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SEAT NO : 376

PROJECT ID : 32

PROJECT TITLE : VALUATION AUTOMATION

Technical Components

Component	Tech Stack
Frontend	React.js
Backend	Node.js, Express.js
Database	MongoDB
API	RESTful services

Implementation Timeline

Phase	Deadline	Status	Notes
Stage 1	18/07/2024	On going	Planning and Requirement gathering
Stage 2		Under review	Design and Prototyping
Stage 3		Under review	DB Designing
Stage 4		In progress	Backend Implementation
Stage 5		Not started	Testing & Implementation

PROBLEM STATEMENT:

The manual nature of the valuation process within educational institutions leads to several challenges, including:

- **Inconsistent fee calculation:** Different examiners and administrators calculate fees independently, leading to inconsistencies and errors in fee payments.
- **Manual assignments:** Faculty assignments are managed manually, resulting in inefficiencies and potential misallocations.
- **Delayed claims processing:** Claims for fees are processed manually, causing delays and inaccuracies in payments.
- **Lack of real-time updates:** Examiners, tabulators, and data entry operators do not have real-time access to their assignments, fee details, and claim statuses, leading to confusion and inefficiencies.
- **Administrative burden:** Managing the entire valuation process, from assigning tasks to processing claims, imposes a significant administrative burden on staff and faculty.

PROJECT-FLOW:

Purpose:

To streamline and automate the valuation process for educational institutions, ensuring efficient management of personnel, accurate calculation of fees, and timely processing of claims.

Scope:

The project encompasses the development of a web-based application that includes modules for:

1. User Management (Board Examiner, Chief Examiner, Examiner, Tabulator, Data Entry Operator)
2. Paper Correction Management
3. Faculty Assignment
4. Fee Calculation
5. Claims Processing
6. Faculty Dashboard

Business Context:

Educational institutions often face challenges in managing the valuation process due to the manual handling of assignments, fee calculations, and claims. Automating these processes will reduce errors, save time, and improve overall efficiency.

Consideration:

- User-friendly interface for all user personas
- Secure authentication and authorization
- Scalable database design to handle large volumes of data
- Real-time updates and notifications
- Compliance with educational institution policies and regulations

Dependencies:

- MERN Stack (MongoDB, Express, React, Node.js)
- Google Authentication for user login
- Institutional data for accurate fee and user information
- Internet connectivity for real-time operations

User personas:

- **Board Examiner:** Oversees the valuation process and ensures compliance with standards.
- **Chief Examiner:** Manages a group of examiners and coordinates the valuation process.
- **Examiner:** Conducts the paper correction and submits the results.
- **Tabulator:** Calculates and verifies the total marks.
- **Data Entry Operator:** Enters and updates data related to the valuation process.

User stories:

Board examiner:

- As a Board Examiner, I want to assign faculty members to different examination tasks so that the process is organized and efficient.
- As a Board Examiner, I want to approve or reject claims so that the payments are processed accurately.

Chief Examiner:

- As a Chief Examiner, I want to view and manage the progress of paper corrections so that I can ensure timely completion.

- As a Chief Examiner, I want to communicate with examiners and tabulators so that I can provide guidance and resolve issues.

Examiner:

- As an Examiner, I want to submit the corrected papers and enter the marks so that the results are recorded.
- As an Examiner, I want to view my fee details so that I can ensure I am compensated correctly.

Tabulator:

- As a Tabulator, I want to calculate and verify the total marks so that the results are accurate.
- As a Tabulator, I want to submit my fee claims so that I am compensated for my work.

Data Entry Operator:

- As a Data Entry Operator, I want to enter and update data related to the valuation process so that the information is accurate and up-to-date.
- As a Data Entry Operator, I want to view my fee details and submit claims so that I am compensated for my work.

Functional Requirements:

User Management:

- User registration and login (Google Authentication)
- Role-based access control

Paper Correction Management:

- Assigning papers to examiners
- Tracking correction status
- Submitting corrected papers and marks

Faculty Assignment:

- Assigning faculty members to various tasks
- Viewing assignment details

Fee Calculation:

- Calculating fees based on the type of task (UG sheet, PG sheet, session-based fees)
- Viewing fee details

Claims Processing:

- Submitting fee claims
- Approving/rejecting claims

Faculty Dashboard:

- Viewing assignments, fee details, and claims status
- Real-time updates and notifications

FLOW CHART: