



Employee Onboarding and IT Access Management Portal

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Problem Definition

- During the onboarding process, organizations often experience delays and miscommunications between HR, Managers, and IT staff.
- Tasks like laptop provisioning, account set-up, and approvals are not tracked in one system.
- Results in incomplete onboarding tasks, delayed system access, and an overall poor new-hire experience.

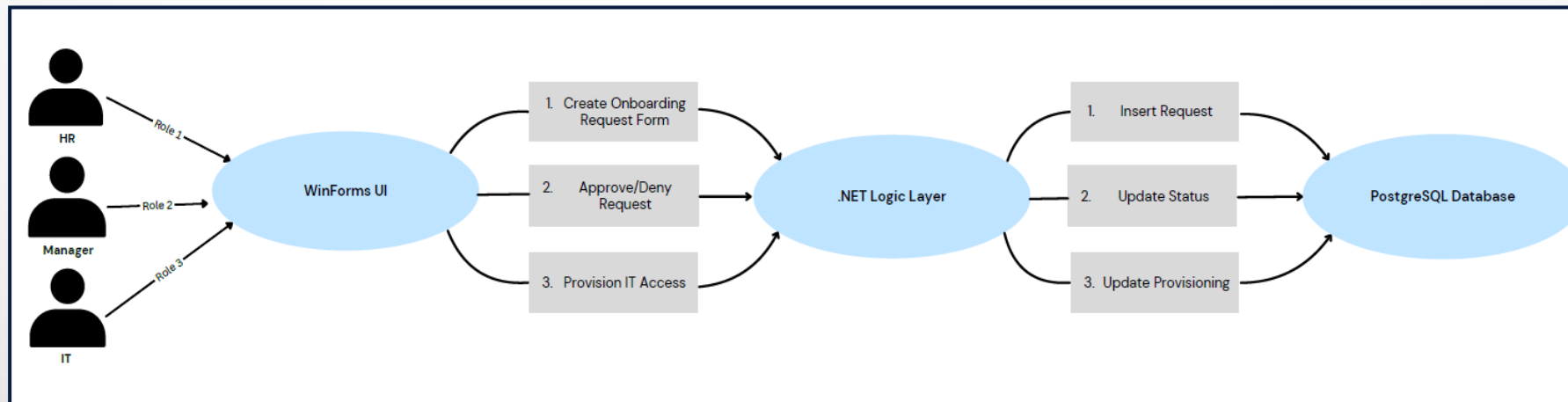


Project Overview

- The presentation layer is made with WinForms, allowing role-based access and user interfaces and makes forms for HR, Managers, and IT.
- HR staff are the primary users and need to create onboarding requests and track their progress.
- The manager needs to approve or deny the onboarding request.
- The IT technician needs a clear list of provisioning tasks to complete them efficiently.
- The business logic layer is responsible for the authentication, request, approval, and provisioning services.
- The data access layer connects to the PostgreSQL database, which holds SQL queries and parameterized commands.

System Architecture

- WinForms desktop app that allows users to interact with the onboarding system.
- Business logic handles the processing of requests such as updating statuses, assigning tasks, and retrieving information from the database.
- Connects to a database where all the data is stored, including employees, onboarding requests, and IT tasks.



Implementation Highlights

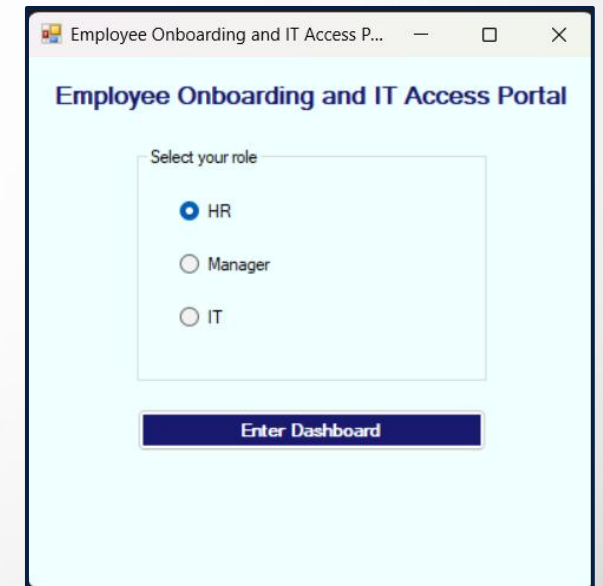
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Demo Overview

- HR can create onboarding requests.
- Managers can approve and reject onboarding requests.
- IT can view approved requests.
- IT can submit provisioning updates.
- System tracks onboarding status.
- Role-based access control (HR, Manager, IT).





Testing & Evaluation Results

- Testing Strategy: Unit testing for feature development, integration testing for connection of layers, and manual testing for UI components.
- Test Cases: User onboarding workflow, role-based access control, and database interactions.
- Evaluation Approach: Verified expected outputs, ensured data consistency across layers, and validated successful completion of onboarding tasks.
- KPI Targets: Decrease new hire onboarding processing time by ~10%, increase IT provisioning completion rate by ~5%, maintain an error rate below 1% per onboarding request.



Challenges & Lessons Learned

- **Version Control:** Beginning with a messy project repository in GitHub challenged us to reorganize our repo's structure and maintain it with improved team coordination and workflow management.
- **Database Connection:** Database setup and functionality verification caused initial delays but resulted in a maintained system connection and accurate data transfer.
- **Project Time Constraints and Scope Management:** Balancing desired features with project deadlines and team bandwidth required us to prioritize core functionality over additional enhancements.



Future Work

- Automatic email notifications for status changes.
- In-depth dashboard analytics for each role.
- Migration to a web-based and mobile application.
- Integration with Active Directory.



Thank You!

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