Corp of Cadets Final Report Spring 2024

Summary

The customer requested a web-application to track the activity plans of cadets. Cadets will use the product to schedule training activity events. Before an event can proceed, it must be reviewed by three levels of leadership to ensure that the events are planned according to the standards of corps leadership. If leadership does not approve the planned activity they can either request improvements or outright deny the plan. All levels of the organization should be able to view the activity history of the units beneath them to track their progress.

The development team created a Rails application that addresses the customer's needs. Our application offers a clean, simple frontend for Cadets and Corps Leadership to manage training activities. Cadets can create and submit training activity plans, which will then be displayed in a list, on a calendar, and in a chart. Corps Leadership can audit activities. They can approve, deny, or request improvements on the activities that have been submitted to them. When a training activity is submitted, an email notification is sent to the Outfit Leader. Then, when any Unit Leader approves an activity, an email notification is sent to the next highest level of leadership. Corps Leadership can also view the training activities of the units below them. Users with admin privileges can, additionally, create and update users and impersonate other users for debugging purposes.

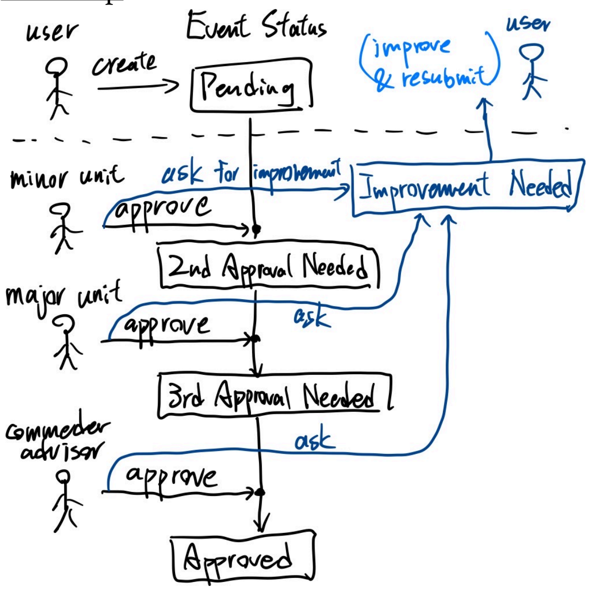
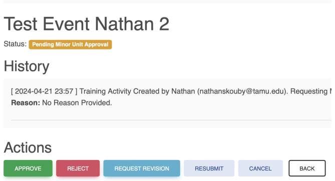
User Stories

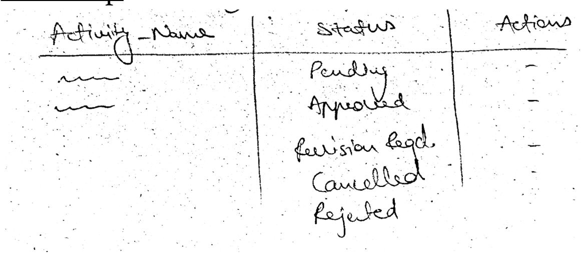
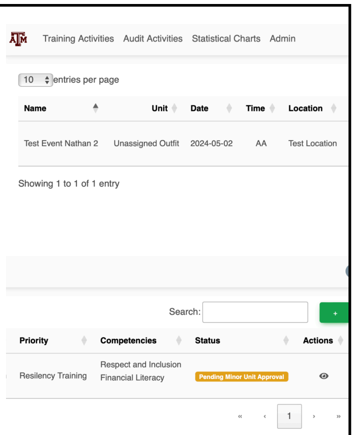
Description of all user stories (including revised/refactored stories in the case of legacy projects). For each story, explain how many points you gave it, explain the implementation status, including those that did not get implemented. Discuss changes to each story as they went. Show lo-fi UI mockups/storyboards you created and then the corresponding screen shots, as needed to explain to stories.

Story	Assignee	Story points	Status
Feature: Accessible website As a generic member of the corp of cadets	Dev	2	Deployed. App can be accessed from the

So that I can view upcoming events and plan new ones I want to be able to access the website from my browser			browser.
Feature: Specific user access As a generic member of the corp of cadets So that I can access events that are relevant to me I would expect to be able to have a way of identifying myself to the website (*this is very basic for now - just simple username and way of displaying name, i.e. single user table)	Erik	2	Login system working. This ended up getting implemented by Manas.
Feature: Group management As a user of the website So that I don't see things I don't care about I would expect to be in a variety of groups and see my memberships; groups may have a direct parent, and I'd want to see the other parent groups I'm in	Alan	5	Pushed to the next sprint, but was implemented and there is now a hierarchical group system on the website which can be viewed in the profile.
Feature: Viewing upcoming events As a user curious about upcoming events So that I can know what others are doing I want to be able to see a sorted list of all upcoming events	Manas	2	Deployed; filtered event list is viewable.
Feature: Adding new events As a training officer, unit leader, or upper corps leadership So that I can plan new events I want to be able to create new events, and I want to be able to assign my events to a specific group	Nathan	3	Deployed; events can be created and edited.
Feature: Viewing event approval	Dev	3	Deployed; status of

progression & timeline As a training officer, unit leader, or upper corps leadership So that I can understand where an event is on the approval status I want to be able to see a “workflow”			events can be seen.
Feature: Notification on attention needed As a training officer, unit leader, or upper corps leadership So that I can know when my attention is needed for an event I want to receive an email	Erik	3	Canceled, but this feature was implemented in a later story
Feature: Approval list As a training officer, unit leader, or upper corps leadership So that I can remark on events quickly I want to be able to see all events that need my attention in order, like a to-do list	Alan	3	Canceled, but this feature was implemented in a later story
Feature: Group management As a user of the website So that I don’t see things I don’t care about I would expect to be in a variety of groups and see my memberships; groups may have a direct parent, and I’d want to see the other parent groups I’m in	Evan	5	Deployed. Added groups and CSV ingestion.
Feature: New events with more details As a training officer, unit leader, or upper corps leadership So that I can plan new events I want to be able to create new events with more details like selecting Trainers, Location, OPORD upload	Johnny	2	Deployed. Events now have more details associated with them like location and status.
Feature: Viewing event approval progression & timeline	Alan	1	Deployed. Incomplete Sprint 1 Story finished in

As a training officer, unit leader, or upper corps leadership So that I can understand where an event is on the approval status I want to be able to see a “workflow”			Sprint 2.
Feature: Notification on attention needed As a training officer, unit leader, or upper corps leadership So that I can know when my attention is needed for an event I want to receive an email	Manas	4	Deployed. Emailing pending approval notification. Canceled Sprint 1 Story finished in Sprint 2.
Feature: Approval list As a training officer, unit leader, or upper corps leadership So that I can remark on events quickly I want to be able to see all events that need my attention in order, like a to-do list <u>Mock up</u>:  Event Status user create Pending (improve & resubmit) user minor unit ask for improvement Improvement Needed approve 2nd Approval Needed major unit approve ask 3rd Approval Needed commeder advisor ask approve Approved	Alan	4	Deployed. Pipeline for event approval. Canceled Sprint 1 Story finished in Sprint 2.  Test Event Nathan 2 Status: Pending Minor Unit Approval History [2024-04-21 23:57] Training Activity Created by Nathan (nathanskouby@tamu.edu). Requesting **Reason:** No Reason Provided. Actions APPROVE REJECT REQUEST REVISION RESUBMIT CANCEL BACK
Feature: Approve or Change training plan As a training officer, unit leader, or upper corps leadership So that the event does not count towards	Johnny	3	Deployed. Training events have options to be approved and changed.

the total goal number for that guidance I want to confirm/change training plan, which are not yet executed Mock up:  Activity_Name | Status | Actions Pending Approved Revision Reqd. Cancelled Rejected			 Training Activities Audit Activities Statistical Charts Admin 10 entries per page Name | Unit | Date | Time | Location Test Event Nathan 2 | Unassigned Outfit | 2024-05-02 | AA | Test Location Showing 1 to 1 of 1 entry Search: + Priority | Competencies | Status | Actions Resiliency Training | Respect and Inclusion Financial Literacy | Pending Minor Unit Approval | « ‹ 1 › »
(Technical Debt) Move remaining tests to Rspec	Manas	1	Deployed.
Feature: Import User Data into the System As the administrator of the website So that each user can be correctly set up I want to be able to bulk import the user data as a CSV file into the system	Evan	4	Deployed: Library functions that provide an option to ingest a CSV file and populate the user database.
Feature: Interactive Activities Calendar As a training officer, unit leader, or upper corps leadership So that I can see all approved activities planned by a certain unit on the calendar. And I can see activities on a certain date when I click. I want to be able to see an interactive monthly calendar, which is clickable for each date and can also be filtered by unit.	Dev	3	Deployed: Interactive calendar that loads under the Training Activities tab.
Feature: Statistical charts As a training officer, unit leader, or upper corps leadership So that I can view the status and completion of the CMDTS goals that a unit is supposed to achieve. I want to	Nathan	3	Deployed: Statistical charts rendered as color coded bar graphs.

be able to see the bar graph and sheet of completion time and training type for a certain unit. (Each type of event has a unique color.)			
Feature: Styling of the app As a user of the website So that the app looks professional, neat, and in the A&M style. I want to be able to see a pic of Reveille on the home page, the core emblem, and a maroon and white color style on all the pages.	Johnny	3	Deployed: Website renders with CSS styling in Aggie colors and design.
Feature: Reason box for canceling an event As a training officer, unit leader, or upper corps leadership I want to be able to type in a text box when canceling an activity So that I can justify the reason for cancellation.	Dev	1	Deployed. Cancel reason dialogue box now needs to be filled out when canceling an event.
(Bug fix) Sometimes, when the user goes back to the home page, the system logs the user out	Manas	1	Ended up being fixed by Alan.
(Bug fix) Sometimes, error messages showed up when rejecting or revising an activity, but the request still went through.	Alan	1	Bug squashed.
Feature: Streamlined Navigation and Responsive Design Enhancements As a user of the website, So that I can navigate the app more efficiently and enjoy a seamless experience across different devices, I want the navigation to be intuitively organized, focusing on mobile responsiveness, and ensuring that elements	Dev	4	Deployed. Navbar polished, and calendar glitches resolved.

are optimally displayed on both desktop and mobile devices.			
Filtered view of training activities As a user of the website, So that I have privacy and so that I only see what I need, I want to only see events that are relevant to me in the “Training Activities” tab	Evan	1	Deployed. Events are only seen if they are for a user’s group.
Approval process integration As a an auditor, So that I can efficiently work with events, I expect to get an email when it is time for me to review an event, And to only see events on the “Audit Activities” tab that I have access to, And for events that are rejected to get returned to the user who submitted them with an email	Alan	5	Deployed. The notification system is integrated with the
Creation of an admin account to switch roles/views As an admin, So that I can effectively troubleshoot roles/views, I want to be able to see all activities and be able to enter a user’s email and “become” them	Nathan	2	Deployed. Admins can now impersonate users, which drastically increases their ability to see and control what is happening. Also lets admins designate other admins.
User management As an admin, So that I can manage users, I want to be able to insert, update, and	Manas	3	Deployed. Most user management can now be done through the admin panel (editing, group management, CSV

delete users/groups			upload).

Roles

Sprint 1

- Product Owner: Johnny Le
- Scrum Master: Evan Krohn

Member	Stories	TOTAL
Nathan Skouby	Adding new events (3), Viewing upcoming events (2)	5
H. Chao		
Manas Sahu	Specific User Access (2)	2
Dev Garg	Accessible website (2)	2

Client Meeting: Feb.11, 4 PM

- Show the client the current functionality of adding an event and viewing events that are upcoming (on the timeline). Additionally, showcased the Google OAuth allowing only TAMU accounts through the system on a deployed version. The client gave feedback on how the adding event system worked where we should add more fields that an event requester can input (file, description, etc..).

Sprint 2

- Product Owner: Nathan Skouby
- Scrum Master: Dev Garg

Member	Stories	TOTAL
Johnny Le	Approval list (2), Approve or Change training plan (3), New events with more details (2)	7

H. Chao	Approval list (2), Viewing event approval progression & timeline (1)	3
Manas Sahu	Notification on Attention Needed (4), Move remaining tests to Rspec (1)	5
Evan Krohn	Group management (5)	5

Client Meeting: March 18, 7 PM

- Showcased the current status of the product. Demonstrated the updated view of the event auditing process and the more detailed events. Demonstrated the notification-triggering functionality. Displayed the profile information including unit membership. They were satisfied with the progress of the application so far. They requested several additions including providing a justification for event cancellation, guidance on stylization, creating a calendar for events, displaying statistical charts for completed events, and the ability to import the real cadet info into the app.

Sprint 3

- Product Owner: HsuehChien Chao
- Scrum Master: Manas Sahu

Member	Stories	TOTAL
Nathan Skouby	Statistical charts (3)	3
Evan Krohn	Import user data from CSV onto the system (4)	4
Johnny Le	Styling the app (3)	3
Dev Garg	Interactive activities calendar (3), a dialogue box for reason for canceling an event (1)	4
H. Chao	Revising activities changes (1), login (1)	2

Client Meeting: April 3, 8:30 PM

- Showcased a near-final first phase of the project. They were satisfied with the progress so far. Impressed with how the app was stylized or looked. Requested that views at least be different by the end of the project establishing that hierarchical relationship.

Sprint 4

- Product Owner: Johnny Le
- Scrum Master: Evan Krohn

Member	Stories	TOTAL
Nathan Skouby	Creation of an admin account to switch roles/views(2)	2
H. Chao	Approval Process Integration(5)	5
Manas Sahu	User management(3)	3
Dev Garg	Streamlined Navigation and Responsive Design Enhancements (4)	4
Evan Krohn	Filter View of Training Activities(1)	1

Client Meeting: April 29, 5 PM

- Showcased the final backend features and prepared the client for the handoff process and what the timeline should look like for the next semester.

<u>BDD/TDD Process</u>

BDD/TDD

- For the Behavior-Driven Development(BDD) process, we gather the requirements from our client and write cucumber scenarios for each feature. Then, we implement the features to make the scenario pass.

- Before implementing the features, we separated each feature into pieces of functionality and wrote RSpec tests to test each functionality. When developing the features, we wrote the minimum amount of code to make the test pass.
- Although writing tests is time-consuming, it does help us enhance code quality. During the refactoring phases, we can refactor the code with confidence, knowing that any introduced errors will be caught by the tests.

Configuration Management Approach

- We use the main branch as the official repository of the project's codebase. It represents the source code of the product that is currently in production, which is always stable and deployable.
- We created a dev branch as a pre-production integration branch where features, enhancements, and bug fixes are merged before being released to production. Developers raise a PR to merge their feature branches into the development branch once they pass initial tests in their local environments. At the end of each sprint, we'll merge the dev branch to the main branch.
- Developers create feature branches when developing a new feature. Each feature branch is dedicated to a specific task and is branched off from the dev branch. Once the feature is complete and passes tests, it is reviewed and merged back into the dev branch.

Issues in the Production Release Process to Heroku

- We faced an issue where our deployed application on Heroku cannot be accessed from the school's network, such as the "TAMU WiFi" or "TAMU Visitors," while it is accessible from other networks. The reason is still unknown.

Repository

The "jwonnyleaf/Cadet-Activity-Management" repository contains the code necessary to develop, test, and deploy the Cadet Activity Management application.

This repo contains several directories that contain code for the app, testing, and documentation. The /app directory contains the code for all of the controllers, models, views, and other pieces of a Rails application. The /config directory contains all of the files to properly set up the development, testing, and deployment environments as well as the route definitions.

The /db directory contains the migrations, schema, and seeds for the databases used by the application. The /features directory contains all of the Cucumber test code, and /spec contains all of the Rspec test code. The /documentation directory contains all of the reports that have been produced throughout the development of this project. In the / directory the Gemfile contains all of the gems used in our app, the Procfile contains deployment functions, and the README provides all of the necessary information for configuring a development environment and deploying the application.

The process to deploy the Cadet Activity Management application is outlined in the provided README. First, you must clone the repository and install the necessary libraries. Then, you must set up Google OAuth following the provided step-by-step instructions. Next, you need to run a migration to ensure your db schema is up-to-date. Now, you are ready to deploy. On Heroku, create an app, install the Heroku Postgres add-on, and configure the Ruby and Node.js buildpacks. Then, set the Rails Master Key according to the value obtained in the OAuth setup. Next, add the Heroku remote using “heroku git:remote -a cadet-activity-management” after logging into the Heroku CLI. Finally, push the code to Heroku using “git push heroku <branch-name>:master”. Once the app is deployed, you can monitor it with the CLI or dashboard. For a more detailed description please consult the README.

Links

Project Management Tool Page:
GitHub Repository: https://github.com/jwonnyleaf/Cadet-Activity-Management
Heroku Deployment: https://cadet-activity-management-7ed1c42c26df.herokuapp.com/
Presentation and Demo Link:
https://docs.google.com/presentation/d/1ctlmUyjeghYHq99mLHpHU5no1BDw1AtEX2UMaxJ2gIo/edit?usp=sharing
https://drive.google.com/file/d/1XU8IHPw_lsK97PwQ2sxjzBe_JW_rMb2r/view?usp=drivesdk
https://drive.google.com/file/d/1IOJdG-KlxCiCLOtMUMKHWm3xyTtYKgXW/view?usp=drivesdk