



CyberCRM

Sprint 4 Retrospective

August 1, 2024

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CyberCRM



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Executive Summary

This is a CRM (Customer Relationship Management) system to use for tracking cybersecurity students so information could be easily accessible to program directors. The primary objective is the ability to pull up a profile page with information on any given student while also having the ability to add or update information on the student. The secondary objective is to be able to run reports on given people or organizations with filters. This could include a list of all the students who have taken a certain certification or in a certain cybersecurity organization.

There will be Role-based access control (RBAC) and have three primary roles: Super User, Program Director, Student Worker. Program Directors could be assigned super user access and student workers have the least permissions with only the ability to add or read in certain specified areas. Program directors by default will only be able to view their program information with their student's information.

Sprint Information

Links

Website: <https://cybercrm-7ccb791b98d3.herokuapp.com/>

Pivotal Tracker: <https://www.pivotaltracker.com/n/projects/2705347>

GitHub: <https://github.com/tamu-edu-students/CyberCRM>

Google Drive: <https://drive.google.com/drive/u/2/folders/0APLVAcl1WKtoUk9PVA>

Code Climate: <https://codeclimate.com/github/tamu-edu-students/CyberCRM>

Sprint Dates

7/20– 7/29

Sprint Goal

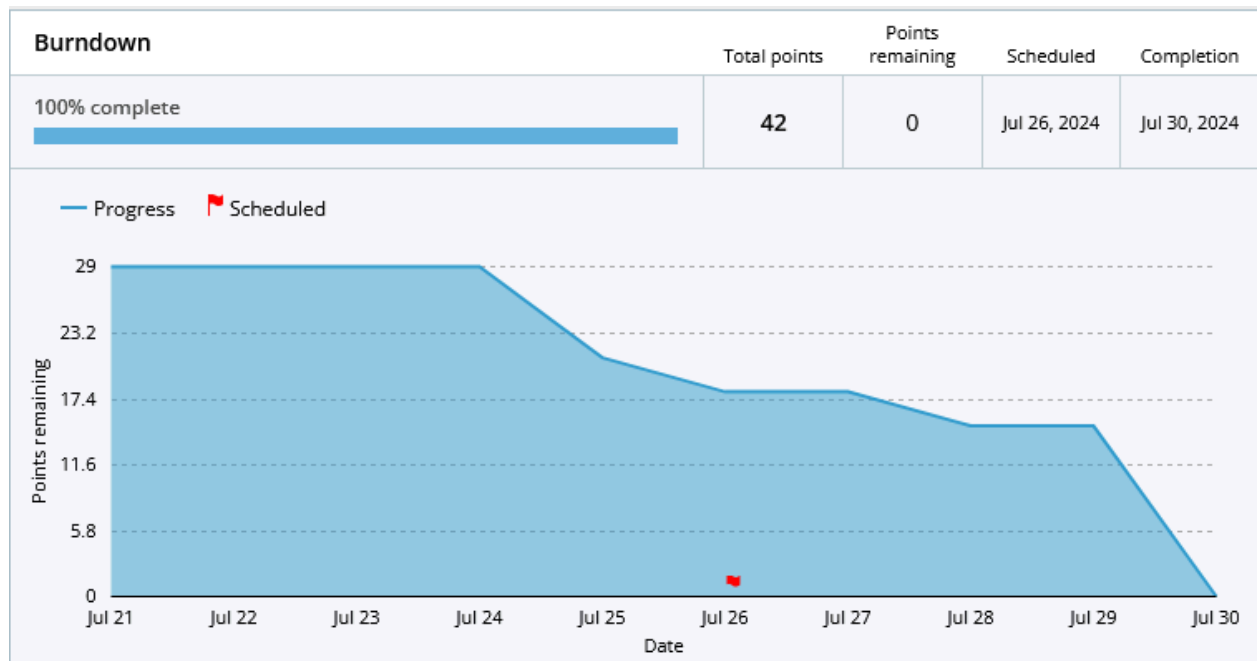
The goal of this sprint is to enhance and finalize the functionality of the CRM system while addressing any issues from previous sprints so we can hand in a neat project for the next team. This sprint is going to improve custom attributes for program directors, implement full CRUD functionality for student notes, including filtering, sorting, and marking notes as private. We will also be strengthening Access control to ensure proper permissions for Super Users, Program Directors, and Student Workers. The delete option will also be replaced with a deactivate feature for student records. Logging for all actions performed on the website will be added to enhance security and traceability. The



navigation bar will be improved to display user information and allow users to switch views based on their roles. Essentially this sprint aims to ensure the CRM system is fully functional, secure, and user-friendly, ready for final deployment.

Burn Down Chart

Note: Generated by Pivotal

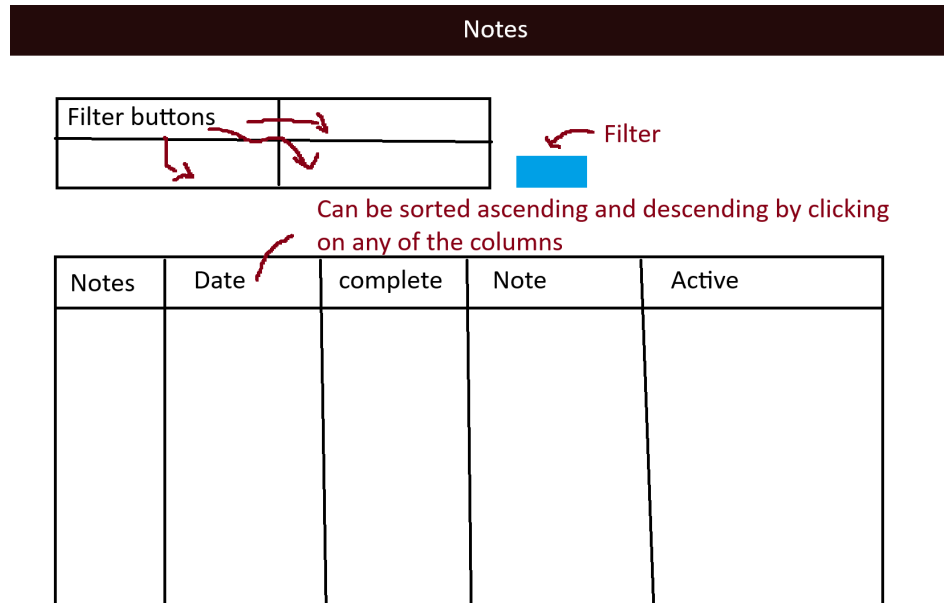




Design Diagrams (UI and ERD)

UI Design for Notes

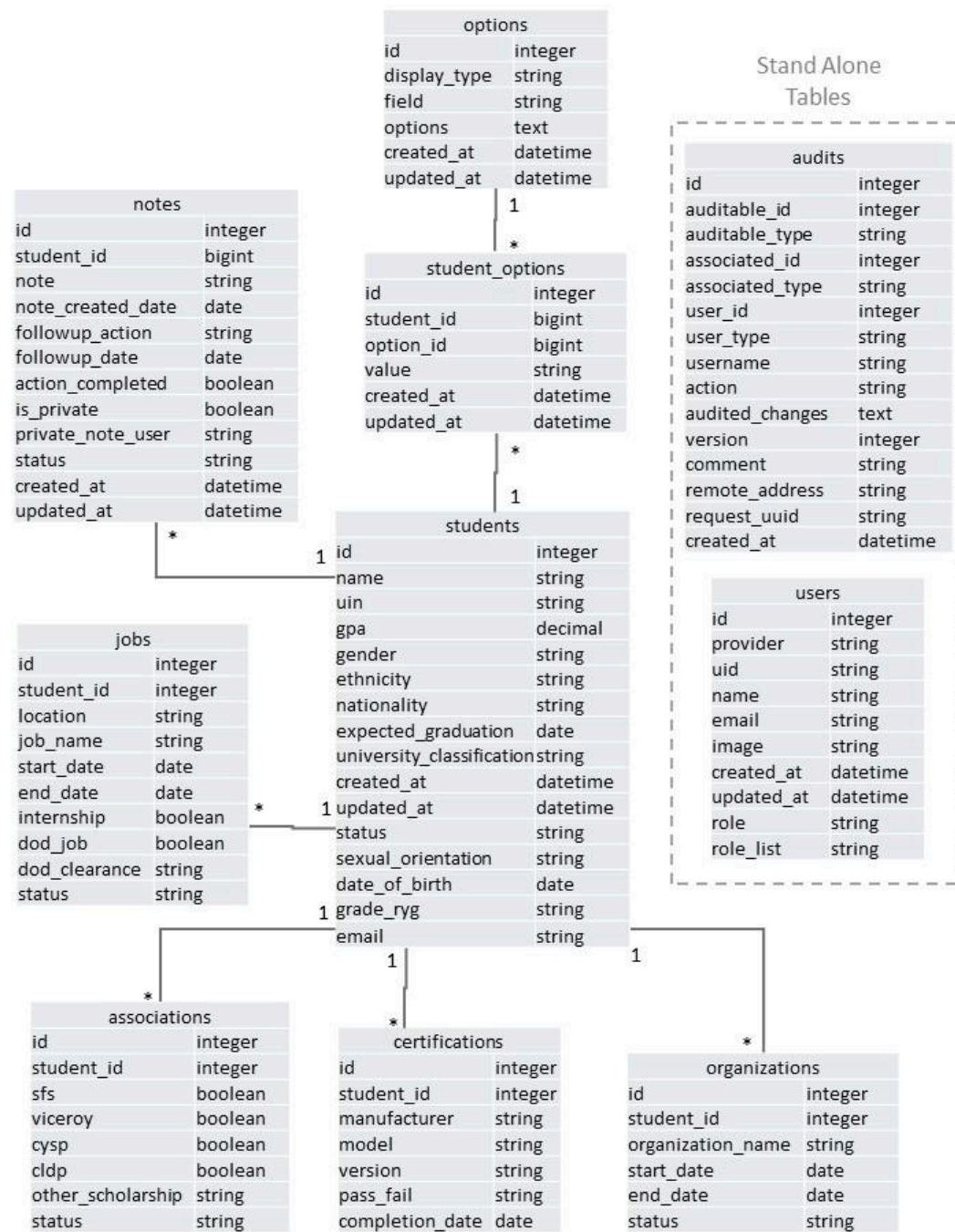
This is a rough sketch of how the filters would look alongside the notes table.



Continue to next page



Entity-Relationship Diagram





Code and Test Evaluation

Rubocop

There were no offenses on Rubocop:

```
Inspecting 62 files
.....

62 files inspected, no offenses detected
```

Note that there were some areas where we told rubocop to ignore the recommendations. This is because how our project is formatted and therefore would need to exceed 10 lines in some areas.

Summary

Jobs

- test
- lint

Run details

- Usage
- Workflow file

lint

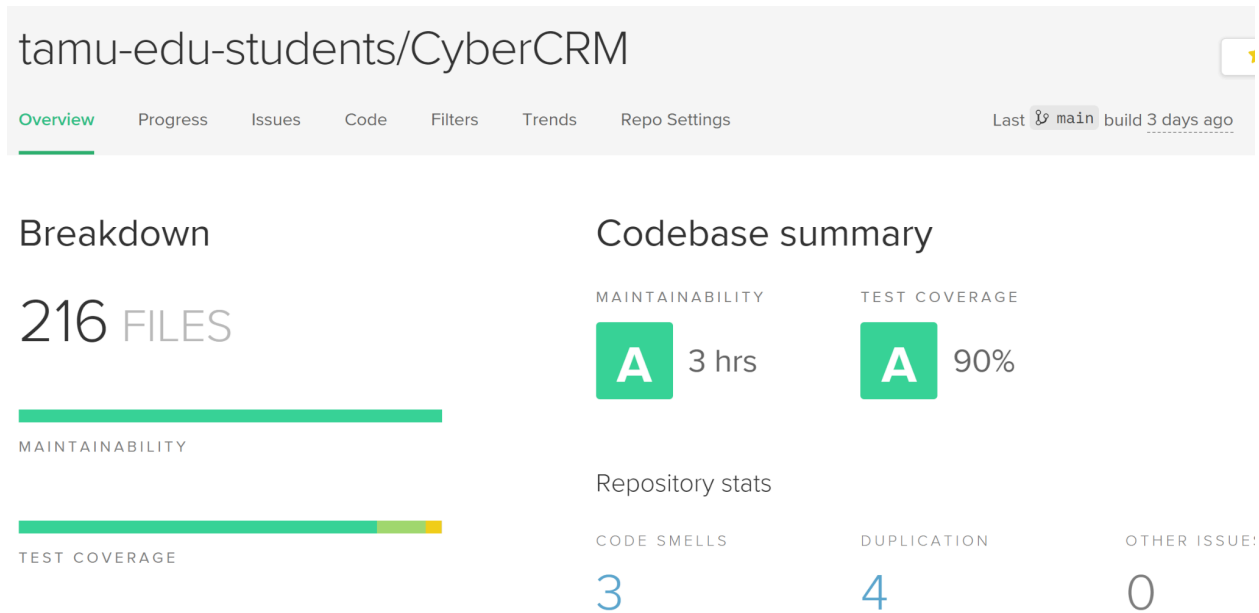
succeeded 3 days ago in 32s

- > Set up job
- > Checkout code
- > Install Ruby and gems
- > Install dependencies
- > Install Yarn
- > Install JavaScript dependencies
- > Security audit dependencies
- > Security audit application code
- > Lint Ruby files
 - 1 ▶ Run bundle exec rubocop -A --parallel
 - 4 Inspecting 62 files
 - 5
 - 6
 - 7 62 files inspected, no offenses detected
- > Post Checkout code

Note that the security audit is also passing.



Code Climate



A score of “A” for maintainability was achieved and Code Climate was able to be connected. The test coverage was connected and over 90% code coverage was achieved.

Coverage

Here is the RSpec and Cucumber testing which have an overall coverage of 90.32% code coverage.

RSpec testing:

Command: ``bundle exec rspec``

```
.....
Finished in 1.65 seconds (files took 2.13 seconds to load)
84 examples, 0 failures

Coverage report generated for Cucumber Features, RSpec to /home/noam/CyberCRM/cybercrm/coverage. 420 / 465 LOC (90.32%) covered.
```

Run time: 5 seconds

90.32% of lines covered in testing total.

Cucumber testing:

Command: ``bundle exec cucumber``



```
73 scenarios (73 passed)
660 steps (660 passed)
0m12.521s
Coverage report generated for Cucumber Features, RSpec to /home/noam/CyberCRM/cybercrm/coverage. 420 / 465 LOC (90.32%) covered.
```

Run time: 19 seconds

Customer Demo

The product owner met with the customer over Zoom on 7/31/24 at 5:45pm to show him the current iteration.

User Stories

User Stories

General User

As a general user, I want to have home page content, so that I have basic knowledge of students.

As a general user, I want a consistently and well designed interface, so that I can navigate the website easily.

As a general user, I want to be able to switch my current view to another role, so that I can see what other users can see

Program Director

As a Program Director, I want to be able to deactivate students, so that I can make the database appear less cluttered as students leave.

As a Program Director, I want to toggle columns on or off, so that I can have a less cluttered table view.

As a Program Director, I want to be able to add custom attributes, so that I can see them on the table and export them.

As a Program Director, I want to see aggregated student statistics, so that I can see student data.

As a Program Director, I want to add more values to existing fields, so that I can add more attributes.



As a Program Director, I want to connect related tables such as programs (SFS, CLDP, VICEROY), so that I can maintain data integrity and relationships.

As a Program Director, I want to be able to filter student notes so I can see relevant details.

As a Program Director, I want to be able to create a note, so that I can record new information about students.

As a Program Director, I want to be able to edit a note, so that I can respond to changes regarding a student's situation.

As a Program Director, I want to be able to deactivate / soft delete a note, so that I can remove irrelevant information from the UI.

As a Program Director, I want to be able to make a note "private", so that I can set them to not be able to be read by other users.

As a Program Director, I want to make only authorized users be able to access private notes, so that users can be sure that their notes can't be read by those they haven't specified.

Super User

As a super user or program director, I want to see audit logs, so that I can have records of actions taken.

Work Done

Sprint Achievements

- Added ability to change current viewing role
- Adding superuser's ability to change the possible roles allowed for each user to view
- Added customizable charts to display student data
- Added ability to privatize notes

Blockers

- CodeClimate test coverage
- Lint testing



- Working on same code portions causing merging issues

Project Management

Team Roles

Christopher Muniz

Filter student notes

Scrum Master

Matthew Atanas

Switch views

Noam Gariani

Archives page/Deactivate Students, home page content and overall design, toggle columns for student table

Patrick Cannell

Create Note

Edit Note

Soft Delete

Filter Private Note

Will Tatum

Custom Options, Statistics, and Audit logs

Product Owner

Team Information

Story Points: 42 total

Matthew Atanas	3
Patrick Cannell	8
Noam Gariani	12
Christopher Muniz	5
Will Tatum	14



Development Methodology

Our development method is Agile. We had discussed as a team having a stand-up meeting every weekday at 5:45pm. Along with this, we had meetings scheduled with Professor Romero every Wednesday and Dr. Ritchey every Thursday at 5:30pm.

SCRUM Meetings:

1. Monday | 5:45 pm – 6:00 pm | Note: Through Discord.
2. Tuesday | 5:45 pm – 6:00 pm | Note: Through Discord.
3. Wednesday | 5:45 pm – 6:45 pm | Note: Professor Romero Meeting this day.
4. Thursday | 5:30 pm – 6:30 pm | Note: Professor Ritchey Meeting this day.
5. Friday | 5:45 pm – 6:45 pm | Note: Through Discord.

Additionally, we created meetings as needed based on the workload. This included additional working hours for members. This was not limited to full group meetings and could be set by people within the group to work together. Also, we used discord to communicate between the team members to coordinate all tasks and work for the project.

By using Pivotal Tracker, we had the backlog and stories with all the needed planning materials hosted on the site. This made going through SCRUM Agile more seamless as it helped with planning and assigning work as well as creating automated graphs such as burn down charts.

We used a product backlog that included tasks that needed to be done. These should be assigned to all developers on the team. Every sprint there were tasks from the product backlog and at the end of every sprint we conducted backlog refinement. By doing this we stayed on top of the needs of our project.

Customer Meeting

Date: July 31, 2024

The team met with John Romero for about 30 minutes. We went through the entirety of the website and he particularly liked the implementation of the audit logs and the ability to add custom options. Topics discussed were custom options, notes, changing roles without logging out, custom fields, student statistics, archives, filtering for the notes, and audit logs. He wanted the ability to change an option that was added in case it was misspelled and some other minor changes through the demo.

He mentioned that he wants continued work on this project so that the Cybersecurity Center could use this application. The survey will be sent out pending the completion of the final report.



Sprint Backlog

- As a general user, I want to have home page content, so that I have basic knowledge of students.
 - Assigned: Noam Gariana
 - Completed: Jul 21, 2024
- As a general user, I want to have home page content, so that I have basic knowledge of students.
 - Assigned: Noam Gariana
 - Completed: Jul 21, 2024
- As a general user, I want a consistently and well designed interface, so that I can navigate the website easily.
 - Assigned: Noam Gariana
 - Completed: Jul 22, 2024
- As a general user, I want to be able to switch my current view to another role, so that I can see what other users can see
 - Assigned: Matthew Atanas
 - Complete: Jul 28, 2024
- As a Program Director, I want to be able to deactivate students, so that I can make the database appear less cluttered as students leave.
 - Assigned: Noam Gariana
 - Completed: Jul 23, 2024
- As a Program Director, I want to toggle columns on or off, so that I can have a less cluttered table view.
 - Assigned: Noam Gariana



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- Completed: Jul 24, 2024
 - As a Program Director, I want to be able to add custom attributes, so that I can see them on the table and export them.
 - Assigned: Noam Gariana
 - Completed: Jul 25, 2024
 - As a Program Director, I want to see aggregated student statistics, so that I can see student data.
 - Assigned: William Tatum
 - As a Program Director, I want to add more values to existing fields, so that I can add more attributes.
 - Assigned: William Tatum
 - Completed: Jul 22, 2024
 - As a Program Director, I want to connect related tables such as programs (SFS, CLDP, VICEROY), so that I can maintain data integrity and relationships.
 - Assigned: Christopher Muniz
 - Completed: Jul 25, 2024
 - As a Program Director, I want to be able to filter student notes so I can see relevant details.
 - Assigned: Christopher Muniz
 - Completed: Jul 28, 2024
 - As a Program Director, I want to be able to create a note, so that I can record new information about students.
 - Assigned: Patrick Cannell
 - Completed: **Unmerged**, available on *Notes_Future_Work* branch
-



-
- Huge merge conflicts with the *Filter Notes* story would crash the 90% coverage and tests. Implemented as a Rails action.
 - As a Program Director, I want to be able to edit a note, so that I can respond to changes regarding a student's situation.
 - Assigned: Patrick Cannell
 - Completed: **Unmerged**, available on *Notes_Future_Work* branch
 - Feature on unmerged branch called *Notes_Future_Work*. Huge merge conflicts with the *Filter Notes* story would crash the 90% coverage and tests. Implemented as a Rails action.
 - As a Program Director, I want to be able to deactivate / soft delete a note, so that I can remove irrelevant information from the UI.
 - Assigned: Patrick Cannell
 - Completed: **Unmerged**, available on *Notes_Future_Work* branch
 - Huge merge conflicts with the *Filter Notes* story would crash the 90% coverage and tests. Implemented using `@student.notes.where(status: "Active")` in the Notes controller.
 - As a Program Director, I want to be able to make a note “private”, so that I can set them to not be able to be read by other users.
 - Assigned: Patrick Cannell
 - Completed: **Unmerged**, available on *Notes_Future_Work* branch
 - Huge merge conflicts with the *Filter Notes* story would crash the 90% coverage and tests. Implemented using an updated method in the Edit view.



-
- As a Program Director, I want to make only authorized users be able to access private notes, so that users can be sure that their notes can't be read by those they haven't specified.
 - Assigned: Patrick Cannell
 - Completed: **Unmerged**, available on *Notes_Future_Work* branch
 - Huge merge conflicts with the *Filter Notes* story would crash the 90% coverage and tests. Implemented using an if conditional that validated the logged in user email matched the email listed in the Private Notes field in the Notes view.
 - As a super user or program director, I want to see audit logs, so that I can have records of actions taken.
 - Assigned: William Tatum
 - Completed: Jul 26, 2024