MetaDrop

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Version 3

10/30/16

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Project Overview

As a team we are going to build an online infrastructure for computational social scientists, social scientist, and citizens that will facilitate and centralize our understanding of online human interaction. We will create a database that will allow metadata specification to store, share, describe, and analyze data sets. This will help solve the problem of not being able to easily access the metadata, and now scientist and citizens can easily access it via the internet.

Markdown (Wiki):

https://github.com/TeddyIvanov/SoftwareEngineering-Group3/blob/master/markdown.md

Test Cases:

https://github.com/TeddyIvanov/SoftwareEngineering-Group3/blob/master/Testing--Documentation%20(1).pdf

Requirements Analysis

Actors (Created by: Teddy Ivanov, Reviewed by: Andrea McGovern)**:**

Researcher/User:

- ❏ Computational Social Scientist
- ❏ Social Scientist
- ❏ Citizens

Admin:

- ❏ System Administrator

Activities (Created by: Andrea McGovern, Reviewed by: Olivia Apperson):

- ❏ Logging in and out of the system
- ❏ Uploading metadata files to be stored in the database
- ❏ Ability to search and filter through libraries of files
- ❏ Ability to download files for use
- ❏ Be able to edit metadata files

Use Cases (Created by: Olivia Apperson, Reviewed by: Xinyi Li)**:**

- ❏ A Computational Social Scientist, Social Scientist, and Citizens have the ability to...
  - ❏ Log in and out of the system
  - ❏ Upload a metadata file
  - ❏ Edit a metadata file
  - ❏ Delete a metadata file
  - ❏ Search through metadata files

- Download a file

- A System Admin has the ability to...
  - Log in and out of the system
  - Delete uploaded files/edits
  - Search through files
  - Edit metadata files
  - Add users to the system

User Requirements (Created by: Soya Ouk, Reviewed by: Xinyi Li)**:**

- The System Administrator, Computational Social Scientist, Social Scientist as well as the Citizens should have login credentials.
- The System Administrator and Researchers should each have their own correct permissions.
- The Researchers must submit the correct and compatible file type.
- Admin can upload files, edit files, delete files, browse for files, version control, and add new users to the system.
- Regular users can upload files, edit files, delete files, and browse through the files.

System Requirements (Created by: Olivia Apperson, Reviewed by: Teddy Ivanov)**:**

- Database
  - Used to store information on metadata files and user's credentials.
- Webpage
  - User interface that visualizes the database of metadata and allow user to see what abilities they are performing.
- Internet Access

- Access to the internet will allow the users to visit the webpage, also allow updates to the database.

- Computer
  - Platform in which the webpage can be accessed. Also can be used to make changes to the database for admins.

Functional Requirements (Created by: Xinyi Li, Reviewed by: Soya Ouk)**:**

- Be able to login and logout
- Be able to upload files
- Be able to search in a search bar for JSON files
- Be able to edit files in the browser
- The system should not crash when a user tries to upload a file or edits a file
- If a file is not of the correct types, it should not be uploaded
- If a user does not have the correct credentials or user roles then they should not be able to do those tasks
- Be able to remove files
- Be able to fix changes

Non-Functional Requirements (Created by: Teddy Ivanov, Reviewed by: Soya Ouk)**:**

- This project is a semester project for the software engineering CS 4320 class, so it must be finished by the end of the semester
- The size of the database has to be large enough to hold JSON files (10 Gigabytes of files)

- ❏ Be able to handle uploading and downloading in real time (less than one second to upload/download)
- ❏ Easy to use User Interface that works on Firefox and Chrome
- ❏ Upload JSON files and script files (only acceptable file types)
- ❏ File extension checking to make sure it of the correct type (i.e. .JSON)
- ❏ Correct username of at least 8 characters and password with at least 8 characters
- ❏ If a file is larger than 250MB, then it should not be uploaded

Class List

Classes: (Created by Xinyi Li, Reviewed by Teddy Ivanov)

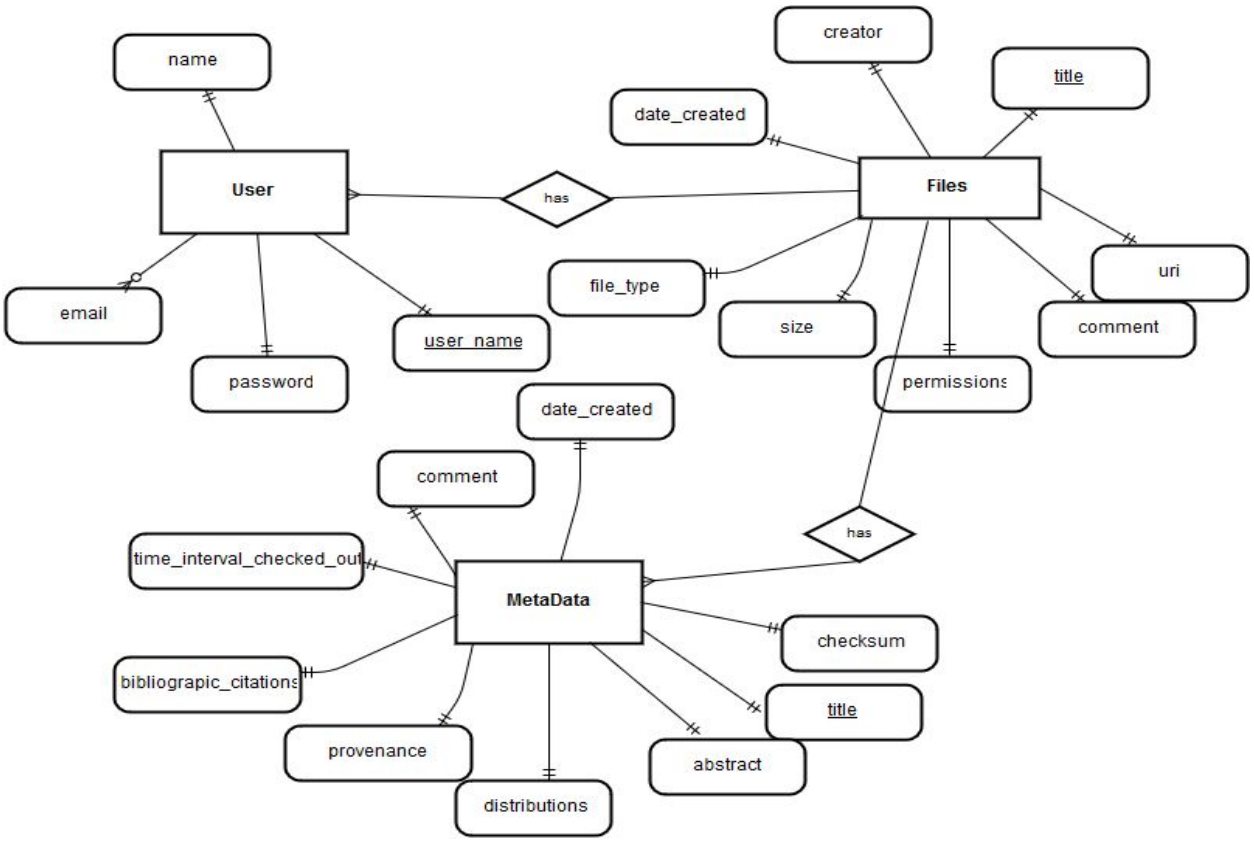
- ❏ Researcher/User
  - ❏ attributes: name:String, password:String, IsAdmin:Boolean,
  - ❏ methods: login(), logout(), uploadFile(), downloadFile(), deleteFile(), editFile()
- ❏ Admin
  - ❏ attributes: name: String, IsAdmin:Boolean,
  - ❏ methods: addUser(), uploadFile(), login(), logout(), downloadFile(), deleteFile(), revertEdit(), editFile(), updateDatabase()
- ❏ MetaDataFile
  - ❏ attributes: title:String, author:String, date:DateTime
  - ❏ methods: display(), delete(), edit(), upload()

Table List

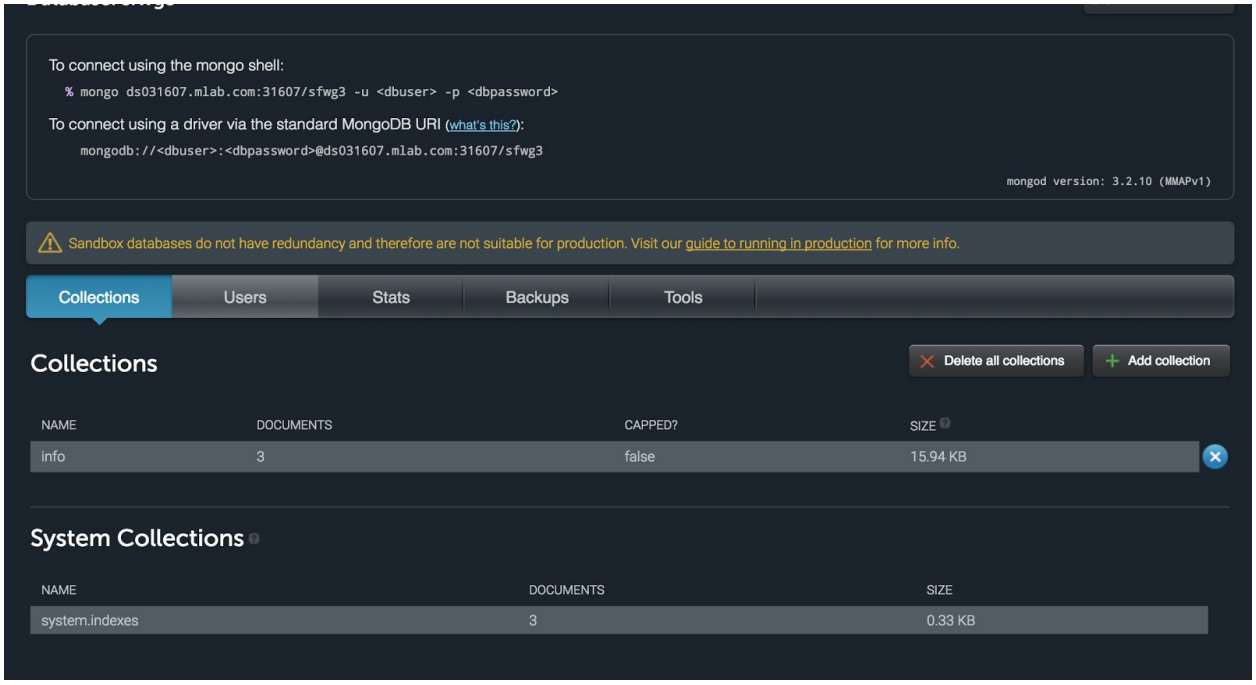
Created by: Olivia Apperson, Reviewed by: Soya Ouk

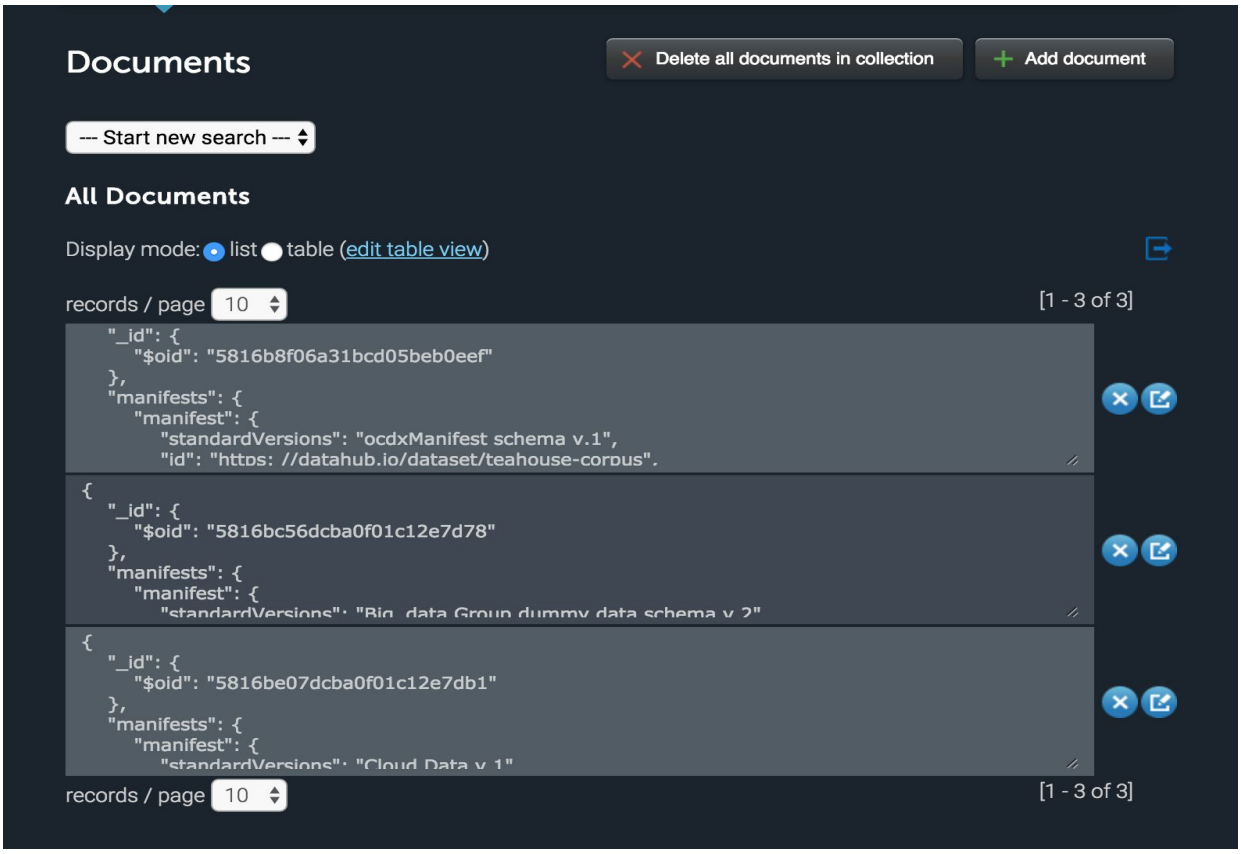
- ❑ Table for Files (type, data, name, author, etc.)
- ❑ Users (name, username, password, etc.)
- ❑ MetaData (comment, checksum, title, etc.)
- ❑ Relationship table between Files and Users

ERD

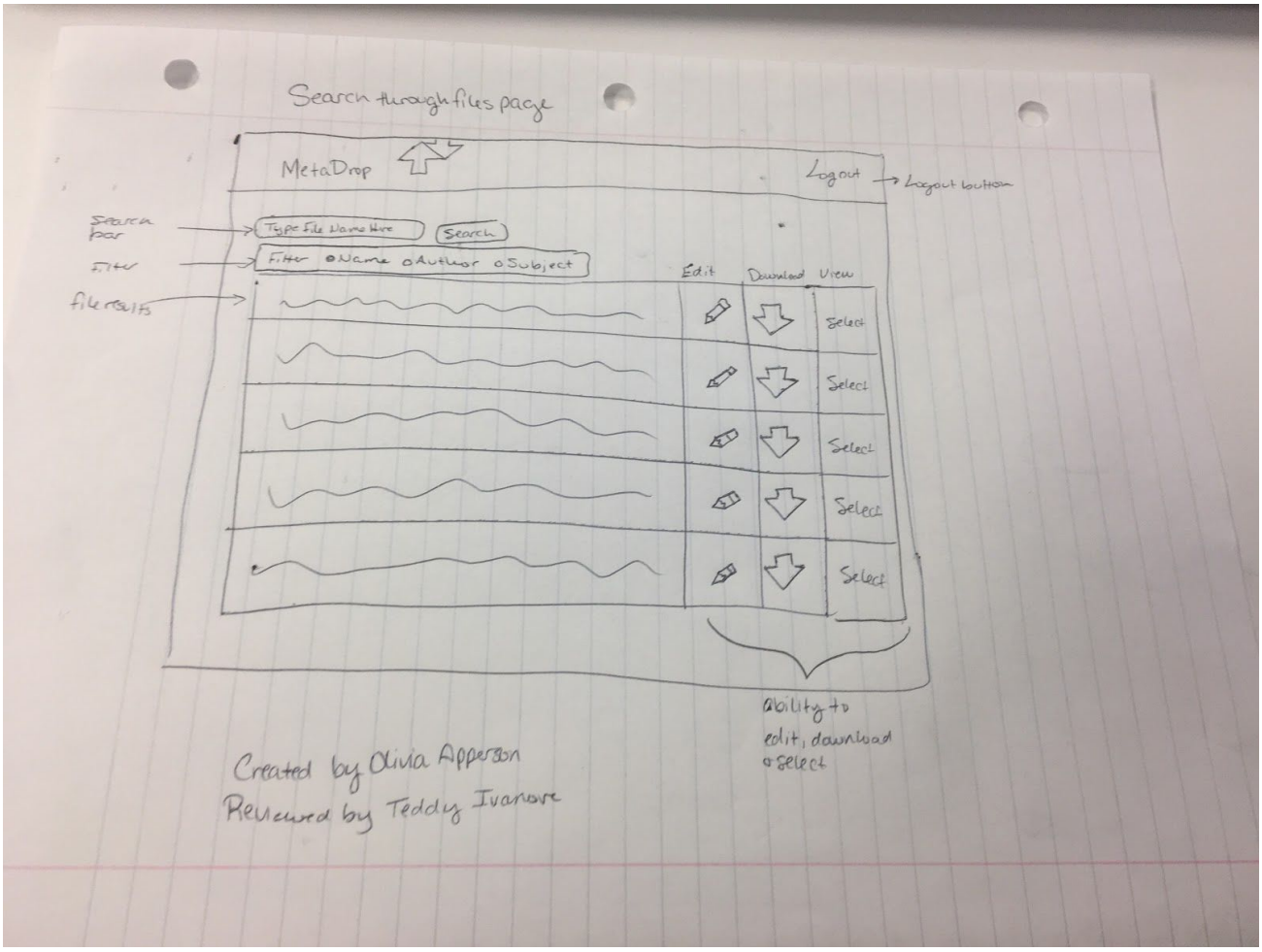

name
creator
title
date_created
User
has
Files
email
password
user_name
file_type
size
permissions
comment
uri
date_created
comment
has
time_interval_checked_out
MetaData
checksum
bibliograpic_citations
title
provenance
abstract
distributions

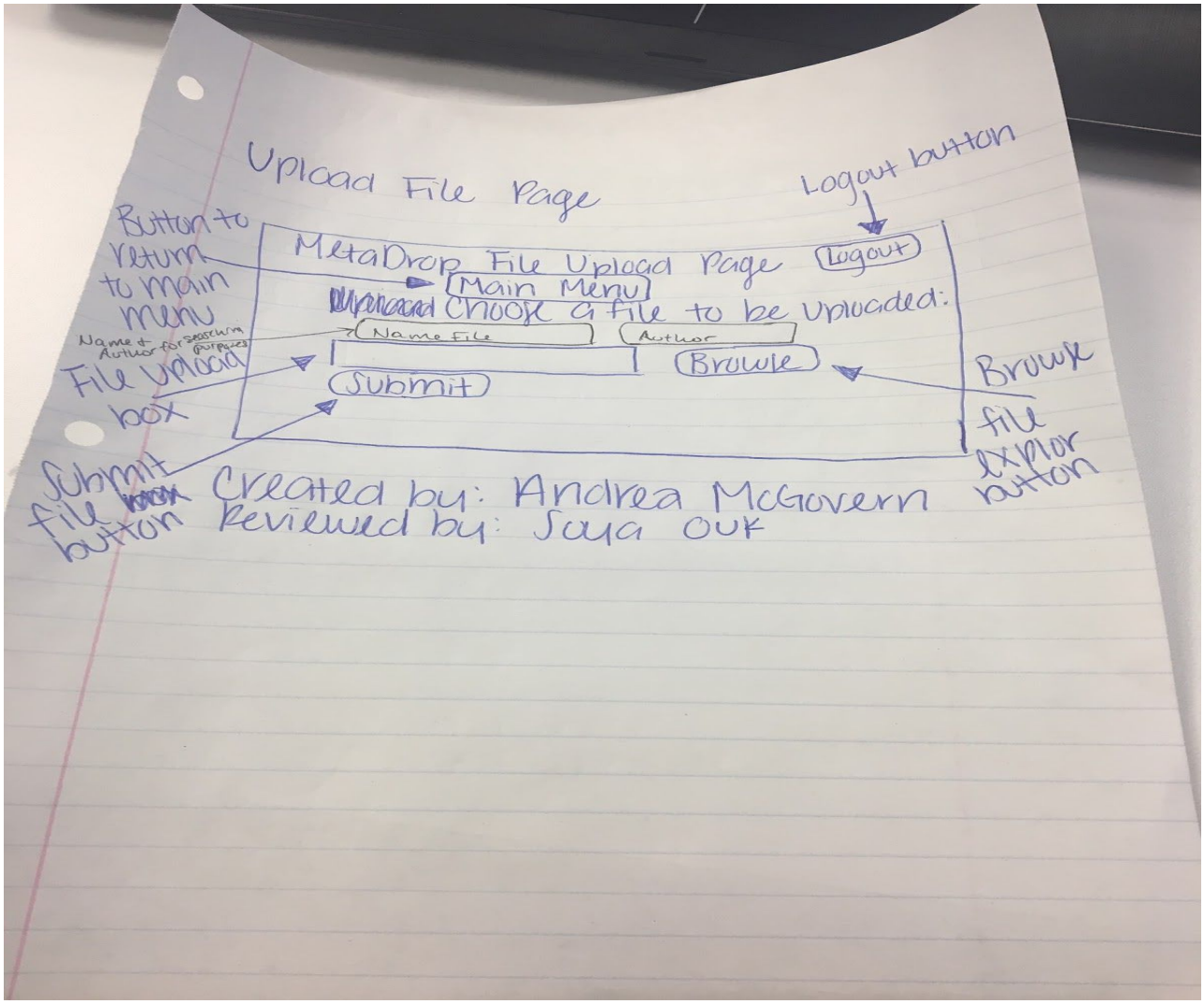
Database Creation/Queries

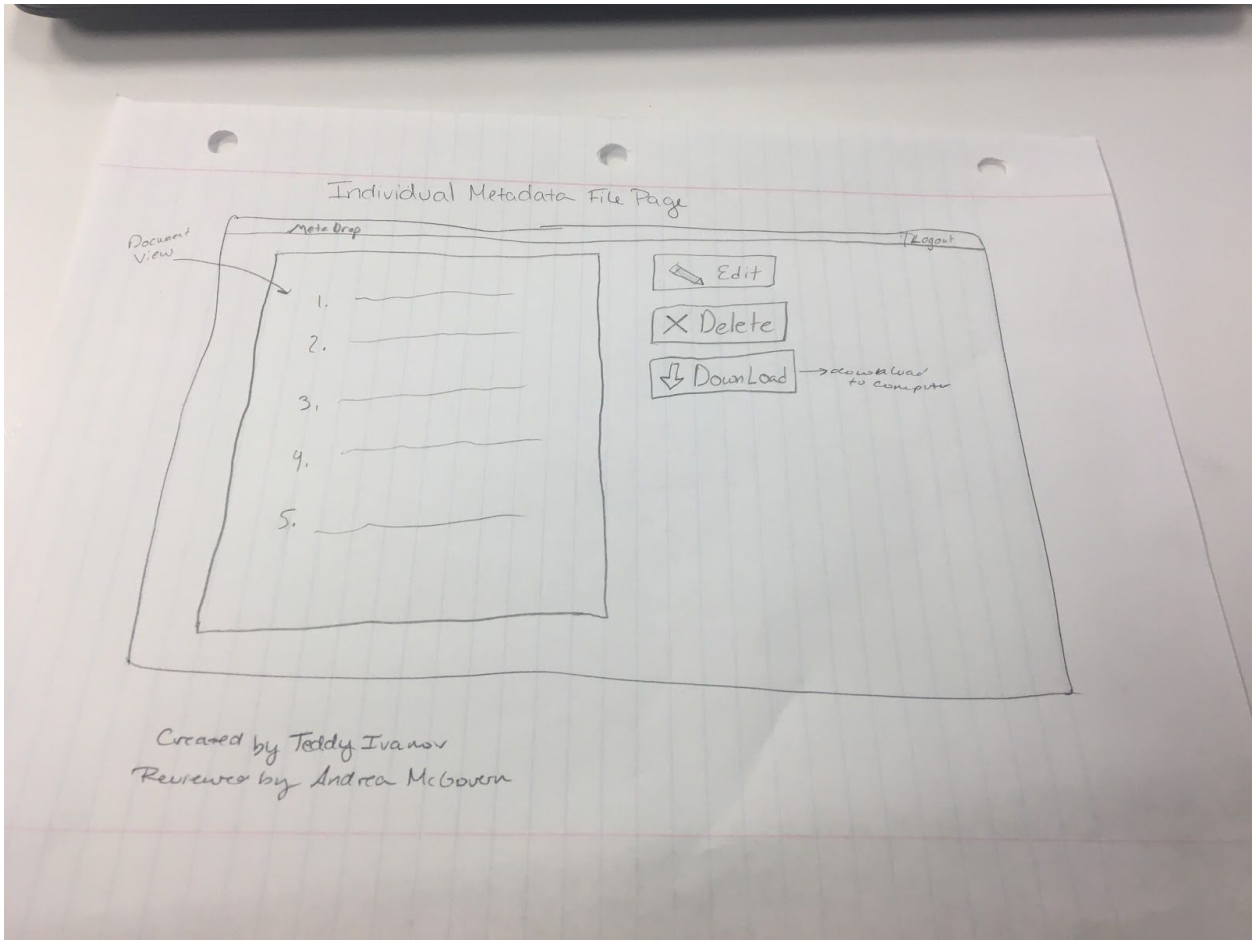


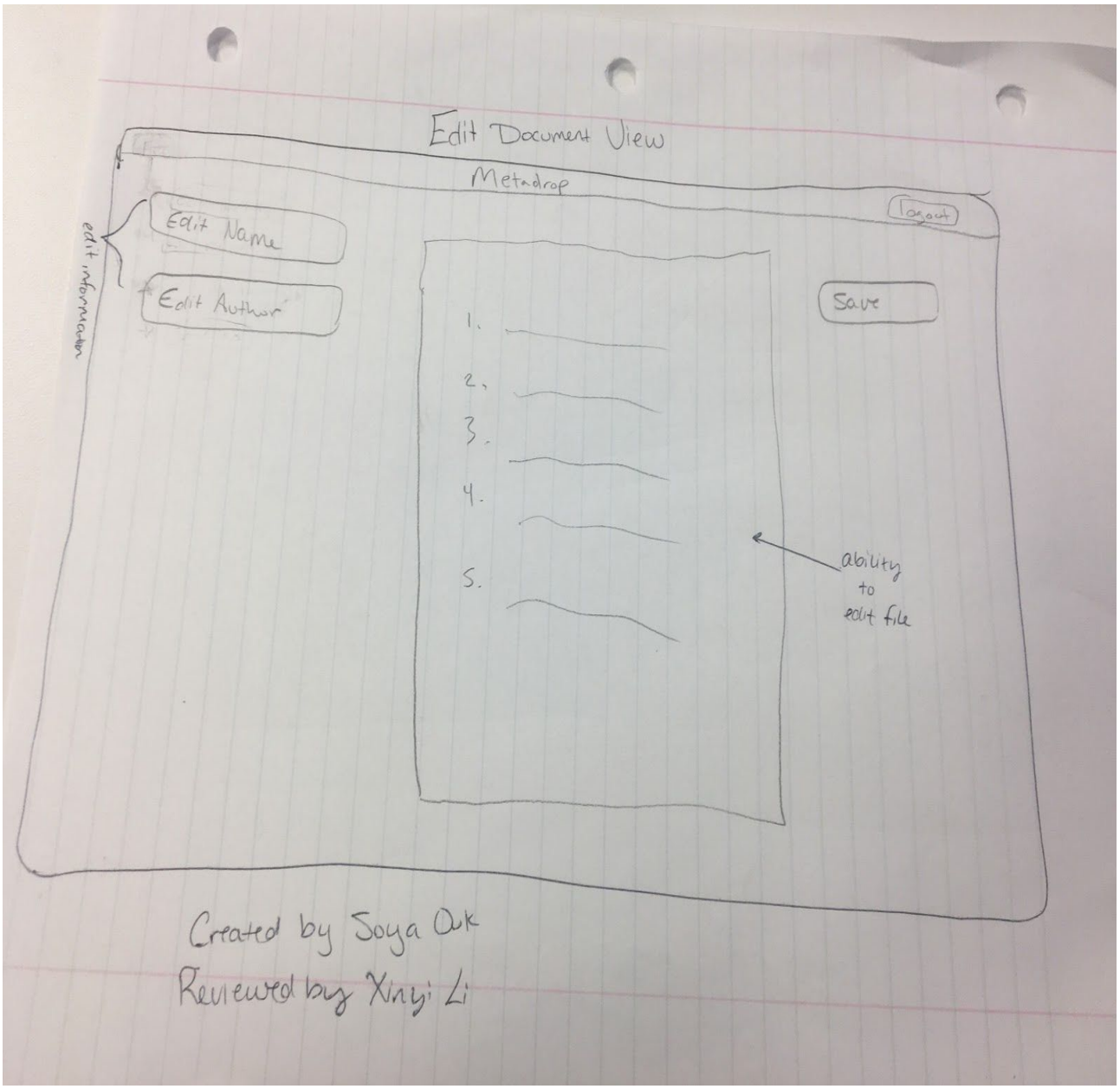


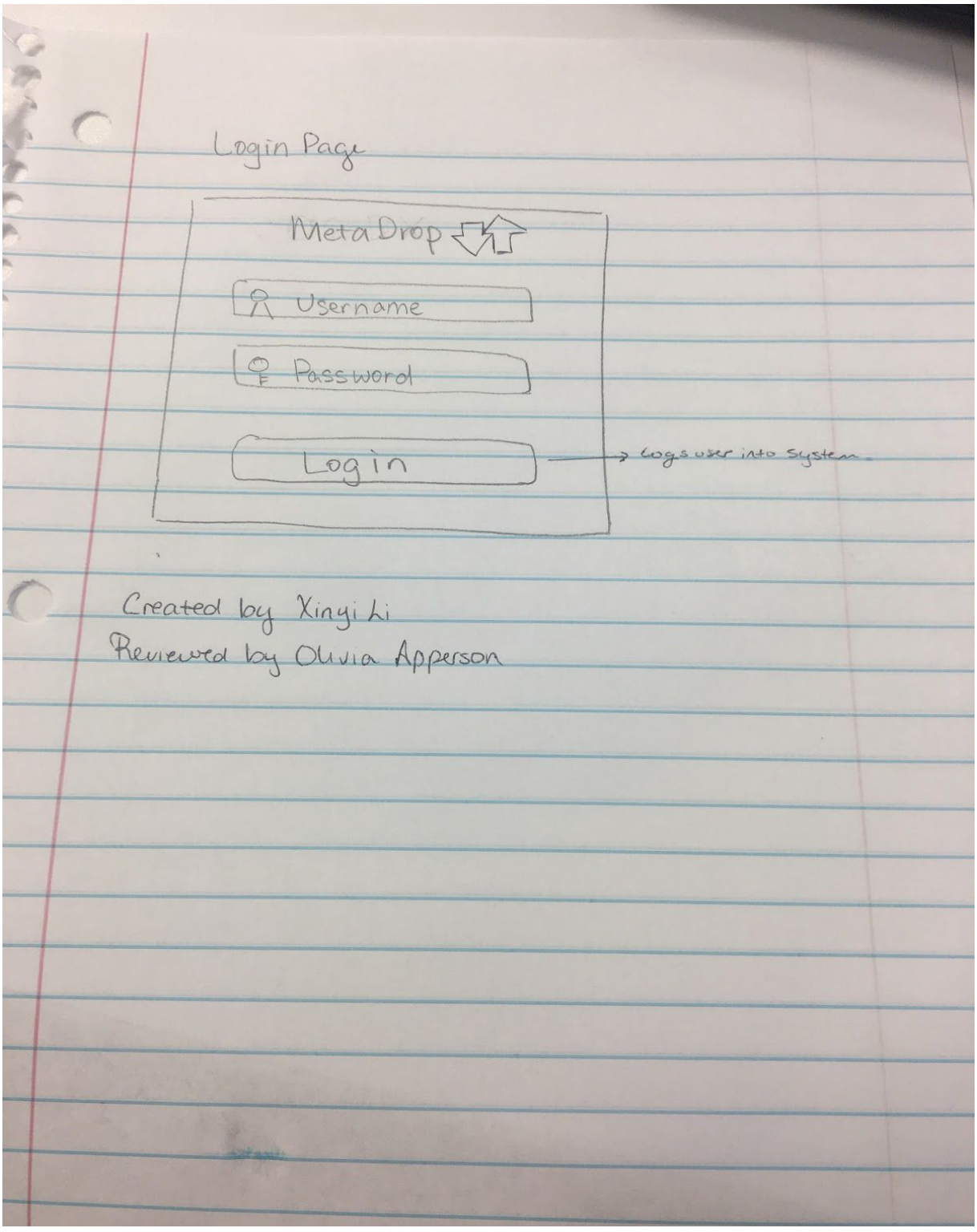
Screen Designs




Upload File Page
Logout button
Button to return to main menu
MetaDrop File Upload Page
Logout
Main Menu
Choose a file to be uploaded:
Name File
Author
Browse
Submit
Name + Author for searching purposes
File Upload box
Browse file explor button
Submit file button
Created by: Andrea McGovern
Reviewed by: Saya Ouk


Individual Metadata File Page
Meta Drop
Logout
Document View
1.
2.
3.
4.
5.
Edit
Delete
DownLoad
Created by Teddy Ivanov
Reviewed by Andrea McGovern

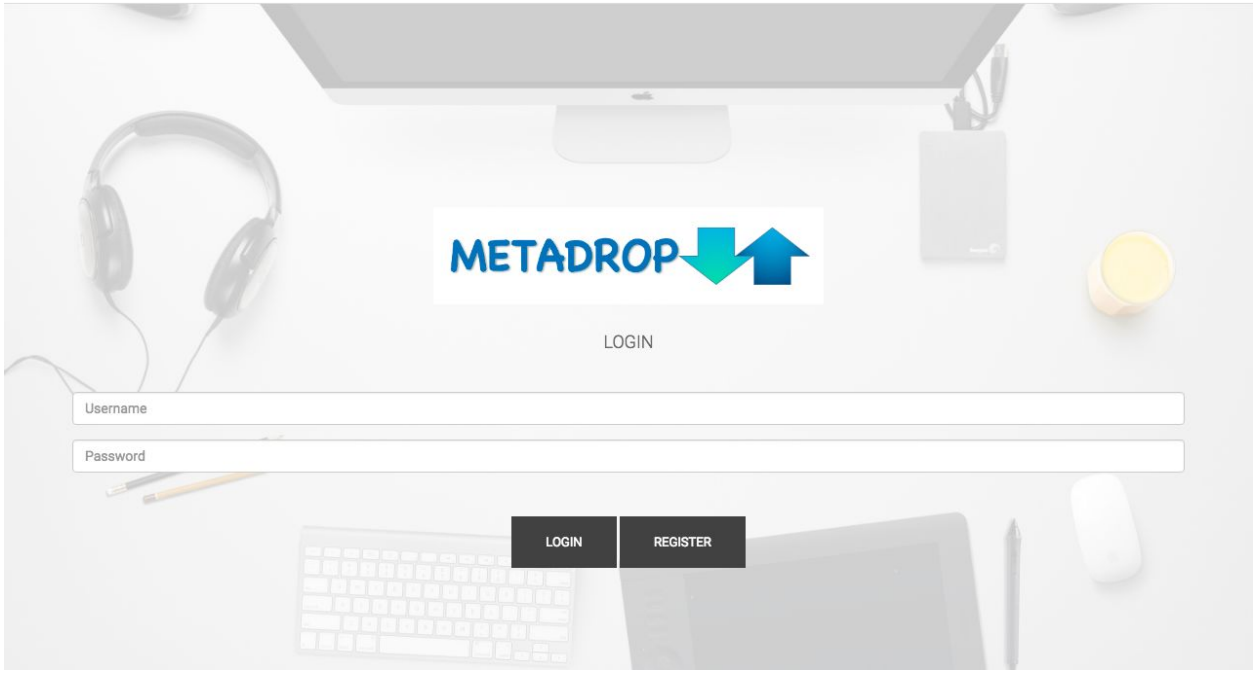

Edit Document View
Metadrop
logout
edit information
Edit Name
Edit Author
Save
1.
2.
3.
4.
5.
ability to edit file
Created by Soya Ouk
Reviewed by Xinyi Li


Login Page
MetaDrop
Username
Password
Login
→ Logs user into system.
Created by Xingyi Li
Reviewed by Olivia Apperson

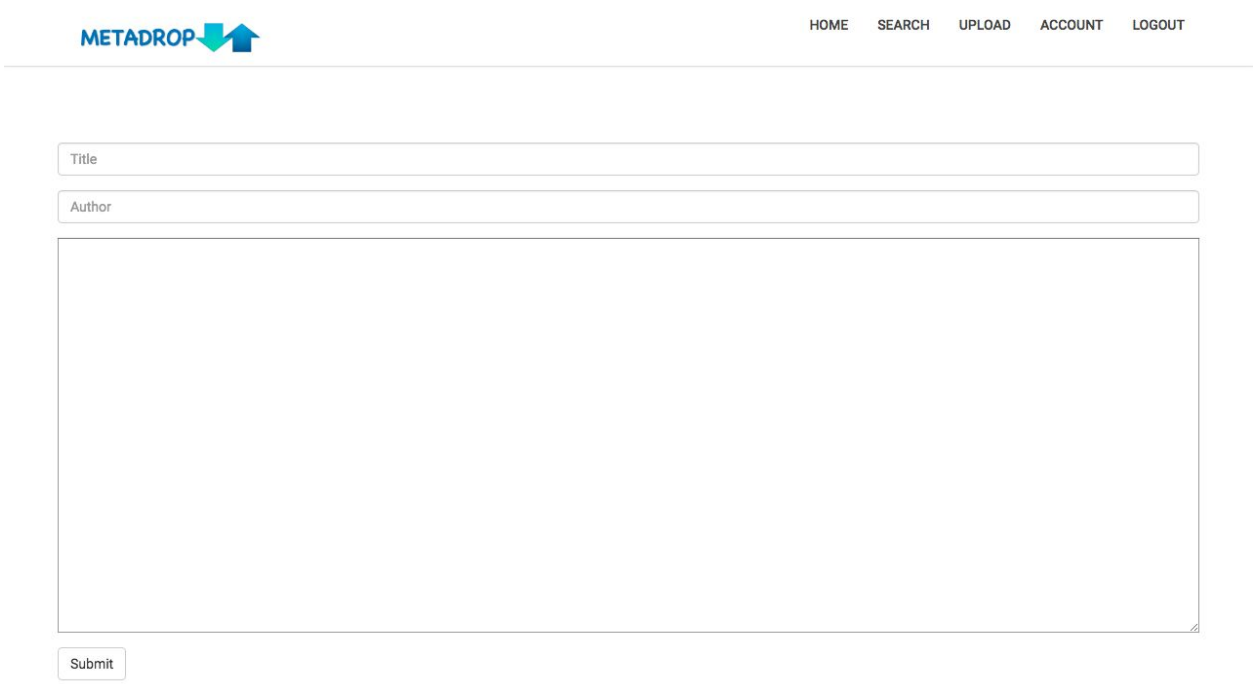
Updated User Interface

Website: http://ec2-35-160-238-84.us-west-2.compute.amazonaws.com/final_project/index.html

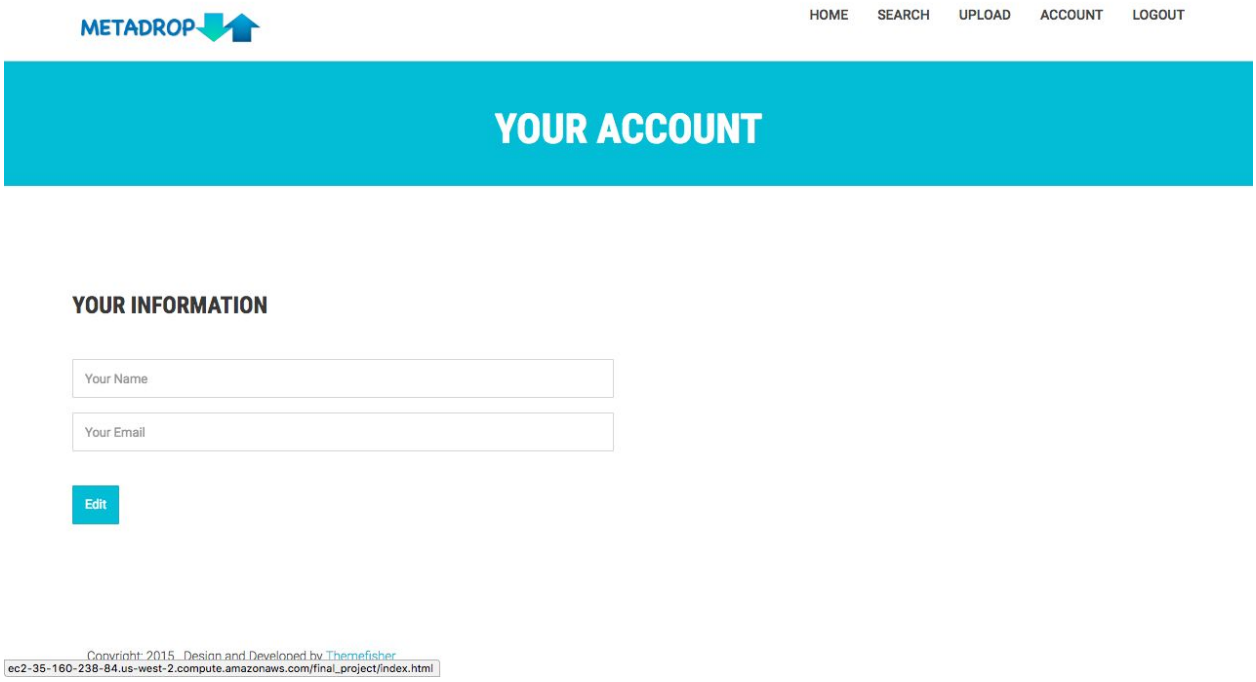
Login Page | Register Page



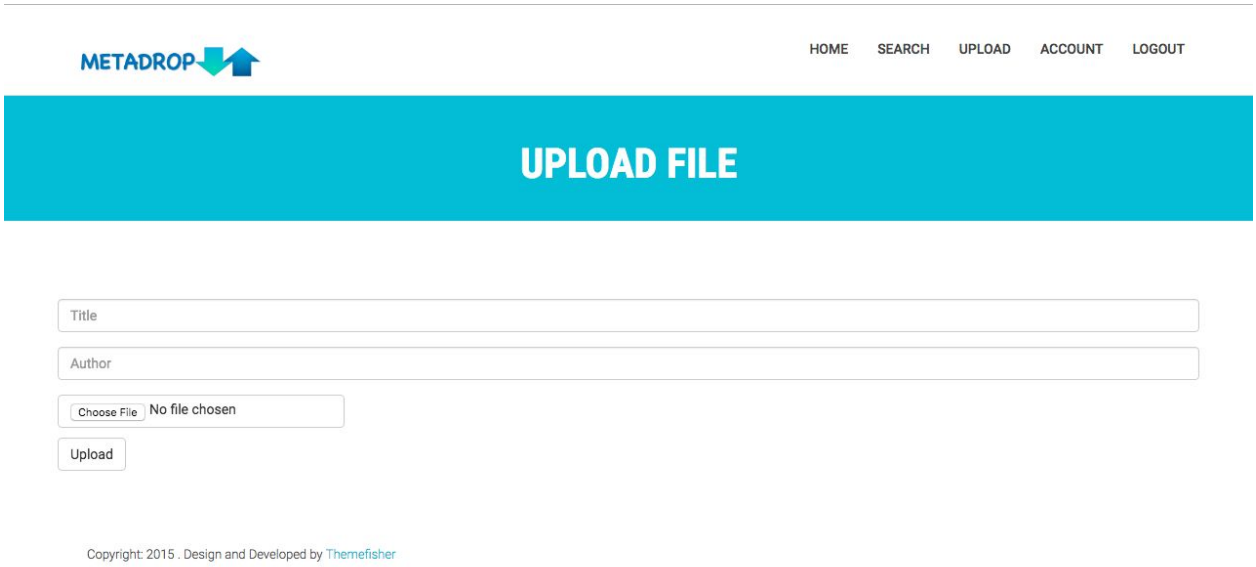
Modify JSON page



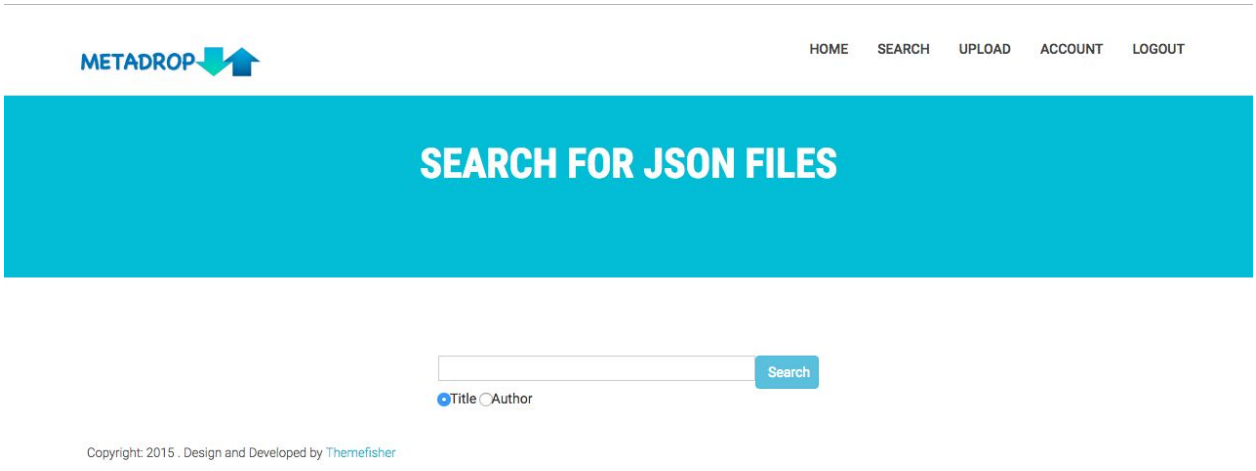
User Account Page



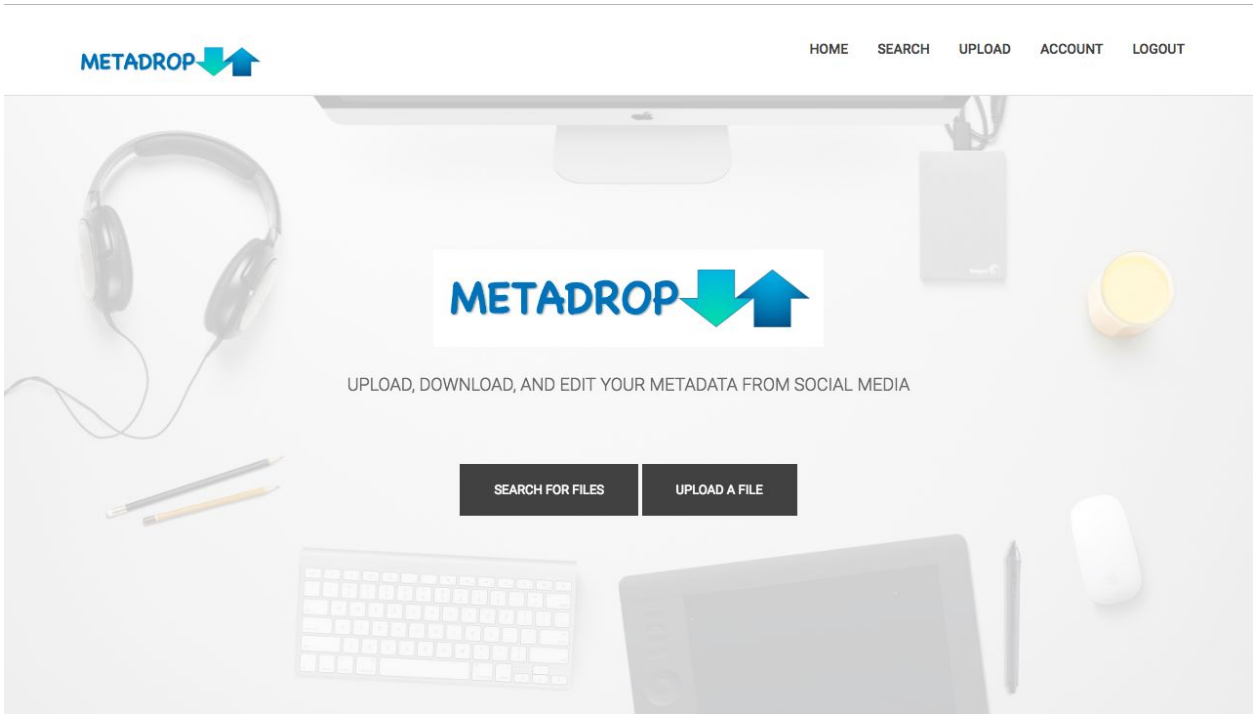
Upload File Page



Search for JSON Files Page



Home Page


METADROP
HOME
SEARCH
UPLOAD
ACCOUNT
LOGOUT
METADROP
UPLOAD, DOWNLOAD, AND EDIT YOUR METADATA FROM SOCIAL MEDIA
SEARCH FOR FILES
UPLOAD A FILE

Glossary

Created by: Soya Ouk, Reviewed by: Olivia Apperson

Computer Platform: A system that consists of a hardware device and an operating system that an application, program or process runs upon.

Computational social science: refers to the academic sub-disciplines concerned with computational approaches to the social sciences.

Functional Requirements: Details of services the software must provide.

JSON: A language easy to write and edit by humans and easy to read and parse by machines.

Metadata: a set of data that describes and gives information about other data.

Non-Functional Requirements: Constraints on the functionalities of the software.

OCDX: Open Community Data EXchange, is a metadata specification and robust infrastructure for long term sustainability.

OCDX Manifest: a bill of materials for datasets.

System Requirements: Pre-requisites that often define the operating environment.

User Requirements: Facts and assumptions about the expected outcome of the software implementation; What the software will enable a user to do or not do.

Change Log

Created by: Olivia Apperson, Reviewed by: Andrea McGovern

Version 1

- Project Overview created
- Requirements Analysis created
- Class/Function List created
- Table List created
- Screen Designed Created
- Change Log Created
- Glossary Created

Version 2 (Revised for more points)

- Glossary Updated
- NonFunctional Requirements Updated
- Functional Requirements Updated
- User Requirements Updated

Version 3 (Sprint 1)

- Screen Designs Added
- Website URL added
- Updated ERD added
- MarkDown (Wiki) link added
- Database and Storage information added