# CS 4320 Final Project: Requirements Analysis & Software Design

# **OCDX** Engine

# **Team 4 Members:**

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# Requirements Analysis

# **User Descriptions**

### Rogers/Pudotha

- Data Scientist
  - Uploads and downloads data
  - Conducts sophisticated and systematic analyses of data
  - Extracts insights from large data sets
- System Admin
  - Review the uploaded data
  - Manage users

# **Use Cases**

#### Skinner/Hofer

- 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**

#### Hofer/Raza

#### 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**

### Raza/Pudotha

## 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**

### Zhang/Rogers

- 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.
- user will be able to include special comments or suggestions on manifest
- user should be able to notify the changes or suggestions that improves manifest to other users

# **System Requirements**

### Hofer/Rogers/Skinner

### 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

# **Software Design**

# **Sketches**

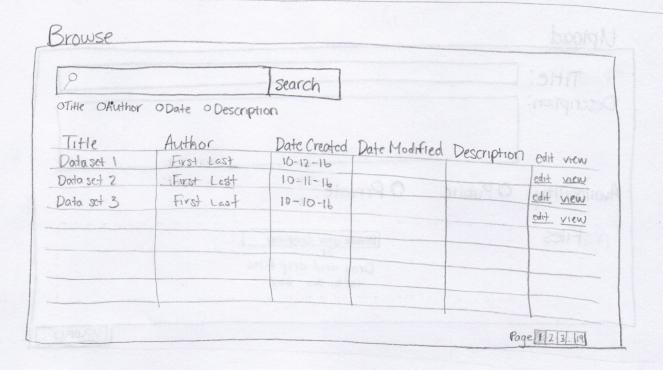
## Skinner/Rogers

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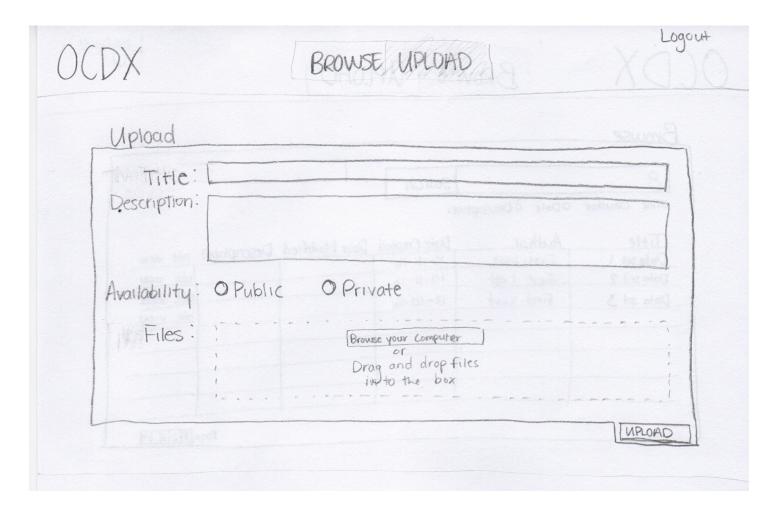
BROWSE UPLOAD

Logout



this Manifest	Search	Do	OWNLOAD	ADD+

- User can Generate or Upload Manifest
- User can Save
- User can Upload Data Set



# **Data**

# Zhang/Hofer

- Members
  - o ID
  - o name
- OCDX\_manifest

- author
- o date
- o size
- category
- version
- modify\_request

## Users

- o ID
- o name
- o email
- o phone

# Login\_attempts

- o userID
- o date
- attempts

# **Change Log**

• Version 1.0: Pre-Implementation Design 10-16-2016