Project Overview: No-Dues Certificate Management Portal

Objective

The goal of this project is to create a streamlined, organized, and user-friendly portal for college students to apply for and track their **No-Dues Certificate**. Traditionally, this process was handled through Google Forms and Excel sheets, which often led to disorganized data management. Our portal aims to centralize the process, provide a clear dashboard, and ensure transparency for students and administrators.

Key Features

Section 1: Login

- **Options for Login:**
    - Enrollment Number + Password
    - Login with Google (Institute Email)
    - If no Google Email ID:
        - Enter College Email ID
        - Enter Enrollment Number

This ensures flexibility for both existing students with institutional Google accounts and those without.

Section 2: Dashboard

1. Overview

The **Dashboard Section** is the first screen displayed immediately after a student logs in to the No-Dues Portal.
Its primary objectives are:

- Provide a quick status overview
- Display application progress
- Show department-wise approval status
- Allow quick navigation to important actions

This section acts as the **central control panel** for the student.

2. Header / Welcome Panel

Purpose: To confirm student identity and display real-time application progress.

Components:

1. **Welcome Message**

   - Format: *Welcome,* 🖐
   - Displays the logged-in student's full name.
   - Confirms successful authentication.

2. **Enrollment Information**

   - Shows the student's Enrollment Number below the welcome text.

3. **Application Status Badge**

   - Examples:
     - "Application in Progress"
     - "Submitted"
     - "Approved"
   - Displayed as a colored status tag.

4. **Completion Percentage**

   - Displayed prominently on the right side.
   - Example: *0% Completion*
   - Includes a progress bar.
   - Dynamically calculated based on:
     - Form completion
     - Document upload
     - Department approvals

3. Quick Action Cards

Located below the welcome panel, three **summary cards** provide fast navigation:

1. **View Application**

    - Allows the student to review the submitted form.
    - Redirects to the application details page.

2. **Track Status**

    - Opens detailed approval tracking view.
    - Shows department-wise progress.

3. **Cleared**

    - Displays number of departments cleared.
    - Example: *0 of 8 departments*

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4. Department Approvals Section

Purpose: To display real-time approval status from all required departments.

Total Required Approvals: 8 Departments

- Security
- Class Coordinator
- Head of Department (HOD)
- Library
- Workshop / Lab
- Training & Placement Cell
- General Office
- Accounts Office

Each department appears as an **individual approval card** in a vertical list.

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5. Approval Status Logic

Each department card shows:

- Department Name
- Current Status
- Status Color Indicator

Status Types:

Status	Color	Meaning
Under Review	Yellow	Application submitted but approval pending
Approved	Green	Department has cleared the student
Rejected	Red	Department has rejected (visible only if rejection occurs)

Important Logic:

- If the student has not applied yet → approvals section may not display.
- Red status appears only in case of explicit rejection.
- No approval request = no department status shown.

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6. Visual Behavior

- All approval cards remain **Under Review (Yellow)** after application submission.
- As departments approve:
    - The corresponding card changes to **Green**.
    - Completion percentage updates automatically.
- When all 8 departments are approved:
    - Completion becomes **100%**
    - Application status changes to **"Fully Approved"**
    - Certificate becomes available for download.

Section 3: Apply for No-Dues Certificate

Application Process

The application process is divided into **five stages**:

1. **Personal Details**

   - Full Name
   - Email
   - Father's Name
   - Phone Number
   - Permanent Address

2. **Academic Details**

   - Enrollment Number
   - Department
   - Pass Out Year
   - Course
   - CGPA

3. **Hostel & Caution Money**

   - **Hostel Resident?**
     - If *Yes*: Enter Hostel Name & Room Number
     - If *No*: No further details required
   - **Caution Money Refund?**
     - If *Yes*: Enter Receipt Number
     - If *No*: No further details required
   - **Mandatory Prerequisites (Checkboxes):**
     - Exit Survey Completed ✔
     - All Fees Cleared ✔
     - Project/Internship Certificate Submitted ✔

4. **Upload Documents**

   - Fee Receipts
   - Previous Marksheet
   - Bank Passbook / Cancelled Cheque
   - College ID Proof

5. **Review & Submit**

   - Student reviews all entered data in a form view
   - Final **Declaration Checkbox**:

     "I hereby declare that all information provided is true and correct. I understand that providing false information may result in rejection of my application and disciplinary action."

Section 4: Apply for No-Dues Certificate

The **Application Status Section** allows the student to monitor the real-time progress of their submitted No-Dues application.

This section becomes accessible only after the student submits the application form.

Its main purpose is to:

- Show application identification details

- Display overall progress

- Provide department-wise approval tracking in a timeline format

A. Application Summary Panel

At the top of the section, a summary card is displayed containing:

1. Application Number

- Unique application reference ID
  Example format: `Application #A82B9C1F`

- Used for tracking and identification.

2. Submission Date

- Displays the exact date when the student submitted the application.

3. Overall Status Badge

Displayed on the right side of the summary panel.

Possible values:

- **In Progress** (Yellow)

- **Approved** (Green)

- **Rejected** (Red)

4. Department Clearance Count

- Displays cleared departments count:

  Example:
  `0 of 8 departments cleared`

This gives quick visibility of overall progress.

B. Approval Timeline Section

Purpose

To visually represent the approval flow of all required departments in a structured timeline format.

It shows:

- Which departments have reviewed the application
- Current review status
- Final decision (if any)

Departments Included in Timeline

The approval timeline contains the following departments:

1. Faculty
2. Class Coordinator
3. HOD
4. Library
5. Workshop / Lab
6. Training & Placement Cell
7. General Office
8. Accounts Office

Each department appears as a step in a vertical timeline.

Status Indicators

Each department displays:

- Department Name
- Status Label
- Status Color
- Optional date/time of action

Status Types:

Status	Color	Meaning
Under Review	Yellow	Approval request sent, waiting for response
Approved	Green	Department has cleared student

Status	Color	Meaning
Rejected	Red	Department has denied clearance

Timeline Behavior

- When application is first submitted → all departments show **Under Review**.

- As departments take action:

    - Status updates dynamically.

    - Color changes accordingly.

- Timeline visually tracks progress from top to bottom.

- If any department rejects:

    - The status turns red.

    - Application overall status may update accordingly.

Visibility Rules

- If no application is submitted → this section is not accessible.

- Only the latest submitted application is shown.

- Historical applications (if allowed in future) can be shown separately.

Section 5: Certificate Section

Overview

The **Certificate Section** displays the final No-Dues Certificate once all required approvals are completed.

This section becomes active only after:

- All 8 departments approve the application.
- Application status becomes fully approved.

A. Issued Certificate View

If certificate is issued:

The section displays:

- Certificate Title (e.g., "No Dues Certificate")
- Certificate Issue Date
- Application Reference Number
- Download Button (PDF format)
- View Button (Preview mode)

The certificate card should clearly indicate:

- Status: Issued (Green indicator)
- Official document availability

B. No Certificate Available State

If no certificate has been issued yet:

The section shows a placeholder box with message:

- "No Issued Certificates Available"
- Optional info message:
  "Complete all department approvals to receive your certificate."

This ensures the user understands why the certificate is not available.

User Flow Summary

1. Student submits application.

2. Application appears in Application Status Section.

3. Departments review and update approvals.

4. Once all approvals are completed:

   - Application status becomes Approved.

   - Certificate becomes visible in Certificate Section.

5. Student downloads certificate.

Functional Summary

Application Status Section:

- Displays application identity

- Shows overall status

- Provides real-time department approval tracking

- Uses visual status indicators

Certificate Section:

- Displays issued certificate after full approval

- Allows preview and download

- Shows placeholder if no certificate issued

Important:

Role-Based Access System – No Dues Portal

1. Login System – Role Selection Mechanism

A. Login Interface Behavior

The system supports role-based authentication.

Option 1 (Recommended – Auto Detection):

- Single login page
- Role automatically detected based on registered credentials
- User logs in with official Email ID + Password
- Redirected to role-specific dashboard

Option 2 (Explicit Role Selection – Alternative):

- Login page includes: Email ID, Password, Role Selection Dropdown
- Dropdown options: Student, Faculty, Class Coordinator, HOD, Hostel Warden, Library Admin, Workshop Admin, T&P Officer, General Office, Accounts Officer, Super Admin
- Redirected to respective role portal after login

(Auto role detection is recommended to prevent misuse and confusion.)

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2. Complete Role Hierarchy (11 Roles)

1. Student 👤

- **Access:** Student dashboard, apply for No-Dues, track status, download certificate
- **Responsibilities:** Submit application, upload documents, track approvals
- **Restrictions:** Cannot approve applications or view other students' data

2. Faculty 👨‍🏫 (Stage 1 Approver)

- **Scope:** Department-specific
- **Responsibilities:** Review academic standing, approve/reject at faculty stage
- **Restrictions:** Cannot see other departments or skip stages

3. Class Coordinator 📇 (Stage 2 Approver)

- **Scope:** Department-specific
- **Responsibilities:** Verify class-level clearances, approve/reject

4. HOD 👔 (Stage 3 Approver)

- **Scope:** Department-specific
- **Responsibilities:** Final academic approval, approve/reject

5. Hostel Warden 🏠 (Stage 4 Approver – Conditional)

- **Applies only if student is hostel resident**
- **Responsibilities:** Verify room clearance, confirm hostel dues cleared
- **Skipped if student is not a hostel resident**

6. Library Admin 📖 (Stage 5 Approver)

- **Responsibilities:** Verify book return, clear library dues, approve/reject

7. Workshop Admin 🔧 (Stage 6 Approver)

- **Responsibilities:** Verify lab/workshop equipment return, clear dues, approve/reject

8. T&P Officer 💼 (Stage 7 Approver)

- **Responsibilities:** Verify internship/project completion, confirm exit survey submission, approve/reject

9. General Office 🏢 (Stage 8 Approver)

- **Responsibilities:** Issue Transfer Certificate (TC), record TC number & issue date, approve for next stage

10. Accounts Officer 💰 (Stage 9 – Final Approver)

- **Responsibilities:** Clear financial dues, final approval authority, trigger certificate generation

11. Super Admin 🔐

- **Role Type:** System administrator
- **Responsibilities:** Manage users, assign roles, view all applications, monitor logs
- **Restrictions:** Does not approve applications or interfere in approval flow

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3. Role-Based Dashboard Behavior

Each role has a **custom dashboard layout** showing only relevant data.

Examples:

Role	Dashboard View
Student	Application form, status, certificate
Faculty	Pending approvals list (department-specific)
Accounts Officer	Financial clearance list
Super Admin	Complete system overview

4. Approval Workflow Order

The approval flow follows a strict sequence:

1. Faculty
2. Class Coordinator
3. HOD
4. Hostel Warden (if applicable)
5. Library
6. Workshop
7. T&P Officer
8. General Office
9. Accounts Officer (Final)

Each stage must be completed before the next becomes active.

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5. Security & Access Control Principles

- Users can only access data relevant to their role
- Cross-department data is restricted
- Role privileges are predefined
- No role can escalate privileges
- Students cannot edit applications after submission (unless rejected)