# VARSITY COLLEGE

**PART ONE**

**PROJECT PLANNING AND PROTOTYPE DEVELOPMENT**

POE

Programming 2B [PROG6212]

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Group 3

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# Table of Contents

# 1. Introduction

This POE entails the creation of a Contract Monthly Claim System (CMCS). The purpose of this system is to streamline the submission and approval of monthly claims for the independently contracted lecturers. Lecturers will be able to submit claims based on their hourly wage and hours worked, and any relevant supporting documents, where once submitted it can be verified by the Programme Co-ordinator and finally approved by the Academic Manager. Claim status will be transparent throughout the administrative process. The key users for this system is the lecturer who will be submitting the claims, the Programme Co-ordinator who will be verifying the claims, the Academic Manager who will accept the claims, and finally an Admin whose sole responsibility is the account creation of both Programme Co-ordinator and Academic Manager and will not interfere with any of the claim processes. The project is currently in its prototype phase outlining the projects database, GUI and project plan, which mean that there is no current functionality.

# 2. Design Choices

The document is structured into design choices, the UML Class diagram for the database, Project Plan, and the systems GUI UI, and ended off with any relevant referenced resources.

## *Layout*

The layout for the menu will be generally the same across the board for every user excluding the admin who will only have a creation and deletion button. The menu bar or navigation bar is located at the top of the page for all views and all users, ensuring the menu is consistent with the rest of the application and reinforcing what the user will expect of the system going forward. The menu bar includes a logout button and a help button ensuring the user does not get stuck. The menus used for each user has been implemented with usability and ease of use in mind ensuring the user cannot get stuck on a page and that every page has clear navigation buttons. Each view display only what is needed by that user ensuring the user only sees what they need.

### Lecturer Dashboard

The lecturer will have a 3 central buttons on their dashboard being “Profile”, “Create Claim”, and “All Claims”, the dashboard will include a quick overview below these buttons showing that lecturers pending claims, accepted claims and total claimed in Rands.

### Programme Co-ordinator/Academic Manager Dashboard

The dashboard for the Co-ordinator/Manager stays consistent with the way the Lecturer dashboard was setup using the 3 central buttons being “Profile”, “Review a Claim”, and “Review History”. Below these is the quick overview section consisting of “Claims Pending Review”, and “Reviewed Claims” allowing the user to quickly view how many claims they need to view without having to click the “Review a Claim” button.

## Colour Scheme

The colours used include dark navy blue for the menu bar, white for the background, blue for the view/mange buttons, green for the action buttons, red for the reject buttons, and yellow for the pending status. The use of dark navy blue for the menu bar and white for the background was used as these colours are associated with trust and reliability, where reliability is essential for a system like this (Olesen, 2025). Blue is used for buttons that aren't the primary focus for that user or a stepping stone to get to another button such as a accept button . Green used for the accept button and main focus buttons as it is universally associated with positivity or confirmation. Red is associated with negativity and stopping something which is why it was used to reject a claim. Yellow was used for the pending status as its colour is associated with optimism (Olesen, 2025). All these colours have been consistently used through the prototype ensuring that each colour can subconsciously indicates the buttons use.

## Assumptions & Constraints

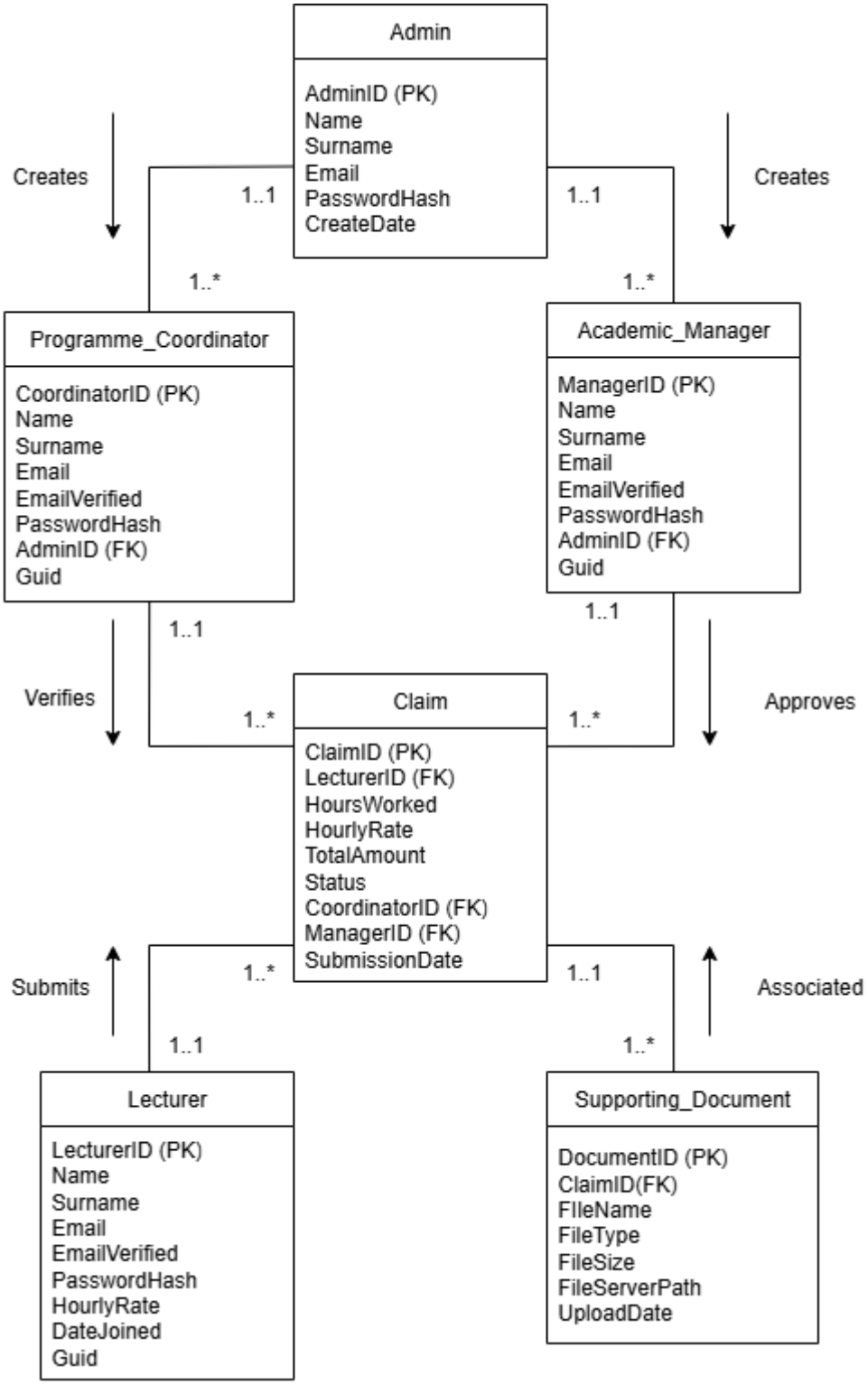
*Assumptions*

- Lecturer can only make a single claim per month
- Every lecturer is paid based on hourly wage and hours worked which is inputted each time
- Supporting documentation is required with every claim
- Every lecturer will have to sign-up
- Admin creates/deletes the Co-ordinators/Managers
- Database stores lecturer details, corresponding claim details, Co-ordinator/Manager Details
- If a claim is rejected a reason can be provided by the reviewer.

*Constraints*

- File uploads are restricted to .pdf, docx, and .xlsx with a size limit of 5MB
- The system must be developed using MVC .NET Core
- Prototype must be non-functional using MVC or FIGMA
- Project must have continuous version control with descriptive comments
- Entity Framework must be used to interact with the data in the database

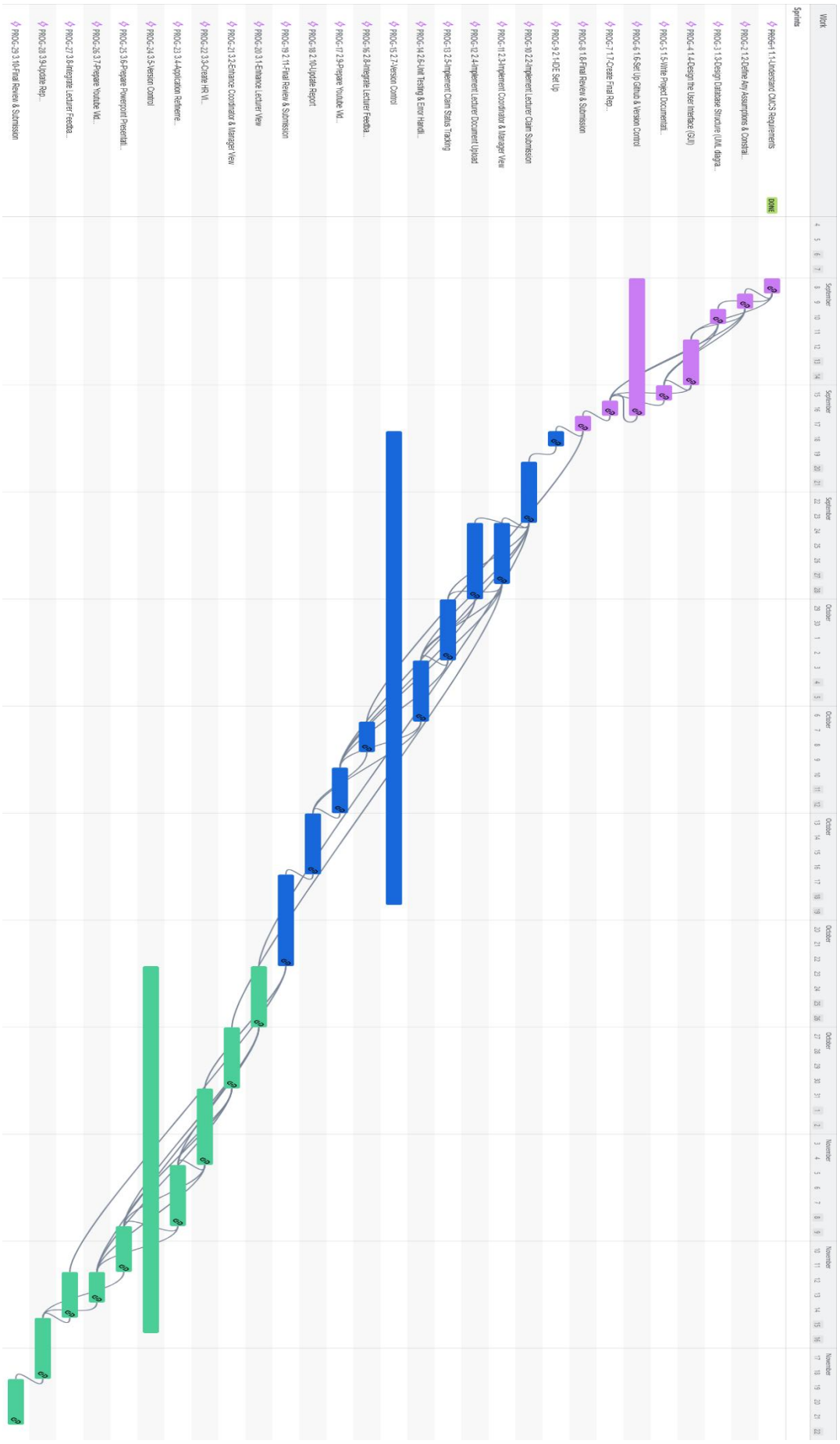
## 3. UML Class Diagram for Database




This UML diagram outlines the tables and attributes need for system to function. Every user has PasswordHash which is the encrypted version of the user's password

ensuring security. Globally Unique Identifier or GUID is used to verify the user's email address ensuring that the user can get email notifications based on the claim progress. Supporting_Document contains the documents metadata, and it associated with each claim. The claim table stores all relevant claim information and takes the Co-ordinator/Manager Id once they have verified/accepted the claim allowing the claim to be viewed from their side of the application. This ensures that the database will be implemented with everything needed to create an operational CMCS.

# 4. Project Plan



# 5. GUI UI

## Lecturer GUI

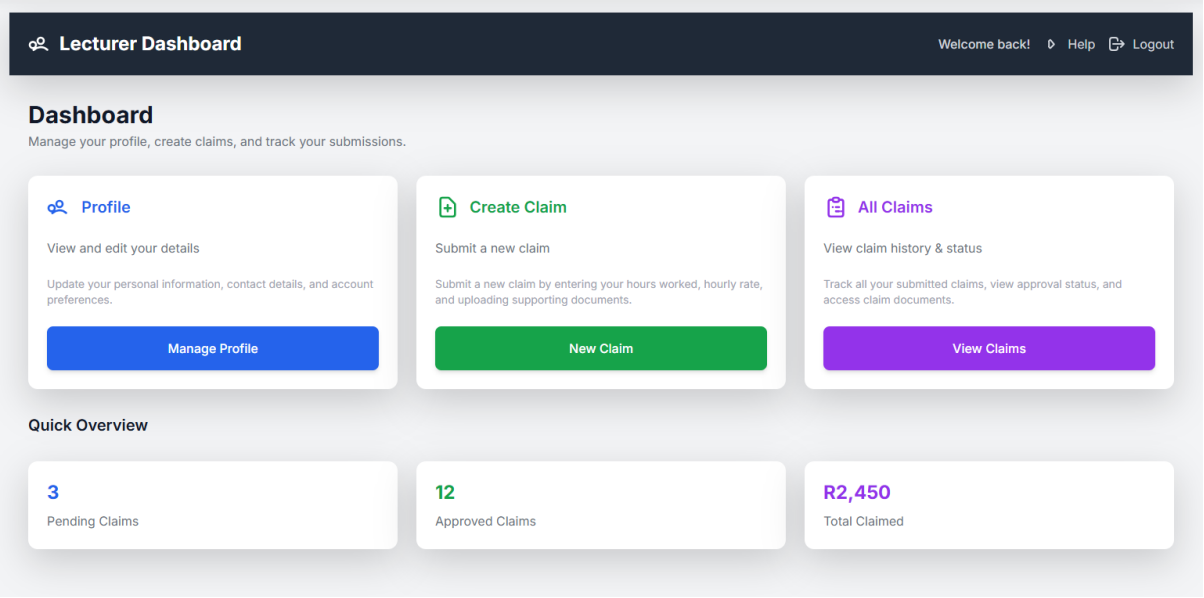



*Figure 1: Lecturer Dashboard*

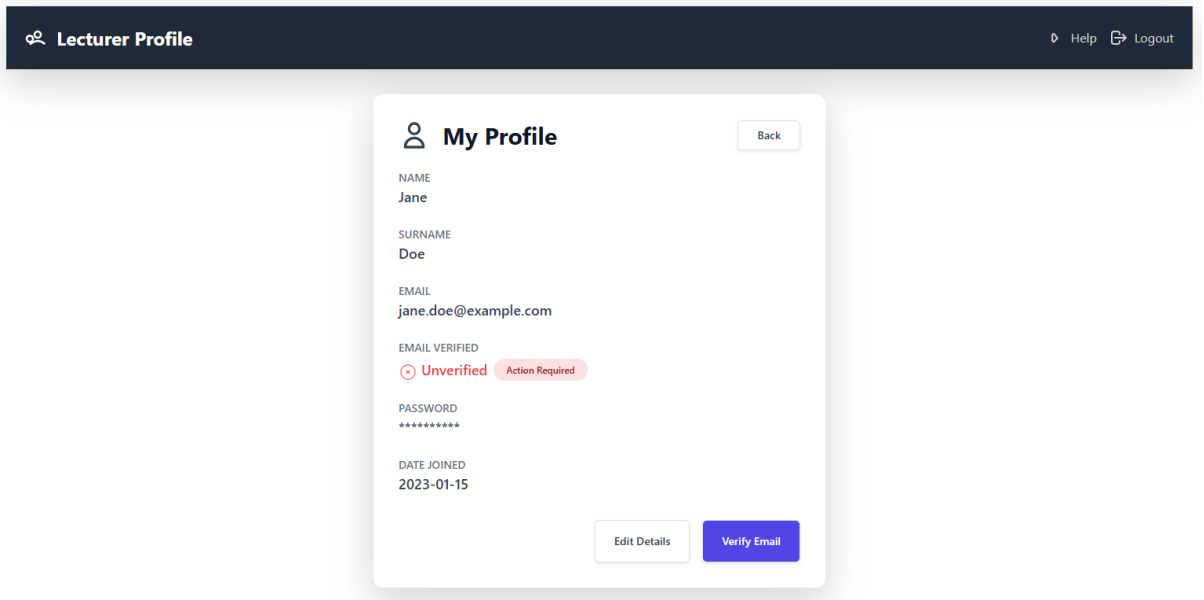



*Figure 2: Lecturer Profile*

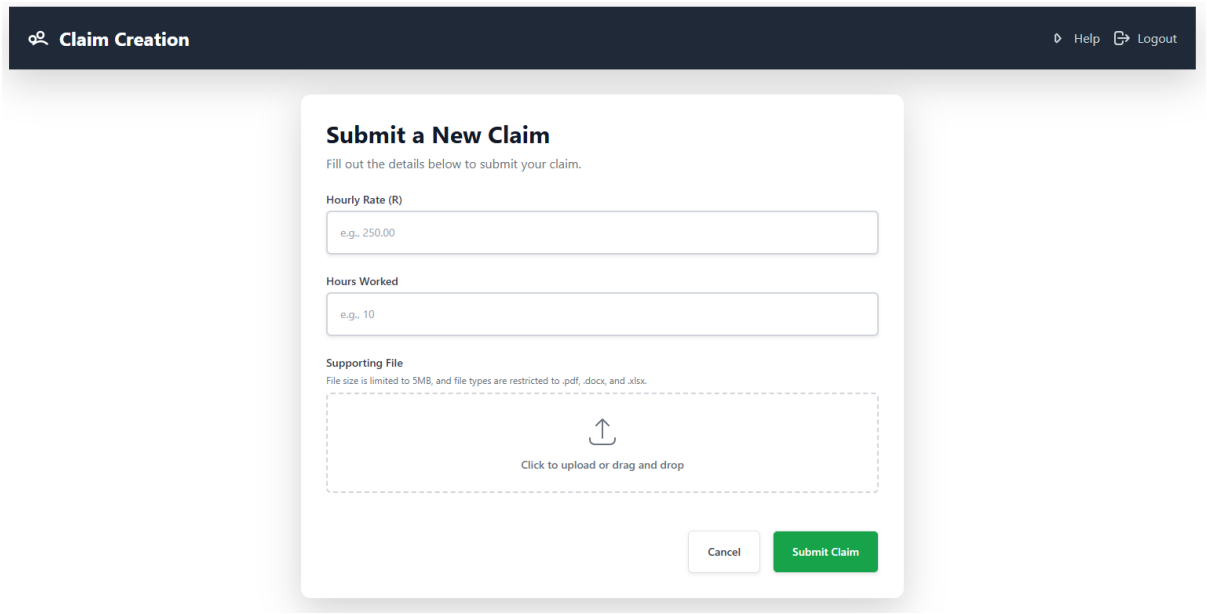



*Figure 3: Create Claim (Submit a new claim)*

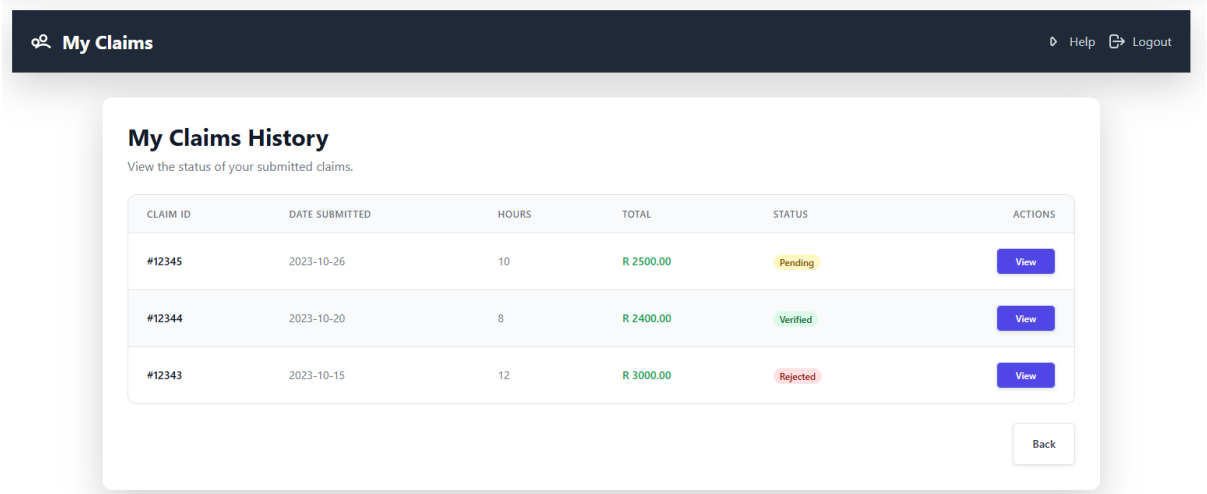



*Figure 4: All Claims (Claim History)*

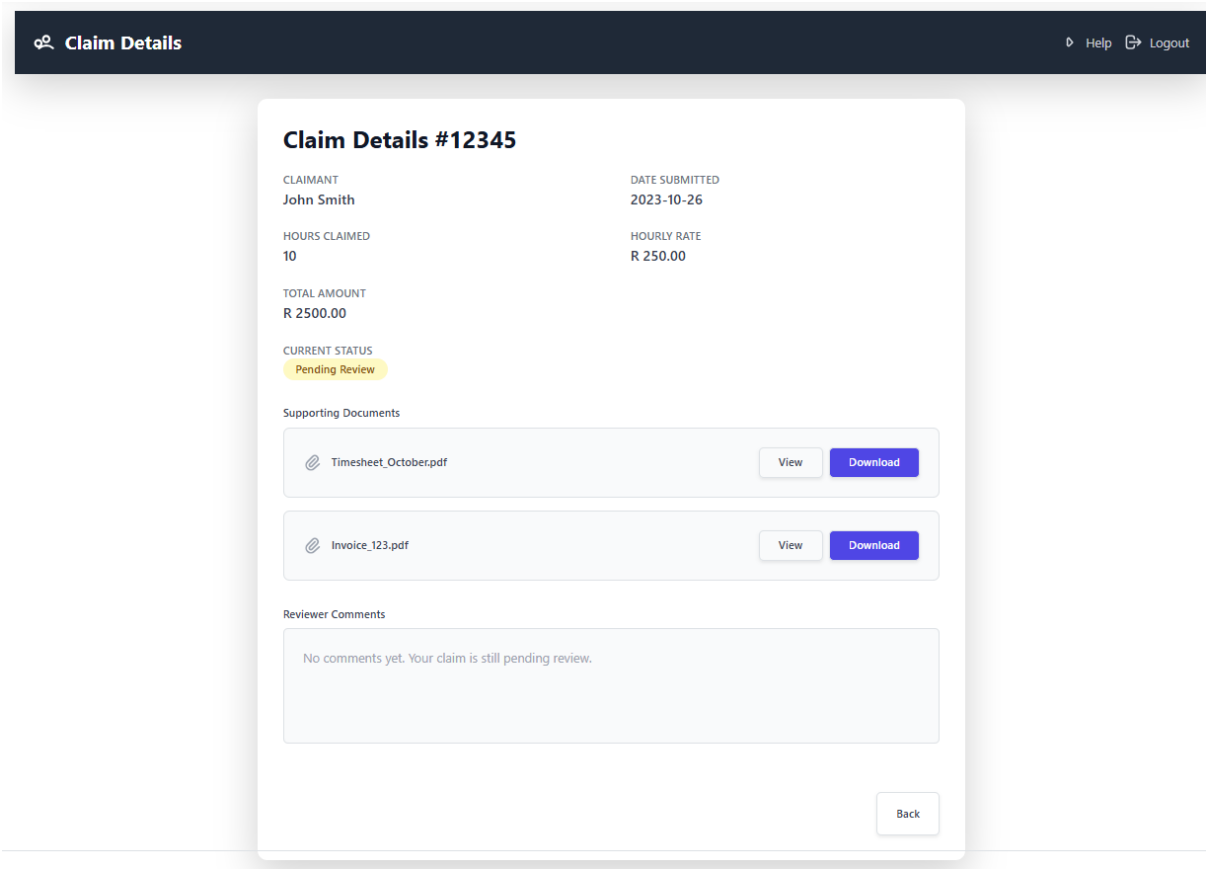



*Figure 5: Individual submitted claim details*

# Programme Co-ordinator/Academic Manager GUI

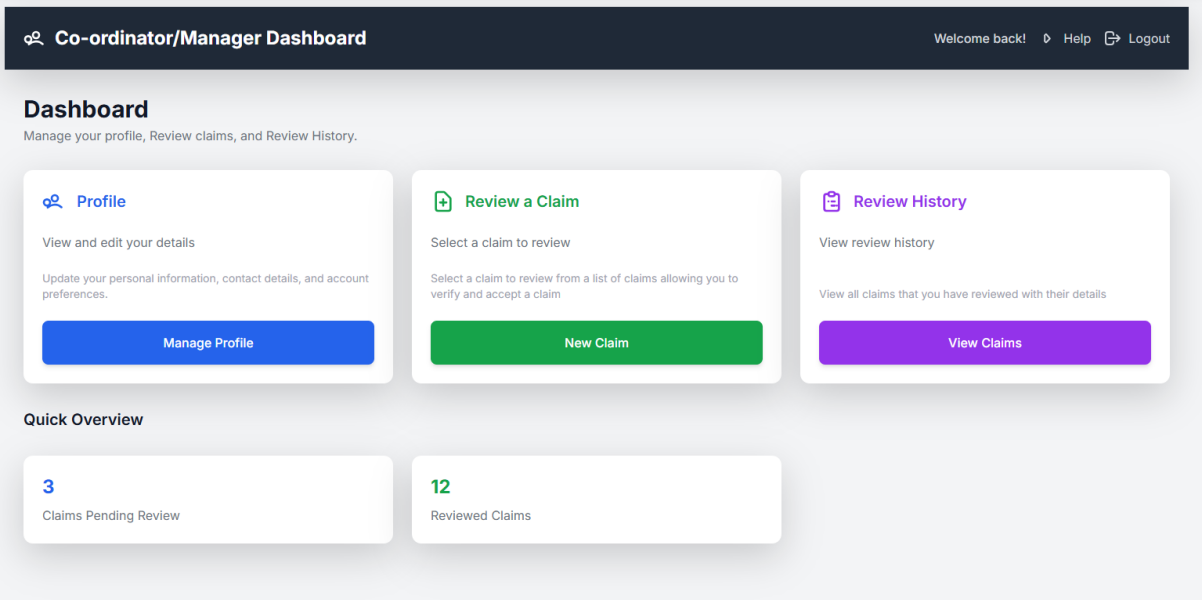



*Figure 6: Dashboard for both Co-ordinator/Manager*

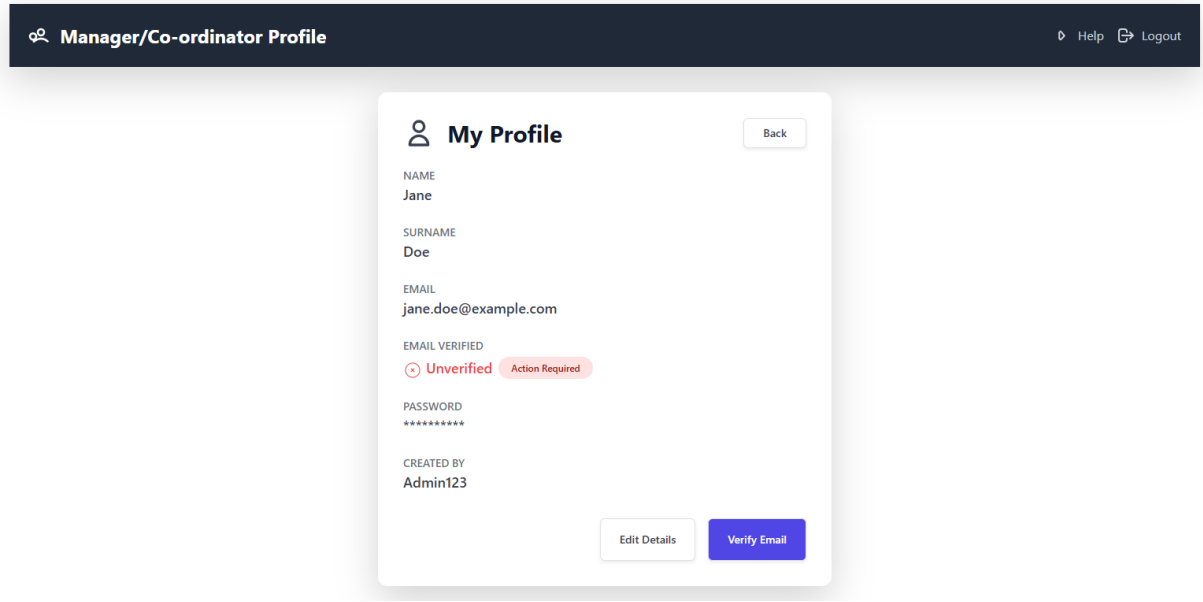



*Figure 7; Profile for both Co-ordinator/Manager*

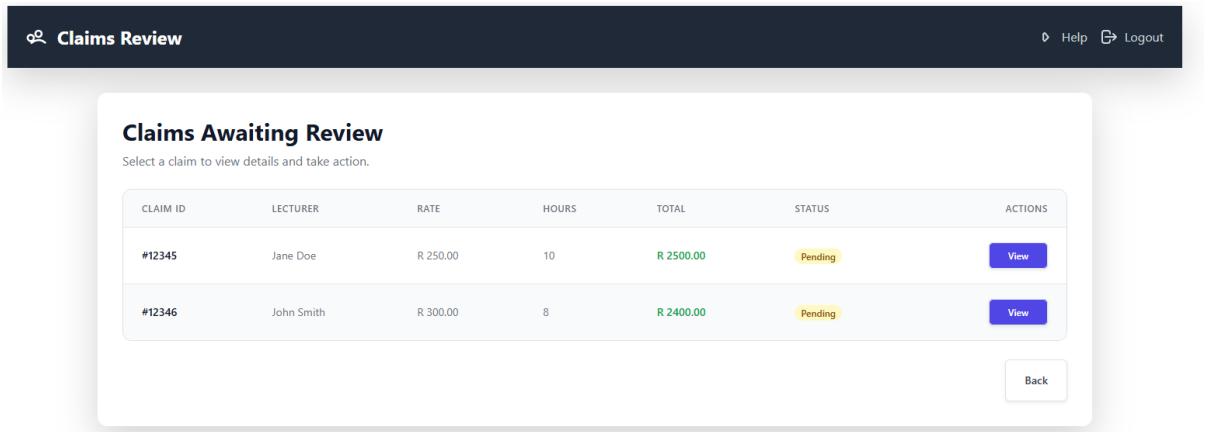



*Figure 8: Review a Claim (list for both Co-ordinator/Manager to choose claim to review*

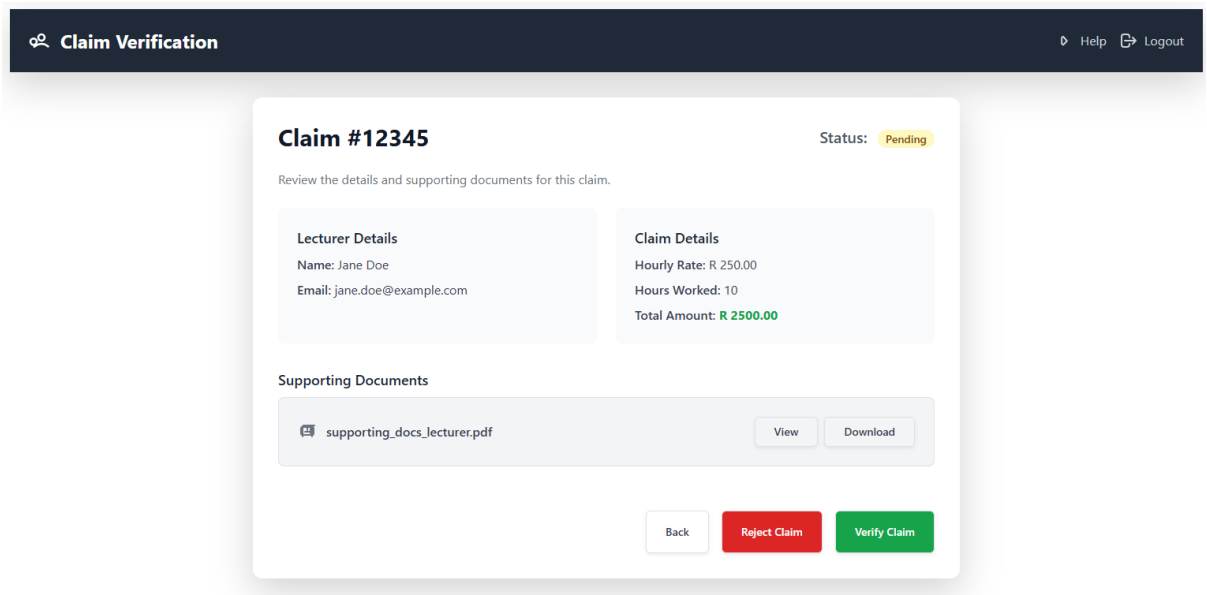



*Figure 9; Co-ordinator Claim Verification*

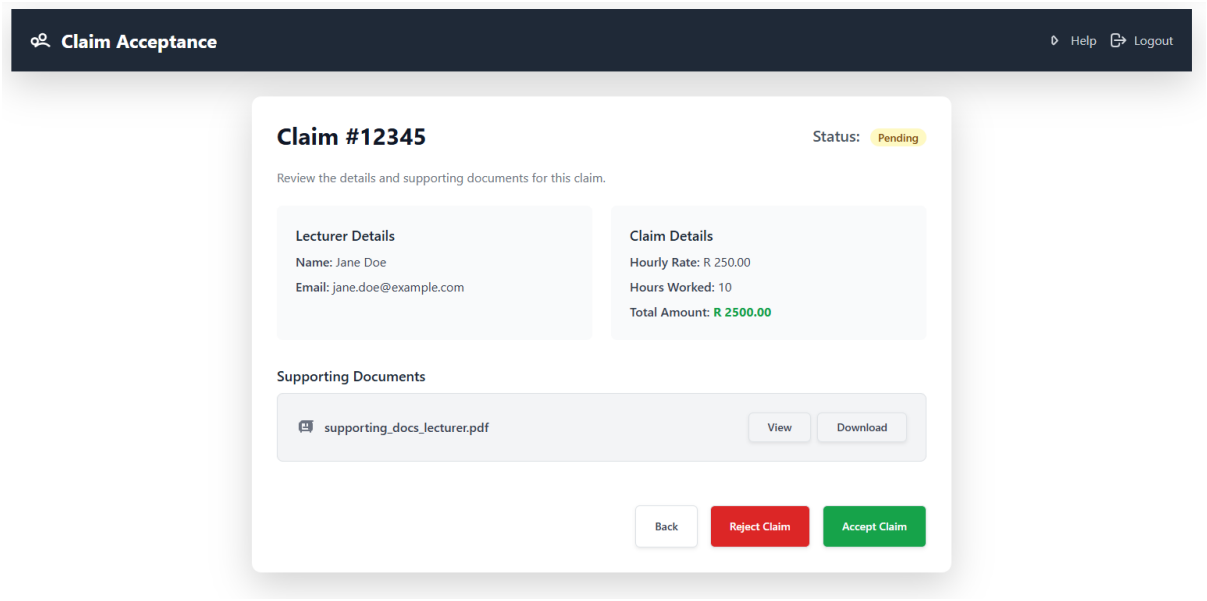



*Figure 10: Manager Claim Acceptance*

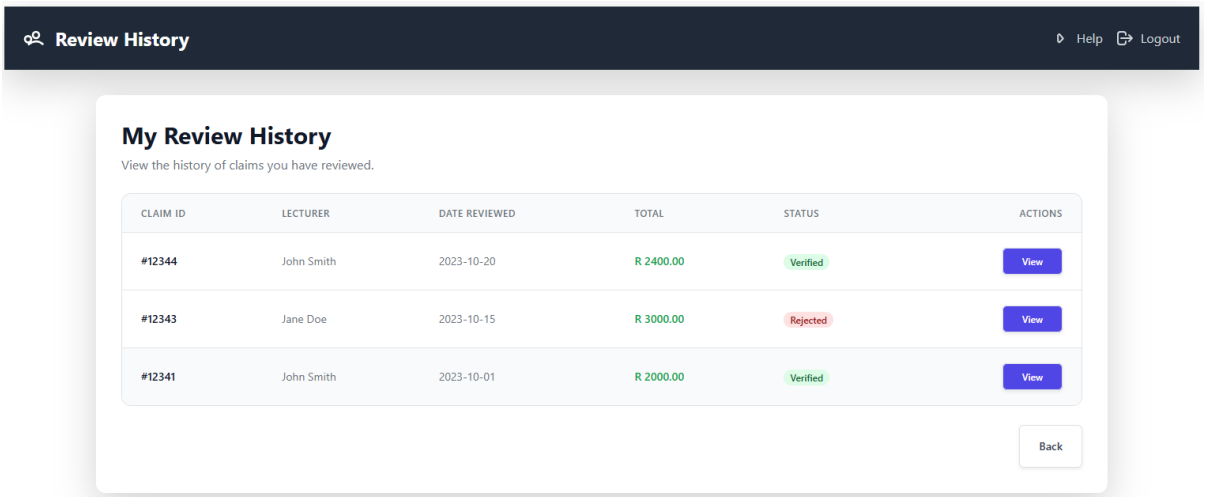



*Figure 11: Co-ordinator/Manager Review History*

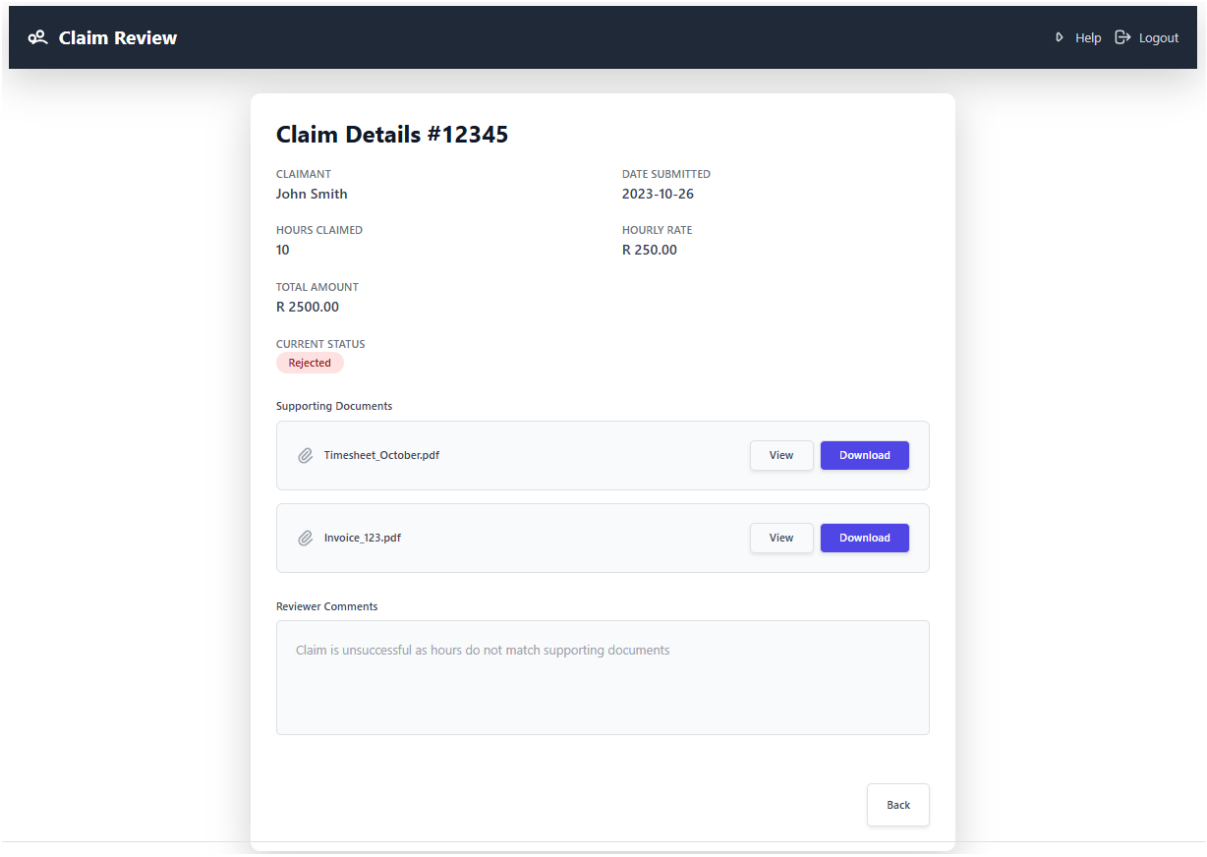



*Figure 12: Co-ordinator/Manager Claim Details from Review History*

# 6. References

Olesen, J., 2025. *Color Meanings – Discover the Power and Symbolism Behind Every Hue*. [Online]
Available at: https://www.color-meanings.com/
[Accessed 7 September 2025].

# 7. AI Usage and Disclaimer

Sections: GUI Design

Name of AI Tool: ChatGPT (GPT-5)

Purpose/Intention: Finding out what colours would be best suited towards creating my GUI

Dates:  7 September 2025

Links: https://chatgpt.com/share/68c92a19-d4c0-8005-bb52-b42f1197a10f