DATA REQUIREMENTS

**A. General Public User View**

**1. Data Requirements**

**DATASETS**

General public users can view both public and private datasets but are only allowed to download public datasets. Uploading datasets is not permitted unless they are registered with an organization. They can submit requests to access private datasets. After signing up, users also have the option to register and join an organization.

**USER INFORMATION**

The data stored on general public users is user ID, full name, email address, organization ID (if any), user type (normal or with organization), password for authentication, date joined, and last login time.

**2. Transaction Requirements**

**Data Entry**

* Submit request for access to private datasets
* Submit registration request to join an organization

**Data Update/Deletion**

* Cancel their own dataset access request
* Update their own profile details (e.g., email address, password)

**Data Queries**

* View list of public datasets
* View details of a public dataset (title, description, tags, license, etc.)
* View files attached to a public dataset
* View dataset ratings and comments
* Search public datasets by title, tag, or description
* View dataset categories
* View sources of datasets
* View organizations associated with datasets
* View dataset versions and release notes
* View dataset analytics (total views, downloads)
* Receive notifications (if registered)
* View locations (linked to datasets)
* Download public dataset files

**B. Organization User View**

**1. Data Requirements**

**DATASETS**

Organization users can view both public and private datasets. They can download public datasets, but must request access for private datasets from the uploader. They are allowed to upload datasets and classify them as either public or private.

**USER INFORMATION**

The data stored on organization users is user ID, full name, email address, organization ID, user type (normal or with organization), password hash for authentication, date joined, and last login time.

**2. Transaction Requirements**

**Data Entry**

* Upload a new dataset (public or private)
* Add tags to a dataset
* Add dataset comments
* Add dataset ratings
* Add a new dataset version
* Submit a request to access a private dataset
* Register or edit organization details (if allowed)

**Data Update/Deletion**

* Update their own dataset details (title, description, visibility, etc.)
* Update/delete their own dataset files
* Update/delete their own dataset versions
* Update/delete their own dataset tags
* Update/delete their own comments and ratings
* Cancel a private dataset access request

**Data Queries**

* View public datasets
* View private datasets they have access to
* View details of a dataset (description, tags, files, comments, ratings)
* View/download dataset files
* Search datasets by title, tags, or description
* View dataset categories
* View dataset sources
* View organizations associated with datasets
* View dataset analytics (total views, downloads)
* View notifications (e.g., dataset access approvals or rejections)
* View locations linked to datasets
* View dataset versions and release notes

**C. Administrator User View**

**1. Data Requirements**

**DATASETS**

Administrators have full access to all datasets. They can view, edit, delete datasets, and manage dataset access requests from users.

**USER MANAGEMENT**

Administrators can view and manage accounts of both general public and organization users. They have the authority to edit user information or deactivate accounts when necessary.

**SYSTEM ACTIVITY**

Administrators monitor overall system activity, access logs, and generate reports on dataset usage and user activity.

**ORGANIZATION MANAGEMENT**

Administrators manage organization registrations by approving or rejecting applications. They can also deactivate organizations when needed.

The data stored on administrator is admin ID, full name, email address, and hashed password for authentication.

**2. Transaction Requirements**

**Data Entry**

* Add or approve new organizations
* Approve/reject private dataset access requests
* Record administrative actions (e.g., dataset edits, user deactivations)
* Create system activity reports

**Data Update/Deletion**

* Edit or delete any dataset
* Edit user account information
* Deactivate or delete user accounts
* Deactivate organizations
* Update system activity logs if necessary

**Data Queries**

* View all datasets (public and private)
* View all user accounts and user details
* View dataset access requests
* View dataset analytics (total views, downloads)
* View system activity logs (dataset accesses, user logins, etc.)
* View organization registrations and statuses
* View notifications related to system or user actions
* Generate and view reports on system usage