment description

Class Diagrams – Step 5 in assignment description

Sequence Diagrams – Step 6 in assignment description

1.4. Overview

The Mine Pump Control System (MPC), is designed to monitor and pump flood water out of mine shafts. As underground mining operations take place far below the water table, flooding into mine galleries and shafts is an ever-present danger.

2. Overall Description Travis

2.1. Product Perspective

2.2. Product Architecture

The system will be organized into ___ major modules: the ___ module, the ___ module, and the _____ module.

Note: System architecture should follow standard OO design practices.

2.3. Product Functionality/Features

The high-level features of the system are as follows (see section 3 of this document for more detailed requirements that address these features):

2.4. Constraints

List appropriate constraints.

Constraint example: Since users may use any web browser to access the system, no browser-specific code is to be used in the system.

2.5. Assumptions and Dependencies

List appropriate assumptions

Assumption Example: It is assumed that the maximum number of users at a given time is 15,000.

3. Specific Requirements Andrew

3.1. Functional Requirements

3.1.1. Common Requirements:

3.1.1.1 Users should be allowed to log in using their issued id and pin, both of which are alphanumeric strings between 6 and 20 characters in length.
3.1.1.2 The system should provide HTML-based help pages on each screen that describe the purpose of each function within the system.
3.1.1.3 Users able to fetch file.
3.1.1.4 Able to process upload and distribute file to multiple nodes.
3.1.1.5 Server able to log every action and saved log for at least 30 days.

3.1.2. Server Module Requirements:

Provide module specific requirements as appropriate.

Example:

3.1.2.1 Users should be allowed to log in using their issued id and pin, both of which are alphanumeric strings between 6 and 20 characters in length.

3.1.3. Client Module Requirements:

Provide module specific requirements as appropriate.

Example:

3.1.2.1 Users should be allowed to log in using their issued id and pin, both of which are alphanumeric strings between 6 and 20 characters in length.

3.1.4. Persistence Module Requirements:

Provide module specific requirements as appropriate.

Example:

3.1.2.1 Users should be allowed to log in using their issued id and pin, both of which are alphanumeric strings between 6 and 20 characters in length.

3.2. External Interface Requirements

3.2.1 There has to be an easy to follow and easy to understand GUI for users.

3.2.2 Interfaced has to be HTML based.

3.2.3.

3.3. Internal Interface Requirements

3.3.1 Every action that server process will be log into Persistence module, with date and time stamp.
3.3.2 Any file type and any size will be accepted.
3.3.3 Any file that is uploaded will need to be saved to 2 or more nodes.
3.3.4 The log will be saved as a .txt file up to 30 days.

4. Non-Functional Requirements Michael

4.1. Security and Privacy Requirements

4.1.1 HTTPS only.
4.1.2 Auto generated username.
4.1.3 Id and passwords change every year.
4.1.4. Local Network Only.
4.1.5 All files that are saved by the Server must be encrypted.
4.1.6 Sessions must last only 1 hour.
4.1.7 Authentication and Authorization must only be handled by the server

4.1.8 All request must pass a JWT token issued from the server.

4.2. Environmental Requirements

4.2.1 Program with be written and operate in Java.
4.2.2. Systems in Java must use at least JDK 11
4.2.3 Server must use environment variables to configure IP and port

4.3. Performance Requirements

4.3.1 A client request must finish within 5 seconds.