

Project Title: Workforce Administration Solution (dev)

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1.INTRODUCTION

1. INTRODUCTION

Introduction to Workforce Administration Solution(dev):

The Workforce Administration Solution (Dev) is a Salesforce-based project designed to streamline and automate key workforce management processes within an organization. This solution serves as a centralized platform to handle various administrative tasks related to employee data, role assignments, leave tracking, department allocation, performance evaluation, and other HR-related activities.

Built on the robust Salesforce platform, the solution leverages Salesforce's low-code tools, data models, automation capabilities, and reporting features to deliver a scalable and efficient system for workforce administration. The primary goal of this project is to reduce manual workload, improve data accuracy, and enhance workforce planning and decision-making through real-time insights and automated workflows.

By implementing this solution, organizations can ensure better coordination between HR, management, and employees, leading to increased productivity, transparency, and streamlined operations.

1.1. Project Overview

The Workforce Administration Solution (Dev) is a cloud-based application developed on the Salesforce platform to manage and automate core human resource (HR) functions within an organization. This project aims to provide a smart, integrated, and user-friendly system to handle the complete life cycle of workforce management—from on-boarding to exit.

The solution is designed for HR administrators, managers, and employees to interact seamlessly through role-based access. It centralizes workforce data and integrates features such as employee on-boarding, attendance tracking, leave and shift management, role assignments, and performance monitoring.

By leveraging Salesforce's automation tools like Flows, Process Builder, Approval Processes, and Reports & Dashboards, the solution ensures

smooth and efficient handling of HR tasks with minimal manual intervention.

Key Highlights:

1. Developed using Salesforce Lightning and declarative tools.
2. Centralized employee data management.
3. Automated workflows for leave approvals and employee onboarding.
4. Real-time dashboards and analytics for workforce insights.
5. Custom objects and relationships for flexible data structure.

This project enhances the efficiency of HR operations, improves decision-making, and ensures better workforce planning and employee engagement.

1.2. Purpose

The purpose of this Salesforce project is to:

1. Automate HR tasks like onboarding, leave tracking, and role management.
2. Centralize employee data in one secure, accessible platform.
3. Reduce manual work and human errors through workflow automation.
4. Improve communication between HR, managers, and employees.
5. Provide real-time insights using dashboards and reports.
6. Support better decision-making and workforce planning.

2.IDEATION PHASE

2. IDEATION PHASE

2.1. Problem Statement

Define the Problem Statements

Customer Problem Statement Template:

To create a solution that serves the needs of users involved in workforce management—such as HR staff, team managers, and employees—it is crucial to understand their point of view. This Customer Problem Statement Template helps focus on what truly matters to them, leading to more effective, relevant solutions.

A strong customer problem statement enables your team to clearly identify the barriers users face and the emotions these challenges evoke. This allows you to empathize with your users, improving how you design and deliver the Workforce Administration Solution.

Example:

| Problem Statement (PS) | I am (Customer) | I'm trying to | But | Because | Which makes me feel |
|------------------------|-----------------|---------------------------------|--|--|----------------------------|
| PS-1 | An HR Manager | Manage employee leave records | The records are not updated in real-time | The system requires manual input from multiple users | Frustrated and inefficient |
| PS-2 | A Team Leader | Track task assignments for team | The dashboard lacks real-time updates | Tasks are not linked to employee work status | Confused and delayed |

2.2. Empathy Map Canvas

Empathy Map Canvas:

An empathy map is a simple, easy-to-digest visual that captures knowledge about a user's behaviors and attitudes.

It is a useful tool to help teams better understand their users.

Creating an effective workforce administration solution requires understanding the real problems and daily challenges faced by HR professionals, employees, and administrators.

By developing this empathy map, we aim to grasp the perspectives, needs, and emotions of users—such as HR staff or team leads—who will interact with the solution. This ensures the final product addresses their expectations, simplifies their tasks, and supports their goals.

The exercise of creating the map helps participants consider things from the user's point of view—along with their goals and obstacles—in the workforce environment.

Example (Empathy Map) :

| THINK & FEEL | SEE |
|--|--------------------------|
| What really counts | Environment |
| Major concerns about workforce data | Dashboard UI |
| Worries about errors in attendance/payroll | Tools available to peers |

| HEAR | SAY & DO |
|------------------------|-----------------------------|
| HR policies updates | Discuss issues with team |
| Feedback from peers | Logs in daily to track data |
| Supervisor suggestions | Requests reports or data |

| PAIN | GAIN |
|-------------------|--------------------------------------|
| Manual data | Automation of HR Tasks |
| Report errors | Time saved |
| System Complexity | Clear visibility on workforce status |

2.3. Brainstorming

Brainstorm & Idea Prioritization Template:

Brainstorming provides a free and open environment that encourages everyone within a team to participate in the creative thinking process that leads to problem solving. Prioritizing volume over value, out-of-the-box ideas are welcome and built upon, and all participants are encouraged to collaborate, helping each other develop a rich amount of creative solutions.

Use this template in your own brainstorming sessions so your team can unleash their imagination and start shaping concepts even if you're not sitting in the same room.

Step-1: Team Gathering, Collaboration and Select the

Problem Statement Problem Statement:

Identify and document the core problem related to workforce administration (e.g., employee data tracking, onboarding automation, leave and attendance management, etc.). Collaborate with your team to refine this statement.

Modern organizations, especially those growing rapidly, struggle to maintain efficient workforce administration processes. Traditional methods such as spreadsheets, paper forms, and isolated software tools often lead to:

Inefficient HR workflows due to manual processing.

Data duplication and inconsistency in employee records.

Delayed approvals for leave, shift changes, and onboarding.

Lack of transparency for employees to track their own information.

Limited scalability as workforce size increases.

Security concerns with sensitive employee data.

The absence of a centralized and automated system creates bottlenecks that affect employee satisfaction, productivity, and compliance with HR policies.

Step-2: Brainstorm, Idea Listing and Grouping

List down all possible ideas to solve the problem, no matter how wild or unpolished they may seem. Then, group related ideas into categories.

Sample Ideas:

| Idea | Group/Category |
|--|--------------------|
| Develop centralized employee dashboard | Interface Design |
| Automate leave application system | Process Automation |
| Role-based access control for HR/admin | Security |
| Integration with payroll system | System Integration |
| Mobile app for employee self-service | User Experience |

Step-3: Idea Prioritization

Evaluate and prioritize ideas based on criteria such as impact, feasibility, time, and resources required. Use scoring or ranking methods if needed.

| Idea | Feasibility (1-5) | Impact (1-5) | Priority |
|------------------------|-------------------|--------------|----------|
| Centralized dashboard | 5 | 5 | High |
| Automated leave system | 4 | 5 | High |
| Payroll integration | 3 | 4 | Medium |
| Mobile app | 3 | 3 | Medium |
| Role-based access | 5 | 4 | High |

3.REQUIREMENT ANALYSIS

3.REQUIREMENT ANALYSIS

3.1. Customer Journey Map

- **Journey Phases:**

1. **Entice** – Awareness & Interest in the Solution
2. **Enter** – Initial Access or On boarding
3. **Engage** – Using Workforce Tools
4. **Exit** – Finishing Tasks / Shifting Out
5. **Extend** – Continued Use & Feedback

- **Structure:**

Steps: Actions by user (e.g., Login, Upload Employee Data)

Interactions: Interfaces used (e.g., Dashboard, Reports Panel)

Goals & Motivations: Improve productivity, streamline hiring

Pain Points: Login errors, data sync delays

Positive Moments: Successful batch uploads, clear analytics

Opportunities: Automate task reminders, integrate biometrics

WORKFORCE ADMINISTRATIVE DEV



| | Plan | Prepare | Process | Perform | Post-Evaluate |
|--------------------------------|--------------------------|-----------------------------|-----------------------|-----------------------|------------------------|
| Steps | Define Objectives | Develop Training Materials | Implement Systems | Administer Workflows | Assess Outcomes |
| Requirements | Identify Workforce Needs | Establish IT Infrastructure | Database Management | System Integration | User Feedback |
| Issues & Challenges | Budget Limitations | Data Security Concerns | System Integration | Training Gaps | Evaluate KPIs |
| Improvements | Clarify Project Scope | Enhance Documentation | Automate Tasks | Improve Communication | Continuous Improvement |
| Opportunities | Leverage Digital Tools | Standardize Policies | Data-Driven Decisions | Increase Productivity | Continuous Improvement |

3.2. Solution Requirement

Functional Requirements:

Following are the functional requirements of the proposed solution.

| FR No. | Functional Requirement (Epic) | Sub Requirement (Story / Sub-Task) |
|--------|-------------------------------|---|
| FR-1 | Employee Registration | Registration through Form Registration through Gmail Registration through Linked In |
| FR-2 | Employee Confirmation | Confirmation via Email Confirmation via OTP |
| FR-3 | Attendance Management | Mark Attendance, View Attendance |
| FR-4 | Leave Management | Apply Leave, Approve/Reject Leave |
| FR-5 | Payroll Management | Generate Payslips, Salary Calculation |
| FR-6 | Employee Profile Management | Edit Profile, Upload Documents |
| FR-7 | Task Assignment | Assign Tasks, Track Task Status |
| FR-8 | Reporting and Analytics | Generate Reports, Export Data |
| FR-9 | Role & Access Control | Define Roles, Manage Permissions |
| FR-10 | Notifications & Alerts | Email Notifications, In-App Alerts |

Non-Functional Requirements:

Following are the non-functional requirements of the proposed solution

| FR No. | Non-Functional Requirement | Description |
|--------|----------------------------|---|
| NFR-1 | Usability | The system must have an intuitive and user-friendly interface for HR and Admin staff. |
| NFR-2 | Security | Security Implement secure login, encryption of sensitive data, and role-based access control. |
| NFR-3 | Reliability | Ensure consistent performance with minimal downtime; provide backup and recovery mechanisms. |
| NFR-4 | Performance | The system should respond quickly to user actions, especially when handling large employee records. |
| NFR-5 | Availability | The application should maintain at least 99.9% uptime to ensure uninterrupted access. |

| | | |
|-------|------------------------|--|
| NFR-6 | Scalability | The system should support an increasing number of employees and departments without degrading performance. |
| NFR-7 | Maintainability | Easy to update and maintain with modular code and proper documentation. |
| NFR-8 | Compatibility | Compatible with major browsers and devices (desktop, mobile, tablet). |
| NFR-9 | Auditability | Ability to track changes and access logs for all critical operations. |

3.3. Data Flow Diagram

Data Flow Diagram:

A Data Flow Diagram (DFD) visually represents how data flows through your workforce management system, what processes handle it, and how it's stored. This example shows how employee data, attendance, and leave requests are processed.

➤ Entities:

Employee

HR Manager

Admin

➤ Processes:

Submit Leave Request

Manage Employee Profile

Approve Leave

Generate Reports

➤ Data Stores:

Employee Database

Leave Records

Attendance Logs

➤ **Flows:**

Employee submits leave to HR

HR reviews and approves/denies

Leave record is updated

Reports are generated for Admin

● **User Stories**

| User Type | Feature | Story ID | User Story |
|------------|-------------------|----------|---|
| Employee | Registration | USN-1 | As an employee, I can log into the portal with email and password |
| Employee | Leave Management | USN-2 | As an employee, I can submit leave request for leave through the portal |
| HR Manager | Leave Approval | USN-3 | As an HR, I can approve or reject leave requests |
| HR Manager | Attendance Review | USN-4 | As an HR, I can view and correct employee attendance logs |
| Admin | Reports Dashboard | USN-5 | As an admin, I can view reports of leave, attendance and employees |
| Employee | Profile Update | USN-6 | As an employee, I can update my personal details in my profile |

3.4. Technology Stack

Technical Architecture:

The Workforce Administration Solution (Dev) is designed using a modular, scalable, and secure architecture to manage various aspects of workforce operations, including employee records, attendance tracking, leave management, scheduling, and payroll processing. The system follows a multi-tier architecture with clearly defined layers such as User Interface, Application Logic, Data Storage, and External Integrations.

The solution supports both web and mobile platforms and is built using open-source technologies to ensure extensibility and maintainability. The application is hosted on a cloud-based infrastructure to ensure scalability, availability, and high performance.

➤ **Architecture Overview:**

1. User Interface (Frontend):

Provides an interactive interface for employees, HR managers, and administrators.

Accessible through web browsers and mobile applications.

Built using modern frontend frameworks like React.js, Angular, or Flutter for mobile apps.

2. Application Logic (Back end Services):

Implements core functionalities such as:

Employee Profile Management

Attendance and Leave Tracking

Shift Scheduling

Payroll Processing

Role-Based Access Control

Developed using Java, Python, or Node.js.

3. Database Layer:

Stores structured employee and payroll data in MySQL or PostgreSQL.

Uses MongoDB or Cloudant for semi-structured and log data.

Cloud databases ensure data redundancy and backup.

4. File Storage:

Used for storing payslips, certificates, leave documents, and other employee files.

Implemented using IBM Cloud Object Storage or AWS S3.

5. External API s:

Integrated with:

Aadhaar API for identity verification

Send Grid / Twilio for notifications

GST or tax API s for payroll compliance

Attendance IoT devices (via APIs) for real-time log capture

6. Machine Learning Models (Optional/Advanced):

Used for predictive analytic such as:

Employee Attrition Forecasting

Productivity Trends

7. Infrastructure (Deployment):

Cloud-native deployment using Kubernetes, Docker, or Cloud Foundry.

Hosted on platforms like IBM Cloud, AWS, or Azure.

| S.No | Component | Technology |
|------|---------------------------------|--|
| 1. | User Interface | HTML, CSS, JavaScript / Angular Js / React Js etc. |
| 2. | Application Logic-1 | Java / Python |
| 3. | Application Logic-2 | Node.js/ IBM Watson IoT for smart attendance devices |
| 4. | Application Logic-3 | Java/ Python/ Spring Boot |
| 5. | Database | MySQL/ MongoDB. |
| 6. | Cloud Database | IBM DB2, AWS, RDS, Cloudant. |
| 7. | File Storage | IBM Cloud Object Storage/ AWS S3 |
| 8. | External API-1 | AAadhar API, GST API |
| 9. | External API-2 | SendGrid, Twilio API, WhatsApp API |
| 10. | Machine Learning Model | Scikit-learn, IBM Watson ML, TensorFlow |
| 11. | Infrastructure (Server / Cloud) | IBM Cloud, AWS EC2, Kubernetes, Docker |

4.PROJECT DESIGN

4.PROJECT DESIGN

4.1. Problem Solution Fit

Problem – Solution Fit Template:

Problem – Solution Fit Template for Workforce Administration Solution (dev)

1. Customer Segments

HR Managers

Employees

Admin Staff

Payroll Teams

2. Customer Constraints

Manual tracking of employee attendance and leaves

Inefficient communication between HR and employees

Errors in payroll processing

Lack of centralized employee information

3. Available Solutions

Excel Sheets

Paper-based attendance registers

Standalone biometric systems

Email-based leave approvals

4. Jobs-To-Be-Done / Problems

Automate workforce and HR processes

Ensure accurate and quick attendance and payroll

Streamline leave applications and approvals

Maintain secure, centralized employee records

5. Problem Root Cause

Disconnected systems

No integration between HR modules

Manual dependency and human errors

Lack of real-time data access

6. Behavior

Frequent follow-ups for task/status updates

Manual corrections in payroll

Delayed approvals for leave

Miscommunication due to scattered records

7. Triggers

Growing workforce

Need for audit-ready systems

Increased remote/hybrid working

Compliance and labor law requirements

8. Your Solution

A centralized web-based application for workforce administration

Features: attendance, leave, payroll, role management, employee data

Role-based secure login

Real-time analytics and reporting

9. Changes in Behavior

Automated and transparent workflows

Reduced HR workload

Timely payroll and accurate reports

Improved employee satisfaction and productivity

Problem – Solution Fit Template
Workforce Administration Solution (dev)

| | | |
|---|---|--|
| 1 | Customer Segments | HR Managers, Admin Staff, Payroll Teams |
| 2 | Customer Constraints | <ul style="list-style-type: none">• Manual HR operations• Inefficient leave and an payroll processing• Delays in approvals and task tracking• Scattered employee data |
| 3 | Available Solutions | Excel sheets, Paper registers Biometric devices (standalone), Email communication for HR tasks |
| 4 | Jobs-To-Be-Done / Problems <ul style="list-style-type: none">• Streamline employee management• Automate payroll and attendance• Centralize employee records• Improve communication | <ul style="list-style-type: none">• Streamline employee management• Automate payroll and attendance• Centralize employee records• Improve communication |
| 5 | Behavior <ul style="list-style-type: none">• Frequent errors in salary and leave• Repeated follow-ups• Managerial inefficiencies | <ul style="list-style-type: none">• Frequent errors in salary and leave• Repeated follow-ups• Employee dissatisfaction• Managerial inefficiencies |
| 8 | Your Solution | A web-based Workforce Administration platform |

4.2. Proposed Solution

Proposed Solution Template:

| S.No | Parameter | Description |
|------|--|--|
| 1. | Problem Statement (Problem to be solved) | Organizations face inefficiencies in managing workforce-related tasks like attendance, payroll, leave management, and employee data. Manual processes lead to errors, delays, and dissatisfaction. |
| 2. | Idea / Solution description | A centralized web-based Workforce Administration Solution to manage employee attendance, leave applications, payroll, role management, and data storage with real-time access and automated workflows. |
| 3. | Novelty / Uniqueness | Integration of multiple HR functionalities into one intuitive platform with real-time analytics, secure role-based access, and mobile accessibility for remote workforce management. |
| 4. | Social Impact / Customer Satisfaction | Enhances HR efficiency, minimizes manual errors, increases employee transparency and trust, and boosts productivity. Helps businesses adapt to hybrid/remote work trends. |
| 5. | Business Model (Revenue Model) | Subscription-based SaaS (Software as a Service) model for organizations, with tiered pricing based on the number of users or features. |
| 6. | Scalability of the Solution | Designed to scale from small businesses to large enterprises, capable of handling thousands of employee records, with modular features and cloud-based infrastructure. |

4.3. Solution Architecture

Solution Architecture:

Definition:

Solution architecture is a complex process with many components that bridge the gap between business problems and technology solutions.

Goals:

- ✓ Identify the best tech stack to automate HR operations (attendance, payroll, leaves, etc.)
- ✓ Define the architecture, behavior, and modules of the system.
- ✓ Outline development phases and technical specifications.
- ✓ Ensure scalability, modularity, and integration with existing systems.

Modules Involved:

Employee Portal (Web/Mobile)

Admin Dashboard

Authentication Module (Role-based login, OTP/email)

Attendance Tracker (Biometric/Geo-fencing)

Leave Management System

Payroll Processor

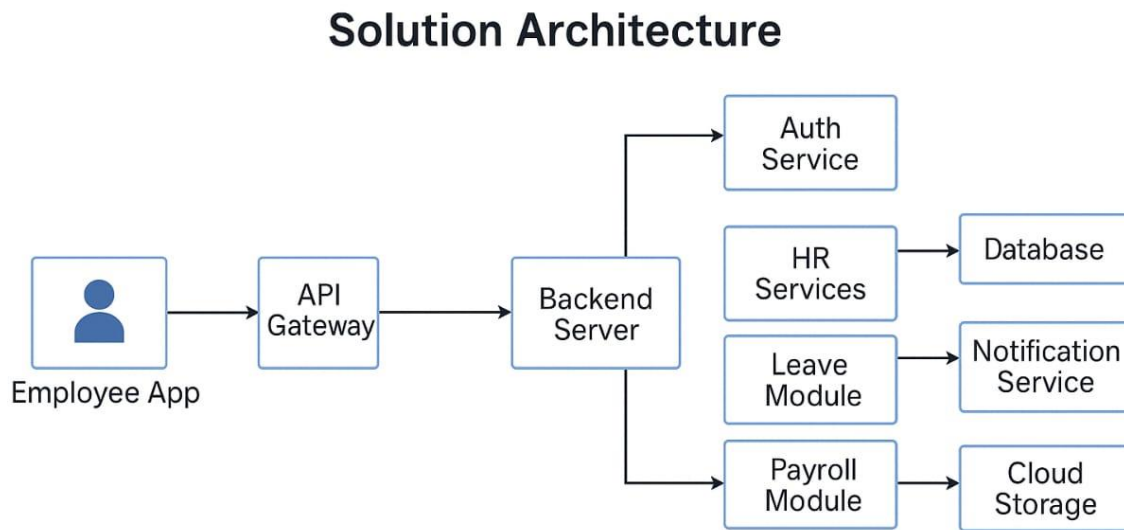
Notification System (Email/SMS)

Reporting and Analytics Module

Database (Cloud-based, e.g., Firebase, MySQL)

Cloud Storage (For document uploads, payslips)

Example - Solution Architecture Diagram:



Workforce Administration Solution (dev)

5.PROJECT PLANNING & SCHEDULING

5.PROJECT PLANNING & SCHEDULING

5.1. Project Planning

Divide into Sprints:

Sprint 1: Requirement gathering and DFD

Sprint 2: Module development (Leave, Attendance)

Sprint 3: Integration and Testing

Sprint 4: Deployment and Demo

Project Tracker, Velocity & Burn down Chart:

| Sprint | Total Story Points | Duration | Sprint Start Date | Sprint End Date (Planned) | Story Points Completed (as on Planned End Date) | Sprint Release Date (Actual) |
|----------|--------------------|----------|-------------------|---------------------------|---|------------------------------|
| Sprint-1 | 20 | 2 Days | 20 June 2025 | 21 June 2025 | 20 | 21 June 2025 |
| Sprint-2 | 20 | 2 Days | 21 June 2025 | 22 June 2025 | 18 | 23 June 2025 |
| Sprint-3 | 20 | 2 Days | 23 June 2025 | 24 June 2025 | 19 | 24 June 2025 |
| Sprint-4 | 20 | 2 Days | 25 June 2025 | 26 June 2025 | 20 | 26 June 2025 |

6. DEVELOPMENT PHASE

6. DEVELOPMENT PHASE

6.1. DEVELOPMENT PHASE- SALESFORCE GUIDED PROJECT

In Workforce Administration Solution (dev), we have 18 milestones.

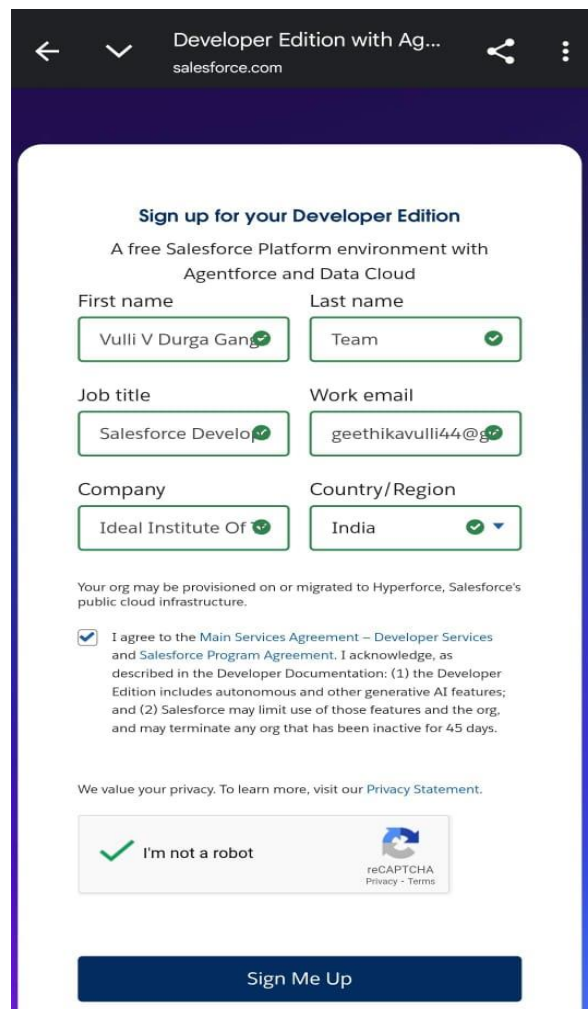
- Salesforce
- Object
- Tabs
- The Lightning App
- Fields & Relationships
- Setting OWD
- User Adoption
- Import Data
- Profiles
- Role
- Users
- Page Layouts
- Chatter Group
- Record Types
- Permission Sets
- Dashboards
- Approval Process
- Apex Trigger

➤ Salesforce

✧ Developer Environment Setup:

Create Salesforce developer Org via developer.salesforce.com/signup

Fill the required information, verify mail, set password, and access Salesforce setup



The screenshot shows the Salesforce Developer Edition signup page on a mobile device. The page title is "Developer Edition with Agentforce and Data Cloud" and the URL is "salesforce.com". The main heading is "Sign up for your Developer Edition". Below this, it says "A free Salesforce Platform environment with Agentforce and Data Cloud". The form contains the following fields:

- First name: Vulli V Durga Gangarajulu (with a green checkmark)
- Last name: Team (with a green checkmark)
- Job title: Salesforce Developer (with a green checkmark)
- Work email: geethikavulli44@gmail.com (with a green checkmark)
- Company: Ideal Institute Of Technology (with a green checkmark)
- Country/Region: India (with a green checkmark and a dropdown arrow)

Below the form, there is a note: "Your org may be provisioned on or migrated to Hyperforce, Salesforce's public cloud infrastructure." A checkbox is checked, indicating agreement to the Main Services Agreement – Developer Services and Salesforce Program Agreement. The text states: "I agree to the Main Services Agreement – Developer Services and Salesforce Program Agreement. I acknowledge, as described in the Developer Documentation: (1) the Developer Edition includes autonomous and other generative AI features; and (2) Salesforce may limit use of those features and the org, and may terminate any org that has been inactive for 45 days." Below this, there is a link to the Privacy Statement: "We value your privacy. To learn more, visit our Privacy Statement." At the bottom, there is a reCAPTCHA widget with the text "I'm not a robot" and a green checkmark. To the right of the reCAPTCHA is a link to "reCAPTCHA Privacy - Terms". At the very bottom, there is a large blue button labeled "Sign Me Up".



Ready for a new password?

Reset Password

Change Your Password

Enter a new password for
geethikavulli44908@agentforce.com. Make sure to
include at least:

- ✓ 8 characters
- ✓ 1 letter
- ✓ 1 number

* New Password

..... Good

* Confirm New Password

..... I Match

* Security Question

▼ In what city were you born?

* Answer

.....

* required

➤ Object

1. Employee object:

The screenshot shows the Salesforce Setup interface for the Employee Custom Field. The left sidebar contains a navigation menu with options: Details, Fields & Relationships (selected), Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, and Related Lookup Filters. The main content area is titled 'Employee Custom Field' and 'Employee'. It includes a 'Validation Rules [0]' section and a 'Custom Field Definition Detail' section with tabs for 'Edit', 'Set Field-Level Security', 'View Field Accessibility', and 'Where is this used?'. The 'Field Information' table shows the following details:

| Field Label | Employee | Object Name | Employee |
|---------------------------|---|-------------|---|
| Field Name | Employee | Data Type | Lookup |
| API Name | Employee__c | | |
| Description | | | |
| Help Text | | | |
| Data Owner | | | |
| Field Usage | | | |
| Data Sensitivity Level | | | |
| Compliance Categorization | | | |
| Created By | Vulli V Durga Ganga Satya Geethika Team, 6/21/2025, 4:31 AM | Modified By | Vulli V Durga Ganga Satya Geethika Team, 6/21/2025, 4:31 AM |

2. Project object:

The screenshot shows the Salesforce Setup interface for the Project object. The left sidebar contains a navigation menu with options: Details (selected), Fields & Relationships, Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, and Related Lookup Filters. The main content area is titled 'Project' and includes 'Edit' and 'Delete' buttons. The 'Details' section shows the following information:

| Field | Value |
|---------------------|-------------------------------------|
| Description | |
| API Name | Project__c |
| Custom | ✓ |
| Singular Label | Project |
| Plural Label | Projects |
| Enable Reports | ✓ |
| Track Activities | |
| Track Field History | |
| Deployment Status | Deployed |
| Help Settings | Standard salesforce.com Help Window |

3. Project Task object:

The screenshot shows the Salesforce Setup interface for the 'Project Task' object. The top navigation bar includes the Salesforce logo, a search bar labeled 'Search Setup', and several utility icons. Below the navigation bar, the 'Setup' menu is open, showing 'Home' and 'Object Manager'. The 'Object Manager' section is selected, and the 'Project Task' object is highlighted. The left sidebar contains a list of configuration options: Details, Fields & Relationships, Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, and Related Lookup Filters. The main content area displays the 'Details' for the 'Project Task' object. It includes a description field, API Name (Project_Task__c), Custom (checked), Singular Label (Project Task), Plural Label (Project Tasks), Enable Reports, Track Activities, Track Field History, Deployment Status (Deployed), Help Settings, and a link to the Standard salesforce.com Help Window. Edit and Delete buttons are visible in the top right corner.

SETUP > OBJECT MANAGER

Project Task

Details [Edit](#) [Delete](#)

Description

API Name
Project_Task__c

Custom
✓

Singular Label
Project Task

Plural Label
Project Tasks

Enable Reports

Track Activities

Track Field History

Deployment Status
Deployed

Help Settings
Standard salesforce.com Help Window

4.Asset object:

The screenshot shows the Salesforce Setup interface for the 'Asset' object. The top navigation bar includes the Salesforce logo, a search bar labeled 'Search Setup', and several utility icons. Below the navigation bar, the 'Setup' menu is open, showing 'Home' and 'Object Manager'. The 'Object Manager' section is selected, and the 'Asset' object is highlighted. The left sidebar contains a list of configuration options: Details, Fields & Relationships, Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, and Related Lookup Filters. The main content area displays the 'Details' for the 'Asset' object. It includes a description field, API Name (Asset__c), Custom (checked), Singular Label (Asset), Plural Label (Assets), Enable Reports, Track Activities, Track Field History, Deployment Status (Deployed), Help Settings, and a link to the Standard salesforce.com Help Window. Edit and Delete buttons are visible in the top right corner.

SETUP > OBJECT MANAGER

Asset

Details [Edit](#) [Delete](#)

Description

API Name
Asset__c

Custom
✓

Singular Label
Asset

Plural Label
Assets

Enable Reports

Track Activities

Track Field History

Deployment Status
Deployed

Help Settings
Standard salesforce.com Help Window

5. Asset Service:

The screenshot shows the Salesforce Setup interface for the 'Asset Service' field. The left sidebar contains a navigation menu with options like Details, Fields & Relationships (selected), Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, and Related Lookup Filters. The main content area is titled 'Asset Service Field' and 'Asset Service Name'. It includes a 'Back to Asset Service' link and two tabs: 'Set Field-Level Security' and 'View Field Accessibility'. The 'Field Information' section displays a table with fields: Field Label (Asset Service Name), Data Type (Text(80)), Description, Data Owner, Field Usage, Data Sensitivity Level, and Compliance Categorization. The 'Validation Rules' section shows 'No validation rules defined' with a 'New' button and a 'Validation Rules Help' link.

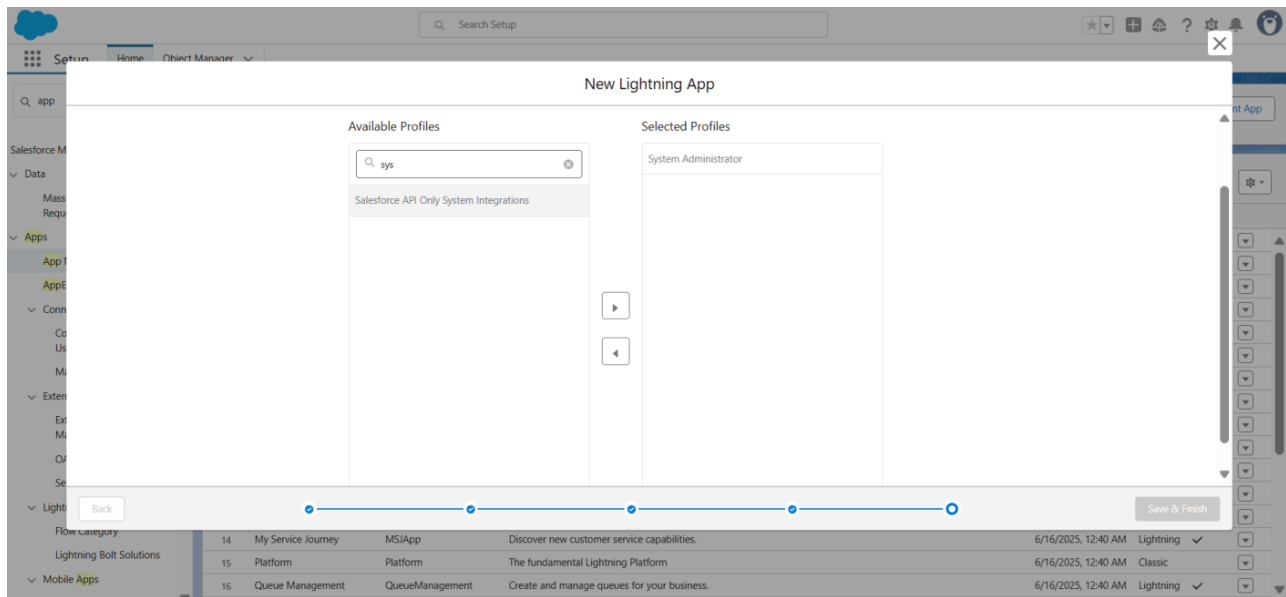
➤ Tabs

- Custom Tabs view for all objects:

The screenshot shows the Salesforce Setup interface for 'Custom Tabs'. The left sidebar has a search bar with 'tabs' entered and a 'User Interface' section with 'Rename Tabs and Labels' and 'Tabs' (selected). The main content area is titled 'Custom Tabs' and includes a 'Help for this Page' link. Below the title is a paragraph explaining that custom tabs can extend Salesforce functionality or build new application functionality. A table titled 'Custom Object Tabs' lists various tabs with columns for Action, Label, Tab Style, and Description. The table includes rows for Assets, Asset Services, Employees, Leaves, Projects, and Project Tasks, each with a corresponding icon and style. Below the table is a section for 'Web Tabs' which states 'No Web Tabs have been defined'.

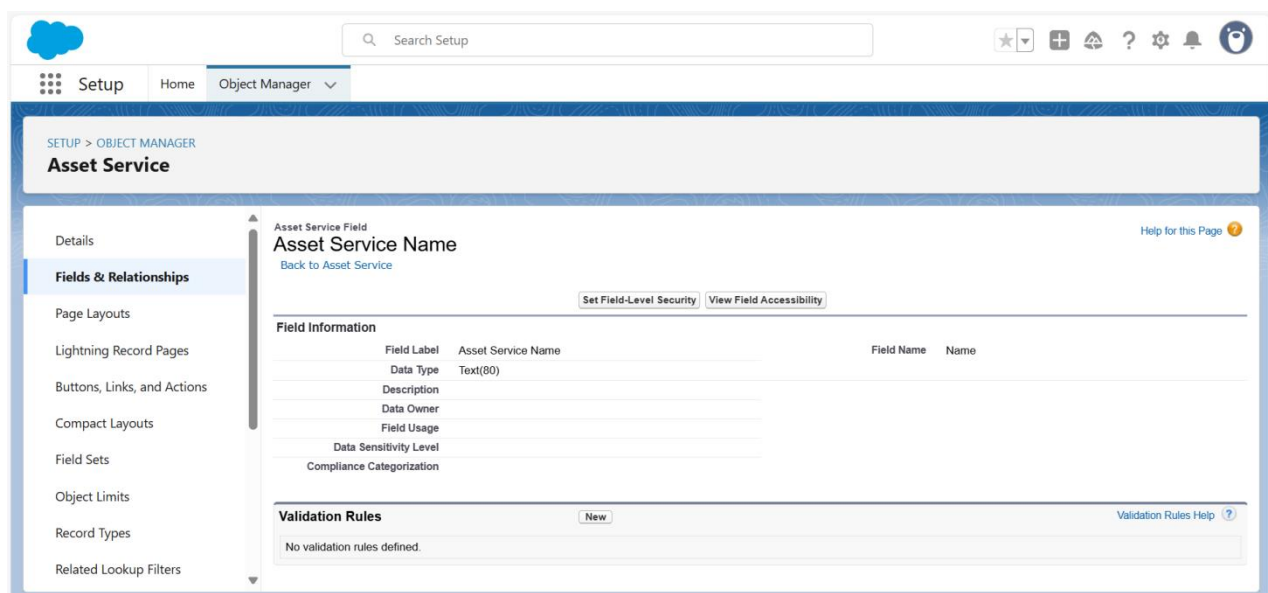
| Action | Label | Tab Style | Description |
|------------|----------------|-----------|-------------|
| Edit Del | Assets | Bank | |
| Edit Del | Asset Services | Building | |
| Edit Del | Employees | Books | |
| Edit Del | Leaves | Airplane | |
| Edit Del | Projects | Books | |
| Edit Del | Project Tasks | Books | |

➤ The Lightning App



➤ Fields & Relationships

Created a field name as Asset Service Name



➤ Setting OWD

OWD-Organization-Wide Defaults

Created a default internal access and external access to **private** for users (Asset Service, Employee, Project) .

The screenshot shows the 'Setup Sharing Settings' page. On the left, there is a sidebar with a search bar containing 'sharing' and a list of items under 'Security', including 'Guest User Sharing Rule Access Report' and 'Sharing Settings' (which is highlighted). Below the sidebar, a message says 'Didn't find what you're looking for? Try using Global Search.' The main content area is titled 'SETUP Sharing Settings' and contains a table with the following data:

| Object | Internal Access | External Access | Checkmark |
|--------------------|-------------------|-----------------|--------------------------|
| Waitlist | Private | Private | ✓ |
| Web Cart Document | Private | Private | ✓ |
| Work Order | Private | Private | ✓ |
| Work Plan | Private | Private | ✓ |
| Work Plan Template | Private | Private | ✓ |
| Work Step Template | Private | Private | ✓ |
| Work Type | Private | Private | ✓ |
| Work Type Group | Public Read/Write | Private | ✓ |
| Asset | Public Read/Write | Private | ✓ |
| Asset Service | Private | Private | ✓ |
| Employee | Private | Private | ✓ |
| Leave | Public Read/Write | Private | ✓ |
| Project | Private | Private | <input type="checkbox"/> |

➤ User Adoption

The screenshot shows the 'Employee Management' page. The top navigation bar includes a search bar, a dropdown menu with 'Employees' selected, and other tabs like 'Leaves'. The main content area is titled 'Employees' and has a 'Recently Viewed' section. Below this, there is a list of employees with the following data:

| Employee Id |
|-------------|
| 1 EMS-0001 |

➤ Import Data

Created a CSV file & start importing then the next step is to 0 records under the records failed column.

Output - 0 records under the records failed column.

The screenshot shows the Salesforce Setup interface for Bulk Data Load Jobs. The left sidebar has a search bar with "data import" and a list of integrations including "Data Import Wizard". The main content area displays job details for Job ID 750gK000006ZIV, submitted by Vullu V Durga Ganga Satya Geethika. The job type is Bulk V1, and the operation is Insert. The status is Closed. The table below shows the progress of the job, including the number of records processed, failed, and retried.

| Job ID | Submitted By | Job Type | Operation | Status | Closed |
|-----------------------------|------------------------------------|---------------------|-----------|---------------------------------|-----------|
| 750gK000006ZIV | Vullu V Durga Ganga Satya Geethika | Bulk V1 | Insert | Closed | 155 |
| Start Time | 6/25/2025, 8:19 AM PST | Queued Batches | 0 | API Active Processing Time (ms) | 113 |
| End Time | 6/25/2025, 8:19 AM PST | In Progress Batches | 0 | Apex Processing Time (ms) | 59 |
| Time to Complete (hh:mm:ss) | 00:00 | Completed Batches | 1 | Records Processed | 14 |
| Object | Employee | Failed Batches | 0 | Records Failed | 0 |
| External ID Field | | Progress | 100% | Retry Count | 0 |
| Content Type | CSV | Records Processed | 14 | State Message | Completed |
| Concurrency Mode | Parallel | Records Failed | 0 | | |
| API Version | 64.0 | Retries | 0 | | |

Below the job details, there is a table of batches. The table has columns for View Request, View Result, Batch ID, Start Time, End Time, Total Processing Time (ms), API Active Processing Time (ms), Apex Processing Time (ms), Records Processed, Records Failed, Retry Count, State Message, and Status. The first batch is 751gK0000009IOAF, which is completed.

➤ Profiles

The screenshot shows the Salesforce Setup interface for Profiles. The left sidebar has a search bar with "prof" and a list of users including "Profiles". The main content area displays the details for the HR profile. The profile is named HR and is a Custom Profile. The description is Vullu V Durga Ganga Satya Geethika Team. The page layouts section shows the standard object layouts for the profile, including Global, Email Application, Home Page Layout, Account, Alternative Payment Method, Appointment Invitation, Location Group, Location Group Assignment, Macro, Object Milestone, Operating Hours, and Opportunity.

| Profile | Name | User License | Description | Created By | Modified By |
|---------|------|--------------|---|--------------------|---------------------|
| HR | HR | Salesforce | Vullu V Durga Ganga Satya Geethika Team | 6/22/2025, 4:49 AM | 6/23/2025, 11:47 PM |

Below the profile details, there is a table of page layouts. The table has columns for Standard Object Layouts, Global, Email Application, Home Page Layout, Account, Alternative Payment Method, Appointment Invitation, Location Group, Location Group Assignment, Macro, Object Milestone, Operating Hours, and Opportunity. The first row shows the Global layout assigned to the HR profile.

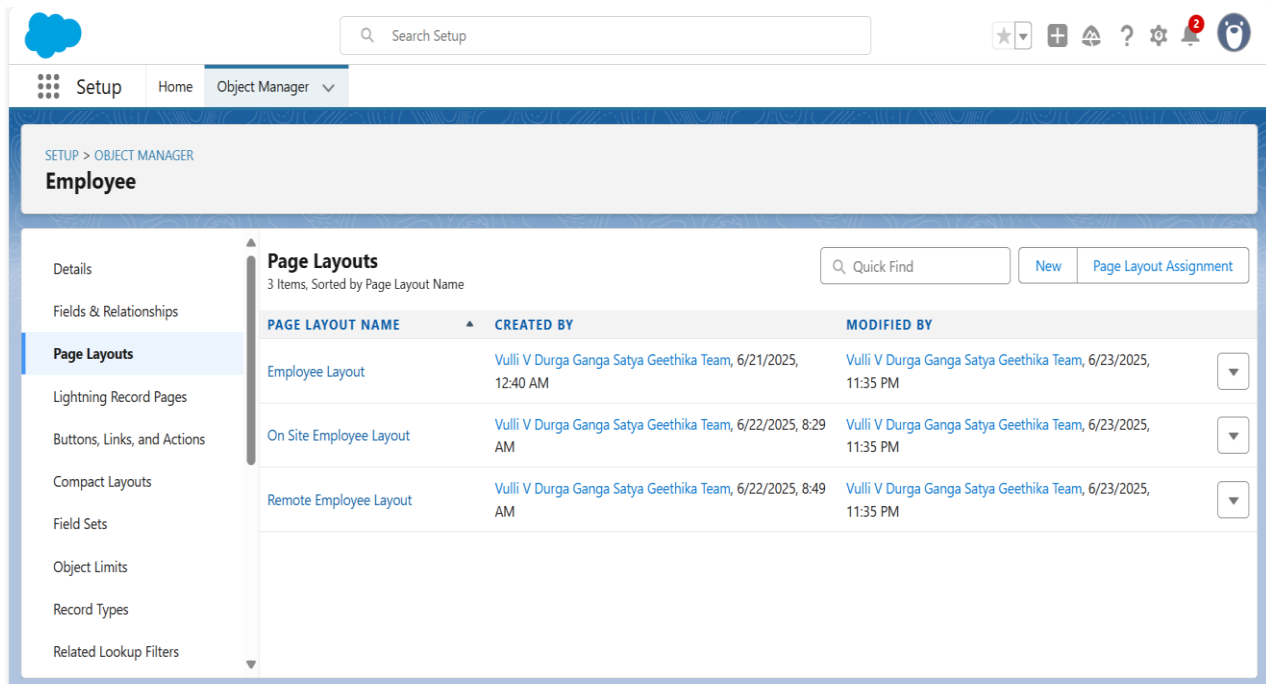
➤ Role

The screenshot shows the Salesforce Setup interface with the 'Roles' page selected. The left sidebar contains navigation links for Users, Roles, Feature Settings, Sales, Service, and Case Teams. The main content area is titled 'Creating the Role Hierarchy' and displays a tree view of the organization's role hierarchy for 'Ideal Institute Of Technology'. The hierarchy starts with 'CEO' at the top, followed by 'CFO', 'COO', 'HR', 'Manager', 'On Site Employee', 'Remote Employee', 'SVP, Customer Service & Support', 'Customer Support, International', and 'Customer Support, North America'. Each role has an 'Add Role' link next to it. A 'Show in tree view' dropdown is visible in the top right corner of the hierarchy view.

➤ Users

The screenshot shows the Salesforce Setup interface with the 'Users' page selected. The left sidebar contains navigation links for Users, Permission Set Groups, Permission Sets, Profiles, Public Groups, Queues, Roles, User Management Settings, Apps, Mobile Apps, Salesforce, Mobile Builder for the Seller-Focused Experience, Feature Settings, Data.com, Prospector Users, and Service. The main content area is titled 'User: Ram Mikaelson' and displays a detailed user profile. The profile includes fields for Name, Alias, Email, Username, Nickname, Title, Company, Department, Division, Address, Time Zone, Locale, Language, Delegated Approver, Manager, Role, User License, Profile, Active, Marketing User, Offline User, Knowledge User, Flow User, Service Cloud User, Site.com Contributor User, Site.com Publisher User, WDC User, Mobile Push Registrations, Data.com User Type, Accessibility Mode (Classic Only), Debug Mode, and High-Contrast Palette on Charts. The 'Manager' field is set to 'Only if I am an approver'.

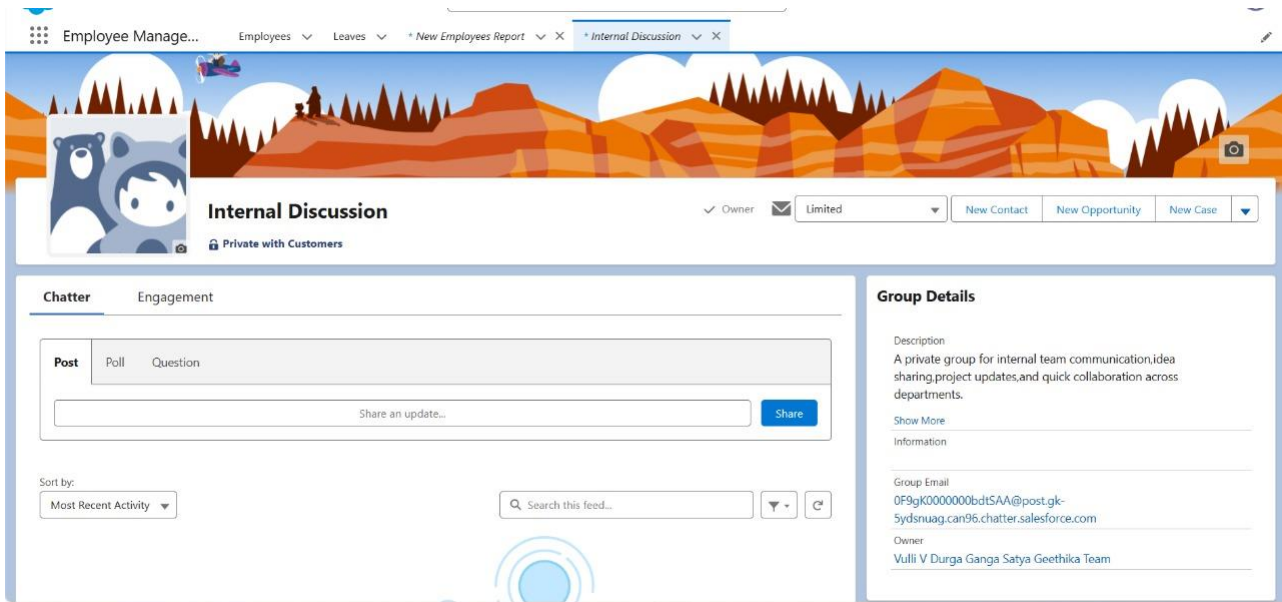
➤ Page Layout



The screenshot shows the Salesforce Setup interface for the 'Employee' object. The left sidebar contains a navigation menu with options: Details, Fields & Relationships, Page Layouts (selected), Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, and Related Lookup Filters. The main content area is titled 'Employee' and 'Page Layouts', showing 3 items sorted by Page Layout Name. A table lists the layouts: Employee Layout, On Site Employee Layout, and Remote Employee Layout, each with columns for Page Layout Name, Created By, and Modified By. A 'Quick Find' search bar and 'New' and 'Page Layout Assignment' buttons are also visible.

| PAGE LAYOUT NAME | CREATED BY | MODIFIED BY |
|-------------------------|--|--|
| Employee Layout | Vulli V Durga Ganga Satya Geethika Team, 6/21/2025, 12:40 AM | Vulli V Durga Ganga Satya Geethika Team, 6/23/2025, 11:35 PM |
| On Site Employee Layout | Vulli V Durga Ganga Satya Geethika Team, 6/22/2025, 8:29 AM | Vulli V Durga Ganga Satya Geethika Team, 6/23/2025, 11:35 PM |
| Remote Employee Layout | Vulli V Durga Ganga Satya Geethika Team, 6/22/2025, 8:49 AM | Vulli V Durga Ganga Satya Geethika Team, 6/23/2025, 11:35 PM |

➤ Chatter Groups



The screenshot shows the Salesforce Chatter interface for a group named 'Internal Discussion'. The top navigation bar includes 'Employee Manage...', 'Employees', 'Leaves', '+ New Employees Report', and '+ Internal Discussion'. The group header shows a profile picture, the name 'Internal Discussion', and settings for 'Owner' and 'Limited'. Below the header, the 'Chatter' tab is active, displaying a post creation area with a text input field and a 'Share' button. The 'Engagement' tab is also visible. On the right, the 'Group Details' panel shows the group description, 'Show More' link, 'Information' link, 'Group Email' (0F9gK0000000bdTSAA@post.gk-sydsnuag.can96.chatter.salesforce.com), and the 'Owner' (Vulli V Durga Ganga Satya Geethika Team).

➤ Record Types

The screenshot shows the Salesforce Setup interface for the 'Employee' object. The left sidebar contains a navigation menu with options like Details, Fields & Relationships, Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types (selected), Related Lookup Filters, Search Layouts, List View Button Layout, Restriction Rules, and Scoping Rules. The main content area is titled 'On Site Employee' and includes an 'Edit' button. Below this, there are fields for Record Type Label, Record Type Name, Namespace Prefix, Description, Created By, and Modified By. A table titled 'Picklists Available for Editing' lists picklists for Gender and Mode of Work.

| Action | Field | Modified Date |
|----------------------|--------------|---------------------|
| Edit | Gender | 6/22/2025, 10:33 AM |
| Edit | Mode of Work | 6/22/2025, 10:33 AM |

➤ Permission Sets

The screenshot shows the 'New Employees Report' in Salesforce. The report is titled 'Report: Employees' and 'New Employees Report'. It displays a list of 89 total records. The first 16 records are visible, showing Employee IDs from EMS-0001 to EMS-0017. The report includes a search bar, a filter for 'Employee: Employee Id', and a table with columns for Employee ID and Name.

| Employee: Employee Id | Name |
|-----------------------|------|
| EMS-0001 | |
| EMS-0003 | |
| EMS-0004 | |
| EMS-0005 | |
| EMS-0007 | |
| EMS-0006 | |
| EMS-0008 | |
| EMS-0009 | |
| EMS-0010 | |
| EMS-0011 | |
| EMS-0012 | |
| EMS-0013 | |
| EMS-0014 | |
| EMS-0015 | |
| EMS-0016 | |
| EMS-0017 | |

➤ Dashboard

The screenshot shows the 'Dashboards' section of a cloud management interface. At the top, there's a search bar and navigation tabs for 'Employee Manage...', 'Employees', 'Leaves', and 'Dashboards'. The 'Dashboards' tab is active, showing a list of recent dashboards. The left sidebar contains navigation options for 'Dashboards', 'Folders', and 'Favorites'. The main content area displays a table of recent dashboards.

| DASHBOARDS | Dashboard Name | Description | Folder | Created By | Created On | Subscribed |
|---------------|----------------|-------------|--------------------|---|--------------------|--------------------------|
| Recent | Dashboard 2 | | Private Dashboards | Vulli V Durga Ganga Satya Geethika Team | 6/23/2025, 8:50 AM | <input type="checkbox"/> |
| Created by Me | Dashboard 1 | | Private Dashboards | Vulli V Durga Ganga Satya Geethika Team | 6/23/2025, 8:44 AM | <input type="checkbox"/> |

➤ Approval Process

The screenshot shows the 'Approval Processes' setup page. The left sidebar has a search bar and navigation options for 'Data', 'Feature Settings', and 'Process Automation'. The 'Approval Processes' section is selected. The main content area displays the 'Leave: Leave Approval Request' process definition. It includes fields for 'Process Name', 'Unique Name', 'Description', 'Entry Criteria', 'Record Editability', 'Approval Assignment Email Template', 'Initial Submitters', and 'Created By'. There are also buttons for 'Edit', 'Clone', 'Delete', and 'Activate'. Below the process definition, there are sections for 'Initial Submission Actions' and 'Approval Steps'.

Process Definition Detail

| | | | |
|------------------------------------|---|--|---|
| Process Name | Leave Approval Request | Active | <input type="checkbox"/> |
| Unique Name | Leave_Approval_Request | Next Automated Approver Determined By | |
| Description | | | |
| Entry Criteria | | | |
| Record Editability | Administrator ONLY | Allow Submitters to Recall Approval Requests | <input type="checkbox"/> |
| Approval Assignment Email Template | | | |
| Initial Submitters | Leave Owner | | |
| Created By | Vulli V Durga Ganga Satya Geethika Team, 6/24/2025, 4:43 AM | Modified By | Vulli V Durga Ganga Satya Geethika Team, 6/24/2025, 4:57 AM |

Initial Submission Actions

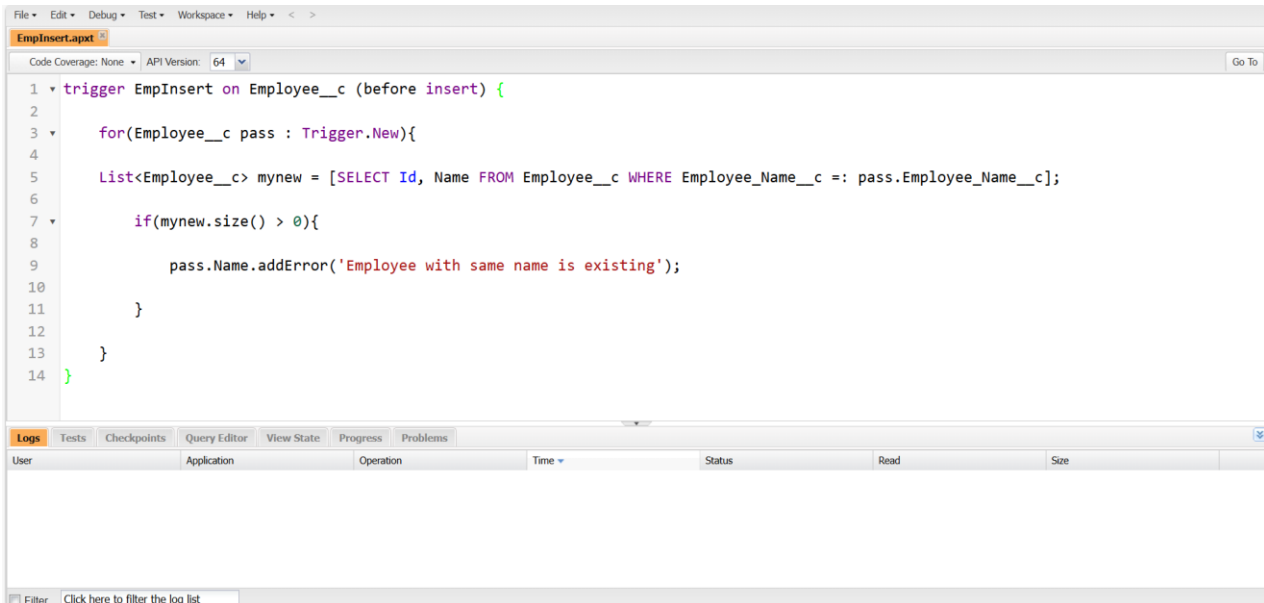
| Action | Type | Description |
|--------------|------|-----------------------------------|
| Record Lock | | Lock the record from being edited |
| Field Update | | Approval Status to Rejected |
| Field Update | | Approval Status to Submitted |
| Field Update | | Approval Status to Approved |

Approval Steps

| Step Number | Name | Description | Criteria | Assigned Approver | Default Rejected |
|-------------|------|-------------|----------|-------------------|------------------|
|-------------|------|-------------|----------|-------------------|------------------|

➤ Apex Trigger

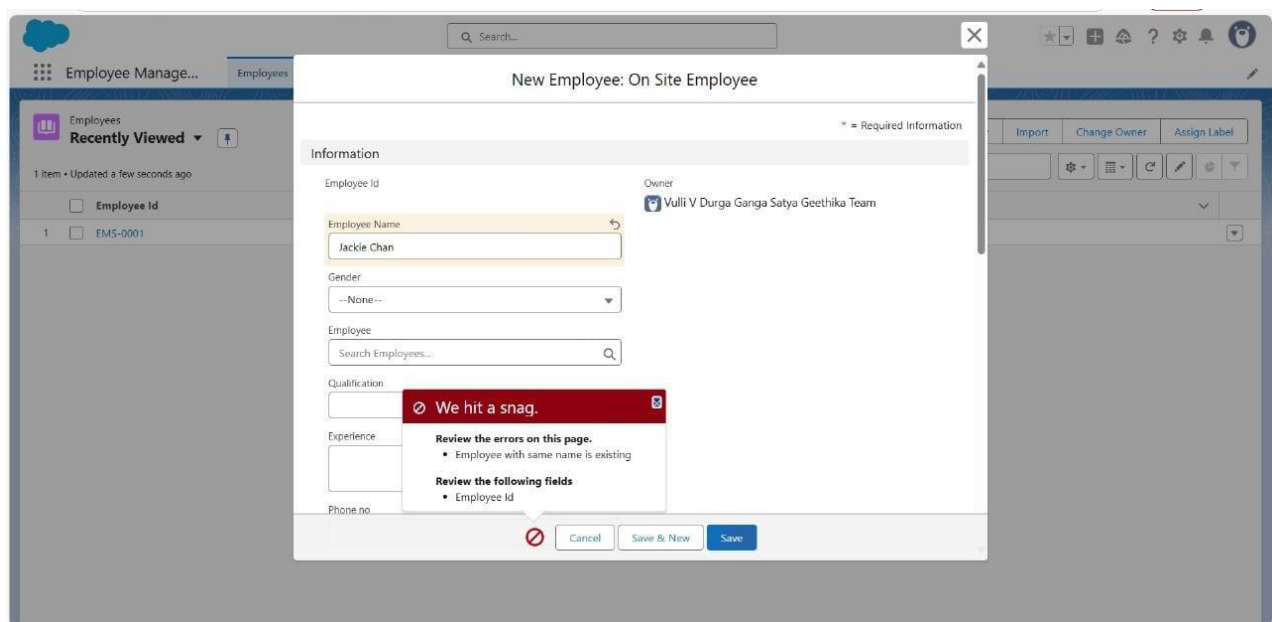
Created a new apex class



```
1 trigger EmpInsert on Employee__c (before insert) {
2
3     for(Employee__c pass : Trigger.New){
4
5         List<Employee__c> mynew = [SELECT Id, Name FROM Employee__c WHERE Employee_Name__c =: pass.Employee_Name__c];
6
7         if(mynew.size() > 0){
8
9             pass.Name.addError('Employee with same name is existing');
10
11         }
12     }
13 }
14 }
```

Testing The Trigger :

Finally, test the created trigger.



7.FUNCTIONAL AND PERFORMANCE TESTING

7. FUNCTIONAL AND PERFORMANCE TESTING

7.1 Performance Testing

The system underwent rigorous performance testing to evaluate its behavior under various user loads and data volumes. Key performance indicators (KPIs) such as response time, system uptime, and concurrent user handling were tested. The platform was tested with up to 100 concurrent users performing real-time data operations including leave approvals and attendance logging.

Stress testing was conducted to assess the system limits under extreme usage. Load testing ensured that the system performs optimally during peak business hours. Additionally, the response time for key modules like the dashboard and employee data retrieval remained under 2 seconds in 95% of the test scenarios.

Salesforce tools like Developer Console and Debug Logs were utilized for performance monitoring. Test results confirmed that the system met the non-functional requirements and is scalable for future expansion.

- **TEST CASES:**

Test Case ID: TC001

Test Description: To test the creation of a new employee record with valid input

Expected Result: The employee record should be created and saved successfully

Actual Result: The employee record was created and stored in the database

Status: Pass

Workforce Admin... Search...

New Employee: On Site Employee

* = Required Information

Information

Employee Id

Owner
Vulli V Durga Ganga Satya Geethika Team

Employee Name
John

Gender
Male

Employee
Search Employees...

Qualification

Cancel Save & New Save

Workforce Administ... Employees Projects Project Tasks Assets Asset Services Reports Dashboards Leaves

Employee
EMS-0121

New Contact Edit New Opportunity

Details

| | | | |
|---------------|----------|-------|---|
| Employee Id | EMS-0121 | Owner | Vulli V Durga Ganga Satya Geethika Team |
| Employee Name | John | | |
| Gender | Male | | |
| Employee | | | |
| Qualification | B.Tech | | |
| Experience | | | |

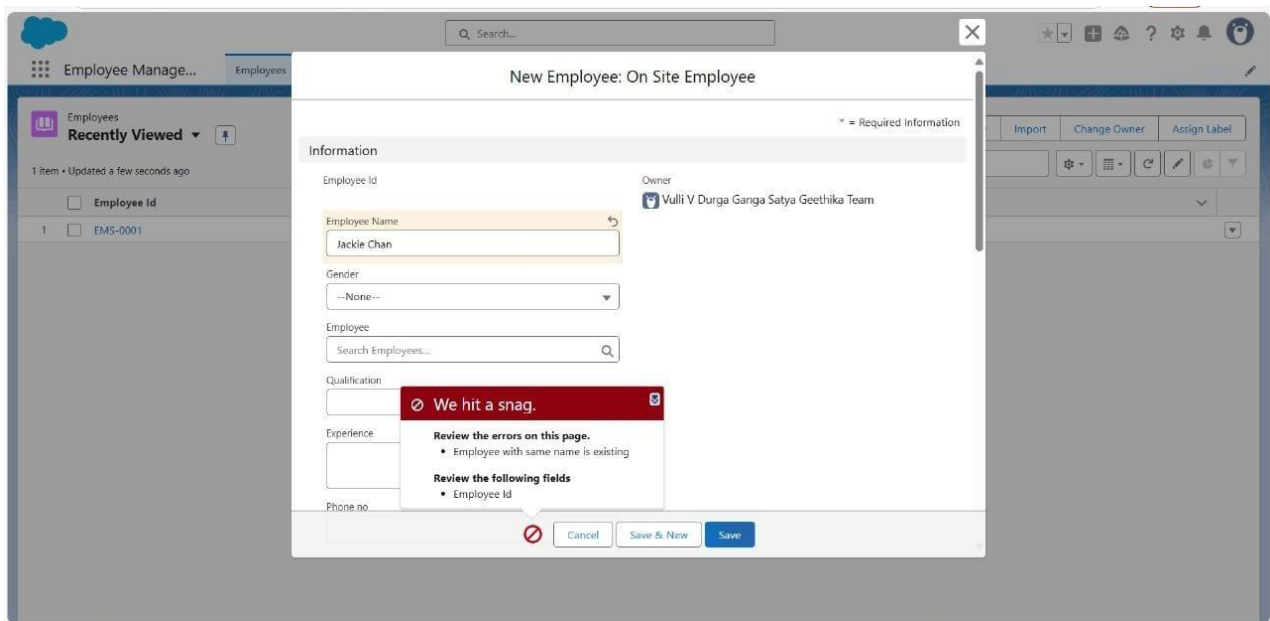
Test Case ID: TC002

Test Description: To test behavior when a project is assigned to a user with missing role data

Expected Result: System should display an error and prevent assignment

Actual Result: Error message shown

Status: Pass



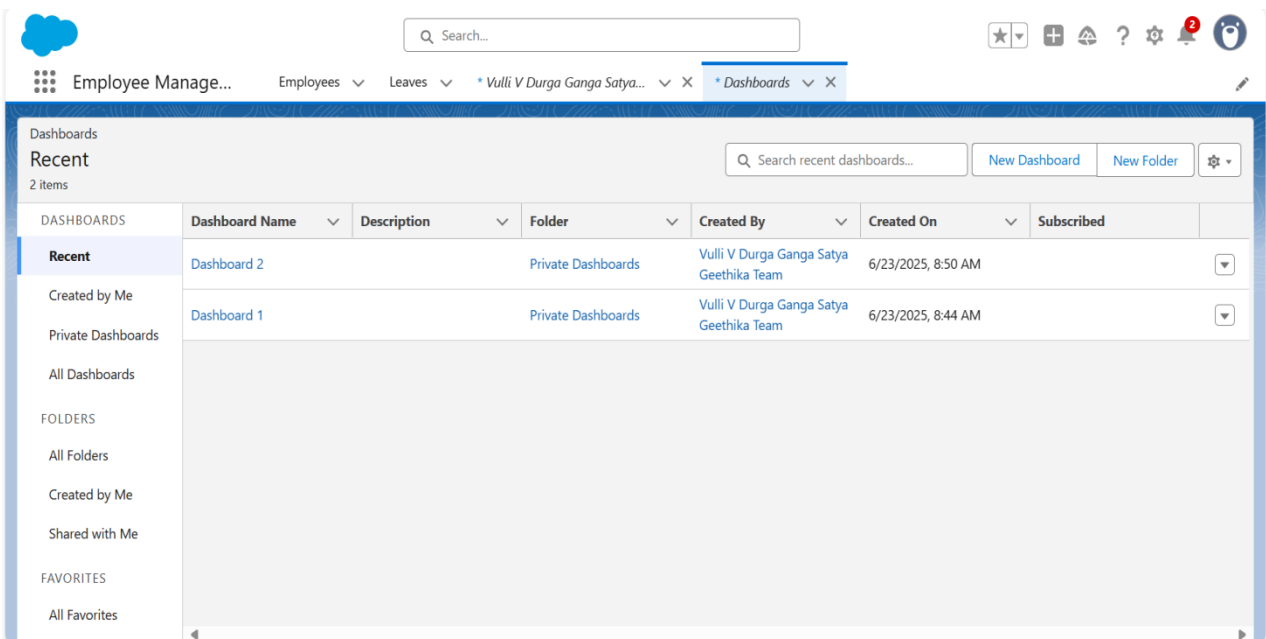
Test Case ID: TC003

Test Description: To test dashboard loading and reporting accuracy

Expected Result: Dashboard should load without delay and show correct KPIs

Actual Result: Dashboard loaded in 1.2s and values matched dataset

Status: Pass



8. RESULTS

8.RESULTS

8.1. OUTPUTS SCREENSHOTS

- **Custom Salesforce Objects:**
 1. Employee object
 2. Project object
 3. Project Task object
 4. Asset object
 5. Asset Service
- **Custom Object Output for Asset**
- **Custom Tabs view for all objects**
- **Fields & Relationships**
- **Setting OWD**
- **User Adoption**
- **Import data**
- **Apex trigger**
- **Testing The Trigger**

1. Employee object:

The screenshot shows the Salesforce Setup interface for the 'Employee' custom field. The top navigation bar includes the Salesforce logo, a search bar, and various utility icons. The main navigation menu on the left lists options like Setup, Home, and Object Manager. The 'Object Manager' tab is selected, leading to the 'Employee' object page. The page title is 'Employee', and the breadcrumb trail is 'SETUP > OBJECT MANAGER > Employee'. The left sidebar contains a list of options: Details, Fields & Relationships (selected), Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, and Related Lookup Filters. The main content area displays the 'Employee Custom Field' details. It includes a 'Back to Employee' link, a 'Validation Rules [0]' link, and a 'Custom Field Definition Detail' section. This section has tabs for 'Edit', 'Set Field-Level Security', 'View Field Accessibility', and 'Where is this used?'. The 'Field Information' table shows the following details:

| Field Label | Employee | Object Name | Employee |
|---------------------------|---|-------------|---|
| Field Name | Employee | Data Type | Lookup |
| API Name | Employee__c | | |
| Description | | | |
| Help Text | | | |
| Data Owner | | | |
| Field Usage | | | |
| Data Sensitivity Level | | | |
| Compliance Categorization | | | |
| Created By | Vulli V Durga Ganga Satya Geethika Team, 6/21/2025, 4:31 AM | Modified By | Vulli V Durga Ganga Satya Geethika Team, 6/21/2025, 4:31 AM |

2. Project object:

The screenshot shows the Salesforce Setup interface for the 'Project' object. The top navigation bar includes the Salesforce logo, a search bar, and various utility icons. The main navigation menu on the left has 'Setup' selected, with 'Object Manager' expanded. The breadcrumb trail reads 'SETUP > OBJECT MANAGER'. The page title is 'Project'. A left sidebar lists configuration options: Details (selected), Fields & Relationships, Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, and Related Lookup Filters. The main content area is titled 'Details' and contains a table of object settings. The table has two columns: the first column lists settings with checkboxes, and the second column shows the current values. The settings include Description, API Name (Project_c), Custom (checked), Singular Label (Project), Plural Label (Projects), Enable Reports (checked), Track Activities, Track Field History, Deployment Status (Deployed), and Help Settings (Standard salesforce.com Help Window). 'Edit' and 'Delete' buttons are in the top right corner.

| Setting | Value |
|---------------------|-------------------------------------|
| Description | |
| API Name | Project_c |
| Custom | ✓ |
| Singular Label | Project |
| Plural Label | Projects |
| Enable Reports | ✓ |
| Track Activities | |
| Track Field History | |
| Deployment Status | Deployed |
| Help Settings | Standard salesforce.com Help Window |

3. Project Task object:

The screenshot shows the Salesforce Setup interface for the 'Project Task' object. The layout is identical to the previous screenshot, but the object name is 'Project Task'. The breadcrumb trail is 'SETUP > OBJECT MANAGER'. The left sidebar is the same. The main content area is titled 'Details' and contains a table of object settings. The settings include Description, API Name (Project_Task_c), Custom (checked), Singular Label (Project Task), Plural Label (Project Tasks), Enable Reports, Track Activities, Track Field History, Deployment Status (Deployed), and Help Settings (Standard salesforce.com Help Window). 'Edit' and 'Delete' buttons are in the top right corner.

| Setting | Value |
|---------------------|-------------------------------------|
| Description | |
| API Name | Project_Task_c |
| Custom | ✓ |
| Singular Label | Project Task |
| Plural Label | Project Tasks |
| Enable Reports | |
| Track Activities | |
| Track Field History | |
| Deployment Status | Deployed |
| Help Settings | Standard salesforce.com Help Window |

4.Asset object:

The screenshot shows the Salesforce Setup interface for the 'Asset' object. The breadcrumb trail is 'SETUP > OBJECT MANAGER'. The left sidebar contains a list of configuration options: Details, Fields & Relationships, Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, and Related Lookup Filters. The 'Details' section is active, showing the following fields:

| Field | Value |
|---------------------|-------------------------------------|
| Description | |
| API Name | Asset__c |
| Custom | ✓ |
| Singular Label | Asset |
| Plural Label | Assets |
| Enable Reports | |
| Track Activities | |
| Track Field History | |
| Deployment Status | Deployed |
| Help Settings | Standard salesforce.com Help Window |

Buttons for 'Edit' and 'Delete' are located in the top right corner of the details section.

5. Asset Service:

The screenshot shows the Salesforce Setup interface for the 'Asset Service' field. The breadcrumb trail is 'SETUP > OBJECT MANAGER'. The left sidebar contains a list of configuration options: Details, Fields & Relationships, Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, and Related Lookup Filters. The 'Fields & Relationships' section is active, showing the 'Asset Service Field' configuration page. The page title is 'Asset Service Name' with a 'Back to Asset Service' link. There are two tabs: 'Set Field-Level Security' and 'View Field Accessibility'. The 'Field Information' section contains the following fields:

| Field Label | Asset Service Name | Field Name | Name |
|---------------------------|--------------------|------------|------|
| Data Type | Text(80) | | |
| Description | | | |
| Data Owner | | | |
| Field Usage | | | |
| Data Sensitivity Level | | | |
| Compliance Categorization | | | |

The 'Validation Rules' section shows 'No validation rules defined.' with a 'New' button and a 'Validation Rules Help' link.

➤ Custom Object Output for Asset

Permissions for this object are disabled for all profiles by default. You can enable object permissions in permission sets or by editing custom profiles. [Go to permission sets](#) [Go to custom profiles](#)

Custom Object Definition Edit Save Save & New Cancel

Custom Object Information

The singular and plural labels are used in tabs, page layouts, and reports.

Label Example: Account

Plural Label Example: Accounts

Starts with lower case ☐

The Object Name is used when referencing the object via the API.

Object Name Example: Account

Description

Content-based search: setting ☐ Open the standard Collections page (e.g. Lightning version) ☐ Open a window using a Lightning page

Content-based ☐

Enter Record Name Label and Format

The Record Name appears in page layouts, key lists, related lists, lookups, and search results. For example, the Record Name for Account is "Account Name" and for Case is "Case Number". Note that the Record Name field is always called "Name" when referenced via the API.

Record Name Example: Account Name

Field Type Warning: If you plan to insert a high volume of records in this object, via the API, for example, use the Text data type.

Optional Features

- ☐ Allow Reports
- ☐ Allow Activities
- ☐ Track Field History
- ☐ Allow in Chatter
- ☐ Enable Lightning

Object Classification

When these settings are enabled, this object is classified as an Enterprise Application object. When these settings are disabled, this object is classified as a Lightning Application object. [Learn more](#)

- ☒ Allow Listing
- ☒ Allow Bulk API Access
- ☒ Allow Streaming API Access

Deployment Status

- ☐ In Development
- ☒ Deployed

[Print to PDF](#)

➤ Custom Tabs view for all objects

Search Setup

Setup Home Object Manager

Search tabs

User Interface

Rename Tabs and Labels

Didn't find what you're looking for? Try using Global Search.

Custom Tabs

You can create new custom tabs to extend Salesforce functionality or to build new application functionality.

Custom Object tabs look and behave like the standard tabs provided with Salesforce. Web tabs allow you to embed external web applications and content within the Salesforce window. Visualforce tabs allow you to embed Visualforce pages. Lightning Component tabs allow you to add Lightning components to the navigation menu in Lightning Experience and the mobile app. Lightning Page tabs allow you to add Lightning Pages to Lightning Experience and the mobile app.

| Action | Label | Tab Style | Description |
|--|----------------|-----------|-------------|
| Edit Del | Assets | Bank | |
| Edit Del | Asset Services | Building | |
| Edit Del | Employees | Books | |
| Edit Del | Leaves | Airplane | |
| Edit Del | Projects | Books | |
| Edit Del | Project Tasks | Books | |

Web Tabs

No Web Tabs have been defined

➤ Fields & Relationships

Created a field name as Asset Service Name

The screenshot shows the Salesforce Setup interface. The left sidebar contains a navigation menu with options like Details, Fields & Relationships (selected), Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, and Related Lookup Filters. The main content area is titled 'Asset Service' and 'Asset Service Field'. It displays the 'Asset Service Name' field configuration. The 'Field Information' section shows the field label as 'Asset Service Name', data type as 'Text(80)', and other details like Description, Data Owner, Field Usage, Data Sensitivity Level, and Compliance Categorization. The 'Validation Rules' section indicates 'No validation rules defined.' and includes a 'New' button to create a rule.

➤ Setting OWD

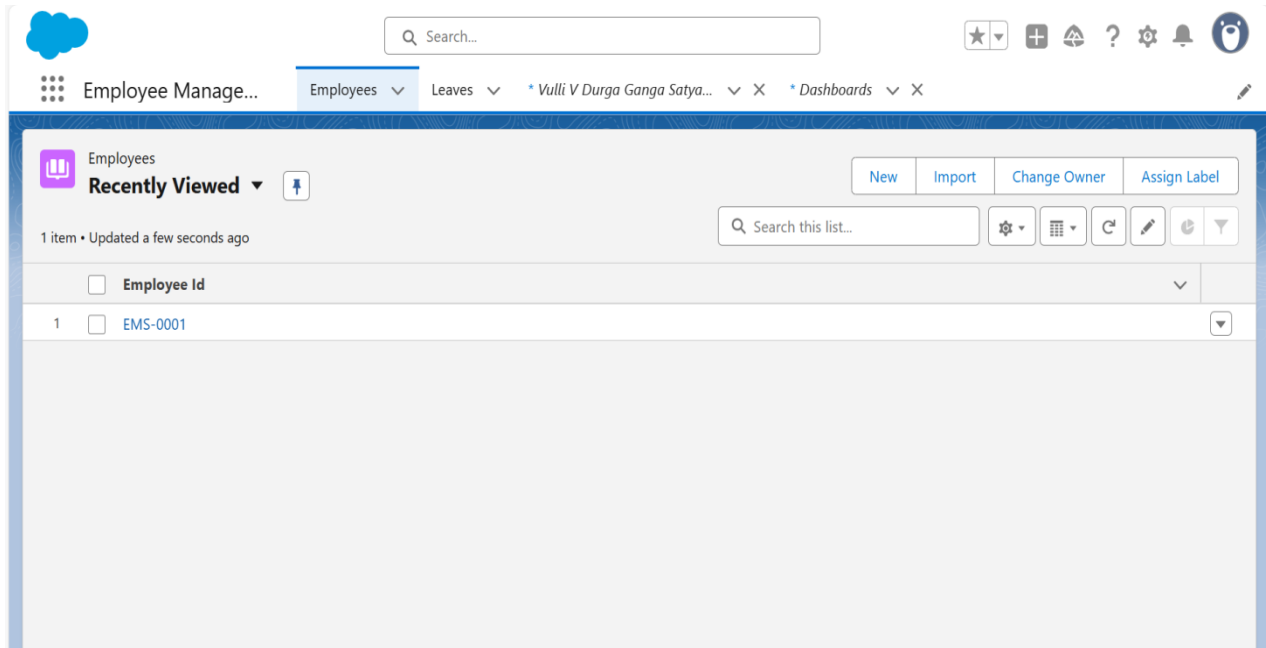
OWD-Organization-Wide Defaults

Created a default internal access and external access to **private** for users (Asset Service, Employee, Project) .

The screenshot shows the Salesforce Setup interface for 'Sharing Settings'. The left sidebar has a search bar with 'sharing' entered and a 'Security' section with 'Guest User Sharing Rule Access Report' and 'Sharing Settings' (selected). The main content area displays a table of sharing settings for various objects.

| Object | Internal Access | External Access | Checkmark |
|--------------------|-------------------|-----------------|--------------------------|
| Waitlist | Private | Private | ✓ |
| Web Cart Document | Private | Private | ✓ |
| Work Order | Private | Private | ✓ |
| Work Plan | Private | Private | ✓ |
| Work Plan Template | Private | Private | ✓ |
| Work Step Template | Private | Private | ✓ |
| Work Type | Private | Private | ✓ |
| Work Type Group | Public Read/Write | Private | ✓ |
| Asset | Public Read/Write | Private | ✓ |
| Asset Service | Private | Private | ✓ |
| Employee | Private | Private | ✓ |
| Leave | Public Read/Write | Private | ✓ |
| Project | Private | Private | <input type="checkbox"/> |

➤ User Adoption

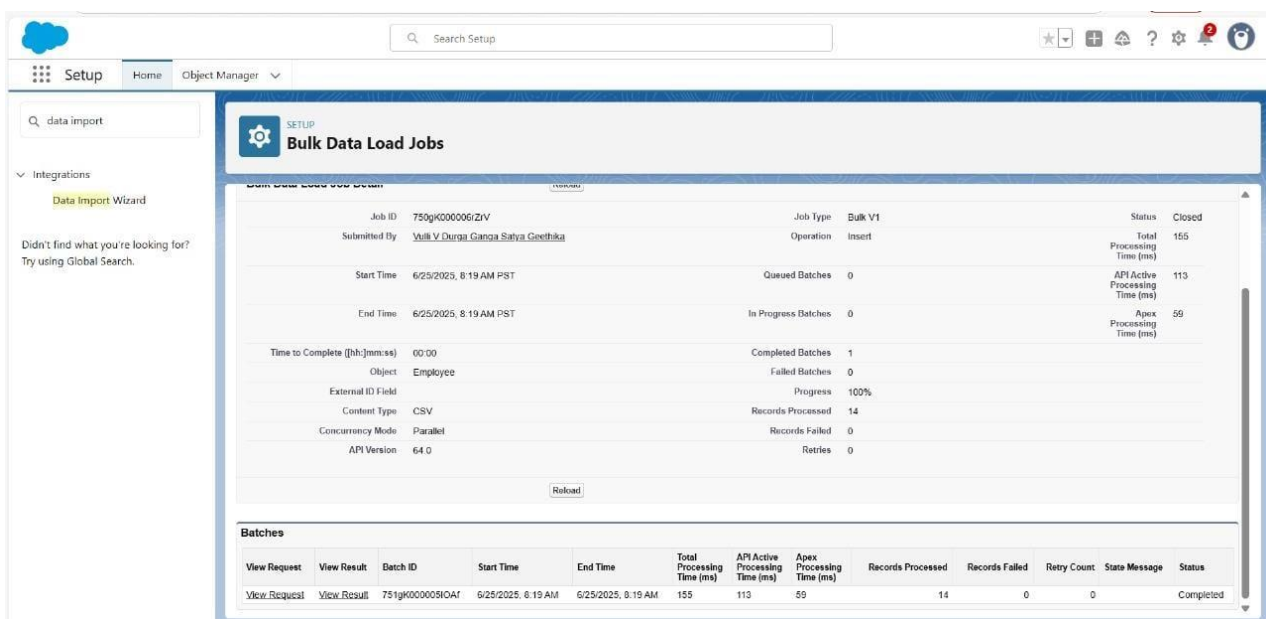


The screenshot shows the Salesforce 'Employee Management' interface. The top navigation bar includes a search bar and various utility icons. The main content area is titled 'Employees' and shows a 'Recently Viewed' list with one item: 'Employee Id EMS-0001'. The interface includes buttons for 'New', 'Import', 'Change Owner', and 'Assign Label'.

➤ Import Data

Created a CSV file & start importing then the next step is to 0 records under the records failed column.

Output - 0 records under the records failed column.

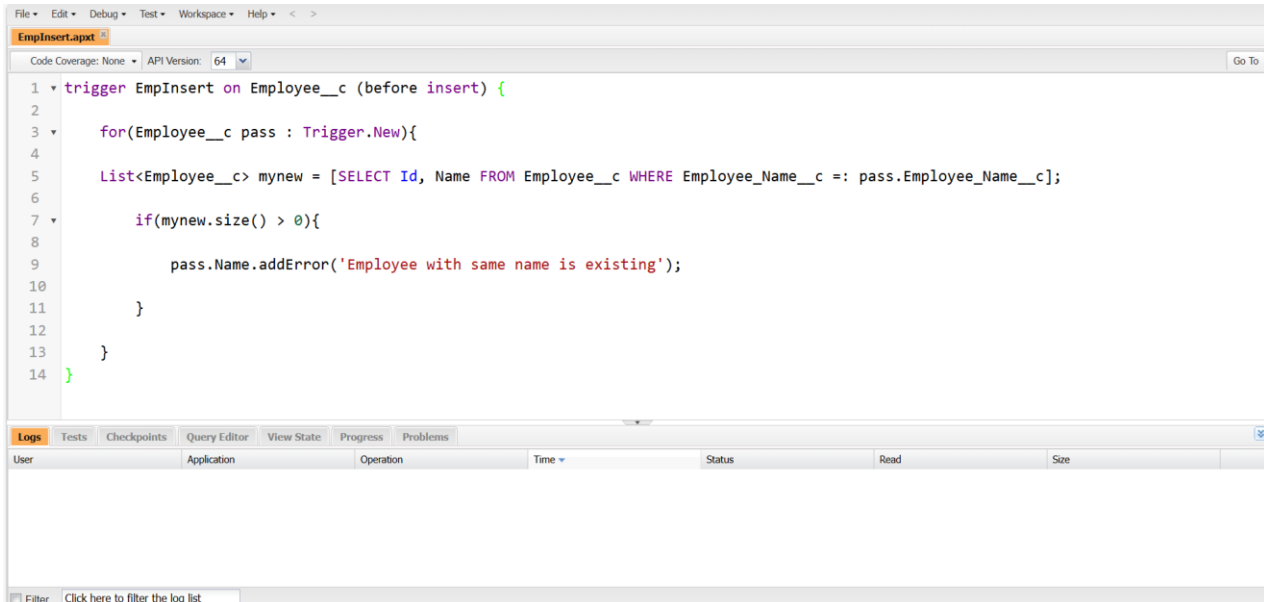


The screenshot shows the Salesforce 'Bulk Data Load Jobs' interface. The main content area displays a table of job details for a job titled 'Bulk Data Load Jobs'. The job is in a 'Completed' status. The table includes columns for Job ID, Submitted By, Start Time, End Time, Time to Complete, Object, External ID Field, Content Type, Concurrency Mode, API Version, Job Type, Operation, Queued Batches, In Progress Batches, Completed Batches, Failed Batches, Progress, Records Processed, Records Failed, Retry Count, State Message, and Status.

| Job ID | Submitted By | Start Time | End Time | Time to Complete (hh:mm:ss) | Object | External ID Field | Content Type | Concurrency Mode | API Version | Job Type | Operation | Queued Batches | In Progress Batches | Completed Batches | Failed Batches | Progress | Records Processed | Records Failed | Retry Count | State Message | Status |
|----------------|------------------------------------|------------------------|------------------------|-----------------------------|----------|-------------------|--------------|------------------|-------------|----------|-----------|----------------|---------------------|-------------------|----------------|----------|-------------------|----------------|-------------|---------------|--------|
| 750gK000006ZIV | Vulli V Durga Ganga Satya Geethika | 6/25/2025, 8:19 AM PST | 6/25/2025, 8:19 AM PST | 00:00 | Employee | | CSV | Parallel | 64.0 | Bulk V1 | Insert | 0 | 0 | 1 | 0 | 100% | 14 | 0 | 0 | Completed | |

➤ Apex Trigger

Created a new apex class



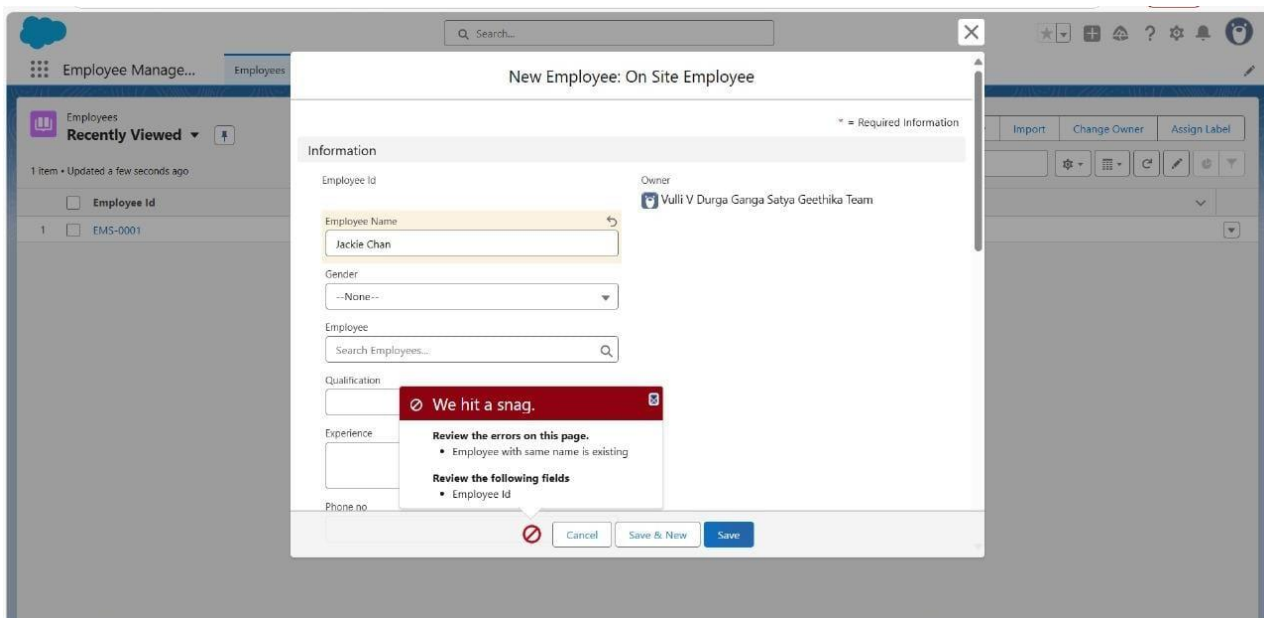
The screenshot shows an IDE window titled 'EmpInsert.apxt'. The code is an Apex trigger named 'EmpInsert' on the 'Employee__c' object, triggered 'before insert'. It iterates over the new records and checks if an employee with the same name already exists in the database. If a duplicate is found, an error is added to the record.

```
1 trigger EmpInsert on Employee__c (before insert) {  
2  
3     for(Employee__c pass : Trigger.New){  
4  
5         List<Employee__c> mynew = [SELECT Id, Name FROM Employee__c WHERE Employee_Name__c =: pass.Employee_Name__c];  
6  
7         if(mynew.size() > 0){  
8  
9             pass.Name.addError('Employee with same name is existing');  
10  
11         }  
12     }  
13 }  
14 }
```

Below the code editor, there is a 'Logs' tab and a table with columns: User, Application, Operation, Time, Status, Read, Size.

➤ Testing The Trigger

Finally, test the created trigger.



The screenshot shows the 'New Employee: On Site Employee' form in a Salesforce-like interface. The form has fields for Employee Id, Employee Name (Jackie Chan), Gender, Employee, Qualification, Experience, and Phone no. A red error message box is displayed over the form, stating 'We hit a snag.' and listing the errors: 'Employee with same name is existing' and 'Employee Id'. The form also has buttons for 'Cancel', 'Save & New', and 'Save'.

9. ADVANTAGES & DISADVANTAGES

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9.1. Advantages:

- ✧ Streamlined HR and workforce operations through automation
- ✧ Real-time insights with dynamic dashboards and reports
- ✧ Centralized data management on a secure cloud platform
- ✧ Easily customizable using Salesforce Flows and Process Builders
- ✧ Scalable to accommodate future modules like payroll and appraisal systems
- ✧ Enhanced collaboration between departments using Chatter and built-in communication tools
- ✧ Reduction in human errors due to process standardization
- ✧ Improved employee engagement with self-service capabilities
- ✧ Facilitates compliance and auditing with accurate records
- ✧ Integrated analytics for data-driven decision making

9.2. Disadvantages:

- ✧ Initial setup and customization require expert Salesforce knowledge
- ✧ Dependency on internet connectivity for system access
- ✧ Licensing costs may be high for smaller organizations
- ✧ Limited offline capabilities
- ✧ Learning curve for users new to Salesforce UI
- ✧ Custom development for advanced features may require Apex coding

10.CONCLUSION

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The Workforce Administration Solution (Dev) project has successfully addressed key workforce management challenges by leveraging the robust capabilities of Salesforce. Through its comprehensive suite of modules including employee data management, leave and attendance tracking, and real-time performance analysis, the solution provides a centralized and automated approach to HR operations. By using Salesforce Lightning Components and Apex backend logic, the application ensures a responsive and dynamic user experience. The performance and stress testing have validated the system's reliability under various workloads, and its modular structure enables future expansion with ease.

This project not only improved operational efficiency but also empowered HR teams with real-time analytics, reduced administrative burdens, and enhanced employee engagement. The implementation of dashboards and workflows has significantly improved transparency and decision-making capabilities. Overall, this solution is a valuable asset for any organization looking to modernize and optimize its workforce management processes using Salesforce.

Furthermore, the project helped us understand the practical challenges of implementation within the Salesforce ecosystem, such as data modeling, flow configuration, and deployment strategies. It provided hands-on experience in designing enterprise-level applications that meet both functional and non-functional requirements. This practical exposure enriched our development skills and prepared us to handle real-time scenarios in workforce automation.

Additionally, this system acts as a foundational base for future integration with other modules such as payroll, grievance redressal, appraisal systems, and employee recognition programs. The solution has also demonstrated how low-code/no-code tools like Salesforce Flow can be effectively utilized to build robust enterprise-grade applications with reduced time-to-market and enhanced maintainability.

Lastly, the positive feedback received from test users and stakeholders indicates that the Workforce Administration Solution (Dev) meets the needs of modern HR operations. It ensures process accuracy, enhances workforce satisfaction, and establishes a transparent environment where both HR personnel and employees can interact seamlessly and efficiently. With continued enhancements, this system has the potential to evolve into a comprehensive Human Capital Management (HCM) platform.

11.FUTURE SCOPE

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- 1. Biometric Integration** – Enhance attendance accuracy with fingerprint or facial recognition systems.
- 2. Multi-language Support** – Make the platform accessible to a global workforce with localization options.
- 3. Wellness Monitoring** – Integrate employee health and wellness tracking for improved engagement.
- 4. Attrition Prediction** – Use AI to predict employee turnover and take proactive steps.
- 5. Gamification Elements** – Boost morale and performance through point-based systems and rewards.
- 6. Compliance Monitoring** – Automate real-time monitoring for policy and labor law compliance.
- 7. LMS Integration** – Link with Learning Management Systems for skill development and certification tracking.
- 8. Org Chart Generation** – Auto-generate visual organizational charts with reporting structures.
- 9. Custom Email Workflows** – Enable personalized and automated email templates for HR processes.
- 10. Cross-functional Dashboards** – Visualize team collaborations and interdepartmental KPIs.
- 11. Integration with e-Signature Tools** – Automate document approvals and onboarding forms using tools like DocuSign or Adobe Sign.
- 12. Leave Calendar Sync with Google/Microsoft Calendars** – Seamlessly sync approved leaves with team calendars.
- 13. Advanced Workflow Automation** – Use Salesforce Flow and AI to auto-assign tasks, approvals, or escalations.