Aggies Care: Non profit organization projects collection systems

CSCE 606 – Software Engineering

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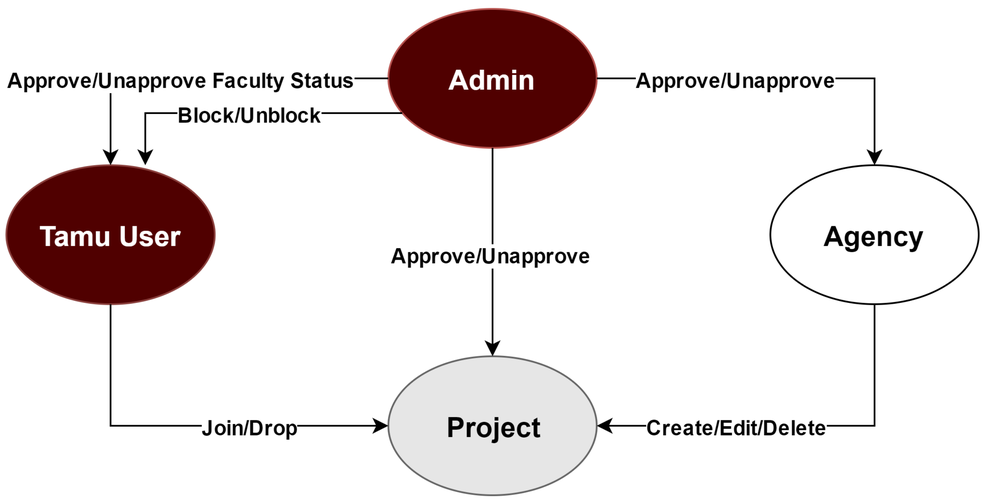
COMPUTER SCIENCE & ENGINEERING
TEXAS A&M UNIVERSITY

Description

Service learning is a powerful educational tool that not only teaches students but also gives them a chance to give back to the community with the skills they've learned. Local non-profits and other agencies often do not have the funding to hire professional consultants or they might not realize what would be possible with technical expertise. In the course of this project, we designed a website to connect agencies with A&M students and faculty through volunteer projects. Agencies can post projects which A&M students and faculty can then browse through to volunteer for projects relevant to their expertise.

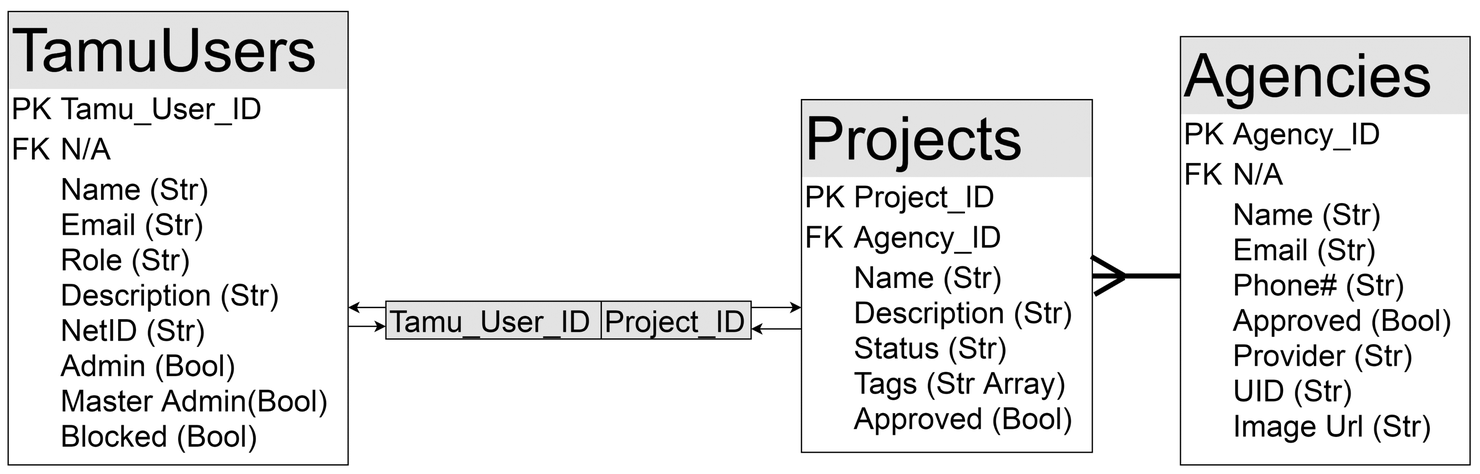
Major Use Cases

1. **General Public**
   - See a table of completed projects
2. **Agency**
   - Post projects
   - Connect with Tamu users that contribute to their projects through email
   - Login through Gmail
3. **Tamu Users**
   - View other Tamu Users
   - View Agencies
   - View Projects
   - Contribute to projects
   - Connect with Agencies through email or phone
   - Login through CAS
4. **Admins**
   - All Tamu User functionality
   - Approve/Disapprove
     - Agencies
     - Projects
     - Completion of Projects
     - Tamu Users
     - Tamu Faculty Status
     - Admin Status



Design Choices

- Models



- Gems

RackCAS	FactoryGirl
Omniauth-google-oauth2	SimpleCov
Kaminari	Sass

Challenges & Lesson Learned

Challenges due to TDD & BDD

- Learning the standard Rails test tools (Cucumber and RSpec)
- Designing testing database to be as DRY as possible (FactoryGirl, RSpec helpers)
- Ensuring entire code base is tested (SimpleCov)

Challenges due to agile development

- Selecting group of features to implement each iteration
- Coordination of each team member's tasks
- Coordination of frequent team meetings

Lessons Learned

- Tests with 100% coverage is reasonable to attain, helps catch bugs
- Pair programming is wonderful
- Using safe commit procedures (full test coverage before committing)
- Version control discipline is important.