TEXAS A&M UNIVERSITY
Department of Computer
Science & Engineering

CyberCRM
Sprint 3 Retrospective

July 19, 2024

Matthew Atanas

Patrick Cannell

Noam Gariani

Christopher Muniz

Will Tatum

Contents

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

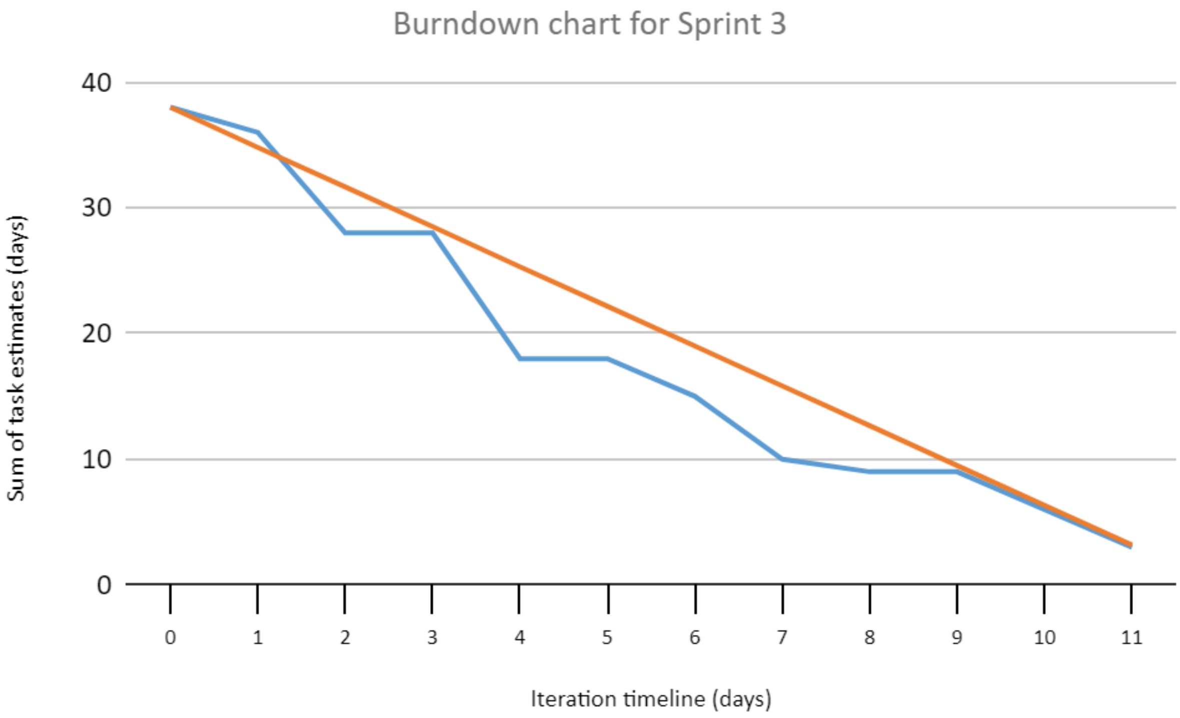
7/8 – 7/18

Sprint Goal

The goal of this sprint is to build out functionality along with polishing issues from prior sprints. This sprint will add the ability to create notes for students and restrict notes access to only that program director that created it. For super users managing the site, functionality to create, update, read, and delete users will be added. For the different programs in the cybersecurity center, there will be tables connected with the students table that display information on scholarships and cybercenter programs. Information will be segmented where program directors only see their programs and student workers have minimal access to information about other students. Additionally, on the navigation bar you will see your image icon, name, email, and other information deemed relevant in an appropriate spot. Tables will now have the deactivate and activate feature rather than the delete button. Along with that, having the entire row be the show button rather than a dedicated column for it. There will also be input validation on user input. Lastly, there will be cleanup like fixing RBAC to where only authenticated users can see the associated pages and forms will have the correct input fields.

Burn Down Chart

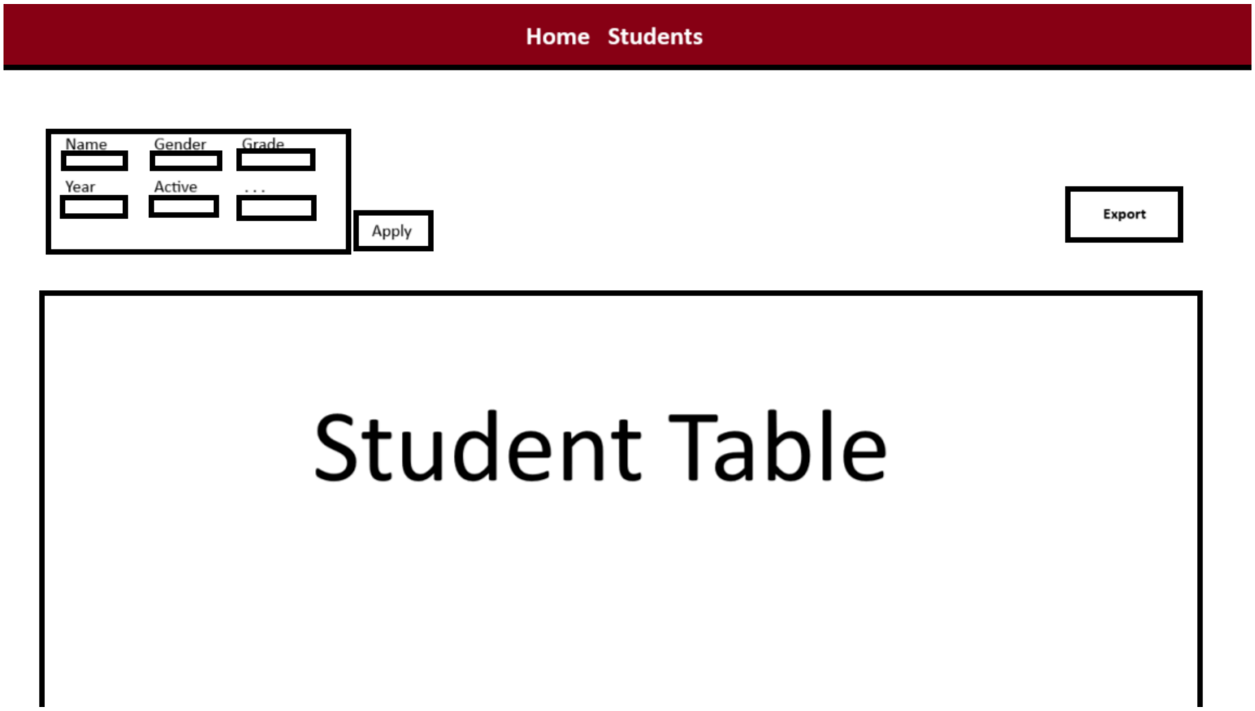
Note: This is self-generated not via pivotal.



Design Diagrams (UI and ERD)

UI Design

This is a rough sketch of how the filters would look on the website.



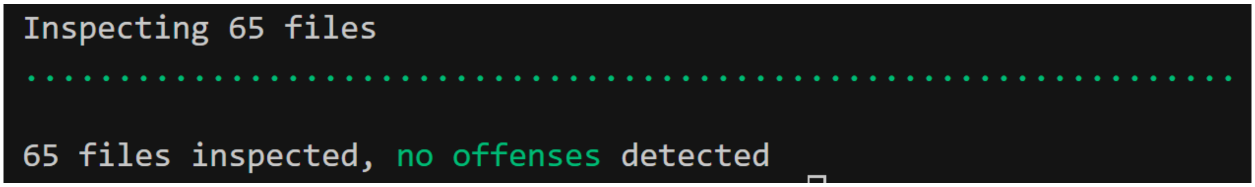
Entity-Relationship Diagram

The biggest new addition is the notes table. A major piece of functionality is the ability to record and date meetings with students. Additionally, a status column will be added to each table except for certifications. The status column enables soft delete so that records can vanish but remain in the database. The students table is the only table that has been created, and the table is populated with realistic data.

Code and Test Evaluation

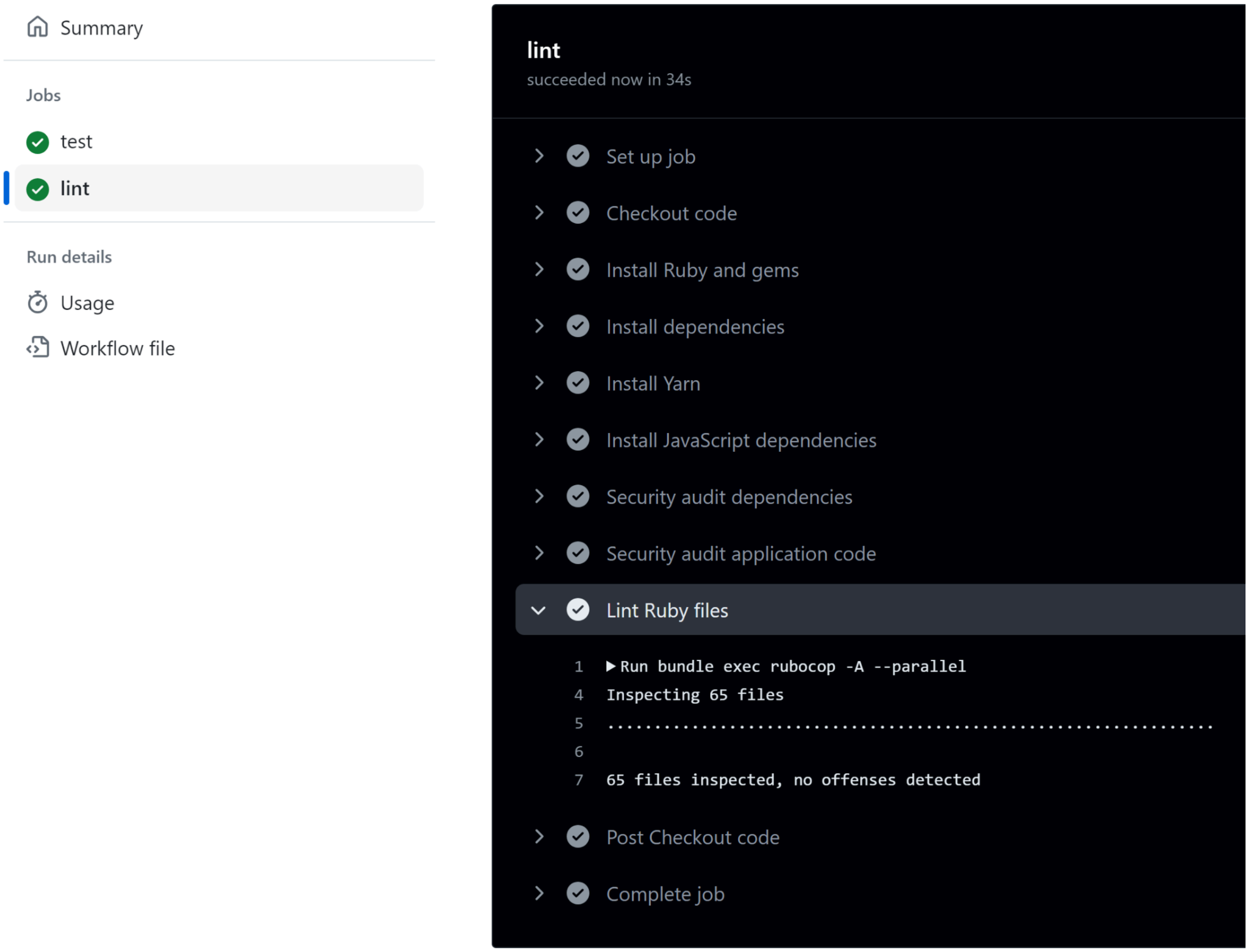
Rubocop

There were no offenses on Rubocop:



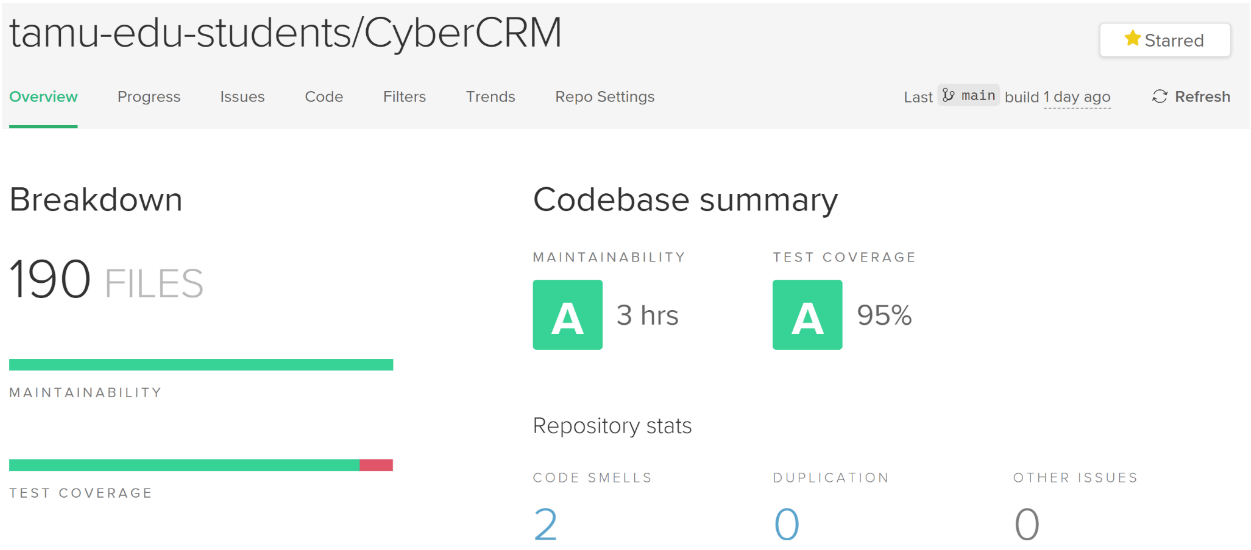
```
Inspecting 65 files
.................................................................

65 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.



```
▶ Run bundle exec rubocop -A --parallel
Inspecting 65 files
.................................................................

65 files inspected, no offenses detected
```

Code Climate



Breakdown

190 FILES

MAINTAINABILITY

TEST COVERAGE

Codebase summary

MAINTAINABILITY
A 3 hrs

TEST COVERAGE
A 95%

Repository stats

CODE SMELLS
2

DUPLICATION
0

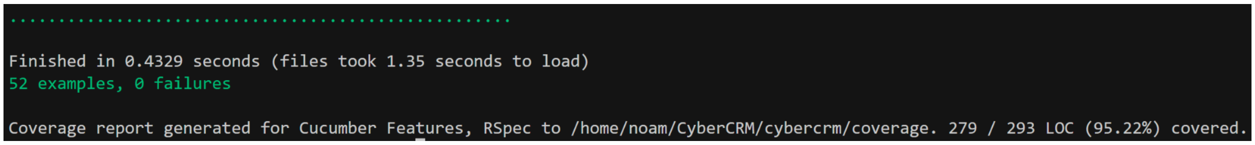
OTHER ISSUES
0

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

RSpec testing:

Command: `bundle exec rspec`

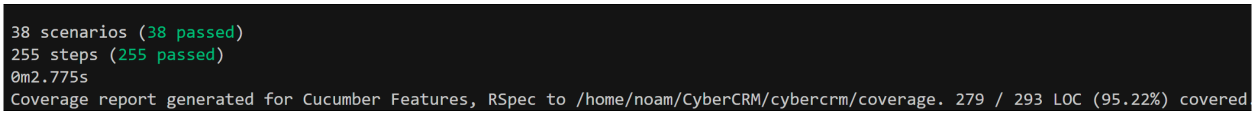


```
....................................................

Finished in 0.4329 seconds (files took 1.35 seconds to load)
52 examples, 0 failures

Coverage report generated for Cucumber Features, RSpec to /home/noam/CyberCRM/cybercrm/coverage. 279 / 293 LOC (95.22%) covered.
```

95.22% of lines covered in testing.

Cucumber testing:

Command: `bundle exec cucumber`



```
38 scenarios (38 passed)
255 steps (255 passed)
0m2.775s
Coverage report generated for Cucumber Features, RSpec to /home/noam/CyberCRM/cybercrm/coverage. 279 / 293 LOC (95.22%) covered
```

95.22% of lines covered in testing.

Customer Demo

The product owner met with the customer over Zoom on 7/10/24 at 5:45pm to show him the current iteration.

User Stories

User Stories

General User

As a user, I want to see my information in an appropriate location.

Program Director

As a program director, I need my inputs to be properly sanitized.

As a program director, I need to be able to click a row in the table to view it.

As a program director, I need to prevent bad actors from accessing data they should not.

As a program director, I need to be able to import CSV data to fill in student information quickly.

As a program director, I need to be able to create users.

As a program director, I need to be able to read user data.

As a program director, I need to be able to update user information.

As a program director, I need to be able to delete users.

As a program director, I need to be able to add and delete custom attributes in the student table.

As a program director, I need to have a well designed user CRUD control page.

As a program director, I need to have the colors of the grade column correspond to the text.

As a program director, I need information segmented based on role.

As a program director, I need to implement the notes table

As a program director, I need to be able to have advanced filter functionality for the student table.

Work Done

Sprint Achievements

- Separated access based on role
- Added CRUD for users
- Functionality for custom attributes
- The notes page integrates the students and notes tables with realistic sample data
- Advanced filtering for student table
- Import CSV functionality

Blockers

- OAUTH testing
- CodeClimate test coverage
- GitHub Actions
- On the notes table, integrating the one-to-many relationship in the controller

Project Management

Team Roles

Christopher Muniz

Advanced filter for student table

Matthew Atanas

User Information on top right, Information segmentation

Noam Gariani

Input Sanitization, Click Row/Fix Actions, Fix OAUTH, Import CSV, Colors for Grade (Column and Form), Design User CRUD page

Patrick Cannell

Created Notes table, integrated student and notes data in the controller, and created the UI

Product Owner

Will Tatum

CRUD for users, Custom Attributes

Scrum Master

Team Information

Story Points:

Matthew Atanas	4
Patrick Cannell	5
Noam Gariani	11
Christopher Muniz	3
Will Tatum	10

Development Methodology

Our development method is Agile. We have discussed as a team having a stand-up meeting every weekday at 5:45pm. Along with this, we have 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 can create meetings as needed based on the workload. This could include added working hours for members. This is not limited to full group meetings and could be set by people within the group to work together. Also, we use discord to communicate between the team members to coordinate all tasks and work for the project.

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

We use a product backlog that includes all our tasks that need to be done. These should be assigned to all developers on the team. Every sprint there will be tasks from the product backlog and at the end of every sprint we will conduct backlog refinement. By doing this we can stay on top of the needs of our project.

Customer Meeting

Date: July 10, 2024

The team met with John Romero for 75 minutes. Topics discussed were menu options, notes, Program Director vs Super User, custom fields, and soft delete. When editing or creating a student, the client wanted a drop menu to appear so that junk data is not added to the database. The notes section of the app will record commentary on students and dates for follow up actions. Regarding the Program Director role, the client required the only the Program Director role can edit and view students. The Super User role can update the user roles. Custom fields creation was mentioned so that future users can add or remove fields from the students table. Finally, Romero specified that that data should never be permanently deleted; the client wants soft delete functionality.

Sprint Backlog

- As a user, I want to see my information in an appropriate location.
  - Assigned: Matthew Atanas
  - Completed: July 9th
- As a program director, I need my inputs to be properly sanitized.
  - Assigned: Noam Gariani
  - Completed: yes, July 8th
- As a program director, I need to be able to click a row in the table to view it.
  - Assigned: Noam Gariani
  - Completed: yes, July 8th
- As a program director, I need to prevent bad actors from accessing data they should not.
  - Assigned: Noam Gariani
  - Completed: yes, July 8th
- As a program director, I need to be able to import CSV data to fill in student information quickly.

  - Assigned: Noam Gariani
  - Completed: yes, July 8th
- As a program director, I need to be able to create users.
  - Assigned: Will Tatum
  - Completed: yes, late July 12th
  - Late because focusing on OAUTH testing and GitHub Actions
- As a program director, I need to be able to read user data.
  - Assigned: Will Tatum
  - Completed: yes, late July 12th
  - Late because focusing on OAUTH testing
- As a program director, I need to be able to update user information.
  - Assigned: Will Tatum
  - Completed: yes, late July 12th
  - Late because focusing on OAUTH testing and GitHub Actions
- As a program director, I need to be able to delete users.
  - Assigned: Will Tatum
  - Completed: yes, late July 12th
  - Late because focusing on OAUTH testing and GitHub Actions
- As a program director, I need to be able to add and delete custom attributes in the student table.
  - Assigned: Will Tatum
  - Completed: yes, late July 12th
  - Late because focusing on OAUTH testing and GitHub Actions
- As a program director, I need to have a well designed user CRUD control page.
  - Assigned: Noam Gariani
  - Completed: yes, July 12th

- As a program director, I need to have the colors of the grade column correspond to the text.
  - Assigned: Noam Gariani
  - Completed: yes, July 11th
- As a program director, I need information segmented based on role.
  - Assigned: Matthew Atanas
  - Completed: July 14th
  - Late because I focused on other assignments.
- As a program director, I need to implement the notes table
  - Assigned: Patrick Cannell
  - Completed: July 17th
  - Late because the story was much more complex than initially anticipated. The story entailed foreign keys, pulling from data from the database into the controller using special join commands, and creating an entirely new page that the user could navigate to from the show student page. Also, the notes table was seeded with realistic sample data.
- As a program director, I need to be able to have advanced filter functionality for the student table.
  - Assigned: Christopher Muniz
  - Completed: July 17th
  - Late because I couldn't fix merge conflicts so re-coded on a newer version of the project and had issues with cucumber.