

# Technical Architecture & System Documentation

*Employee Management System (EMS)*

## Technical Architecture & System Documentation

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### 1. Infrastructure & Tech Stack Rationale

#### 1.1 Core Architecture

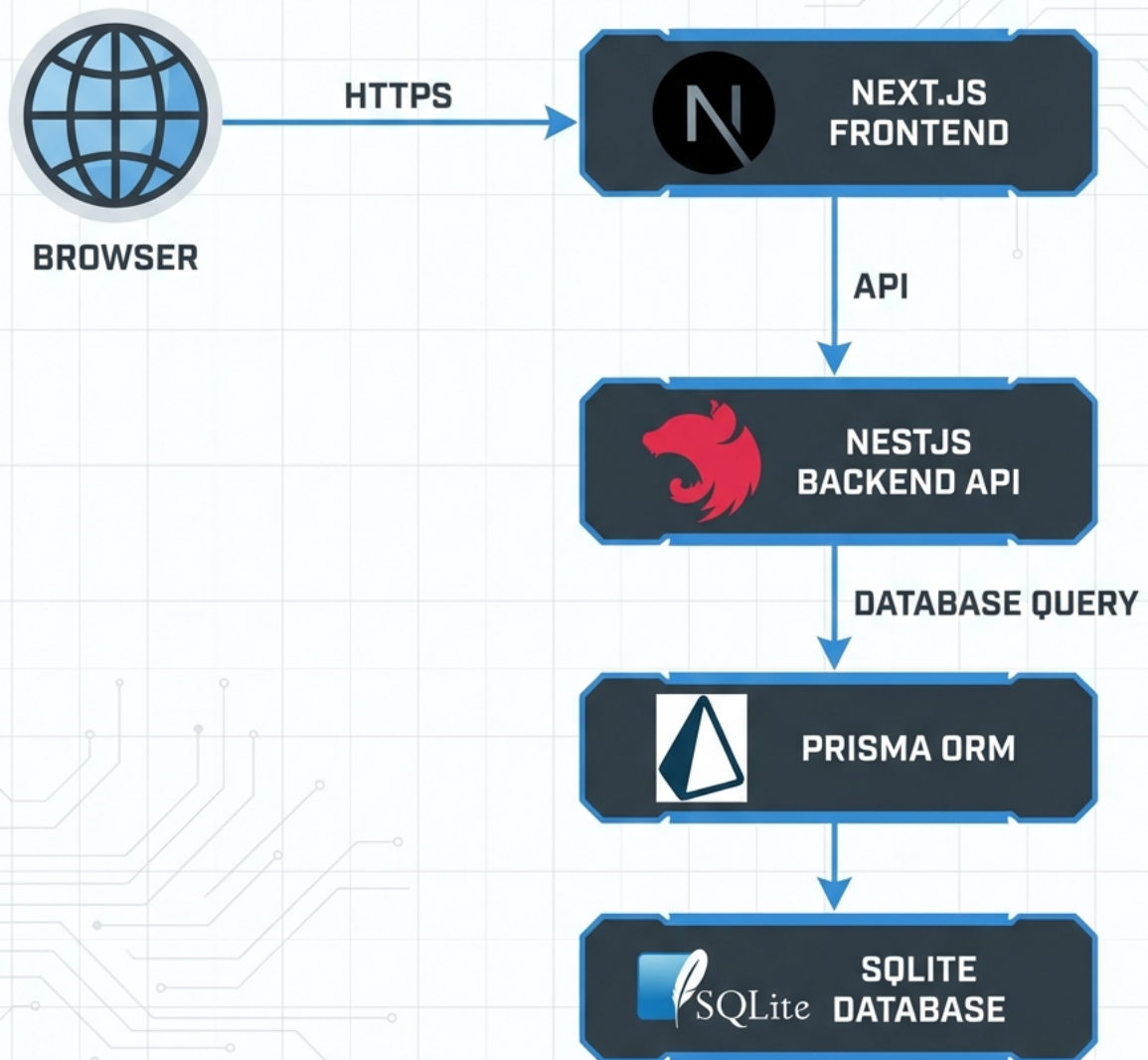
#### 1.2 The Stack

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### 2. System Flow & Diagrams

#### 2.1 High-Level System Architecture

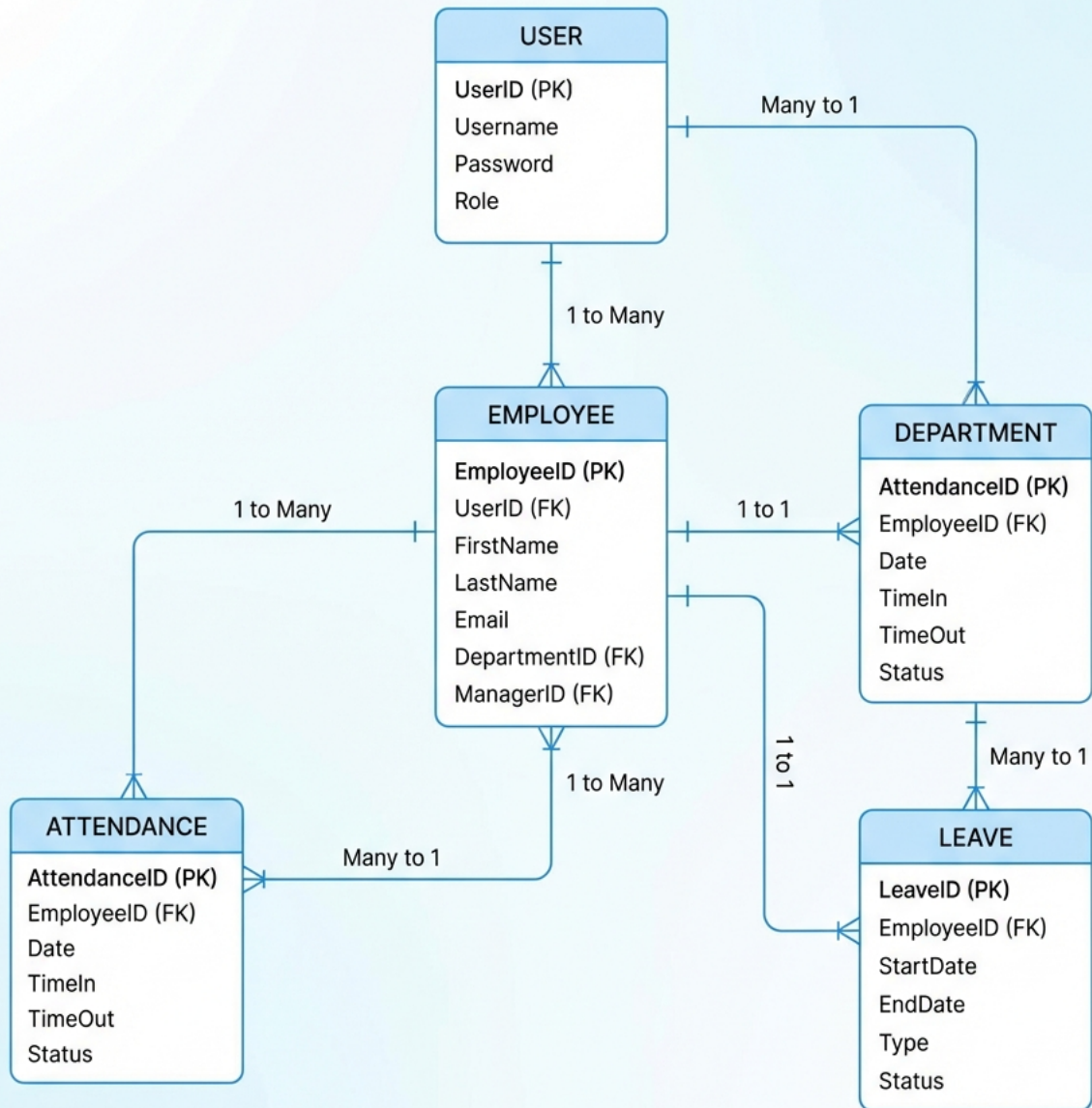
# WEB APPLICATION ARCHITECTURE



graph TD

subgraph "Internal Backend"

## 2.2 Database Entity Relationship (ER) Diagram

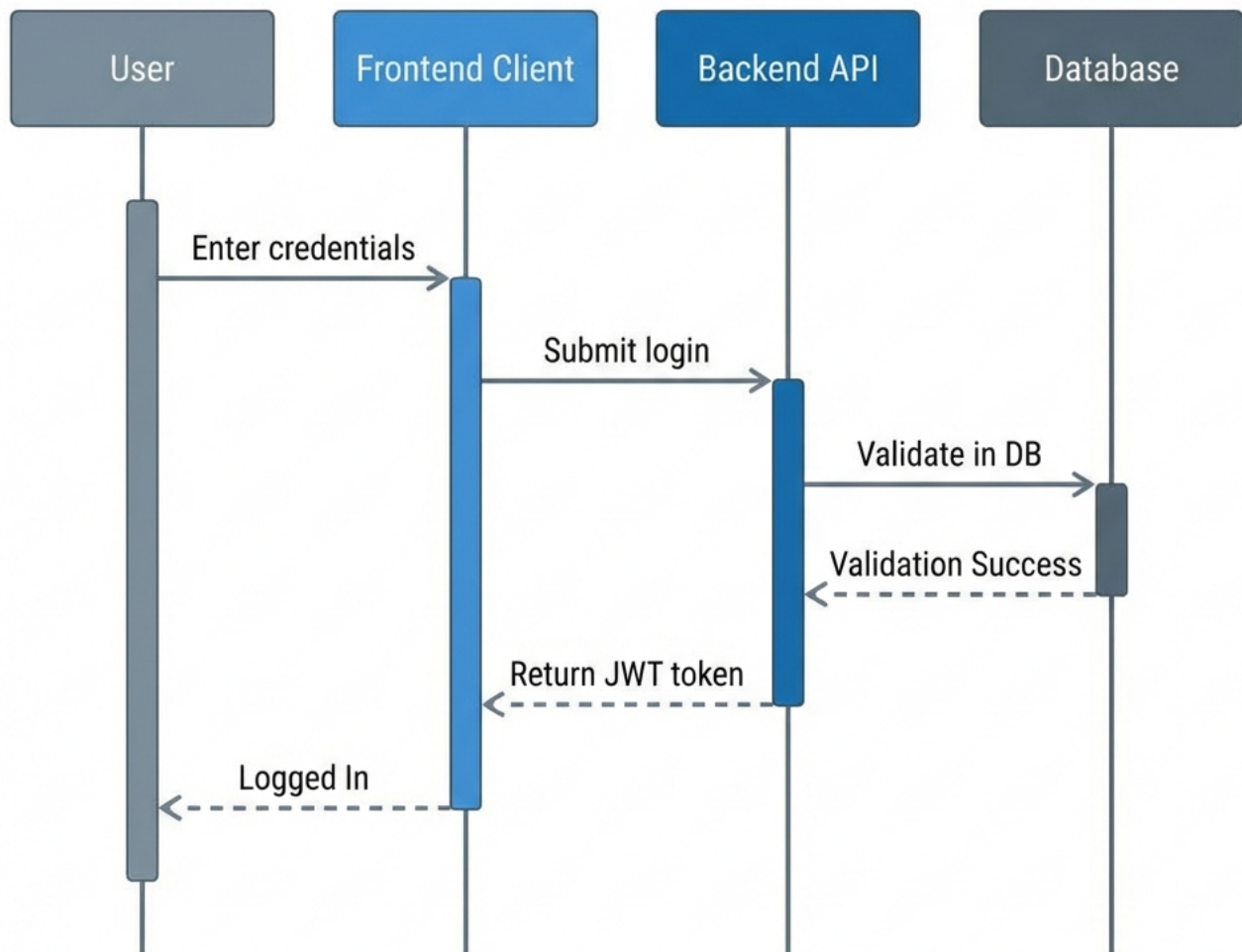


erDiagram

User {

**2.3 Authentication Flow**

## SEQUENCE DIAGRAM: AUTHENTICATION FLOW



sequenceDiagram

U->>F: Enter Credentials

### 3. Core Logic Implementation

#### 3.1 Role-Based Access Control (RBAC)

**\*\*Access Matrix:\*\***

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#### 3.2 Attendance Logic

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#### 3.3 Leave Workflow

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### 4. Performance Optimization

#### 4.1 Turbopack

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#### 4.2 SQLite in Production VS Development

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### 5. Maintenance & Scaling

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### 6. Conclusion

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