Grant Guru

Phase 1 Review

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Today’s Topics

Project and User Feature Overview

ER Diagram

Data Dictionary

Normalization Analysis

Project Overview & User Features

Project Goal

To create a grant management system that allows users to efficiently create, track update applications for academic grants.

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- Users can opt-in to receive **email notifications** for newly posted or forecasted grants that match their interests.
- Notification frequency is customizable (e.g., daily, weekly, or monthly).

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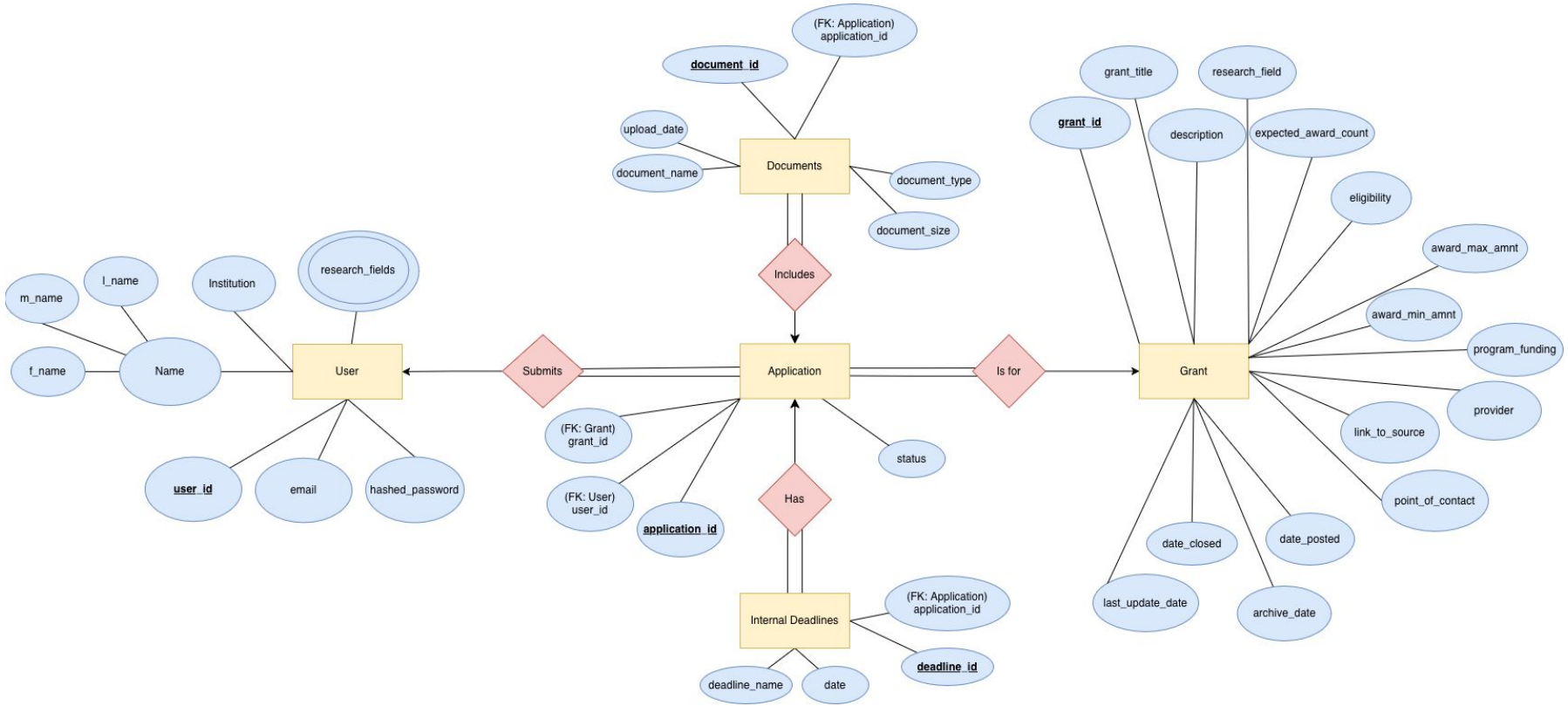
- **Rate Limiting:** To prevent abuse, external data scraping is limited to one request every five seconds per user.

ER Diagram


(FK: Application)
application_id
document_id
upload_date
document_name
Documents
document_type
document_size
Includes
research_fields
Institution
l_name
m_name
f_name
Name
User
Submits
Application
Is for
Grant
grant_title
research_field
grant_id
description
expected_award_count
eligibility
award_max_amnt
award_min_amnt
program_funding
provider
link_to_source
point_of_contact
date_posted
date_closed
archive_date
last_update_date
user_id
email
hashed_password
(FK: Grant)
grant_id
(FK: User)
user_id
application_id
status
Has
Internal Deadlines
(FK: Application)
application_id
deadline_id
deadline_name
date

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- **Constraints on Numeric Values to ensure additional domain integrity:** e.g. NON NEGATIVE constraint on the document_size attribute found in the Document relation

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- **3NF (No Transitive Dependencies):** All non-key attributes depend directly on their primary key, not on other non-key attributes. For example, `institution` depends directly on `user_id`, not transitively through another attribute like `email`.

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- **BCNF (Determinants are Superkeys):** Every functional dependency has a superkey on the left-hand side, satisfying the requirements for BCNF.

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- `UserResearchField(user_id, research_field)`

End