

CS 4320: Final Project Requirements Analysis & Software Design

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Requirements Analysis

User Descriptions

- e.g. <http://www.seangoggins.net/> (<http://www.seangoggins.net/>)

Use Cases

- User can Browse by keyword for Manifest

- User can Contribute to Existing Dataset
- User can Download Info
- User can Generate or Upload Manifest
- User can Save
- User can Search on Manifest
- User can Upload Data Set

Functional Requirements

- **Database Backend**
 - The system will be able to perform efficient searches, using keywords.
 - The system should be able to upload and update manifests.
- **Business Logic**
 - Process search, upload, and update requests, both into and out of Database Layer
- **Front-End Framework**
 - Accept and serve search, upload, and update requests

Non-Functional Requirements

- **Space Requirements**
 - The system must have enough physical space to handle extremely large data-sets.
 - We may need to implement a distributed system using clusters for efficiency.
- **Reliability Requirements**
 - If the system crashes, the data and any manipulations/analytics must be preserved.
- **Privacy Requirements**
 - The data access must be limited to authorized users only.
 - The system must enable secure data transfer over the internet

User Requirements

- User will be able to upload Manifest.
- Manifest can be reviewed by others.
- User can edit or delete their Manifest.
- User can search for Manifest they wish to view or test.

System Requirements

- **Web Server**

- Web Server must provide reliable service for the appropriate amount of traffic that will be sent and received from the system.
 - **Database Backend**
 - Database must be able to convert data into easily storable format, and return in original format.
 - **Storage Array**
 - System must create intermediate backups and update logging to revert to earlier states if needed
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Software Design

Sketches

- User can Browse by keyword for Manifest
- User can Contribute to Existing Dataset
- User can Download Info
- User can Generate or Upload Manifest
- User can Save
- User can Search on Manifest
- User can Upload Data Set

Data

Functions

Database Structure

Change Log

- Version 1.0: Pre-Implementation Design
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Glossary
