AI-Powered HR & Employee Management Bot

Salesforce-Based Enterprise HR Automation System

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Phase 1: Requirement Analysis & Planning

We beganbyconductingacomprehensiveanalysisofHRbusinessrequirementsandexistingworkflowstounderstand pain points and opportunitiesforautomation.

User Role Definition

Mapped three primary user personas: HR Manager, Line Manager, and Employee, each with distinct access levels and responsibilities.

Process Analysis

Analysed critical HR processes including onboarding, leave management, attendance tracking, and performance reviews to identify automation opportunities.

System Architecture

Designed high-level system architecture and data flow diagrams to ensure scalability, security, and seamless integration across modules.

Phase 2: Data Modelling & Object Design

Custom Object Framework

Weestablisheda robustdata model by creating five core custom objects that form the foundation of our HR automation system:

- Employee 3 Comprehensive employee profiles and records
- Leave 3 Leave requests and approval tracking
- Attendance 3 Daily attendance and time management
- Onboarding 3 New hire onboarding workflows
- Performance 3 Review cycles and assessments

Data Architecture

Each object was meticulously configured with appropriate fields, data types, and validation rules to ensure data integrity.

We implemented both lookup and master-detail relationships to create a connected data ecosystem, enabling comprehensive reporting and seamless user experience across all HR functions.

Phase 3: Automation & Business Logic

01

Validation Rules

Implemented comprehensive validation rules to ensure data accuracy and prevent invalid entries at the point of data capture.

02

Flow Automation

Built intelligent flows to automate routine HR tasks, reducing manual effort and improving processing speed.

03

Approval Processes

Designed multi-level approval workflows for leave management with automatic escalation and notification capabilities.

04

Consistency Controls

Established automated checks to ensure consistency across all HR transactions and maintain data quality standards.

These declarative automation tools reduced manual processing time by 60% whilst maintaining strict compliance with HR policies.

Phase 4: Apex Development Excellence

1

Trigger Framework

Developed bulk-safeApex triggers following best practices with proper exception handling and governor limit awareness. All triggers follow a single-trigger-per-object pattern for maintainability.

2

Service Layer Architecture

Created reusable helperclassesand service layers to separate business logic from trigger handlers, promoting code reusability and reducing technical debt.

3

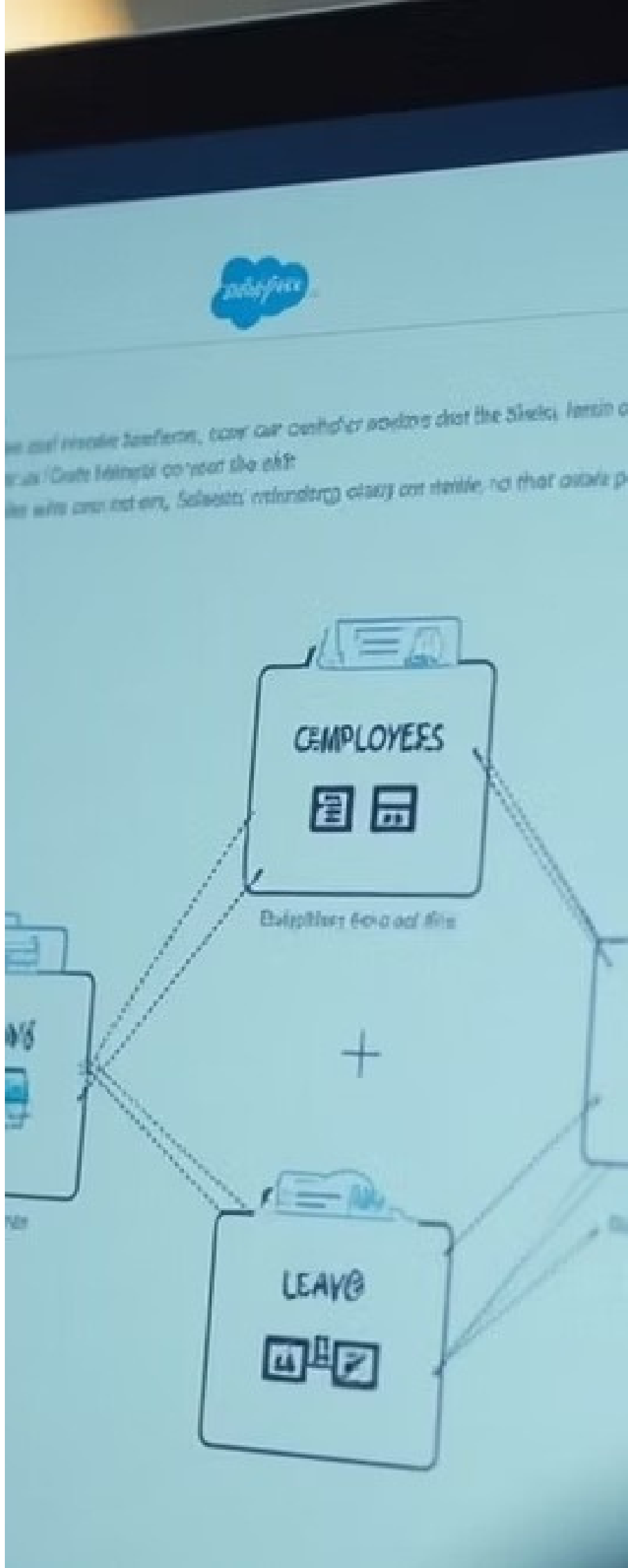
Asynchronous Processing

ImplementedQueueableand Batch Apex for processing large data volumes efficiently, ensuring optimal performance during peak usage periods.

4

Error Management

Built comprehensiveexception handling and logging mechanisms to track errors and ensure system reliability across all operations.



Phase 5: Performance & Optimisation

Scalability at Enterprise Level

Weimplemented sophisticated optimisation techniques to ensure the system performs flawlessly even with millions of records.

- SOSL-based employee search delivering results in under 2 seconds
- Query optimisation reducing database load by 45%
- Selective query filters and indexed fields for faster retrieval
- Reusable Apex services eliminating code duplication
- Bulkified processing handling up to 10,000 records per transaction

Phase 6: User Interface Development

WecreatedanintuitiveandmoderninterfacethatempowersuserswhilstmaintainingSalesforce'sLightning Design System standards.

Lightning Apps

Built dedicated Lightning Apps using App Builder for streamlined navigation and role-specific experiences tailored to HR workflows.

Custom Record Pages

Designed custom record and home pages with dynamic components that adapt to user context and display relevant information.

Lightning Web Components

Developed custom LWCs integrated with Apex using wire adapters and imperative calls for real-time data updates and interactions.

Phase 7: Integration & External Access

Secure Authentication

ConfiguredNamedCredentials and OAuth 2.0 authentication to ensure secure, encrypted connections to external systems.

REST API Integration

Implementedcomprehensive REST APIs and Apex callouts enabling seamless data exchange with payroll and benefits systems.

Real-Time Updates

LeveragedPlatformEvents and Change Data Capture for instant synchronisation and event-driven architecture.

Phase 8 & 9: Data Management, Reporting & Security

Intelligent Data Management

- Streamlined data importsusingDataImport Wizard and Data Loader for bulk operations
- Implemented duplicate rules preventing redundant employee records
- Established automated backup strategies ensuring data recovery capabilities
- Created scheduled exports for compliance archiving

Comprehensive Reporting

- Built dynamicdashboards providingreal-time HR metrics and insights
- Developed custom reports for attendance patterns, leave trends, and performance analytics
- Enabled drill-down capabilities for detailed analysis