

# Program Assessment Manager

Course Assessment & Accreditation Tracking  
for the CEE Department



# Application Overview

- PSU's Civil & Environmental Engineering Department is sponsoring our team to create a course detail and assessment tracking system
- Our central goal is to ease the ABET accreditation process, by collecting and reporting course information
- The department will also make use of this information for internal reviews and tracking curriculum changes over time



# High-Level Requirements



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- Collect instructor course assessments and facilitate sharing them with other instructors
- Instructors manage their own assessments and can view assessments created by others
- Reminders sent when work needs to be done or incomplete



# High-Level Requirements

- Collect and report course details to facilitate program accreditation
  - List of ABET requirements and interface for mapping course content to those requirements
  - Export all collected data in Excel-compatible format for staff



# High-Level Requirements

- Simple and easy to use for non-technical staff
  - Web application managed by the CAT
  - Strong focus on usability during development



# Development Plan



# Development Plan

- User-story based requirements
- Iterative development process
  - Small implementation tasks
  - Regular sponsor/user feedback
- Using industry-standard tools
  - Github for version control
  - JIRA/Greenhopper for issue tracking
  - Flowdock for collaboration



# Code Acceptance Process

- “Done Criteria”
  - Code style and conventions
  - Proper tests included
  - No test regressions
  - Proper documentation
- All new code reviewed by 2+ other team members
- Accepted when no issues found



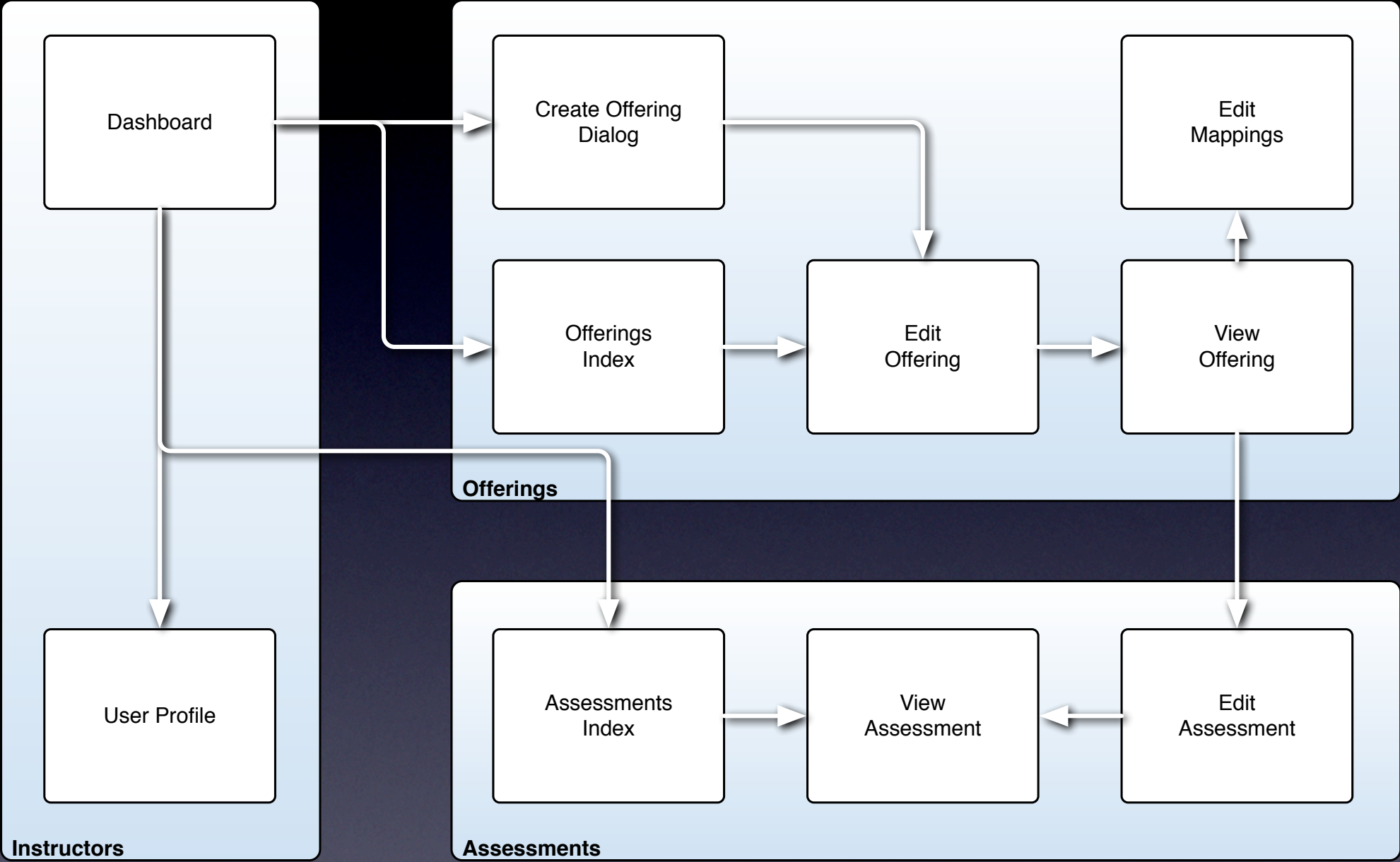
# Pretty Pictures



	December		January		February	
Milestone	A	B	C	D	E	F
Research	Dev Process and Tools	UI Toolkits	LDAP Authentication			
Users	Basic Info and Sessions	Roles and Permissions	Advanced Features	LDAP Integration		
Courses	Basic Scheduling	Mappings and Assessments	Instructor Dashboard	Other Features		
Interface	Prototyping		Implementation		Final Tweaks	
QA		Prototype Feedback	UI Usability Testing	Final Acceptance Testing		

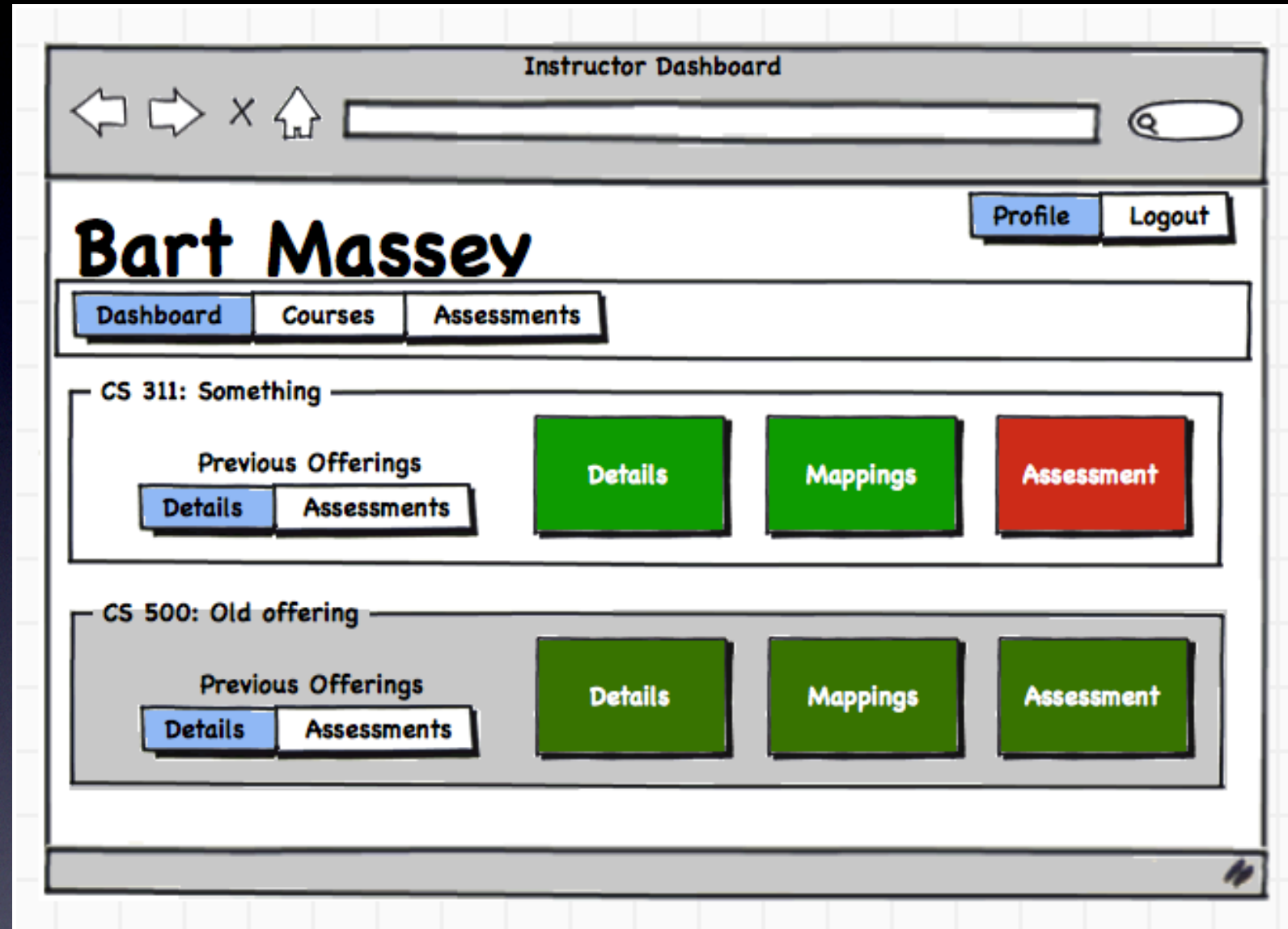
# Development Schedule





# Instructor Site Flow





Instructor Dashboard

Navigation icons: back, forward, close, home, search

**Bart Massey** Profile Logout

Dashboard Courses Assessments

CS 311: Something

Previous Offerings

Details Assessments

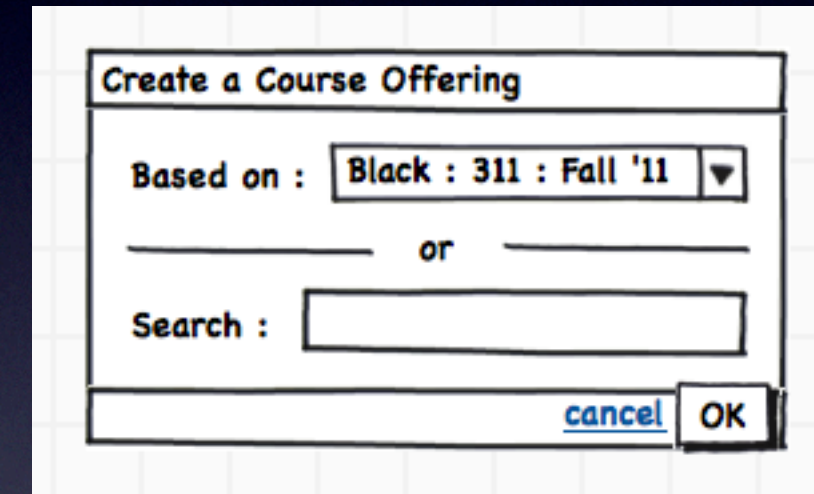
Details Mappings Assessment

CS 500: Old offering

Previous Offerings

Details Assessments

Details Mappings Assessment



Create a Course Offering

Based on : Black : 311 : Fall '11

or

Search :

cancel OK

# Interface Prototypes



# Team Organization



# Roles & Responsibilities

- Each role has a lead / co-lead
- Multiple leaders reduces risk and shares management burden
- Lead/co-lead setup prevents single point of failure



# Role Assignments

- **Lead**  
Ryan Souza
- **Systems**  
Troy Martin
- **Documentation**  
David Ford
- **Testing/QA**  
Charles Daily
- **Research**  
Hoang Le
- **UI/Design**  
Eric O'Connell



# Risk Management



# Risk Management

- **Data loss**  
Distributed version control, Github, offsite backup
- **Group member absence**  
Code review, small tasks, role assistants
- **Requirement change**  
Sponsor heavily involved in dev. process, early alert to any changes
- **Library version incompatibilities**  
Dependency management tool used



# Risk Management

- **CAT unable to host**  
Industry standard framework, fresh setup instructions included
- **Missing sponsor**  
Second department contact, Dr. Mark Jones possible backup sponsor
- **Deployment complexity**  
Testing setup regularly deployed from scratch using current instructions



# Thank you!

*Ariel Lewis, Dr. Christopher Monsere & Dr. Mark Jones*



Questions?