

Step 1: Conceptual Database Schema for Multi-Granularity Citizen Science Platform

Key Entities and Attributes

1. Users

- user_id (PK)
- name
- email
- password_hash
- role (e.g., researcher, contributor, admin)
- created_at
- updated_at

2. Projects

- project_id (PK)
- title
- description
- owner_id (FK → Users.user_id)
- status (e.g., active, archived)
- created_at
- updated_at

3. Documents

- document_id (PK)
- project_id (FK → Projects.project_id)
- title
- content (could be text or a URL to stored files)
- document_type (e.g., report, dataset, protocol)
- uploaded_by (FK → Users.user_id)
- created_at
- updated_at

4. Contributions

- contribution_id (PK)
- project_id (FK)
- user_id (FK)
- contribution_type (e.g., observation, comment, annotation)
- content
- created_at

5. Tags

- tag_id (PK)
- name

6. Project_Tags (many-to-many between Projects and Tags)

- project_id (FK)
- tag_id (FK)

7. Collaborators

- collaborator_id (PK)
- project_id (FK)
- user_id (FK)
- permission_level (e.g., read, write, admin)

Step 2: ER Diagram Image

an ER diagram image for this schema and then prepare a PDF.

