BANNARI AMMAN INSTITUTE OF TECHNOLOGY
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Sathyamangalam - 638401 Erode District, Tamil Nadu, India
Stay Ahead

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Roll No : 7376221SE154
Seat no : 389
Project ID : 8
Project Title : Template Task

Technical Components:

Component	Tech Stack
Front-end	Angular
Back-end	Express.js with Node.js
Database	MongoDB (NoSQL Database)
API	RESTFul API

Implementation Timeline:

Phase	Deadline	Status	Notes
Stage 1	03/06/2024	Completed	Planning and Requirements gathering
Stage 2			Design and Prototyping
Stage 3			DB Designing
Stage 4			Backend Implementation
Stage 5			Testing & Implementation

PROBLEM STATEMENT:

Teachers and college administrators face several challenges in managing daily tasks, scheduling, and resource allocation:

- **Lack of Centralized Platform:** Monitoring task progress, identifying bottlenecks, and ensuring accountability is difficult without a centralized system to provide real-time updates and comprehensive oversight of all activities.
- **Communication Gaps:** Inefficient communication between admin and teachers regarding tasks and schedules.
- **Availability Status Management:** Managing the availability of teachers for classes and tasks, especially during unexpected absences, is challenging for tracking and updating status in real-time.
- **Scheduling Conflicts:** Difficulty in managing and updating class schedules and venues.
- **Task Management:** Tracking and managing the completion status of tasks assigned to teachers.

PURPOSE:

The project aims to provide a centralized platform that allows selecting templates for tasks and facilitates efficient communication, task assignment, and status tracking. By addressing common challenges such as scheduling conflicts, teacher unavailability, and fragmented communication, the system seeks to improve overall productivity, ensure the timely completion of tasks, and provide a structured and transparent workflow.

SCOPE:

- **User Management:**

  - ➢ **Admin Interface:** Allow administrators to add, edit, and deactivate staffs. Assign roles and manage user permissions.
  - ➢ **Teacher Interface:** Enable teachers to view and update their daily tasks, schedules, and availability status.

- **Template Management:** Create and manage task templates, choose respective templates for particular tasks that include fields such as task description, venue allocated, deadlines, and associated resources.

- **Task Assignment and Tracking:**

  - ➢ **Admin Interface:** Assign daily tasks to teachers, including class schedules, venue details, and specific responsibilities. Track the progress and completion status of assigned tasks.
  - ➢ **Teacher Interface:** View assigned tasks, calendar schedule , update completion status, and request changes when needed.

- **Communication and Notifications:** Facilitate efficient communication between administrators and teachers through integrated messaging and notification systems. Provides real-time updates on task assignments and changes.

WORK-FLOW:

Users:

1. **Admin:**
    - Login: Admin logs into the dashboard.
    - Dashboard: Admin views statistics and manages tasks.
    - Manage Users: Admin can add, edit, or deactivate users; assign roles (e.g., Teacher, Approver).
    - Create/Manage Templates: Admin chooses, defines, edits, or deletes task templates.
    - Setup Approval Workflow: Admin defines approval stages and assigns approvers.
    - Assign Tasks: Admin assigns daily tasks and schedules to teachers.
    - View Task Status: Admin can view the status of all assigned tasks and pending approvals.
    - Send Notifications: Admin can send notifications to teachers and approvers.

2. **Faculty:**
    - Login: Faculty logs in to view their dashboard.
    - View Tasks: Faculty can view their template, assigned tasks, venues, exam duties, and timings.
    - Mark Completion: Faculty marks tasks as completed or pending.
    - Request Substitution: If unavailable, faculty can request the approver to assign an alternate.
    - View Upcoming Tasks: Faculty can view scheduled template tasks and deadlines.
    - Submit Feedback: Faculty can provide feedback on tasks and any issues faced.

3. **Approver:**
    - Review Tasks: Approvers review task completion and feedback.
    - Approve/Reject Tasks: Approvers can approve or reject task completion and request revisions if necessary.
    - Provide Feedback: Approvers can offer feedback on task performance.

FUNCTIONAL REQUIREMENTS:

1. **Login Authentication:**
    - Users can log in as either admin or faculty.
    - Based on the user role, the corresponding dashboard will be displayed.

2. **Dashboard:**
    - Admin Dashboard: Displays statistics, user, task and template management, and approval workflows.Assign roles to users and manage their permissions.
    - Faculty Dashboard: Displays assigned tasks, class schedules and venue details, pending tasks, and feedback options.

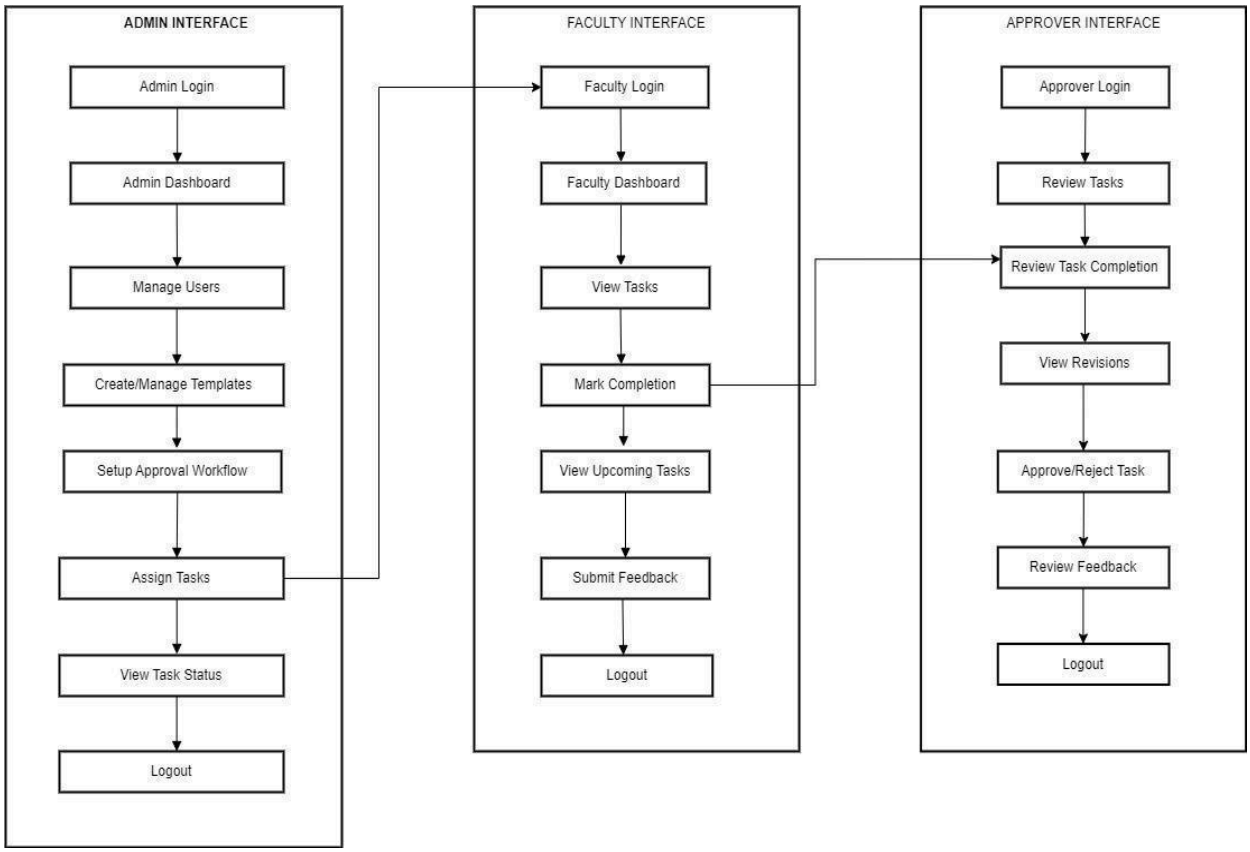
3. **Task Management:**
    - Admin: Assigns tasks, defines templates, sets deadlines, and monitors task status.
    - Faculty: Views tasks, marks completion, requests substitutions, and views upcoming tasks.

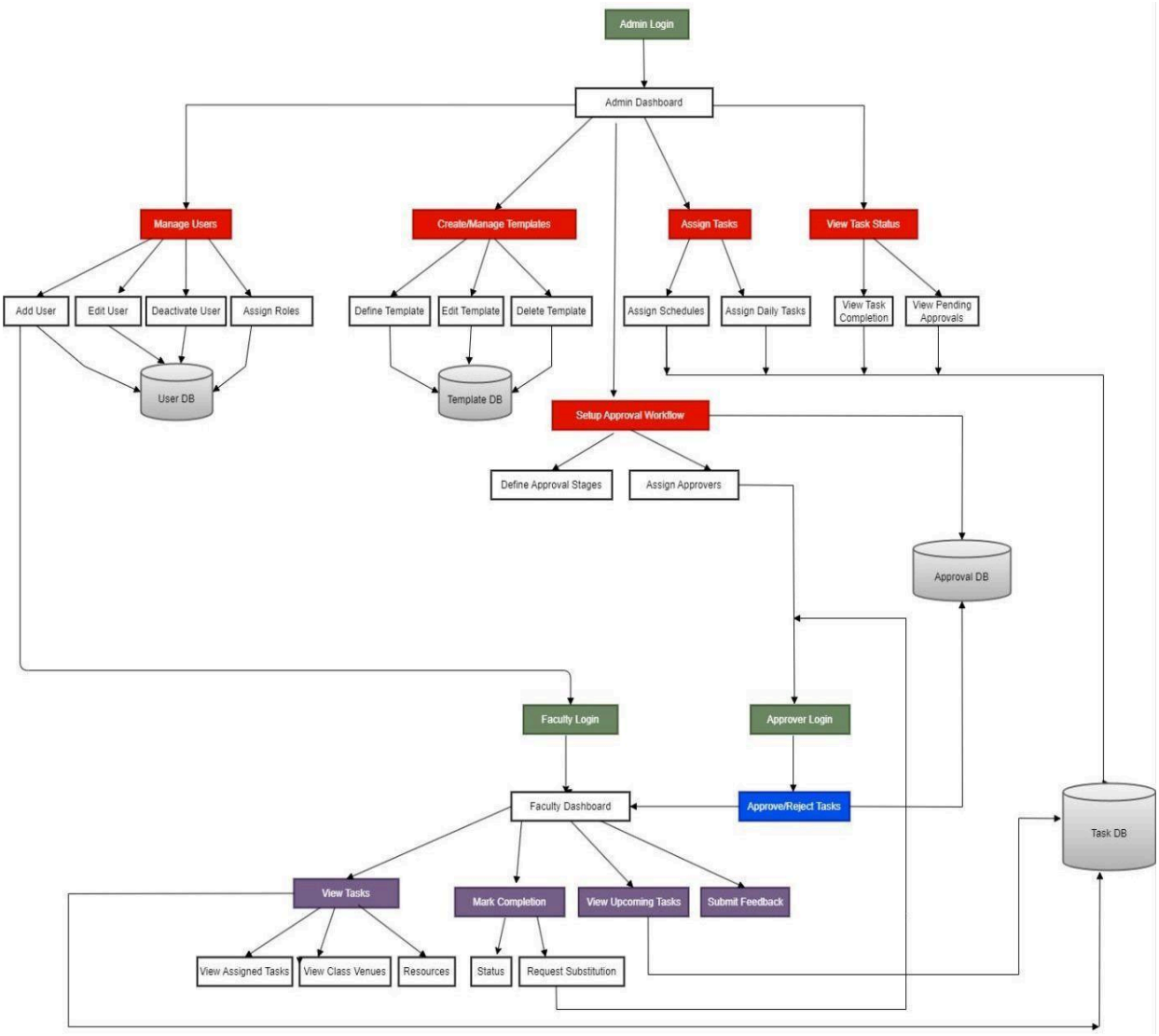
4. **Approval Workflow:**
    - Assign approvers to each stage and manage the flow of approvals and feedback.

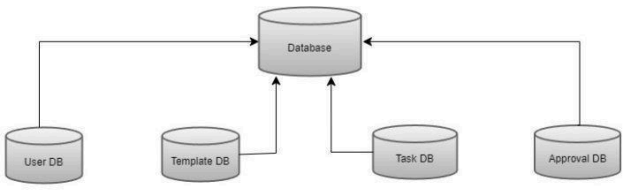
5. **Calendar Integration:**
    - Faculty can view their tasks and schedules in a calendar view.
    - Admin can schedule tasks and view faculty availability.

6. **Feedback Mechanism:**
    - Faculty can provide feedback on tasks and suggest improvements.

FLOWCHART:

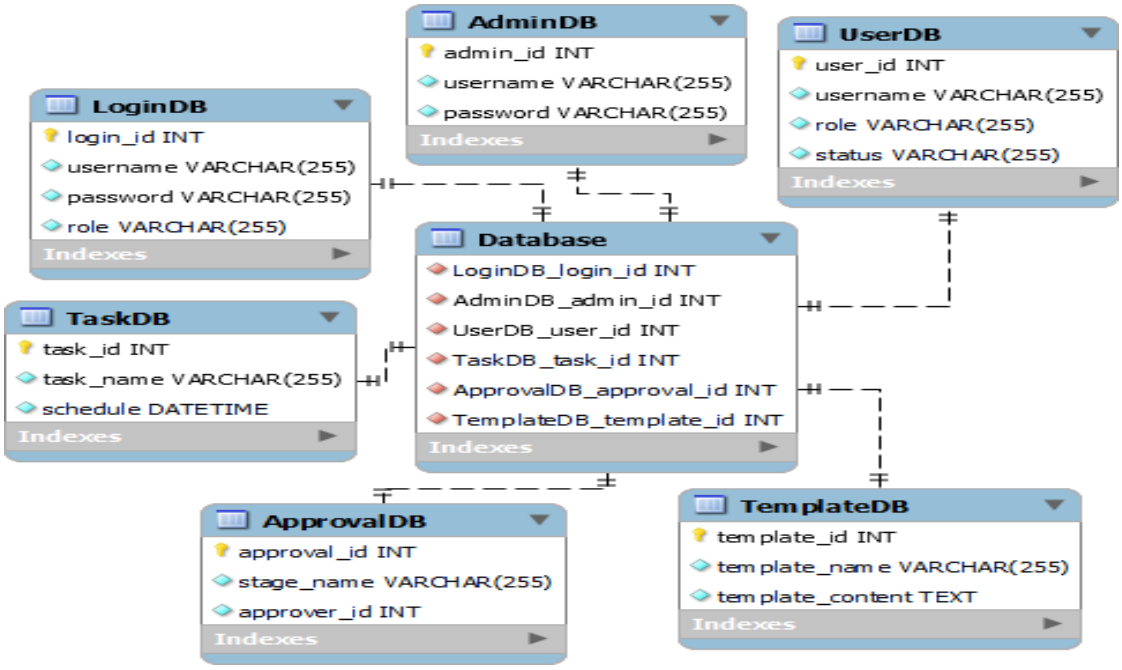

ADMIN INTERFACE
Admin Login
Admin Dashboard
Manage Users
Create/Manage Templates
Setup Approval Workflow
Assign Tasks
View Task Status
Logout
FACULTY INTERFACE
Faculty Login
Faculty Dashboard
View Tasks
Mark Completion
View Upcoming Tasks
Submit Feedback
Logout
APPROVER INTERFACE
Approver Login
Review Tasks
Review Task Completion
View Revisions
Approve/Reject Task
Review Feedback
Logout


Admin Login
Admin Dashboard
Manage Users
Create/Manage Templates
Assign Tasks
View Task Status
Add User
Edit User
Deactivate User
Assign Roles
Define Template
Edit Template
Delete Template
Assign Schedules
Assign Daily Tasks
View Task Completion
View Pending Approvals
User DB
Template DB
Setup Approval Workflow
Define Approval Stages
Assign Approvers
Approval DB
Faculty Login
Approver Login
Faculty Dashboard
Approve/Reject Tasks
Task DB
View Tasks
Mark Completion
View Upcoming Tasks
Submit Feedback
View Assigned Tasks
View Class Venues
Resources
Status
Request Substitution

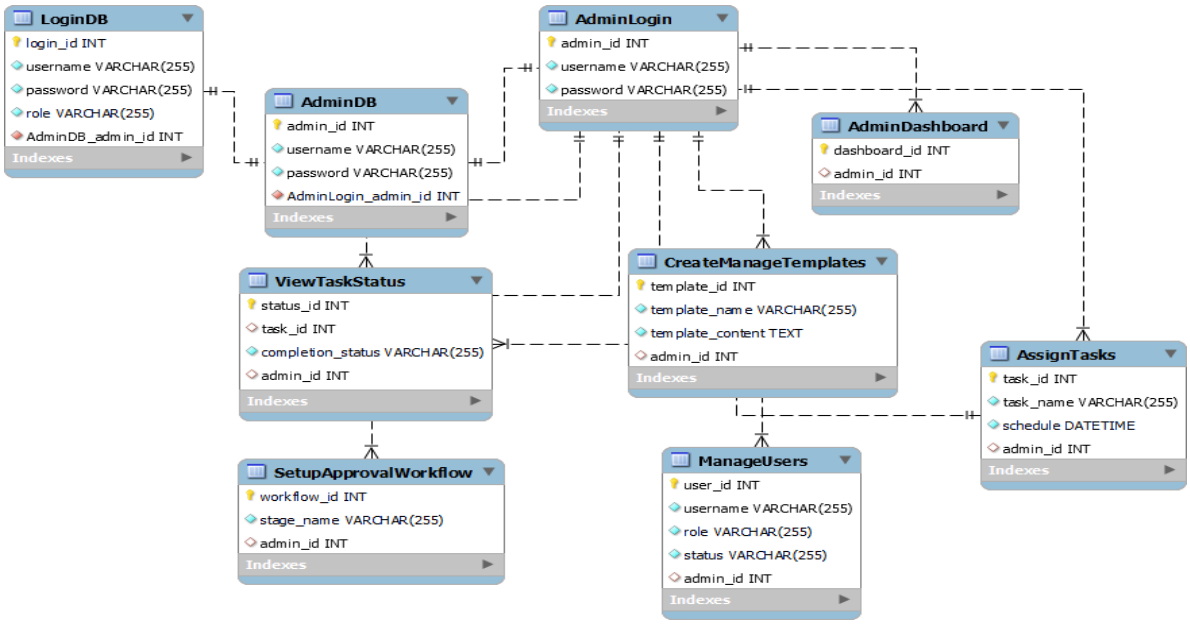

Database
User DB
Template DB
Task DB
Approval DB

ER DIAGRAM:

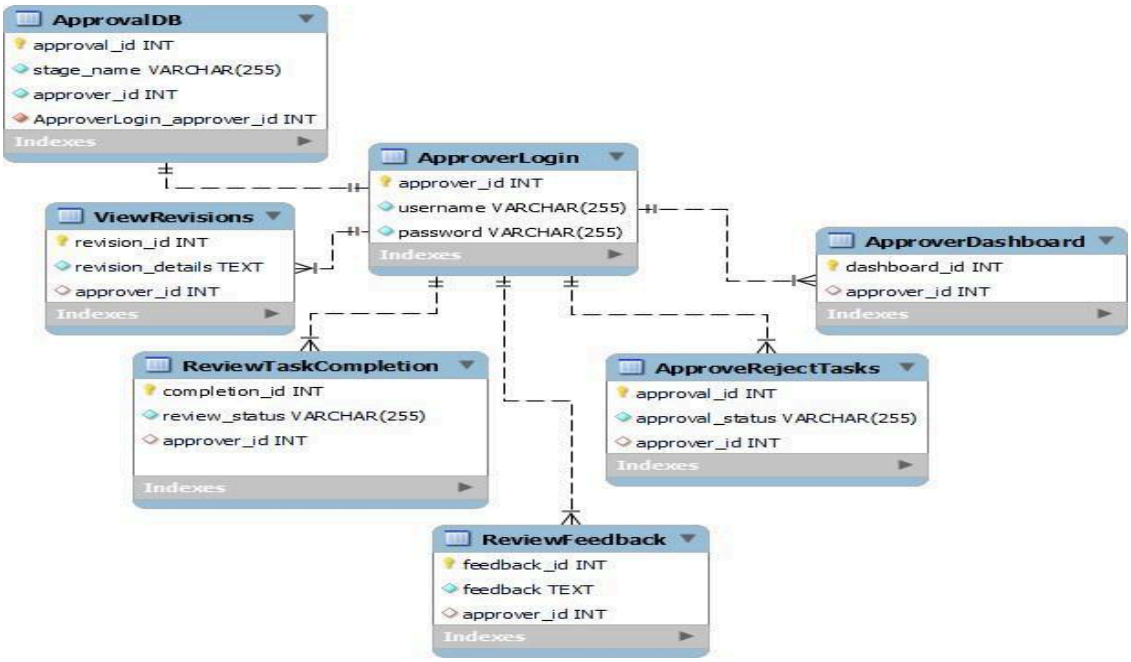
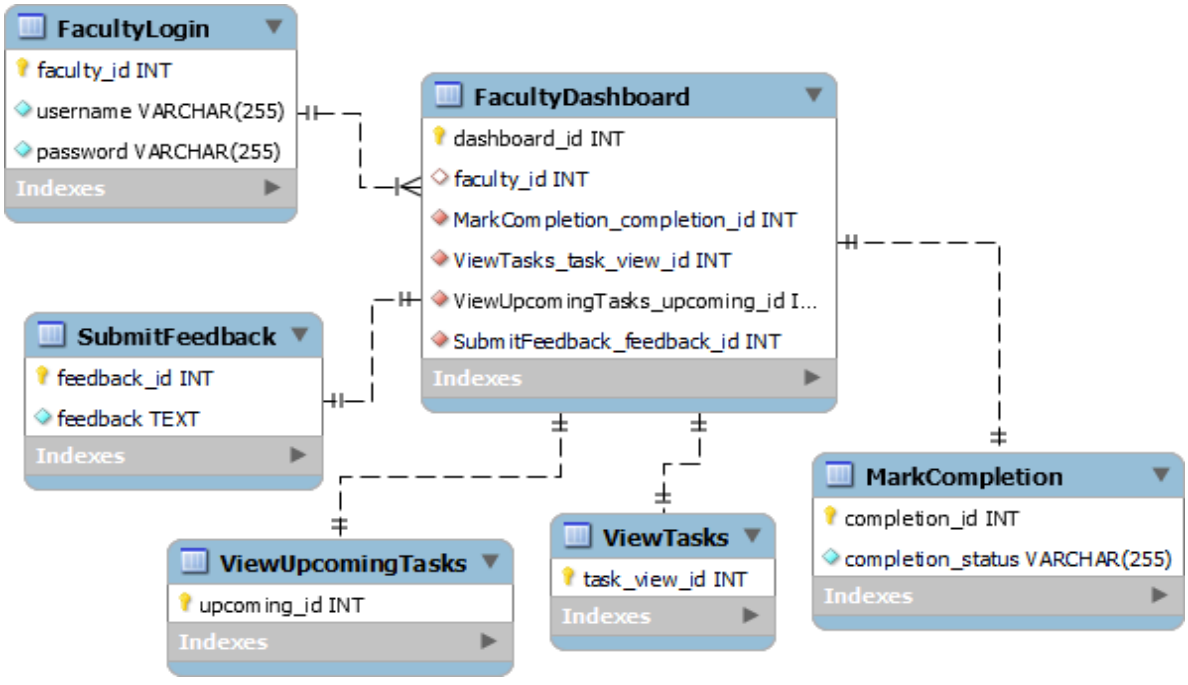
DATABASE CONNECTION:



ADMIN INTERFACE DATABASE:



APPROVAL INTERFACE DATABASE:



FACULTY INTERFACE DATABASE: