

Project documentation: Scheme builder, project flow, tools used

Scheme Builder:

The Employee Travel Approval Application will be designed using a three-tier architecture:

Presentation Layer:

Web-based interface for employees to submit travel requests.

Dashboard for managers to review and approve requests.

Application Layer:

Backend server using a framework like Flask or Django for handling business logic.

Database to store employee data, travel requests, and approval statuses.

Data Layer:

Relational database management system (e.g., PostgreSQL) for structured data storage.

Project Flow:

Employee Submits Travel Request:

Employees log in to the system and submit travel requests with details like destination, dates, and purpose.

Manager Review:

Managers receive notifications and log in to review travel requests.

Managers can approve, reject, or request additional information.

Automated Notifications:

Automated email notifications to keep employees and managers informed of the request status.

Data Storage:

Travel requests, approvals, and employee information are stored securely in the database.

Reporting:

Generate reports for tracking travel expenses, approval timelines, and other relevant metrics.

Tools Used:

Frontend:

HTML, CSS, JavaScript for the user interface.

Frameworks like React or Angular for a dynamic and responsive experience.

Backend:

Python with Flask or Django for server-side logic.

RESTful APIs for communication between frontend and backend.

Database:

PostgreSQL for structured data storage.

Authentication:

JWT (JSON Web Tokens) for secure authentication and authorization.

Version Control:

Git for source code management.

Deployment:

Docker for containerization.

Deployment on cloud platforms like AWS or Heroku for scalability.

Testing:

Unit testing with tools like Pytest.

End-to-end testing for critical workflows.

Security:

HTTPS for secure communication.

Regular security audits and updates.

Monitoring:

Implement logging and monitoring tools for tracking application health and performance.

Documentation:

Use tools like Swagger for API documentation.

Maintain comprehensive project documentation for codebase and configurations.

By following this scheme and utilizing the mentioned tools, the Employee Travel Approval Application aims to streamline the travel request process, enhance communication between employees and managers, and provide valuable insights through reporting.