SOFTWARE REQUIREMENT FOR (VALUATION AUTOMATION) - COE

NAME	ARTHANAREESWARAR R
ROLL NUMBER	7376222AD116
SEAT NUMBER	370
PROJECT ID	32
PROJECT TITLE	(Valuation Automation) - COE

Tech-Stack:

- ***Stack:*** Python stack
- ***Frontend***: HTML, CSS, JS, Jinja2
- ***Backend***: Python, Flask, Flask-SQL Alchemy, Flask-Login, Flask-RESTful
- ***Database***: MySQL
- **Authentication:** Flask-JWT-Extended

Introduction:

This document outlines the design and implementation of an Evaluation and Automation System for academic institutions. The system aims to streamline the process of evaluating examination papers by automating cost calculations and data management. By leveraging modern front-end and back-end technologies, the system provides a user-friendly interface for users to create profiles, input data, and retrieve cost calculations efficiently.

Scope:

The Evaluation and Automation System is designed to serve the following primary users: Board Officers, Chief Examiners, Evaluators, Tabulators, and Data Entry Operators.

- User authentication and profile management.
- Data input for department strength, subjects, and paper costs.
- Automated calculation of evaluation costs.
- Secure storage and retrieval of data in a database.
- User-friendly interface for data entry and result visualization.

General Description

The system is a web application that integrates front-end and back-end components to provide a seamless user experience. It facilitates the creation of user profiles, input of necessary data, and automated calculation of costs related to the evaluation process. The system ensures secure storage of all data and provides easy access for users to retrieve information and perform searches.

Product Functions

- **User Authentication:** Secure login and registration functionality.
- **Profile Management:** Ability to create and manage profiles for different user roles (Board Officer, Chief Examiner, Evaluator, Tabulator, Data Entry Operator).
- **Data Input:** Interface for users to input department strength, number of subjects, and cost per paper.
- **Cost Calculation:** Automated calculation of total costs based on input data.
- **Data Storage:** Secure storage of user profiles and cost data in a relational database.
- **Data Retrieval:** Functionality to search for users and retrieve their total cost details.

User Persona:

- **Board Office:**
  Responsible for overseeing the evaluation process and ensuring smooth operations. Needs to track the cost associated with evaluations.

- **Chief Examine:**
  Manages the evaluators and ensures that evaluation standards are maintained. Requires a detailed view of the cost per section.

- **Evaluator:**
  Evaluates a specified number of papers daily. Needs to log evaluation progress and understand individual costs.

- **Tabulator:**
  Compiles and tabulates evaluation results. Needs to know the cost per paper for tabulation.

- **Data Entry Operator:**
  Enters data into the system and ensures all information is accurate. Needs an efficient way to enter and verify data.

User Stories:

1. **As a Board Officer**: I want to log in to the system so that I can manage the evaluation process and track costs.

2. **As a Chief Examiner**: I want to create a profile and input data for evaluation sections so that I can oversee the cost calculations for my sections.

3. **As an Evaluator**: I want to log my daily paper evaluations so that my work can be accurately tracked and costed.

4. **As a Tabulator**: I want to input and manage tabulation data so that I can calculate the cost per paper accurately.

5. **As a Data Entry Operator**: I want to enter evaluation data efficiently so that the system is up-to-date with accurate information.

Functional Requirements

1. **User Authentication**:
   - Users must be able to register with a username, password, and role.
   - Users must be able to log in using their credentials.
   - The system must generate and validate JWT tokens for session management.

2. **Profile Management**:
   - Users must be able to create and update their profiles with relevant details.

- The system must store profile details securely in the database.

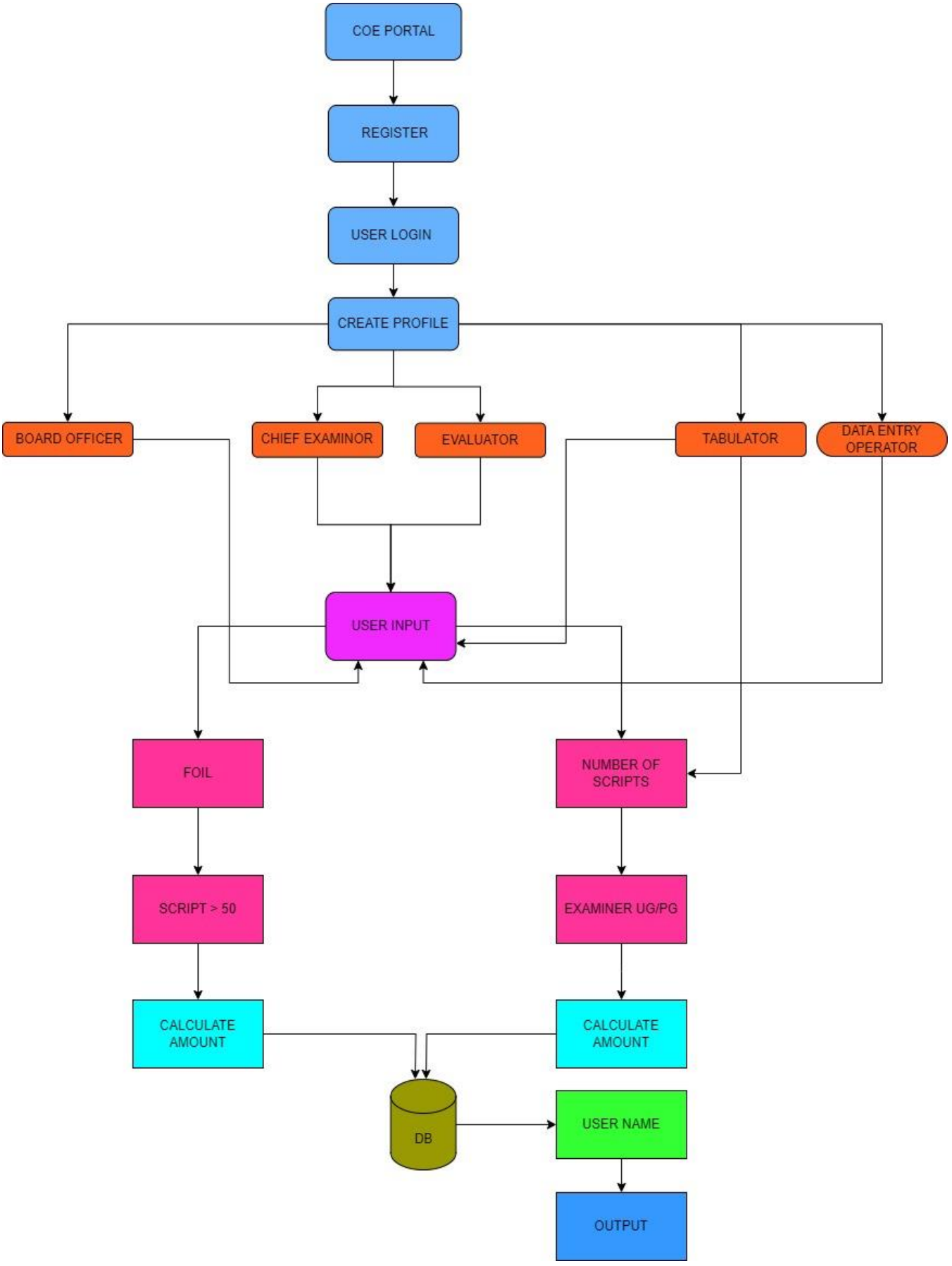
3. **Data Input**:
   - Users must be able to input department strength, number of subjects, and cost per paper.
   - The system must validate input data for accuracy and completeness.

4. **Cost Calculation**:
   - The system must calculate the total number of papers and the number of sections.
   - The system must compute costs for Board Officers, Chief Examiners, Evaluators, Tabulators, and Data Entry Operators based on input data.
   - The cost calculation must consider predefined rates (e.g., cost per paper, cost per section).

5. **Data Storage**:
   - The system must store all input data and calculated costs in a MySQL database.
   - Data storage must ensure data integrity and security.

6. **Data Retrieval**:
   - Users must be able to search for profiles and retrieve total cost details.
   - The system must display retrieved data in a user-friendly format.

FLOWCHART:


COE PORTAL
REGISTER
USER LOGIN
CREATE PROFILE
BOARD OFFICER
CHIEF EXAMINOR
EVALUATOR
TABULATOR
DATA ENTRY OPERATOR
USER INPUT
FOIL
NUMBER OF SCRIPTS
SCRIPT > 50
EXAMINER UG/PG
CALCULATE AMOUNT
CALCULATE AMOUNT
DB
USER NAME
OUTPUT