PROG6212

Prog6212 POE

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# Project Overview

## Contract Monthly Claim System

The Contract Monthly Claim System (CMCS) is a web application that is designed to make it simple to submit, verify and approving monthly claims that are made by the Independent Contractor (IC) lectures. It is always time consuming when it is time for lectures to claim every month, meaning the system will reduce any human error because there will be fewer manual submissions and paper works.

The CMCS will be a web application that will allow to have different users that will encrypt who can access what, for example, the lecturers will submit claims and upload any supporting documents, and they will be able to track their progress of their claims in real time. The Program Coordinators (PC) and the Program Managers (PM) will have their interface that will allow them to verify the claims, approve, or reject claims, to make sure that the claims are accurate, and support accountability. When the system automates the calculations and the tracking of the claims, it will eliminate redundancy and human errors made by the PC or the PM.

# Problem Statements

* There were submissions made manually, meaning there was a possibility of paperwork and delays in the claims.
* There were errors in the calculations in the total of the hours worked and the hourly rates.
* There was no transparency because the lecturers could not see if their claims were approved, they would see will the money at the end of the month.
* The PCs and the PMs would spend a lot of time in paperwork and manually verifying the claims.

# Project Objectives

* To make the process of the claim submission to be digital so that the lectures have less paperwork.
* To automate the claim calculations and base it on the hours and the rate of the lecturer, to that there are fewer human errors.
* To enhance transparency for the lectures, meaning they will see their claim status and track if it is approved or rejected.
* To have a role-based system, meaning the Lecturers, the PMs and the PCs will have their own interfaces so there is security on who approves the claims.
* To have efficiency in the administrators, by reducing the time that the claims are processed and increasing communication between the stakeholders.

# Key Features of the CMCS

* **Lecturer Interface:**- Submit the claims by entering the employee number, the name, the hours worked, and the rate.  
  - Uploading the supporting documents, for example, attendance registers or work evidence.  
  - The lecturer will be able to see the claim history, and track if the claims are rejected or approved.
* **Program Coordinators and Program Manager Interface:**- Looking through the pending claims.  
  - Be able to approve and reject claims with comments for feedback.  
  - Verifications of the calculations made automatically by the system.
* **Claim Tracking System:**- There will be real- time tracking of the claim, meaning there will be the status such as: Approve, Pending, Reject.
* **Automation of calculations:**- Automatic calculation of the total pay meaning it’s going to be hours worked \* hourly rate.

# Project Plan

|  |  |  |  |
| --- | --- | --- | --- |
| Phase | Start Date | End Date | Key Task |
| Requirement Gathering | 01-08-2025 | 01-08-2025 | Identify the functional and non-functional requirements, and document them |
| Design | 11-08-2025 | 09-09-2025 | Develop UML Diagrams, database schema and develop the frontend(Prototype) |
| Development | 10-09-2025 | 20-10-2025 | Backend coding and the integration of the database |
| Testing and QA | 21-10-2025 | 15-11-2025 | Unit testing and bug fixing, getting feedback from the stakeholders. |
| Deployment | 16-11-2025 | 30-11-2025 | Handing over the documentation and deployments |

# Project Scope

* Have role-based authentication for lectures, program coordinators, and program managers
* Having a secure claim submission and accurate automatic calculations.
* Document uploading such as PDFs and Word documents.
* Having real time updates of the claim status.
* Having a summary of submitted claims and which ones have been approved and rejected.

# Project Assumptions

* All users will have internet connections so that they can use the web application.
* Lecture profiles will be loaded by the administrators so that the lecturers are able to use the system.
* People using the system will be given basic training on how to use the web application.

# Constraints

* Budget: We will not have enough funds so that we have advanced integrations such as larger databases.
* Little timeline: having a small amount of time to develop the system including the databases and the development of the system.
* Lack of resources: A small development team, meaning there is a requirement for careful planning.

# Team Roles and Responsibilities

|  |  |  |
| --- | --- | --- |
| Role | Responsibility | Assigned to |
| Project Manager | To develop timelines, and deliverables of the system and know how to do the resource allocations of the project. | Mr. Shibiti |
| Full Stack Developer | To design and develop the front and backend of the system. | Keoagile Mafora |
| QA Tester | To test the web application and ensure that it is quality. | Keoagile Mafora |
| Stakeholder | Provides feedback on the system’s usability and verifies if the deliverables have been met | - Lecturers  - Program Coordinators  - Program Manager |

# Expected Benefits

* **For Lecturers:** A faster way of submitting claims, and more transparent way of tracking the claims without having any confusions and delays of the claims.
* **For Program Coordinators and Program Managers:** A good process of verifying and approving claims, reducing manual paperwork and a lot of workloads.
* **For the institution:** Having improved data accuracy and increased operational efficiency.

# Tools and Technologies

|  |  |
| --- | --- |
| Responsibility | Tools and Technologies |
| Frontend | HTML, CSS |
| Backend | C#, ASP.NET Core MVC |
| Database | SQL Server (SSMS) |
| Version Control | GitHub |
| Testing | XUnit for unit testing |

# Communication Plan

* Team: Weekly meetings
* Client: Weekly online meetings
* Sponsor: Monthly reports

# Designing the UML Database

