

POE- Documentation

ST10434047

Jamie Abrahams
VARSITY COLLEGE | CAPE TOWN

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Explanation of design choices

The Contract Monthly Claim System (CMCS) will be developed as a modern ASP.NET MVC web application. This architectural choice is central to our design, as it provides a clean separation of concerns: the Model (business logic and data entities), the View (user interface), and the Controller (handles user input). This structure will allow us to build a maintainable and scalable system.

Our design will be responsive, ensuring a seamless user experience across various devices and screen sizes (desktops, tablets, and mobile). To achieve this, we will use Figma to create high-fidelity UI mock-ups and interactive prototypes. Figma allows us to design for different frame dimensions, ensuring our layout is both functional and visually appealing before development begins (Figma, 2025).

The application's C# Models will directly correspond to the database design. To visualize this database structure, we will create an Entity-Relationship Diagram (ERD) using Draw.io. An ERD is the industry standard for modelling the relationships between data entities and is the perfect tool for designing our database schema before implementation.

Database Structure:

The database will be hosted on Azure SQL to leverage the scalability, security, and reliability of the Azure cloud ecosystem. Each table will be mapped to a C# model, and the entire schema will be visualized using an Entity-Relationship Diagram (ERD) created in Draw.io. The structure is centred around the Lecturer entity, which stores personal and authentication details. Each lecturer can submit multiple Claim entities, where each claim represents a single monthly submission and contains information like the SubmissionDate, ClaimPeriod, and Status. To detail the work performed, every claim is composed of one or more ClaimItem records, which individually log the HoursWorked, HourlyRate, and WorkDate. To support these claims, multiple SupportingDocument records can be linked, storing file paths and names. The approval workflow is handled by the Administrator entity, representing approvers, and an Approval entity that links an administrator to a claim, recording their decision and comments. This normalized structure ensures data integrity and provides a robust foundation for the application's logic.

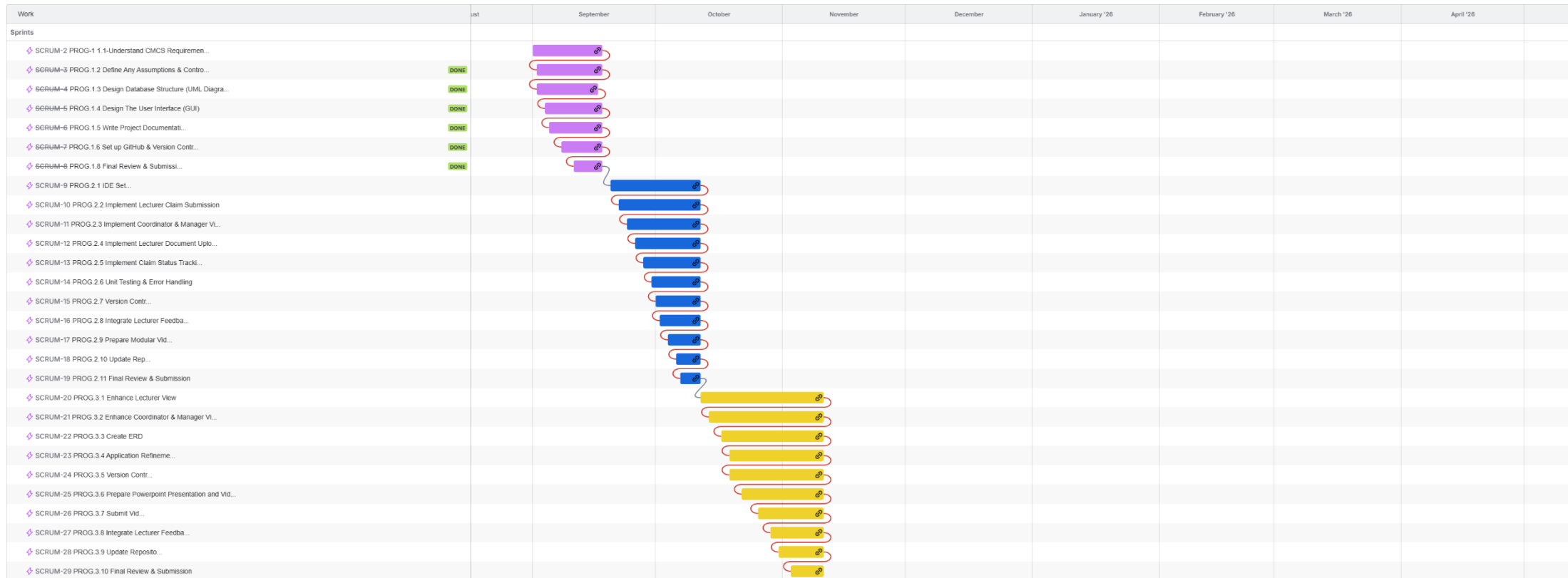
GUI Layout:

The GUI, designed as a high-fidelity prototype in Figma, will prioritize an intuitive, clean, and efficient user experience to make the claims process as seamless as possible. The user journey begins with a secure Login Screen for both lecturers and administrators. Upon logging in, a lecturer is directed to a personal Dashboard that provides an at-a-glance summary of recent claims and their statuses, alongside a prominent call-to-action to initiate a new submission. The New Claim Form will guide the user through a multi-step process, including a section to add individual line items for hours worked, a simple interface for uploading supporting documents, and a final summary for review before submission. For administrators, the workflow is equally streamlined; their dashboard features a queue of all pending claims, which they can select to open a comprehensive Claim Review Screen. This view will present all submitted details and attached documents clearly, allowing for an informed decision to either approve or reject the claim using dedicated buttons and a field for providing feedback comments.

Assumptions and Constraints

In planning this project, we are operating under several key assumptions and constraints. We assume that all users, both lecturers and administrators, will possess basic computer literacy and have access to a modern web browser to use the application. It is also assumed that the business rules for claim validation are predefined and that lecturer hourly rates are established within the system, though they may be overridden on individual claim items if necessary. The project is bound by a few important constraints: the primary deliverable for this stage is a non-functional prototype, meaning the focus is on the Figma design and the ERD, not on implemented back-end logic. Additionally, the development must adhere to the realistic timeline that will be detailed in the project plan.

Project Plan:



GUI Designs

New Claim Form

!


Contract Monthly Claim System

Dashboard

Claims

Reports

Settings



1 Details







2 Line Items


3 Documents

4 Review

Line Items

+ Add Item

Work Date	Description	Hours Worked	Hourly Rate	Actions
08/15/2024	Lecture on Advanced Algorithms	3	\$50.00	 
08/16/2024	Office Hours	2	\$50.00	 
08/17/2024	Grading Assignments	4	\$50.00	 



Attach Supporting Documents

Drag & drop files here, or click to browse

Browse Files

Back

Next: Documents

Contract Monthly Claim System (CMCS)

[Dashboard](#) [Claims](#) [Reports](#) [Settings](#)

Dashboard

Welcome back, here's an overview of the claim system.

Last 30 Days

Total Claims Processed Per Month



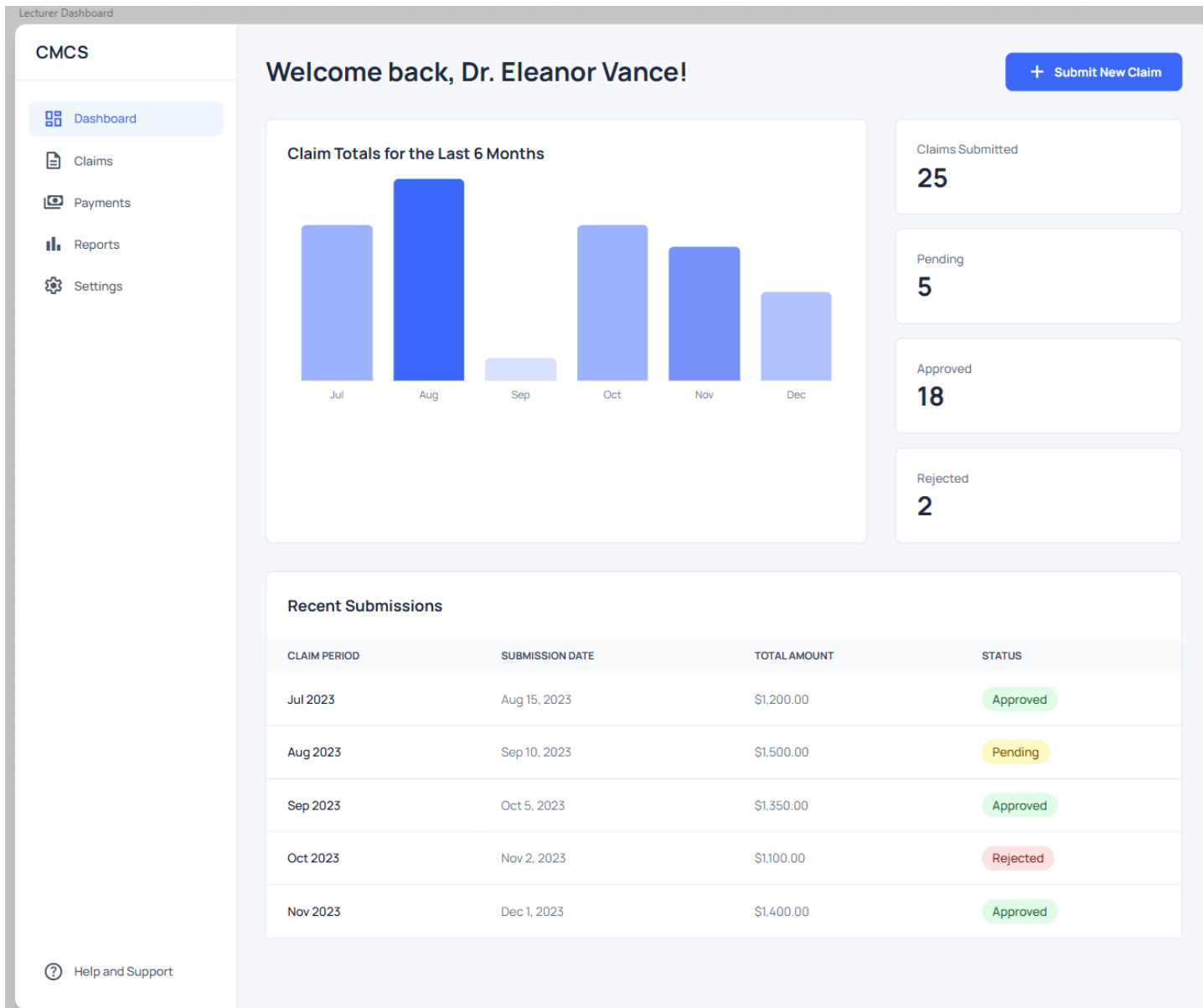
Current Claim Statuses



Pending	147
Approved	74
Rejected	24

Top Lecturers by Claim Value

Lecturer	Total Claim Value	Claims Submitted	Approval Rate
Dr. Amelia Harper Physics Department	\$15,000	12	92%
Prof. Ethan Bennett Computer Science	\$12,500	8	100%
Dr. Olivia Carter History Department	\$10,000	15	80%
Prof. Noah Davis Mathematics	\$8,500	5	60%



Administrator Review Screen

Contract Monthly Claim System

DashboardClaimsReportsSettings

Claim #12345

Submitted by Dr. Amelia Harper on 2024-07-26

Pending

Line Items

Description	Amount	Document
Lecture 1: Introduction to Programming Hourly rate for course delivery	\$200.00	Invoice.pdf
Lecture 2: Data Structures Hourly rate for course delivery	\$250.00	Timesheet.pdf
Lecture 3: Algorithms Hourly rate for course delivery	\$300.00	Receipt.pdf

Action Panel

Total Amount: \$750.00

Approve

Reject

Provide Feedback or Comments

Enter your comments here...

Submit Feedback

Bibliography

Figma, 2025. *Figma*. [Online]

Available at: <https://www.figma.com/>