

Technical architecture:

1. ****Frontend (Client-side):****

- Use a web-based frontend framework like React or Angular for a dynamic user interface.
- Implement responsive design for accessibility on different devices.
- Utilize a state management system (e.g., Redux for React) to manage application state.

2. ****Backend (Server-side):****

- Choose a backend framework like Node.js (Express), Django, or Flask.
- Design a RESTful API to handle communication between the frontend and backend.
- Implement user authentication and authorization for secure access to the application.

3. ****Database:****

- Use a relational database such as PostgreSQL or MySQL to store employee data, travel requests, and approvals.
- Design a schema that efficiently represents the relationships between employees, travel requests, and approvals.

4. ****Server Logic:****

- Implement business logic for creating, updating, and retrieving travel requests.
- Include workflows for approval processes, considering different levels of authorization.
- Ensure data validation and error handling to maintain data integrity.

5. ****Integration with External Systems:****

- Integrate with corporate systems, such as HR systems for employee data and email systems for notifications.
- Utilize APIs for currency conversion, weather updates, or any other external data needed for travel requests.

6. ****Notifications:****

- Implement a notification system to alert employees and approvers of the status of their travel requests.

- Use email notifications or push notifications depending on the corporate preferences.

7. ****Security:****

- Implement secure coding practices to prevent common web vulnerabilities.

- Use HTTPS for secure data transmission.

- Regularly update dependencies and perform security audits.

8. ****Testing:****

- Conduct unit testing for individual components and integration testing for the entire system.

- Implement automated testing for regression testing and continuous integration.

9. ****Deployment:****

- Deploy the application on a cloud platform like AWS, Azure, or Google Cloud for scalability and reliability.

- Utilize containerization (e.g., Docker) for easy deployment and scaling.

10. ****Monitoring and Logging:****

- Implement logging mechanisms for tracking application behavior.

- Set up monitoring tools to detect and respond to issues promptly.

11. ****Documentation:****

- Create comprehensive documentation for developers, administrators, and end-users.

- Include API documentation, database schema, and deployment instructions.