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Module Code: PROG6212 POE PART 1

FULL DOCUMENTATION

# Database Structure and Design Choices

**The system is designed around five core entities:**

* **Lecturer:** Stores lecturer information, including ID, name, email, and hourly rate.
* **Claim:** Records the submitted claim details such as hours worked, hourly rate, and total amount.
* **ClaimStatus:** Defines the status of each claim (e.g., Pending, Approved, Rejected).
* **SupportingDocs:** Manages file uploads associated with claims.
* **Approval:** Captures the actions of Coordinators and Managers, including approval decisions, roles, and dates.

The UML class diagram illustrates the relationships:

* A **Lecturer** can submit multiple claims.
* Each **Claim** is linked to one **ClaimStatus** and may include multiple **SupportingDocs**.
* Each claim can receive multiple **Approvals**, ensuring accountability and a clear audit trail.

I chose this structure to reflect the real-world workflow of claims, ensuring traceability and proper data integrity.

## GUI Layout and Design Choices

The GUI is role-based:

* **Lecturers**: Submit claims, upload supporting documents, and track claim status.
* **Programme Coordinators**: Review submitted claims, verify hours, and approve/reject with comments.
* **Academic Managers**: Perform final approval before payment processing.

The design uses a **consistent Bootstrap-based layout**, ensuring simplicity and responsiveness. The **Submit Claim** page includes input fields for hours worked, hourly rate, faculty, module, and number of sessions, ensuring accuracy and detailed reporting. Dashboards for Coordinators and Managers present claims in color-coded tables with filtering options for quick decision-making.

### Assumptions and Constraints

* Each lecturer has a **fixed hourly rate** stored in the database.
* Claims are submitted **monthly only**.
* Supporting documents must be uploaded in **PDF format**.
* Authentication and authorization (login/roles) are planned for future development but are excluded from this prototype.
* This prototype is non-functional; only the front-end design and structure are implemented.

#### Business Rules

1. A lecturer can submit **one or more claims per month**, but each claim must include hours worked and a supporting document.
2. Claims must be reviewed by a Programme Coordinator before being escalated to the Academic Manager.
3. Only approved claims can proceed to final settlement.
4. Claims without valid supporting documents cannot be approved.
5. Once a claim is rejected, it must be resubmitted by the lecturer with corrections.
6. Coordinators cannot override Manager decisions.