G003 - Gremester Final Presentation

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Product Overview

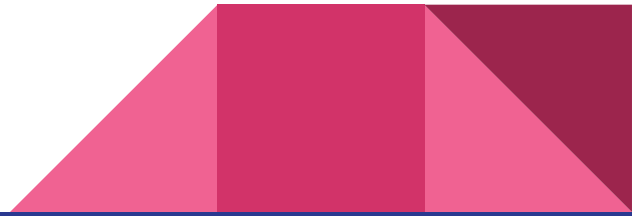
A web-based system which can provide a collaborative platform to streamline the workflow of the admission process. This system will be a one-stop platform for managing the graduate application process for students as well as faculty members.

Features Completed

- Ability to create a student profile with personal and academic details
- Look up details about top 100 US graduate schools
- Add interested potential graduate universities to students profile
- Prediction of students' chance of admission to top 100 university
- Discussion forum for students
- Filtering of potential student applications by faculty

Features Completed cont.

- Faculty evaluation of student applications
- Allow faculty to view their own evaluations as well other faculty evaluations
- View a students' university location using Google Maps
- Administrator interface for website maintenance



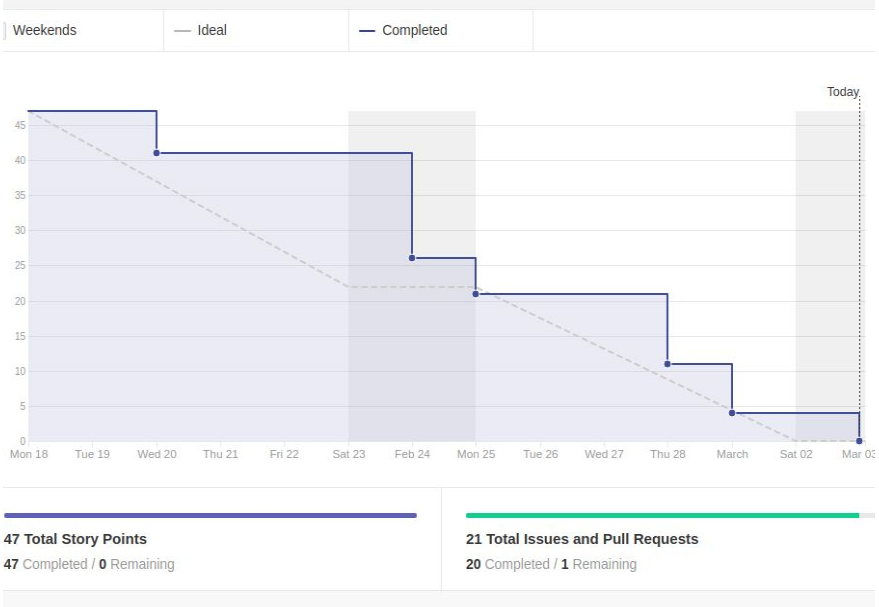
Sprint 1 Milestones

- Implementation of user authentication protocols for faculties, students and admin
- Implementation file upload from production application to google cloud storage
- Integrated Travis into our GitHub Project
- Decided to stop using Angular for front end technology

Burndown chart

Sprint 2 Milestones

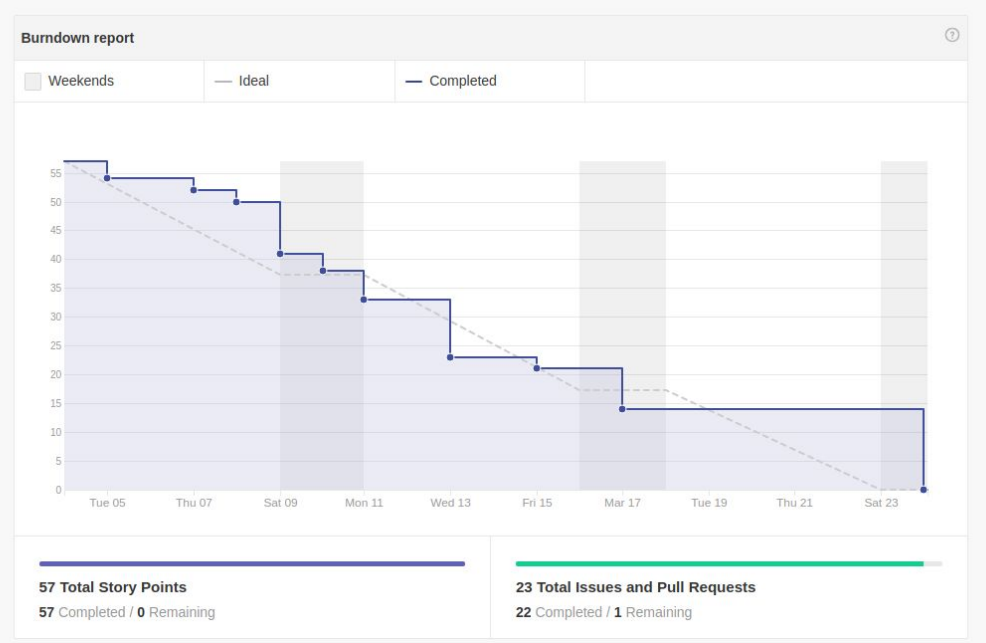
- Finished implementation for creating and editing student profiles
- Added search and filtering functions for graduate schools and programs
- Added pull request templates to provide more context of the code change and monitor test coverage
- Timely update for Zenhub issues, which helps maintain more steady burndown rate than Sprint 1
- Met with our external product owner



Burndown chart

Sprint 3 Milestones

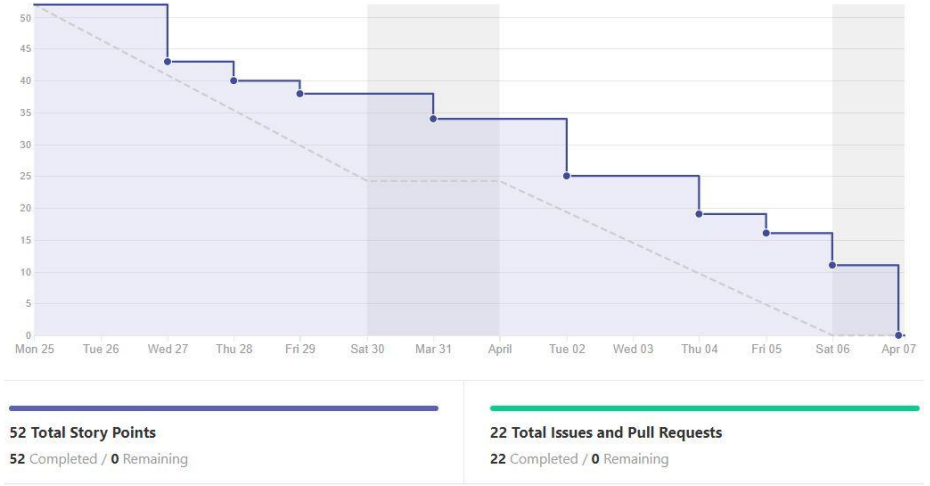
- Implementation of applications filtering by faculty members based on a range of criteria
- Allow students to edit and delete universities through my applications
- Allow students to add their education to their profile dynamically



Burndown chart

Sprint 4 Milestones

- Implementation of faculty evaluation form
- View students profiles by faculty
- Ability to add undergraduate details to profile by students
- Application evaluation by faculty
- Addition of Teaspoon to measure Javascript testing into the project



Burndown chart

Sprint 5 Milestones

- Implementation of student discussion forum
- Implementation of GPA based filtering for different grading scales
- Allow faculty to view their own evaluations as well as other evaluations
- User interface for university admission chance for students

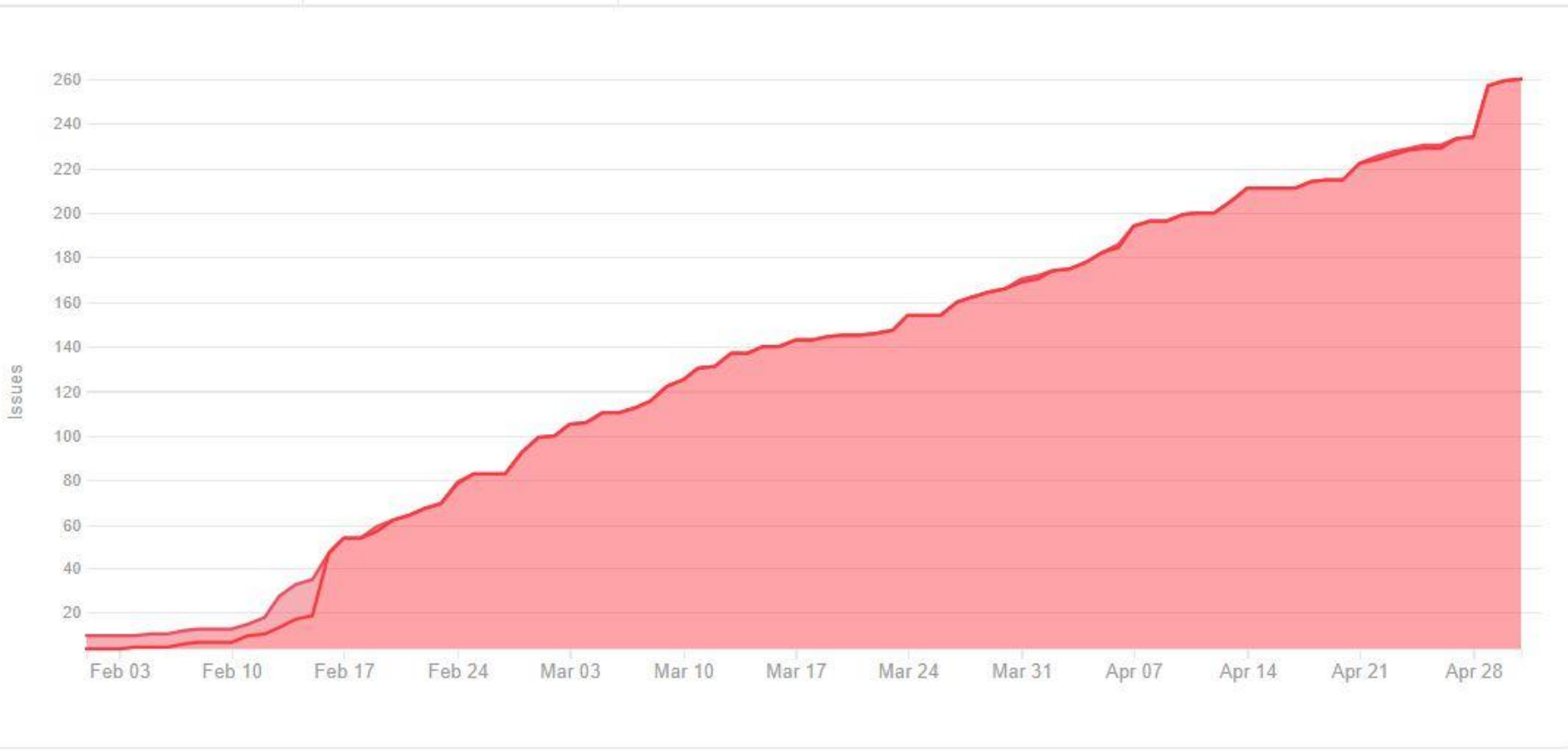
Burndown chart

Sprint 6 Milestones

- Implementation of students admission chance prediction model
- Performance Testing
- Project Tuning and Documentation

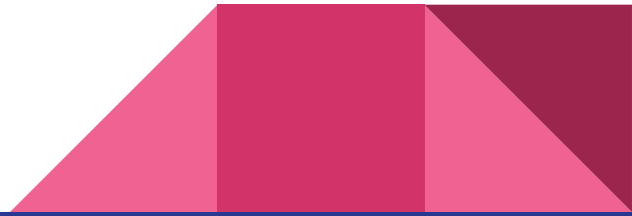
Burndown chart

Cumulative Burndown



Testing

- Code Coverage
  - Ruby On Rails - 98.14% (@20.35 hits/line)
  - Javascript - 81%
- Number of tests:
  - 563 RSpec tests
  - 136 Cucumber scenarios
- Travis CI for continuous integration
- User Acceptance Testing



Testing - Performance Testing

Selected components for testing

- Bottleneck external service - Google Cloud Storage save
- Faculty application filtering - Profiles Controller#filter >450 LOC
- Test background :
  - 1000 student/profile/profile_undergrad_uni records
  - 1300 profiles_research_interests records
  - 1900 applications

	Average time(ms)	**Response Class**
Google Cloud Storage saving	191	Close to instantaneous
Faculty application filtering	1175	Acceptable

Technology & Tools

Strengths

- Pair programming
- Regular Scrum Meetings
- Pull request template to provide more context of the code change and monitor test coverages
- Review of pull requests on time
- Timely status update in Zenhub
- Velocity Estimation and task delegation

Weakness

- Front end technology change
- Issues with Javascript testing
- Zenhub issue description
- Documentation

Lessons Learnt

- Importance of Feasibility study
- Value of Pair Programming
- Importance of Regular meetings - **3+ meetings/week**
  - 32 Hangout meetings
  - 16 In person meetings
- Importance of frequent and small commits
  - 514 commits

Demo

Future Directions

- Privacy settings for users
- Extend the application capabilities to other graduate programs outside of CS/ECE
- Schedule data scraping tools to run daily
- Chat messenger for students
- Communication medium between faculty and student
- Improve performance testing

Questions?

For more details, please visit our Wiki page