CMCS – Claim Management and Coordination System

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Introduction:

The Claims Management and Coordination System (CMCS) is a web-based platform created to replace the slow and error-prone manual claim process used by institutions. The system automates key tasks such as claim calculations, validations, approvals, and report generation. It provides separate views for Lecturers, Managers, and HR, helping the institution process claims faster, more accurately, and with better transparency.

Problem Statement:

The Need for an Automated Claims Solution

The current process for managing lecturer claims is fragmented, inefficient, and error-prone, creating challenges for all involved:

- **For Lecturers:**
    - **Frustration:** Unclear how to submit claims and who to contact.
    - **Uncertainty:** No confirmation of receipt or status updates, leading to payment delays.
- **For Management (Coordinators & Managers):**
    - **Inefficiency:** Manual verification of every claim (rates, hours, duplicates) is incredibly time-consuming.
    - **Risk:** Human error can lead to overpayments or compliance issues going unnoticed.
- **For HR & Finance:**
    - **Data Entry Hell:** Manually collating approved claims from various sources into reports.
    - **Inconsistency:** Difficulty tracking down missing information and reconciling payments.

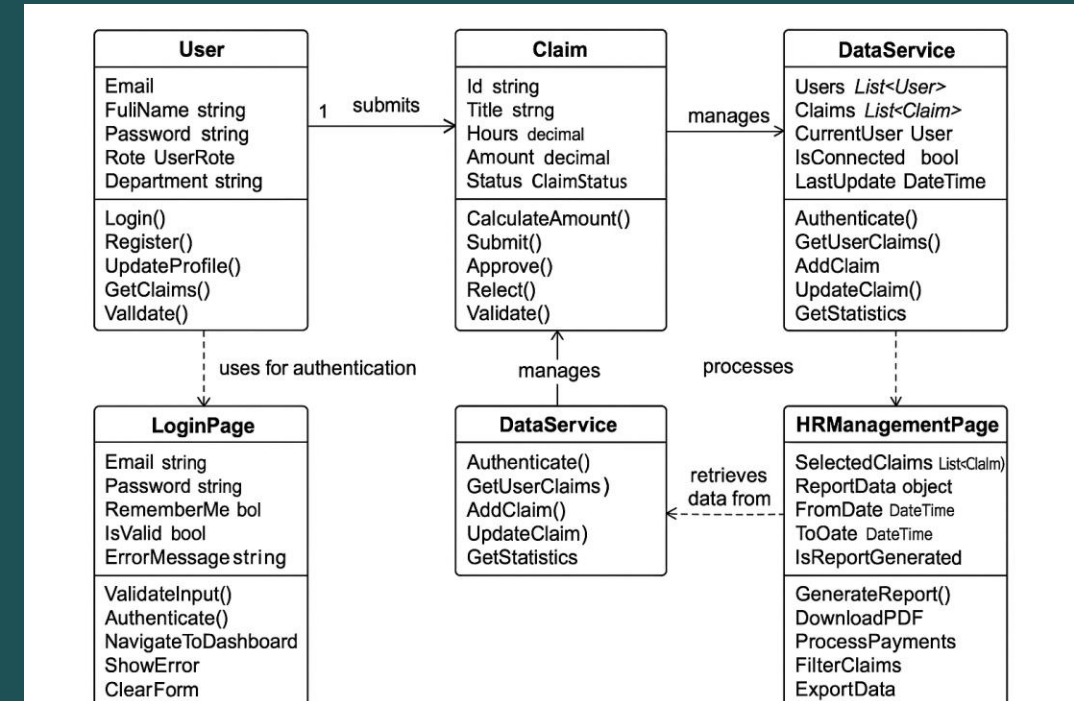This outdated system results in wasted time, financial inaccuracies, and frustration across the institution.

System Architecture

The diagram visually represents the classes: User, Claim, DataService, LoginPage, and HRManagementPage.

Each class box shows its attributes and methods, and the relationships between them are indicated with arrows.

For example, the User class has a one-to-many relationship with the Claim class, and the DataService class manages collections of users and claims.

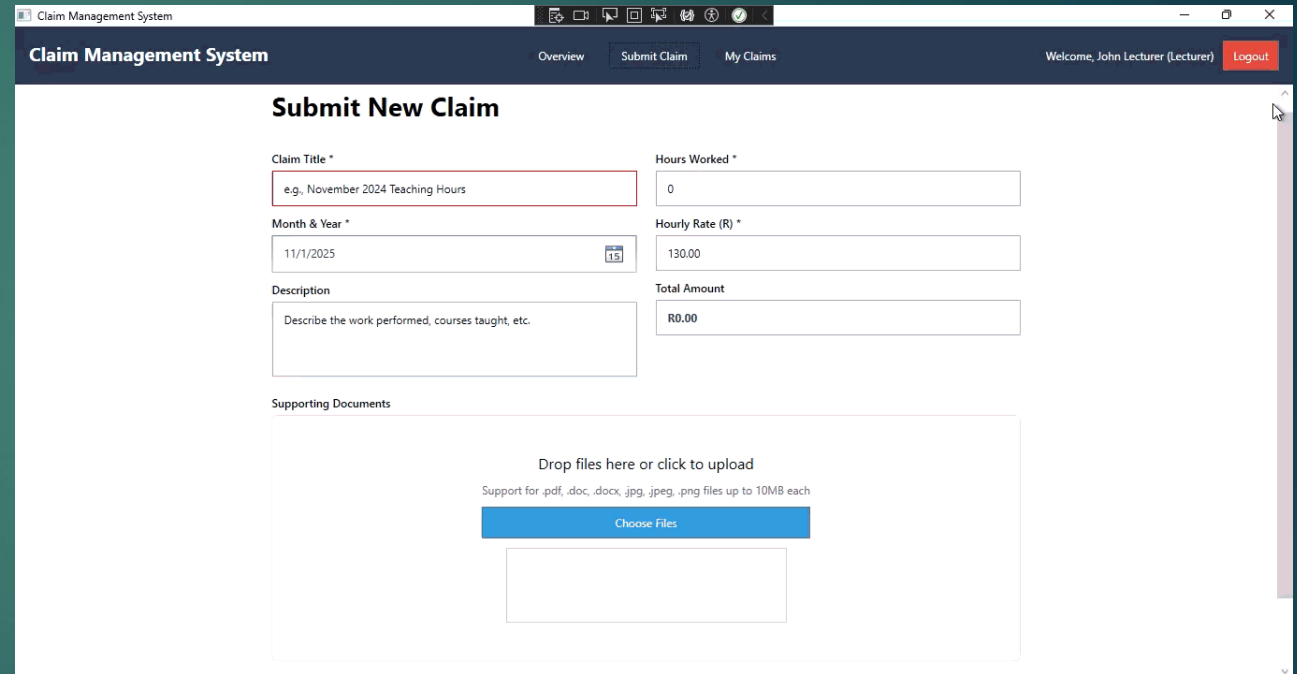The LoginPage and HRManagementPage interact with these core classes as well.

Lecture Workflow Automation

Auto-Calculation Features:

- **Real-time Amount Calculation**: The system automatically calculates the total claim amount by multiplying hours worked by hourly rate, updating instantly as users input values to prevent manual calculation errors

Validation Features:

- **Comprehensive Input Validation**: Implements real-time validation checks for required fields, numeric ranges, and data formats with visual feedback (colored borders, error messages) to ensure data integrity before submission

Manager Workflow

HR Workflow

Technical Highlights

- Core Technologies:
- ASP.NET Core MVC
- Entity Framework Core
- jQuery & jQuery Validation
- ASP.NET Core Identity
- Reporting Libraries:
- QuestPDF (for PDFs) / ClosedXML (for Excel)
- Development Practices:
- Version Control with Git & GitHub

Benefits & Value Proposition

▶ Boost Efficiency: Slash claim processing time and eliminate manual follow-ups.

▶ Ensure Accuracy: Automate calculations and validations to virtually eliminate costly errors.

▶ Enhance Transparency: Give every user real-time visibility into claim status from start to finish.

▶ Empower Your Team: Free managers and HR from repetitive tasks to focus on strategic initiatives.