
📂 Phase 1: Problem Understanding & Industry Analysis

Goals:

- Understand current onboarding challenges in organizations
- Analyze industry best practices and competitor solutions
- Document project scope, goals, and success metrics

— Research Onboarding Challenges

- Identify common issues employees face during onboarding
- Collect information on delayed access, incomplete documentation, poor communication, and training gaps

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— Analyze Industry Best Practices

- Study onboarding practices of leading companies
- Note strategies like automated task tracking, role-based access, mentorship programs, and digital document handling

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— Competitor Solutions

- Review competitor tools for onboarding management
- Compare features, usability, and workflow efficiency
- Identify gaps or opportunities for improvement

— Define Project Scope

- Clearly outline the project goals:
  - Streamline onboarding tasks
  - Centralize employee data, documents, and task tracking
  - Enable role-based access for HR, Manager, and Employee

— Define Success Metrics

- Time to complete onboarding
- Employee satisfaction with onboarding process
- Accuracy and completeness of onboarding documentation
- System usability and role-based access efficiency

✅ Deliverables

- Research notes on onboarding challenges
- Industry best practices summary

- Competitor analysis table
- Documented project scope, goals, and success metrics

Phase 2: Org Setup & Configuration

Goals:

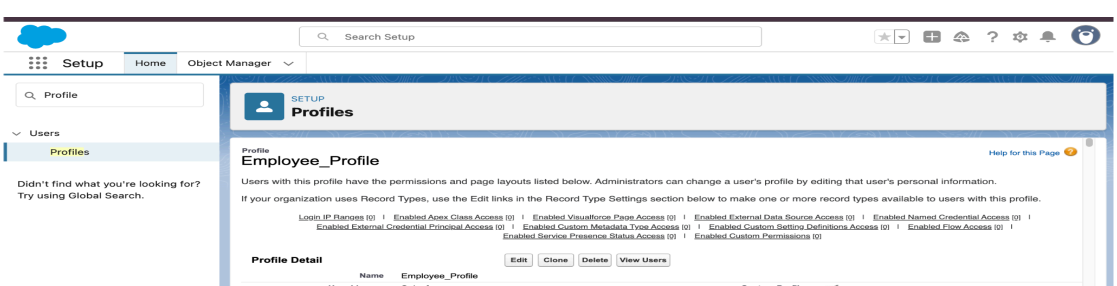
- Create Salesforce Developer Org
- Configure company info, users, and profiles
- Set up permission sets for HR, Manager, Employee

Developer Org Setup

1. Signup: [Salesforce Developer Signup]
    - Username: `manas@onboarding.com`
    - Company: `Onboarding Capstone`
    - Job Role: `Developer`
2. Setup → Company Information:
    - Fiscal Year = Standard, Locale = English (India), Time Zone = GMT+5:30

Create Custom Profiles

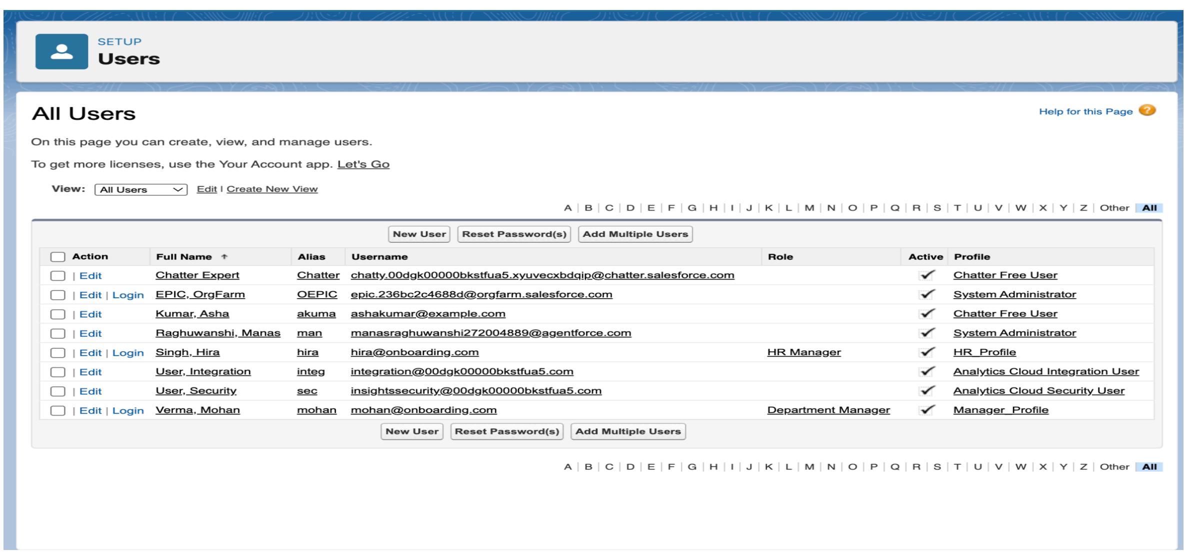
- Clone *Standard User* → create:
    - HR_Profile, Manager_Profile, Employee_Profile
- Object Permissions (Employee, OnboardingTask, Document):
    - HR → CRUD, Manager → Read/Edit, Employee → Read/Edit (own)
- Tab Visibility: Default On



Kjhk

Create UsersScreenshot: Users list showing all 3 users

Name	Profile	Username
Hira Singh	HR_Profile	hira@onboarding.com
Mohan Verma	Manager_Profile	mohan@onboarding.com
Asha Kumar	Employee_Profile	asha@onboarding.com

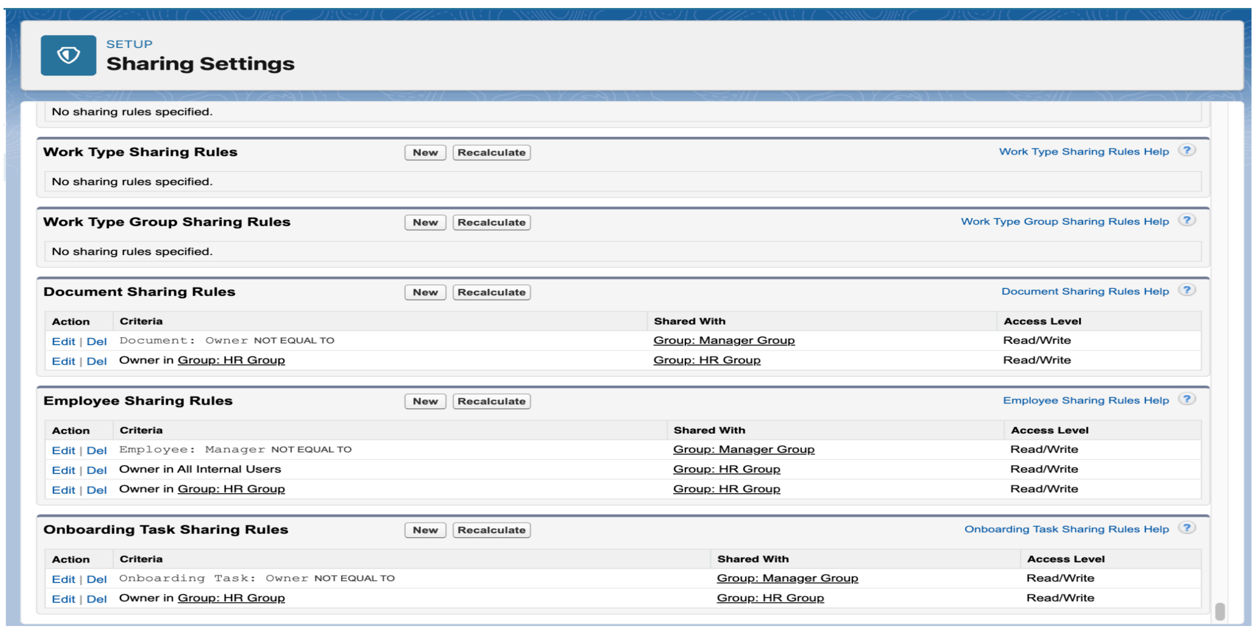


Create Permission Sets

- Permission Sets: HR_Full_Access, Manager_Approvals, Employee_SelfService
- Configure Object Settings (CRUD) and assign to users

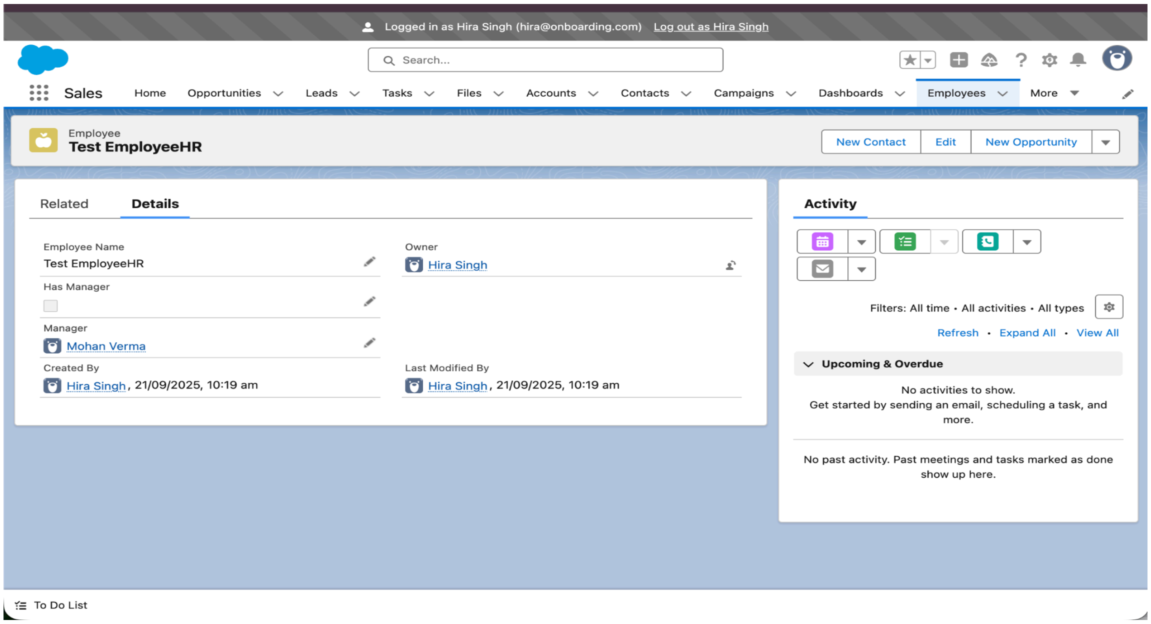
Sharing & Security

- Sharing Settings → Org-Wide Defaults → Private for Employee, Task, Document



Verify Access

- Login as each user:
  - HR → create records
  - Manager → approve/view team
  - Employee → view own tasks


Logged in as Hira Singh (hira@onboarding.com) Log out as Hira Singh
Search...
Sales
Home
Opportunities
Leads
Tasks
Files
Accounts
Contacts
Campaigns
Dashboards
Employees
More
Employee
Test EmployeeHR
New Contact
Edit
New Opportunity
Related
Details
Employee Name
Test EmployeeHR
Owner
Hira Singh
Has Manager
Manager
Mohan Verma
Created By
Hira Singh, 21/09/2025, 10:19 am
Last Modified By
Hira Singh, 21/09/2025, 10:19 am
Activity
Filters: All time • All activities • All types
Refresh • Expand All • View All
Upcoming & Overdue
No activities to show.
Get started by sending an email, scheduling a task, and more.
No past activity. Past meetings and tasks marked as done show up here.
To Do List

Phase 3 — Data Modeling & Relationships Documentation

Header / Intro

Objective:
Design custom objects, fields, and relationships to manage employee onboarding tasks and documents.

Goals:

- Create Employee__c, OnboardingTask__c, and Document__c objects
- Define fields for each object
- Establish Master-Detail and Lookup relationships
- Visualize the data model using Schema Builder

Objects & Fields

2a — Employee__c

Field Label	Field Name	Data Type	Required	Description
Employee Name	Employee_Name__c	Text (255)	✅ Yes	Full name of employee
Email	Email__c	Email	✅ Yes	Employee email address

Department	Department__c	Picklist	❌ No	Department name (HR, IT, etc.)
Manager	Manager__c	Lookup (User)	❌ No	Manager assigned to employee
Joining Date	Joining_Date__c	Date	❌ No	Employee joining date

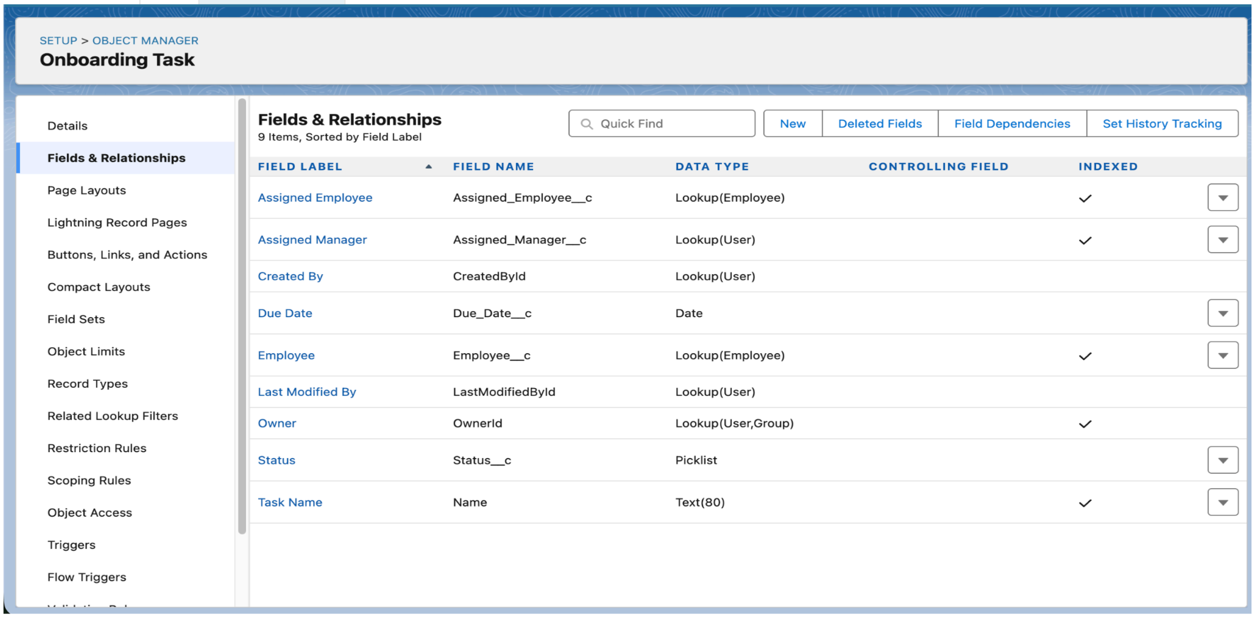
2b — OnboardingTask__c

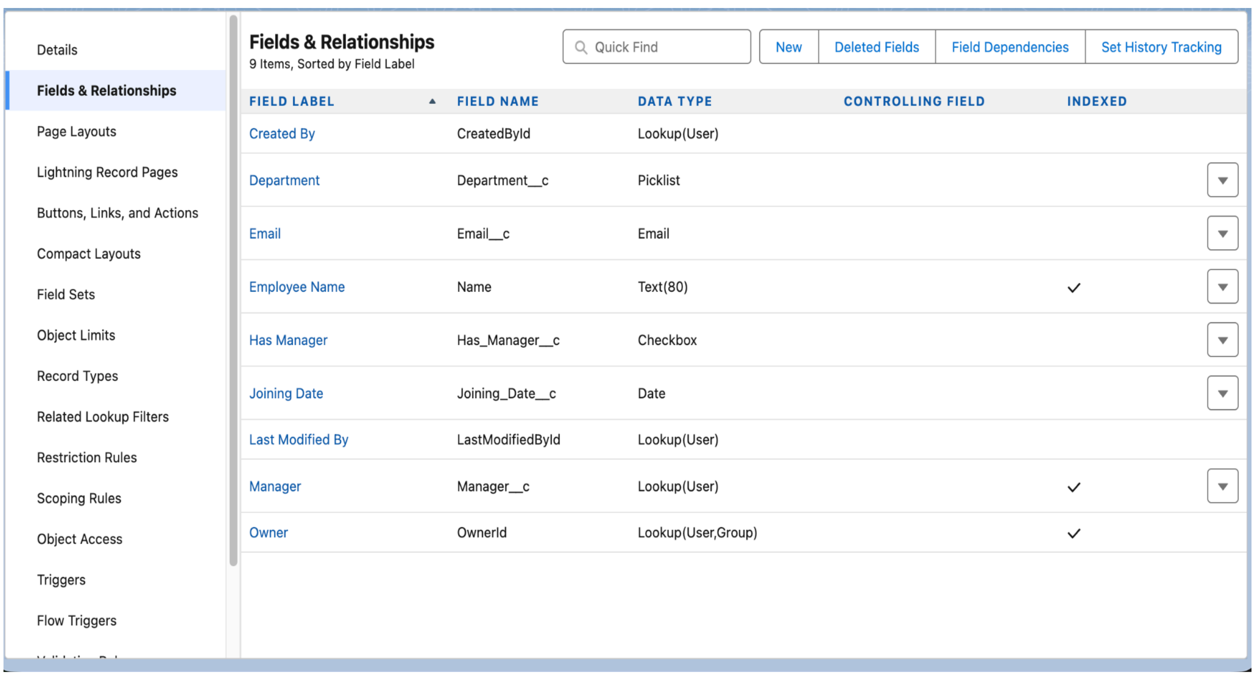
Field Label	Field Name	Data Type	Required	Description
Task Name	Task_Name__c	Text (255)	✅ Yes	Name of the onboarding task
Assigned Employee	Assigned_Employee__c	Master-Detail (Employee__c)	✅ Yes	Task linked to an employee
Assigned Manager	Assigned_Manager__c	Lookup (User)	❌ No	Manager responsible for the task
Status	Status__c	Picklist (Not Started, In Progress, Completed)	✅ Yes	Task progress status

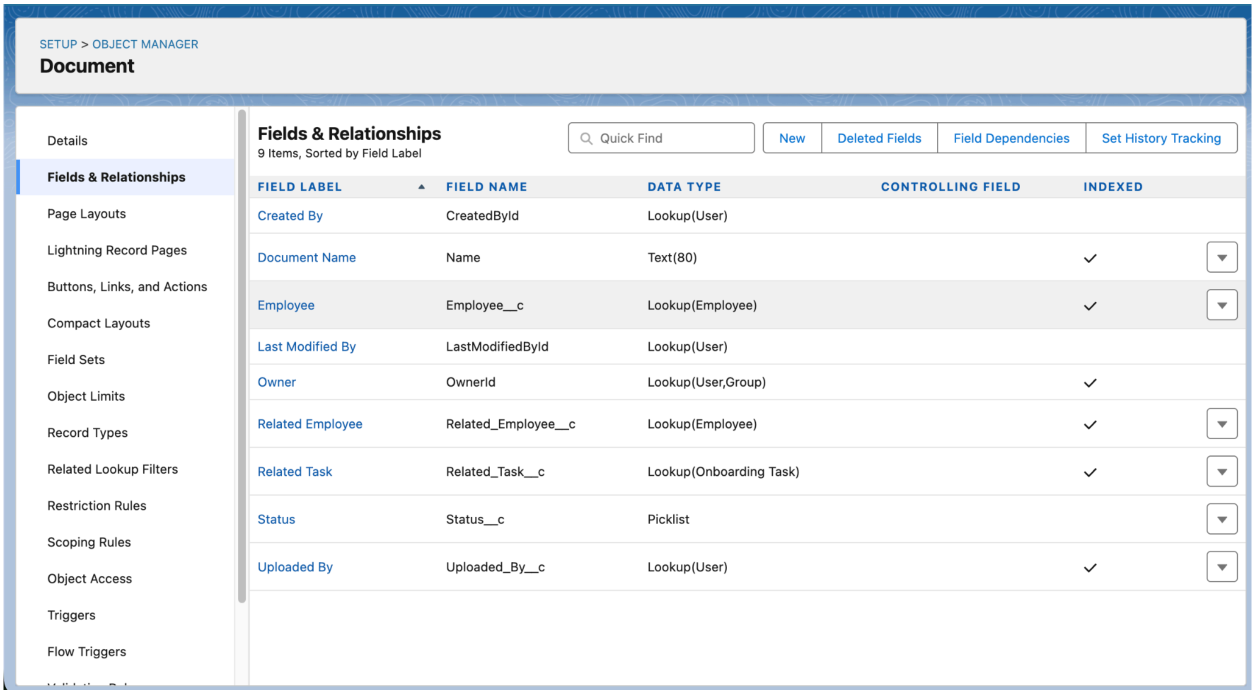
Due Date	Due_Date__c	Date	❌ No	Task deadline

2c — Document__c

Field Label	Field Name	Data Type	Required	Description
Document Name	Document_Name__c	Text (255)	✅ Yes	Name of the uploaded document
Uploaded By	Uploaded_By__c	Lookup (User)	❌ No	User who uploaded the document
Related Employee	Employee__c	Master-Detail (Employee__c)	✅ Yes	Document linked to employee
Related Task	Task__c	Lookup (OnboardingTask__c)	❌ No	Document linked to a task (optional)
Status	Status__c	Picklist (Pending, Approved, Rejected)	✅ Yes	Document approval status

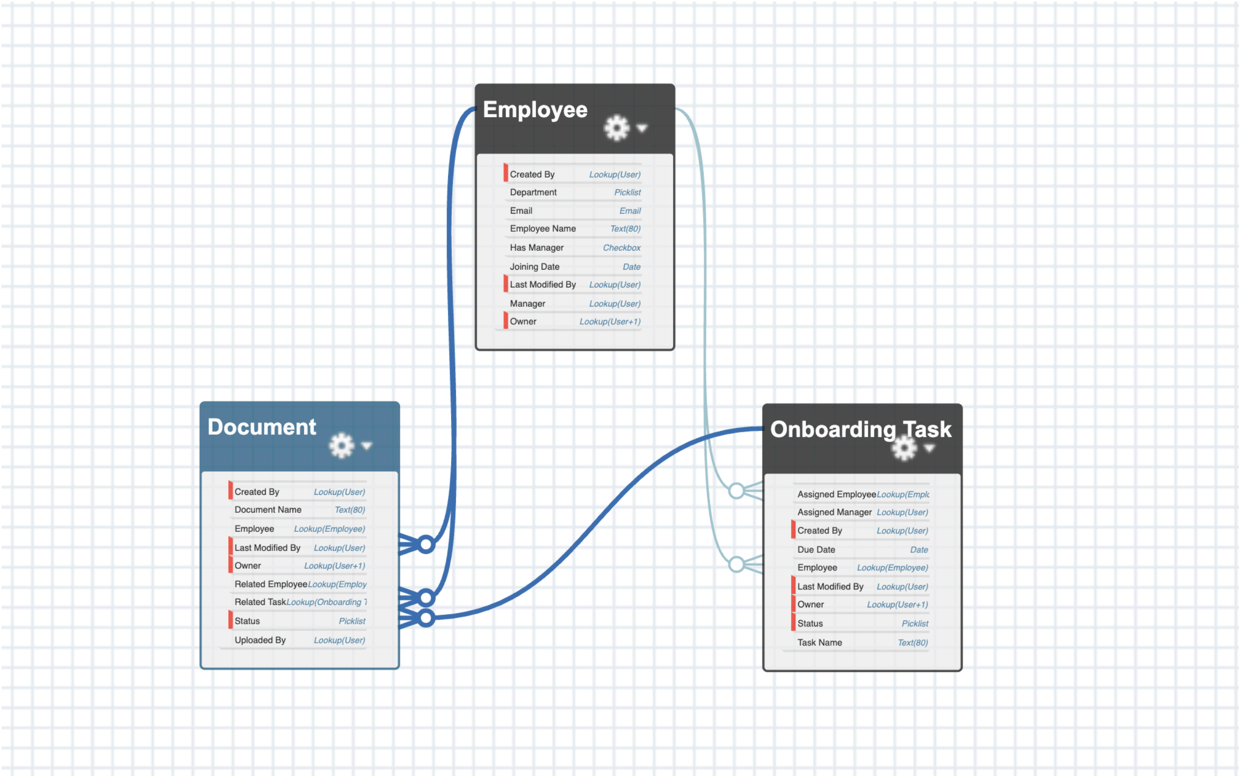

SETUP > OBJECT MANAGER
Onboarding Task
Details
Fields & Relationships
Page Layouts
Lightning Record Pages
Buttons, Links, and Actions
Compact Layouts
Field Sets
Object Limits
Record Types
Related Lookup Filters
Restriction Rules
Scoping Rules
Object Access
Triggers
Flow Triggers
Fields & Relationships
9 Items, Sorted by Field Label
Quick Find
New
Deleted Fields
Field Dependencies
Set History Tracking
FIELD LABEL
FIELD NAME
DATA TYPE
CONTROLLING FIELD
INDEXED
Assigned Employee Assigned_Employee__c Lookup(Employee) ✓
Assigned Manager Assigned_Manager__c Lookup(User) ✓
Created By CreatedById Lookup(User)
Due Date Due_Date__c Date
Employee Employee__c Lookup(Employee) ✓
Last Modified By LastModifiedById Lookup(User)
Owner OwnerId Lookup(User,Group) ✓
Status Status__c Picklist
Task Name Name Text(80) ✓


Details
Fields & Relationships
Page Layouts
Lightning Record Pages
Buttons, Links, and Actions
Compact Layouts
Field Sets
Object Limits
Record Types
Related Lookup Filters
Restriction Rules
Scoping Rules
Object Access
Triggers
Flow Triggers
Fields & Relationships
9 Items, Sorted by Field Label
Quick Find
New
Deleted Fields
Field Dependencies
Set History Tracking
FIELD LABEL
FIELD NAME
DATA TYPE
CONTROLLING FIELD
INDEXED
Created By CreatedById Lookup(User)
Department Department__c Picklist
Email Email__c Email
Employee Name Name Text(80) ✓
Has Manager Has_Manager__c Checkbox
Joining Date Joining_Date__c Date
Last Modified By LastModifiedById Lookup(User)
Manager Manager__c Lookup(User) ✓
Owner OwnerId Lookup(User,Group) ✓



Relationships Overview

Relationship	Type	Related List Label
Employee → Manager	Lookup (User)	Employees
OnboardingTask → Employee	Master-Detail (Employee__c)	Tasks
Document → Employee	Master-Detail (Employee__c)	Documents
Document → OnboardingTask	Lookup (OnboardingTask__c)	Documents


Employee
Created By Lookup(User)
Department Picklist
Email Email
Employee Name Text(80)
Has Manager Checkbox
Joining Date Date
Last Modified By Lookup(User)
Manager Lookup(User)
Owner Lookup(User+1)
Document
Created By Lookup(User)
Document Name Text(80)
Employee Lookup(Employee)
Last Modified By Lookup(User)
Owner Lookup(User+1)
Related Employee Lookup(Employ
Related Task Lookup(Onboarding T
Status Picklist
Uploaded By Lookup(User)
Onboarding Task
Assigned Employee Lookup(Emplo
Assigned Manager Lookup(User)
Created By Lookup(User)
Due Date Date
Employee Lookup(Employee)
Last Modified By Lookup(User)
Owner Lookup(User+1)
Status Picklist
Task Name Text(80)

Phase 4 — Automation & Workflows

Plan Automation

- Trigger: New Employee record creation.
- Actions:
    - Create default Onboarding Tasks for each new Employee.
    - Send email notifications to Employee and Manager.
    - (Optional) Start approval process for onboarding documents.
- Conditions: Can be department-specific or role-specific.

Create Default Onboarding Tasks with Flow

1. Navigate to: Setup → Flows → New Flow
2. Select: Record-Triggered Flow → Create.
3. Configure Trigger:
    - Object: `Employee__c`
    - Trigger: When a record is created
    - Entry Conditions: Optional (e.g., Department = HR)
4. Add Element: Create Records

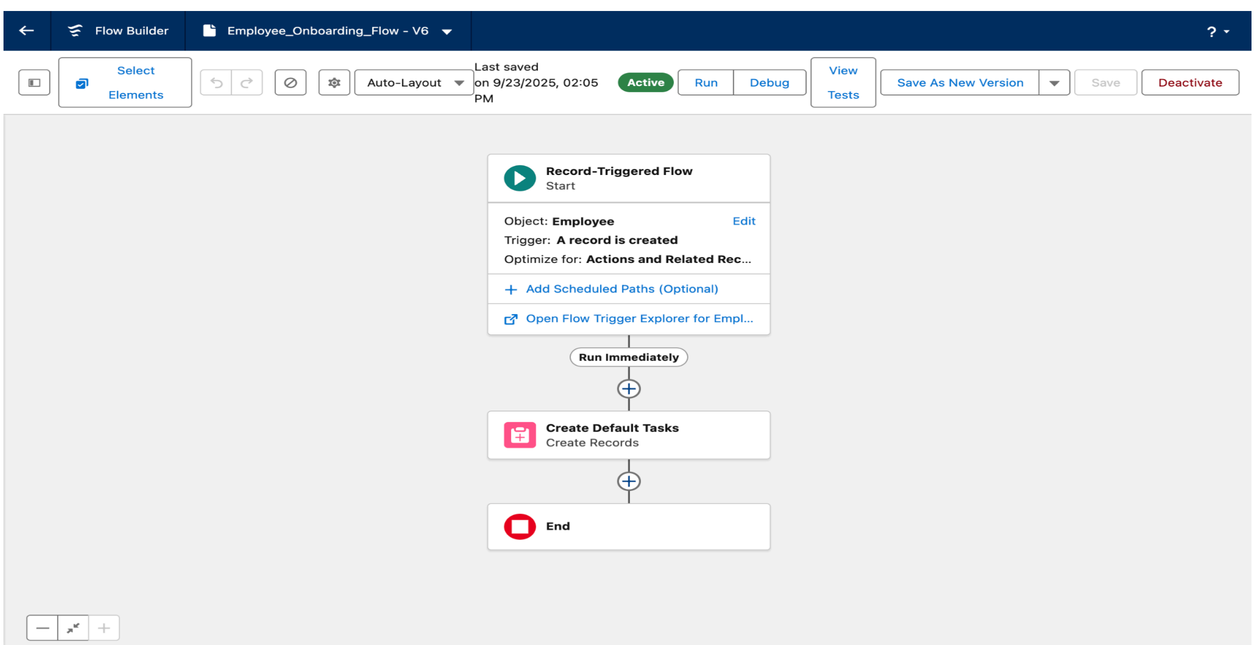
- Label: *Create Default Tasks*
- Object: `OnboardingTask__c`
- Field Mapping:

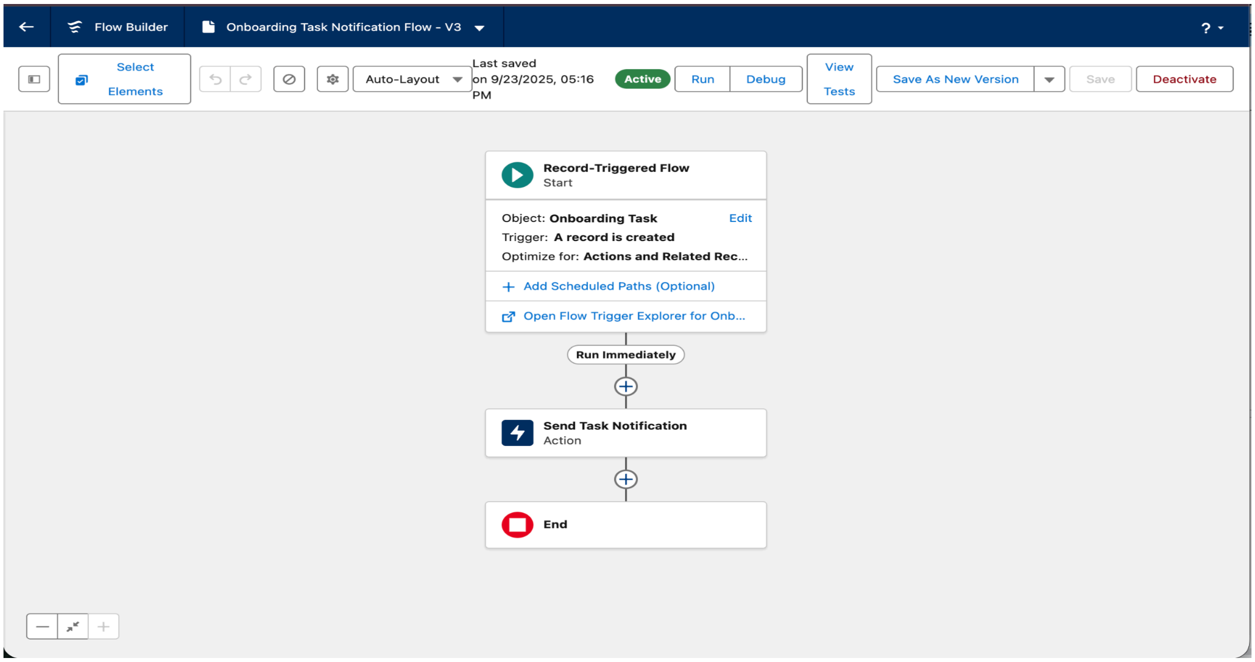
5.

Field	Value
Task Name	e.g., “Complete ID Form”
Assigned Employee	`$Record.Id`
Status	Not Started
Due Date	`Today() + 7`

6.

7. Save and Activate the Flow.





Test Automation

- Create a new Employee record.
- Check the Onboarding Tasks related list: Default tasks should be created automatically.
- Verify email notifications are received by Employee and Manager.

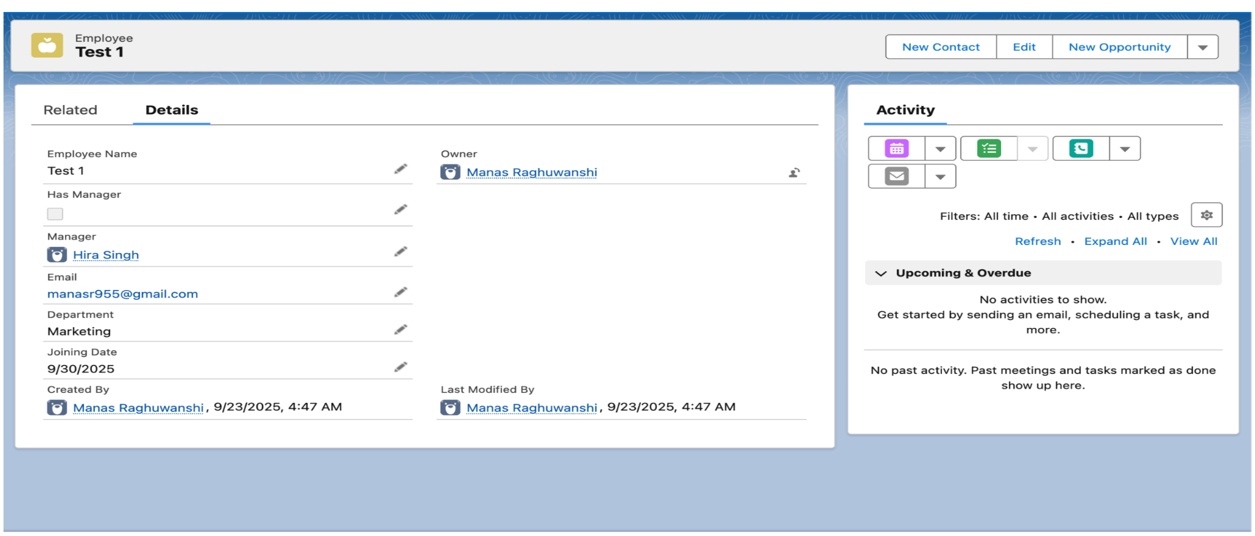
Navigate: Setup → Approval ProcessDocument Approval Processes → Document__c → New Approval Process.

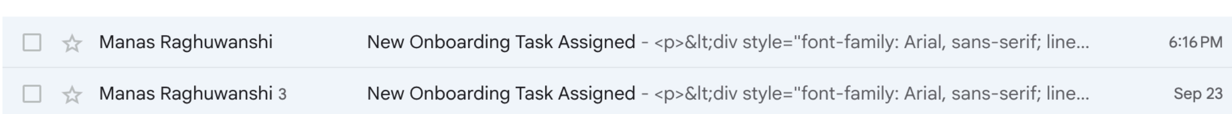
1. Use Standard Wizard.
2. Configure:

- Entry Criteria: `Status__c = Pending`
- Approver: Employee’s Manager (`Manager__c`)
- Approval Action: Set `Status__c = Approved`
- Rejection Action: Set `Status__c = Rejected`

Verify Setup

- Create a new **Employee** record and confirm:
  - Default Onboarding Tasks are created.
  - Emails are triggered.
  - Document approval process works (if enabled).
- Ensure related lists show proper records.





Phase 5 — Apex Programming (Developer)

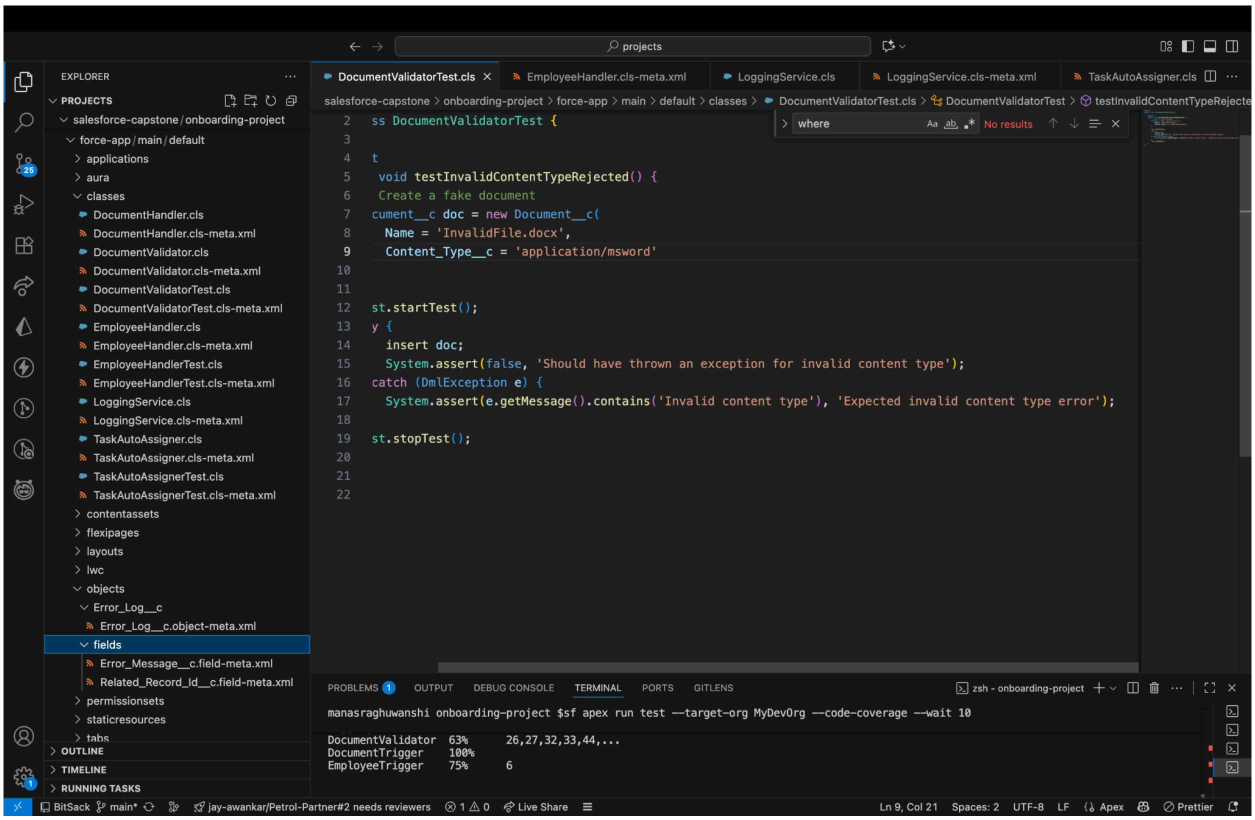
Goal: Implement complex business logic that can't be achieved with declarative tools using Apex classes, triggers, and test classes. Ensure code is well-tested (>= 75% coverage) and bulk-safe.

1. **Plan the Apex work**
   - Identify logic that needs Apex: complex validations (file format checks), batch processes, transaction control, callouts to external systems.
   - Draft method signatures and responsibilities (e.g., `DocumentValidator.validateFormat(documentId)`, `TaskAutoAssigner.assignTasksForEmployee(employeeId)`).

2. **Set up your dev environment**
   - Use VS Code with Salesforce Extensions Pack (SFDX) or the Developer Console for quick edits.
   - Authorize your Dev Hub / scratch org or Developer Org: `sfdx auth:web:login`.

3. **Create Apex classes (bulk-safe)**
   - `DocumentValidator` (static utility)
     - Responsibility: validate file types, sizes, and required metadata.
     - Example methods: `validateContentType(Blob fileBody, String contentType)`, `validateFileSize(Integer bytes)`.
   - `TaskAutoAssigner` (service class)
     - Responsibility: create OnboardingTask__c records for a given employee in bulk.
     - Use `@future(callout=true)` only when making callouts; prefer Queueable for asynchronous processing.
   - `EmployeeHelper` (domain/service layer)
     - Centralize operations like setting default fields and orchestrating task creation.

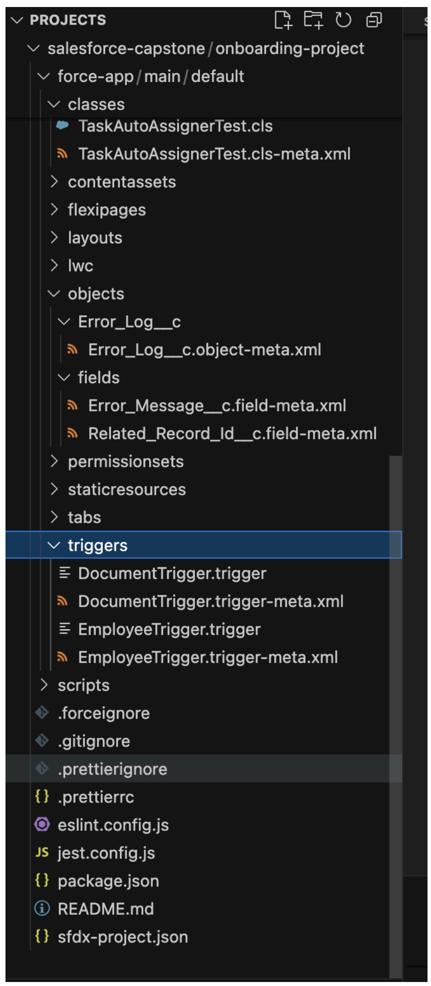
4. **Create Triggers (thin triggers, logic in classes)**
   - `Trigger EmployeeTrigger on Employee__c (after insert, after update)`
     - Keep trigger logic minimal; call `EmployeeHelper.handleAfterInsert(Trigger.new)`.
   - `Trigger DocumentTrigger on Document__c (before insert, before update)`
     - Call `DocumentValidator` to validate files and set status fields.



5. **Write Test Classes**
   - Create comprehensive tests for each Apex class and trigger.
   - Use `@IsTest` classes and `Test.startTest()` / `Test.stopTest()` blocks.
   - Assert bulk behavior by inserting 200 records in a single test to ensure governor limits are respected.
   - Aim for **>75% overall coverage**, but test meaningful behavior (asserts) — high coverage alone is not enough.

6. **Run static analysis & code quality checks**
    - Use PMD for Apex or SonarQube if available.
    - Run `sfdx force:apex:test:run` and fix failing tests.

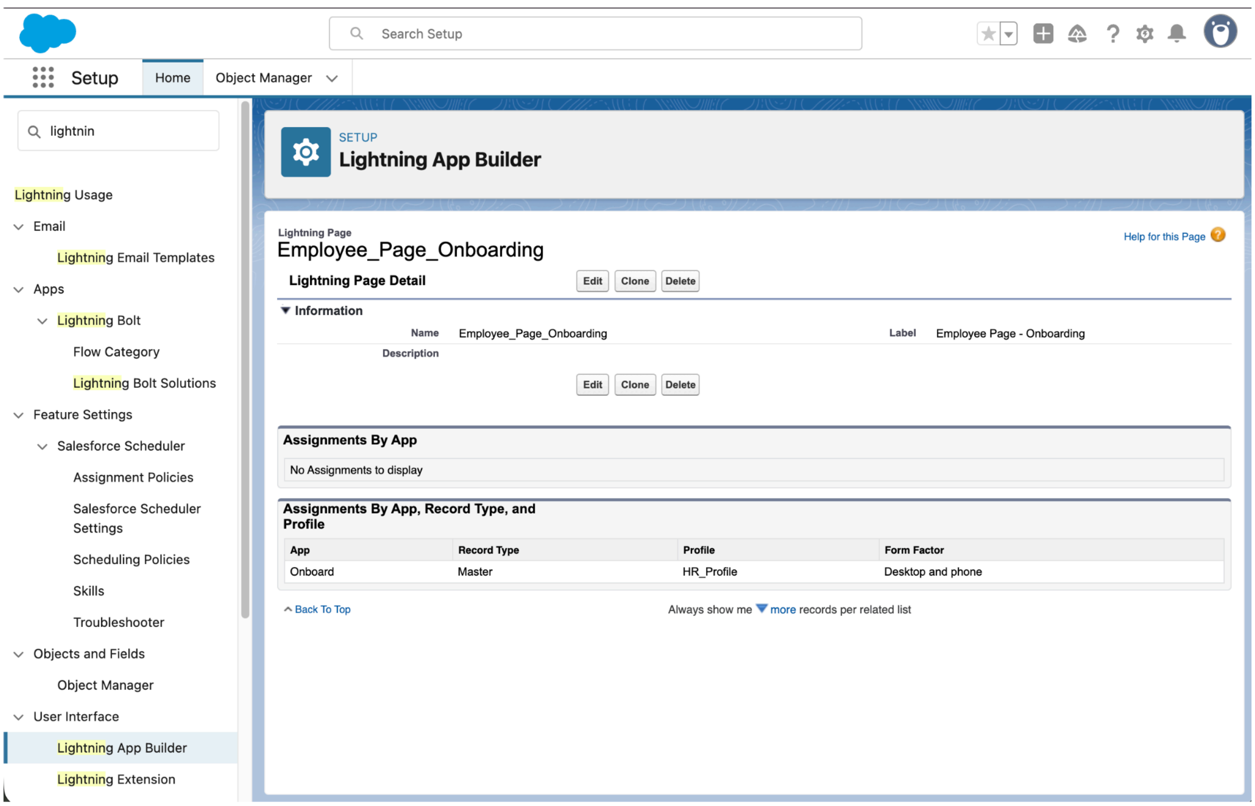
7. **Deploy and monitor**
    - Deploy to Sandbox first using change sets or SFDX. Run all tests in target org.
    - Monitor logs (Debug Logs) for unexpected exceptions.



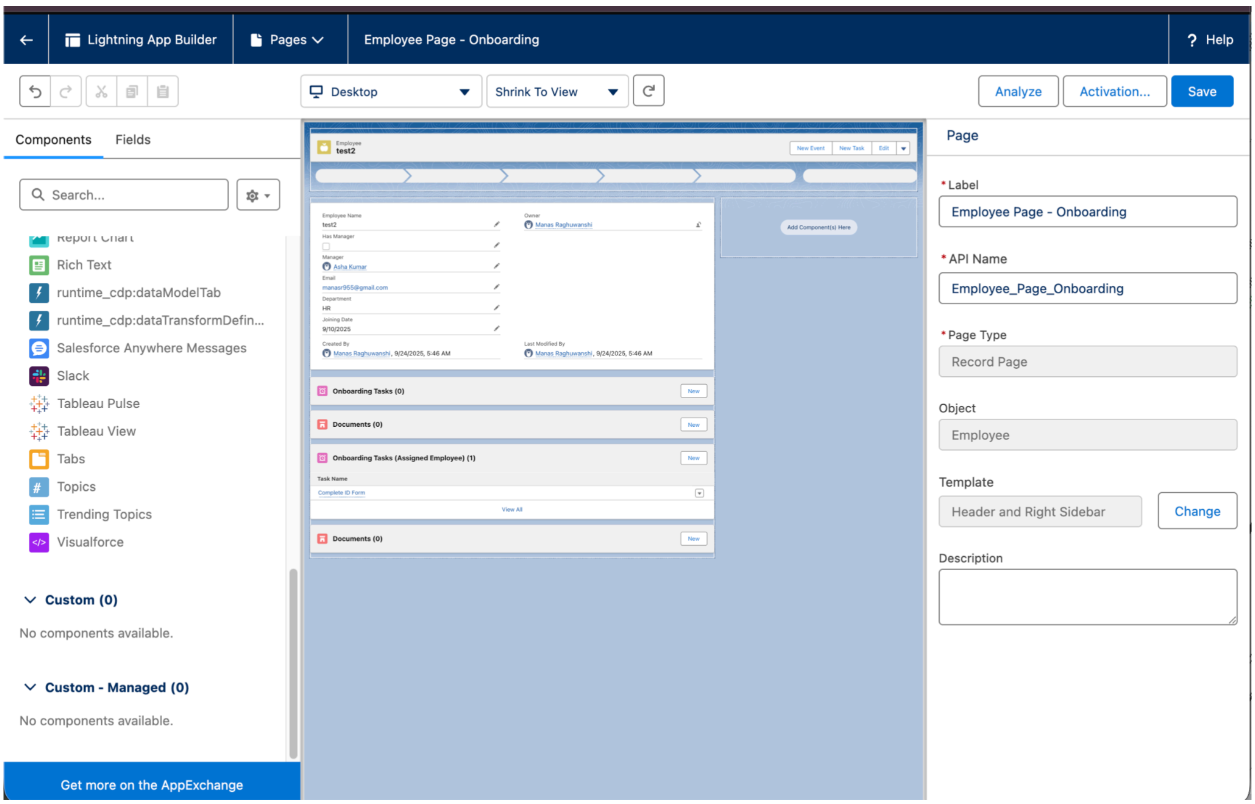
Phase 6 — User Interface Development

Goal: Build polished Lightning experiences for HR, Managers, and Employees to interact with records efficiently.

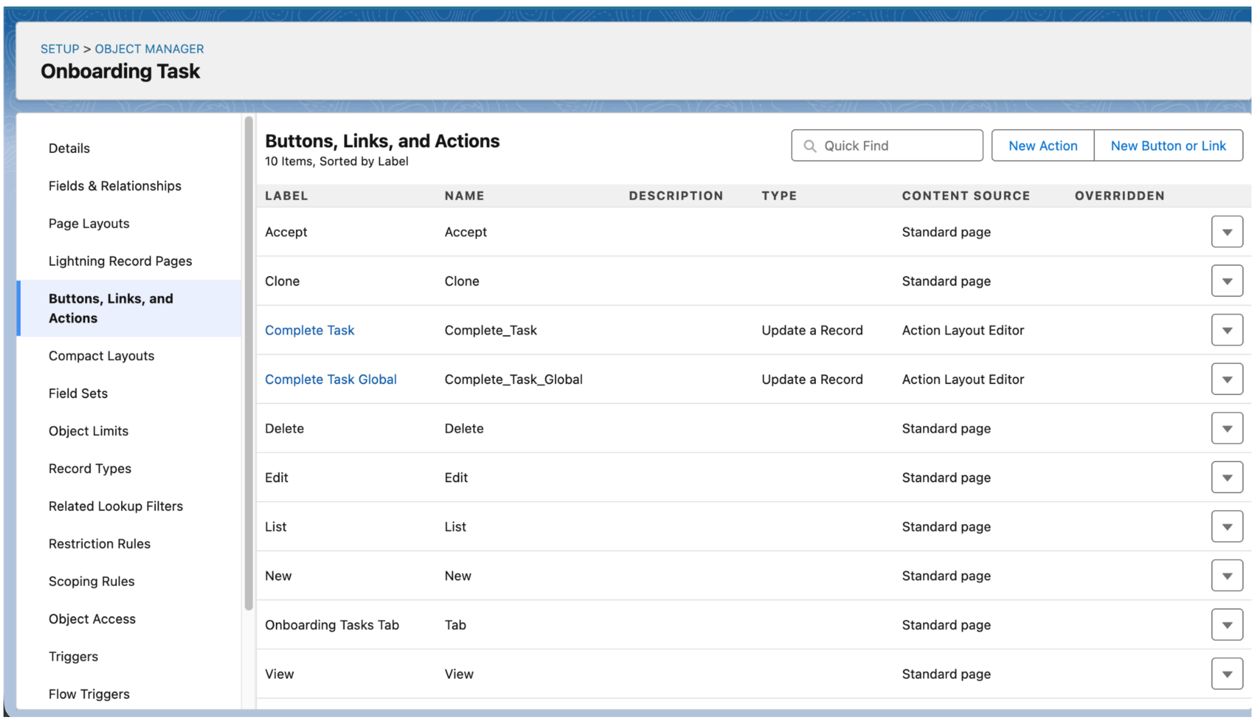
1. **Create Lightning App(s)**
   - Setup → App Manager → New Lightning App
     - App Name: `Onboarding - HR` (and `Onboarding - Manager` if needed)
     - Add Navigation Items: Employees, Onboarding Tasks, Documents, Reports
     - Set branding and permissions



2. **Customize Record Pages with Lightning App Builder**
   - Setup → Object Manager → Employee__c → Lightning Record Pages → New
     - Start with a standard template (Header + Two Regions)
     - Add components: Record Detail, Related Lists (Tasks, Documents), Path (Status__c on OnboardingTask__c), Report Chart (Tasks by Status)
     - Add Quick Actions: `New Task`, `Upload Document`, `Submit for Approval`
     - Activate page for specific profiles (HR / Manager)



3. **Add Quick Actions & Publisher Actions**
   - Setup → Object Manager → OnboardingTask__c → Buttons, Links, and Actions → New Action
     - Action Type: Create a Record / Lightning Component
     - Example quick action: `Complete Task` (updates Status__c to Completed)
   - Put quick actions in the record page layout / compact layout.



Phase 7 — Integration & External Access

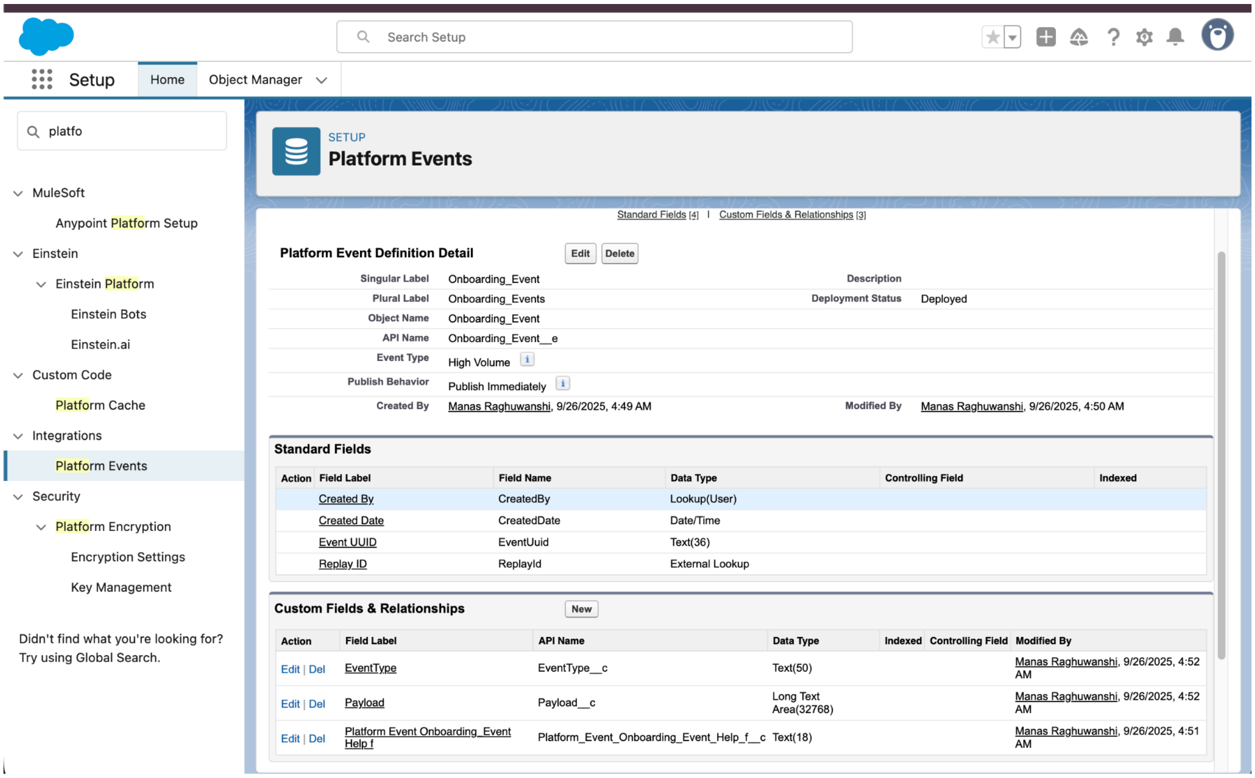
Goal: Exchange employee and HR data with external systems (Workday, SAP), and enable secure external employee self-service via Experience Cloud (Community) or APIs.

1. **Choose integration approach**
   - Real-time sync: REST / SOAP API, or Platform Events (near real-time).
   - Batch sync: Scheduled jobs (Apex schedulable) + bulk API or middleware (Mulesoft, Dell Boomi).

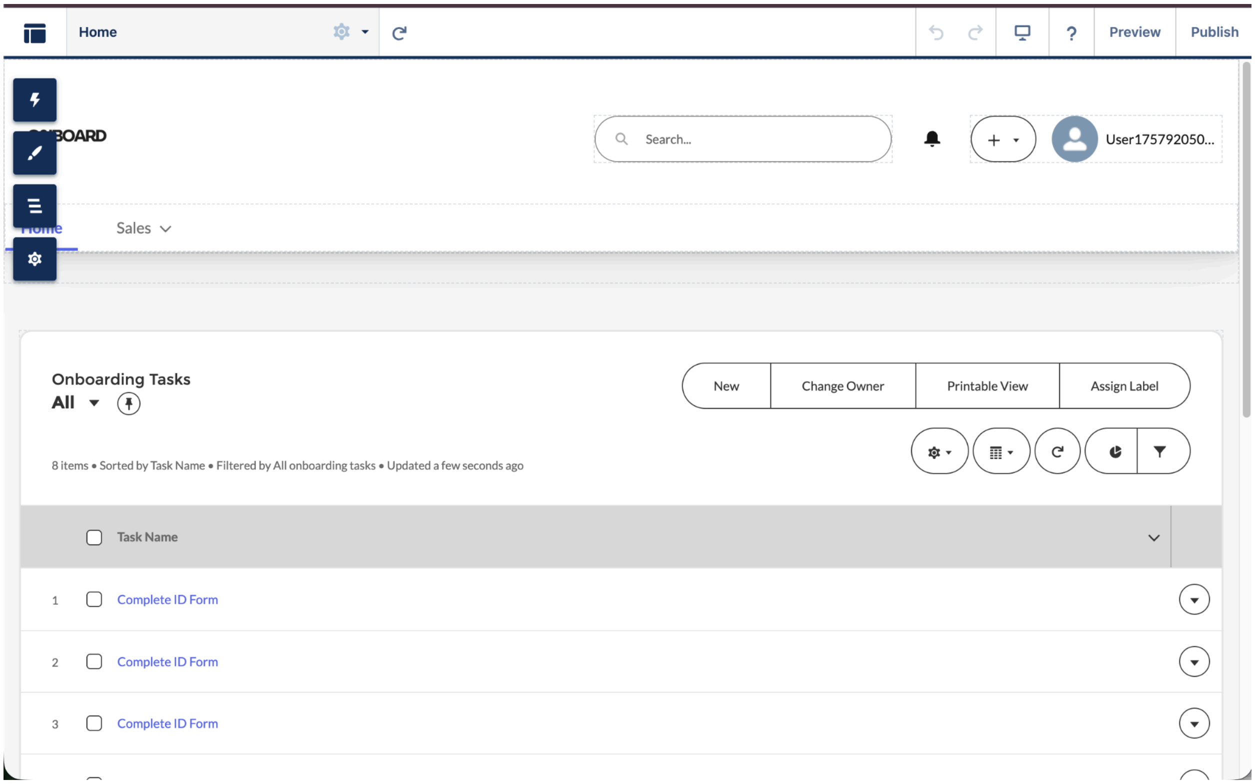
2. **Implement inbound integration (external → Salesforce)**
   - Option A: Expose REST Resource via Apex `@RestResource` and authenticate using Connected App + OAuth.
   - Option B: Use Mule/ETL to call Salesforce REST API (sObjects endpoint) with Bulk API for large datasets.

3. **Implement outbound integration (Salesforce → external)**
   - Use `HttpRequest` in Apex or Platform Events that middleware subscribes to.
   - For large outbound datasets, use outbound messages or scheduled batch jobs.

4. **Platform Events for decoupling**
   - Define a Platform Event `Onboarding_Event__e` with fields like EmployeeId, EventType, Payload
   - Publish events from Flows or Apex. Middleware can subscribe and process asynchronously.



5. **External Employee Portal (Experience Cloud)**
   - Setup → Digital Experiences → All Sites → New Site
     - Choose `Customer Account Portal` or `Build Your Own` template to create Employee Self-Service site.
     - Expose components: View/Upload Documents, View Tasks, Submit Approvals
     - Configure Guest/User sharing rules and permissions (use public access cautiously — prefer authenticated access)



6. **Testing and monitoring**
    - Use Postman or a middleware test harness to test REST endpoints and OAuth flows.
    - Monitor with Event Monitoring / API Usage dashboards.

Phase 8 — Data Management & Deployment

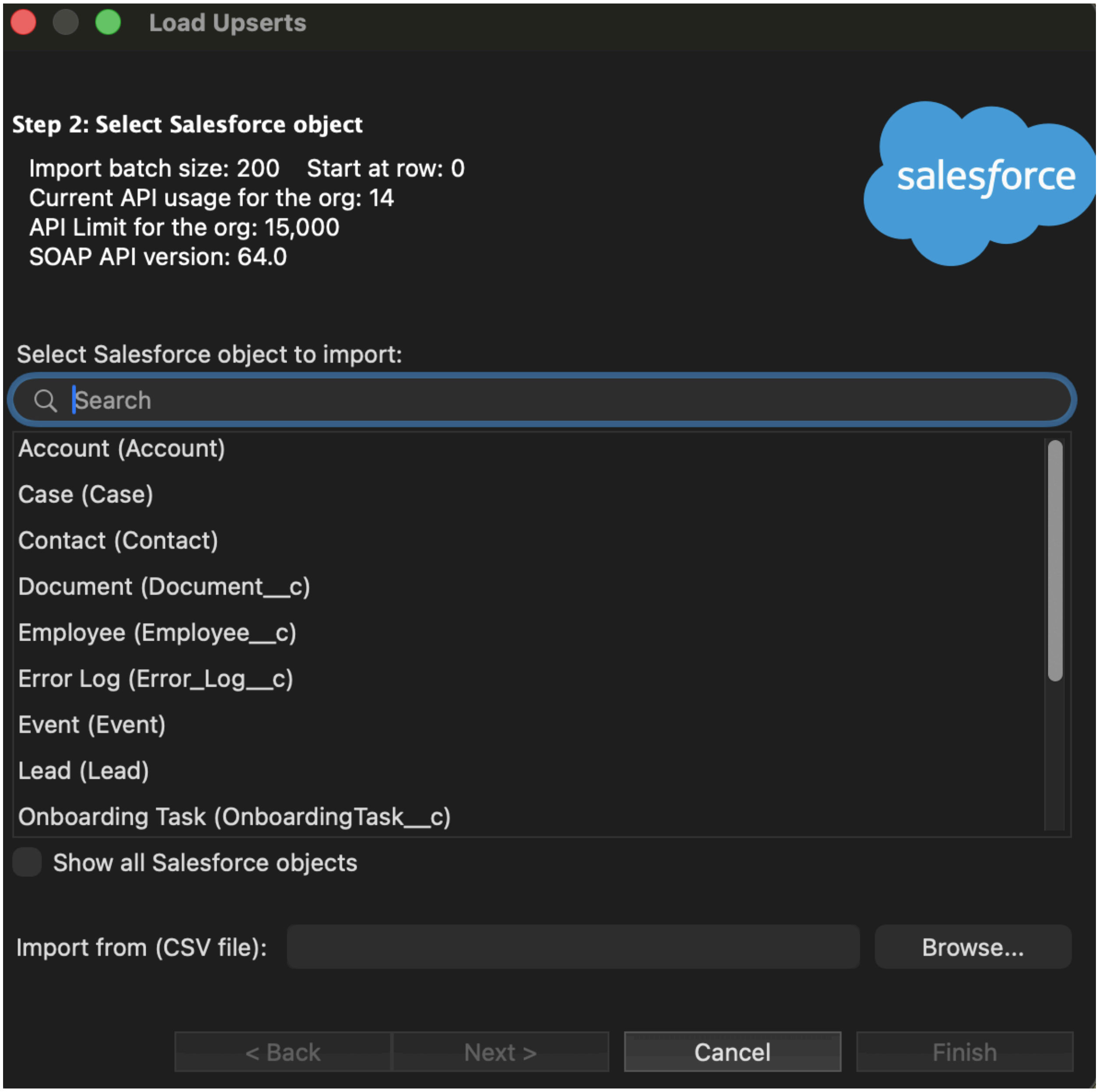
Goal: Safely import initial data, prepare change sets or CI/CD for deployment, and back up metadata regularly.

1. **Initial Data Load**
    - Prepare CSV files for Employee, OnboardingTask, Document. Ensure lookup IDs are handled: import Employees first, note new Salesforce IDs for later imports.
    - Use Data Loader or Workbench to insert records. For large data sets, use Bulk API.
    - Validate partial imports in a sandbox before production.

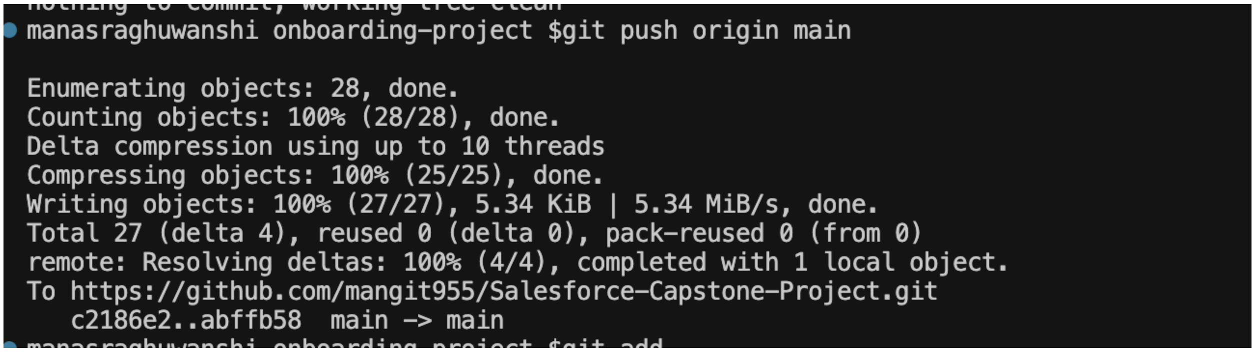
External_Task_Id__c	Employee__r.External_Employee_Id__c	Name	Status__c	DueDate__c
T-001	E-001	Laptop Setup	Not Started	2025-10-05
T-002	E-001	HR Orientation	Not Started	2025-10-06
T-003	E-002	Create Email Account	Not Started	2025-10-07
T-004	E-002	Assign Buddy	Not Started	2025-10-07
T-005	E-003	Software Access	Not Started	2025-10-08
T-006	E-003	Security Training	Not Started	2025-10-09
T-007	E-004	Workspace Setup	Not Started	2025-10-08
T-008	E-004	Complete Forms	Not Started	2025-10-09
T-009	E-005	Manager Intro	Not Started	2025-10-10
T-010	E-005	Team Lunch	Not Started	2025-10-10

External_Employee_Id__c	Name	Email
E-001	Manas Raghuwanshi	manas@example.com
E-002	Priya Sharma	priya@example.com
E-003	Amit Verma	amit@example.com
E-004	Sneha Kapoor	sneha@example.com
E-005	Rohit Singh	rohit@example.com

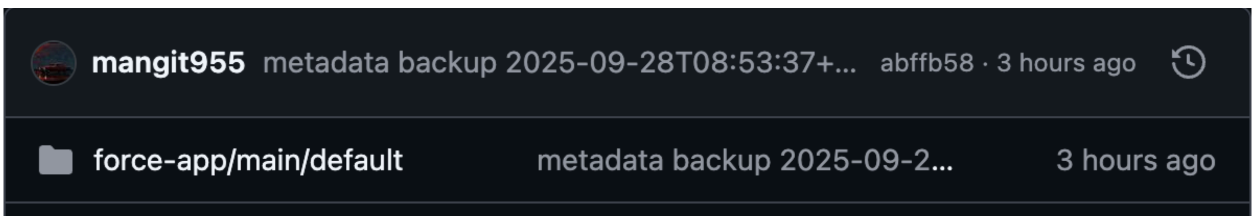
2. **Data cleansing & validation**
   - Use duplicate rules and validation rules to prevent bad data.
   - Run validation jobs (Apex or ETL) to check formats and missing required fields.



3. **Deployment strategy**
   - For small teams: use Change Sets from Sandbox → Production. Include metadata: Objects, Flows, Apex, LWC, Permission Sets.
   - For automated CI/CD: use SFDX pipeline (GitHub Actions / Jenkins) to push source to scratch orgs and run tests.



4. **Backup strategy**
   - Metadata backup: Use `sf force:source:retrieve` regularly and store in Git.
   - Data backup: schedule exports (weekly/monthly) using Data Export, third-party backup tools, or custom Apex export jobs.



Github repo link - [Onboard Platform]

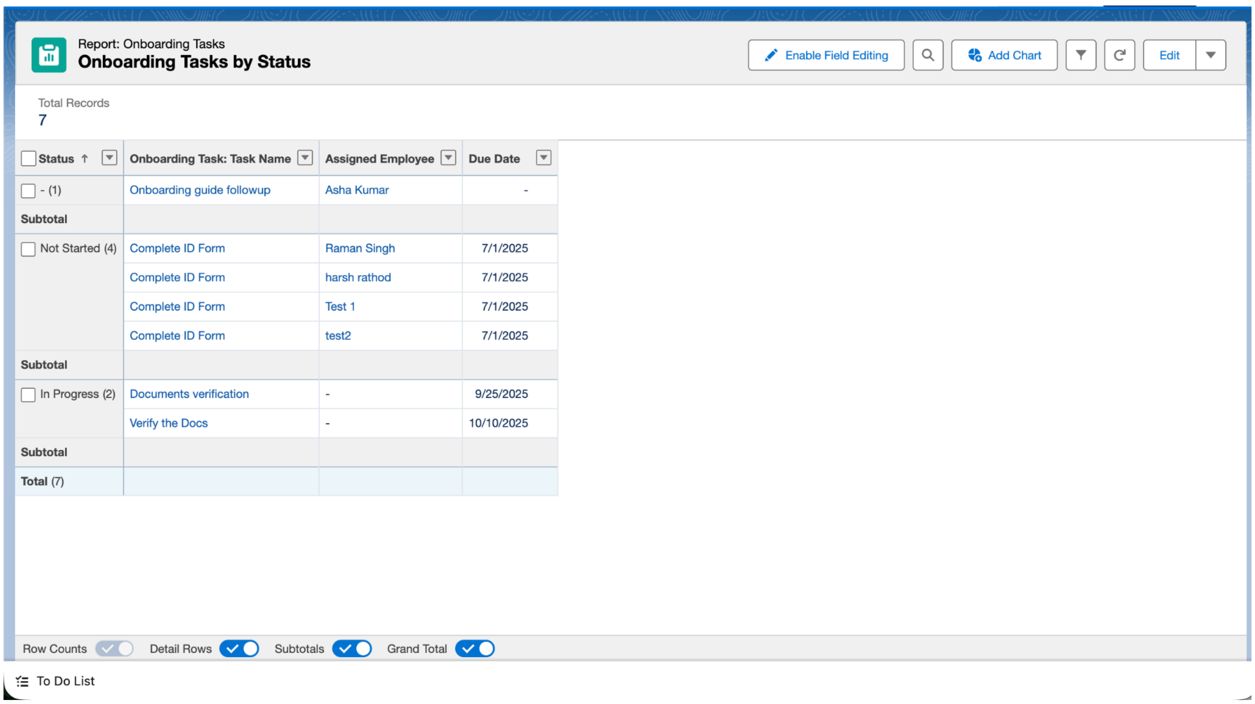
Phase 9 — Reporting, Dashboards & Security Review

Goal: Build actionable reports and dashboards to monitor onboarding KPIs; perform a security and field-level access audit.

1. **Define KPIs**
   - Task completion rate (% completed within due date)
   - Average time to onboard (hire date → task completion)
   - Documents pending approval
   - Manager approval times (average)

KPI	What it measures
Task completion rate	% of tasks completed on or before due date
Average onboarding time	Days from hire date → task completion
Documents pending approval	Count of documents not yet approved
Manager approval times	Average time managers take to approve tasks

2. **Create Reports**
   - Use Report Builder to create Tabular / Summary / Matrix reports:
     - `Onboarding Tasks by Status` (group by Status__c)
     - `Open Documents by Employee` (filter Status != Approved)
     - `Onboarding SLA` (calculate days between CreatedDate and CompletedDate)


Report: Onboarding Tasks
Onboarding Tasks by Status

Enable Field Editing | Add Chart | Edit

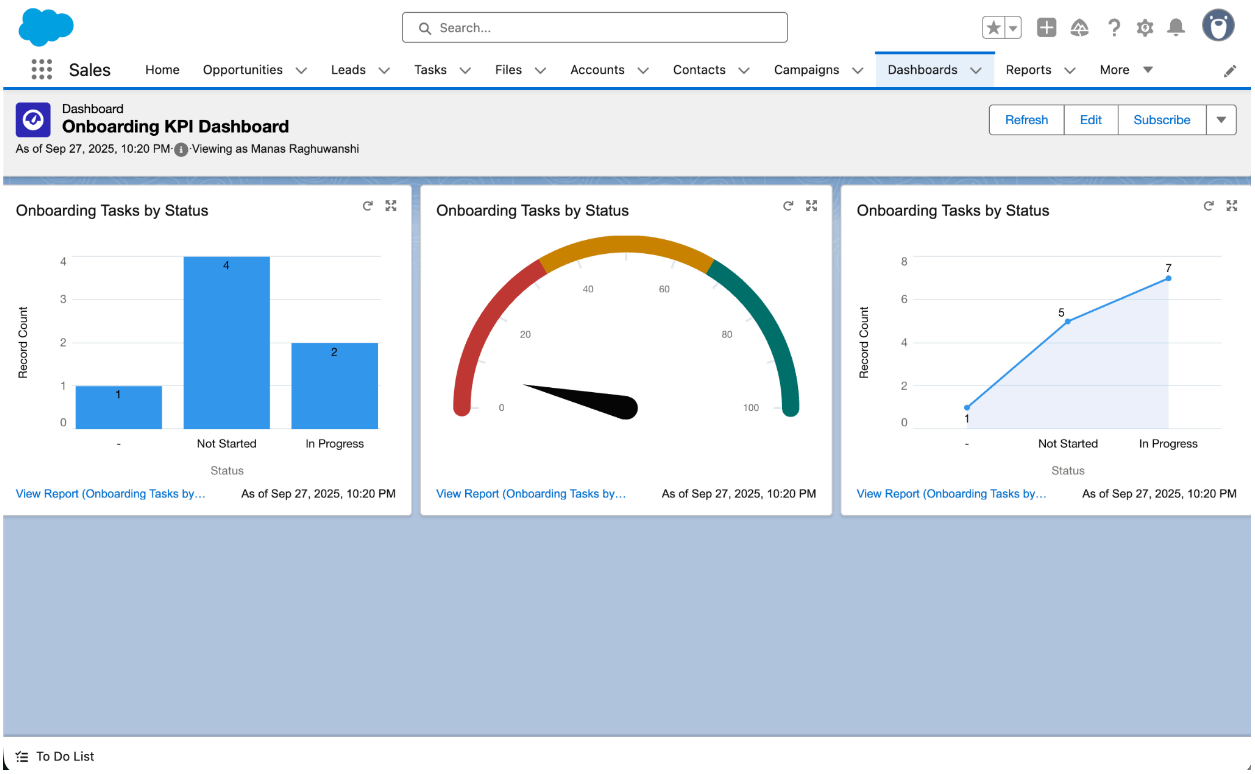
Total Records
7

Status	Onboarding Task: Task Name	Assigned Employee	Due Date
- (1)	Onboarding guide followup	Asha Kumar	-
Subtotal			
Not Started (4)	Complete ID Form	Raman Singh	7/1/2025
	Complete ID Form	harsh rathod	7/1/2025
	Complete ID Form	Test 1	7/1/2025
	Complete ID Form	test2	7/1/2025
Subtotal			
In Progress (2)	Documents verification	-	9/25/2025
	Verify the Docs	-	10/10/2025
Subtotal			
Total (7)			

Row Counts | Detail Rows | Subtotals | Grand Total

To Do List

3. **Create Dashboards**
   - Setup → Dashboards → New Dashboard
   - Add components: charts for Tasks by Status, Gauge for % on-time completion, Table for overdue tasks
   - Schedule dashboard refreshes (daily / weekly)



4. **Security Review & Field-Level Audit**
    - Review Profiles & Permission Sets for HR, Manager, Employee — confirm least privilege.
    - Run the Field Accessibility viewer for key objects (Employee, OnboardingTask, Document).
    - Validate Sharing Settings (Owd for objects) and sharing rules for visibility.
    - Check for any Apex classes with `without sharing` that might expose data.

5. **Compliance checks**
    - Ensure PII fields are encrypted or restricted in access per policy.
    - If storing sensitive documents, confirm encryption at rest and proper access controls.

Phase 10 — Project Video

Video Link: View Here

GitHub Link: Onboard Platform