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Attendance System Requirements

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The Attendance Tracking System is a web-based platform designed to streamline student/employee attendance management using React (frontend), Node.js (backend), and MySQL (database). The system features role-based access, real-time attendance marking, and automated report generation, ensuring scalability (500+ users) and security (RBAC). GitHub serves as the core collaboration tool, with a structured repository (``main``, ``dev``, and feature branches), pull request reviews, issue tracking, and CI/CD pipelines via GitHub Actions. Key workflows include branching (``git checkout -b feature/attendance-marking``), committing changes, and enforcing code quality through automated tests. Challenges like merge conflicts are mitigated by regular ``git pull`` syncs, while branch protection rules safeguard production code. Future enhancements may include biometric integration (facial recognition) and AI-driven analytics. Hosted on AWS/Vercel, the project's GitHub repo ([\[github.com/your-repo/attendance-system\]](https://github.com/your-repo/attendance-system)[\)\(https://github.com/your-repo/attendance-system\)](https://github.com/your-repo/attendance-system)) centralizes documentation, ER diagrams, and deployment scripts, embodying best practices in version control and agile development.

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