STUDENT–FACULTY–STAFF UNIFIED WORKFLOW MANAGEMENT SYSTEM

Technology stack

- Frontend: HTML, CSS, and JavaScript.
- Backend: Python (FastAPI).
- Database: PostgreSQL.
- Platform: Full-Stack Web Application.

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1. Role-Based User Authentication

- The system provides secure login and access control for different users such as students, faculty members, administrative staff, and administrators.
- Each user is allowed to perform only the actions relevant to their role, ensuring data security and proper workflow management.

2. Online Request Submission

- Students can submit various academic and administrative requests through the web portal.
- These include leave requests, on-duty (OD) applications, project approvals, internship permissions, certificate requests, and other institutional services.
- All requests are submitted digitally without the need for physical paperwork.

3. Configurable Approval Workflow

- Each request type follows a predefined approval flow.
- Requests are automatically routed to the appropriate faculty member, department, or administrative office based on the request category.
- This ensures systematic and organized processing.

4. Faculty Review and Recommendation

- Faculty members can review student requests, verify details, add remarks, and either approve or reject the requests.
- Faculty recommendations are recorded in the system to maintain transparency and accountability.

5. Administrative Staff Processing

- After faculty approval, administrative staff can verify documents, process the request, generate certificates or approvals, and update the request status.
- This helps staff manage tasks efficiently using a centralized queue.

6. Status Tracking

- Students can track the real-time status of their requests.
- Each request displays a clear timeline such as Submitted, Approved, Processing, or Completed.
- This reduces uncertainty and eliminates repeated follow-ups.

7. Digital Document Management

- The system supports uploading, storing, and downloading documents in digital format.
- All files are securely stored and linked to their respective requests, reducing paper usage and preventing document loss.
- Digital college seal is applied through online, indicating the file is verified from college.

8. Notification and Alert System

- Users receive notifications for important actions such as request submission, approval, rejection, or completion.
- Alerts help students and staff stay informed and reduce delays in processing.

9. Admin Dashboard and Analytics

- Administrators have access to a centralized dashboard showing pending requests, department-wise workload, processing time statistics, and system usage reports.
- This enables data-driven decision-making and performance monitoring.

10. Audit Trail and History Management

- Every action performed on a request is recorded with timestamps and user details.
- This audit trail ensures accountability, supports institutional audits, and helps in resolving disputes.

11. Secure and Scalable System Architecture

- The system is designed with security best practices such as password encryption, role validation, and session management.
- Its modular architecture allows easy expansion to include additional workflows and services in the future.

12. Paperless and Time-Efficient Operations

- By digitizing all workflows, the system reduces manual paperwork, minimizes processing time, and improves overall efficiency for students, faculty, and administrative staff.