Phase 1: Problem Understanding & Industry Analysis

1. Requirement Gathering

- Collected requirements from employees, managers, and finance team.
- Identified the need for a centralized system to handle travel requests, approvals, and expenses.
- **Key requirements:**
  - Simple form for employees to submit travel requests.
  - Automated approval notifications for managers.
  - Ability to log expenses against approved trips.
  - Department-wise and organization-wide reporting.

2. Stakeholder Analysis

- **Employees:** Submit travel requests and expense claims.
- **Managers/Approvers:** Approve or reject requests based on budget and necessity.
- **Finance/Admin:** Track expenses, generate reports, and ensure compliance.
- **System Administrators:** Configure, manage, and maintain the Travel Approval App.

3. Business Process Mapping

- **Current Process (Existing System):**
  - Travel requests handled via emails, paper forms, or spreadsheets.
  - Delays due to manual tracking and lack of centralized data.
- **Proposed Process (Using Salesforce App):**
  - Employees submit requests in Salesforce.
  - Managers receive automated approval tasks.
  - Expenses linked directly to approved requests.
  - Reports and dashboards provide real-time insights.

4. Industry-specific Use Case Analysis

- **IT/Software Companies:** Frequent client visits, onsite travel approvals.
- **Educational Institutions:** Faculty travel for seminars, workshops, and conferences.
- **Corporate Organizations:** Employee travel for training, meetings, and business expansion.
- **Healthcare Industry:** Doctors and medical staff travel for workshops and conferences.
- **Common challenge:** Manual tracking leads to delays, higher costs, and lack of transparency.

- **Proposed system:** Improves efficiency, transparency, and cost tracking across industries.

5. AppExchange Exploration

- Explored Salesforce **AppExchange** for existing travel and expense management solutions.
- Found apps like **Concur Travel & Expense** and **Expensify** for Salesforce.
- Identified limitations in existing apps for specific organizational needs.
- Decided to **build a custom Travel Approval App** tailored to department-wise workflows and reporting requirements.

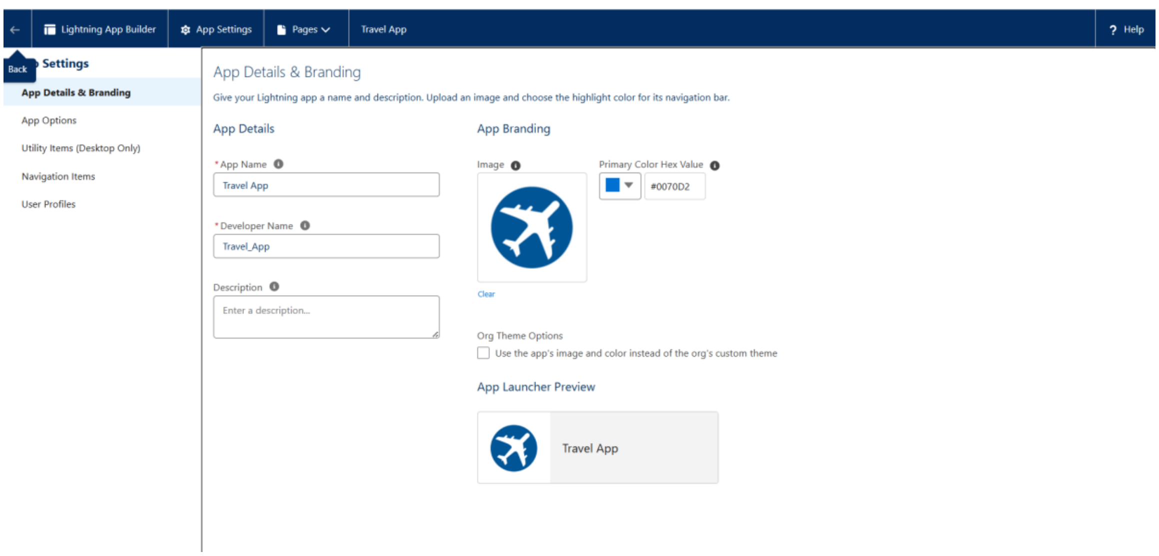
Phase 2: Org Setup & Configuration

1. Salesforce Editions

- Selected Developer Edition because it provides free access with customization options.
- Supports custom objects, fields, workflows, reports, and dashboards required for the Travel Approval App.
- Suitable for testing the full travel approval process before moving to production.

2. Company Profile Setup

- Configured organization details like company name, address, email, and contact info.
- Set default currency: INR for expense tracking.
- Applied time zone: IST (GMT +5:30) to ensure correct travel date and time records.
- Configured default language: English (India) for consistency among users.



3. Business Hours & Holidays

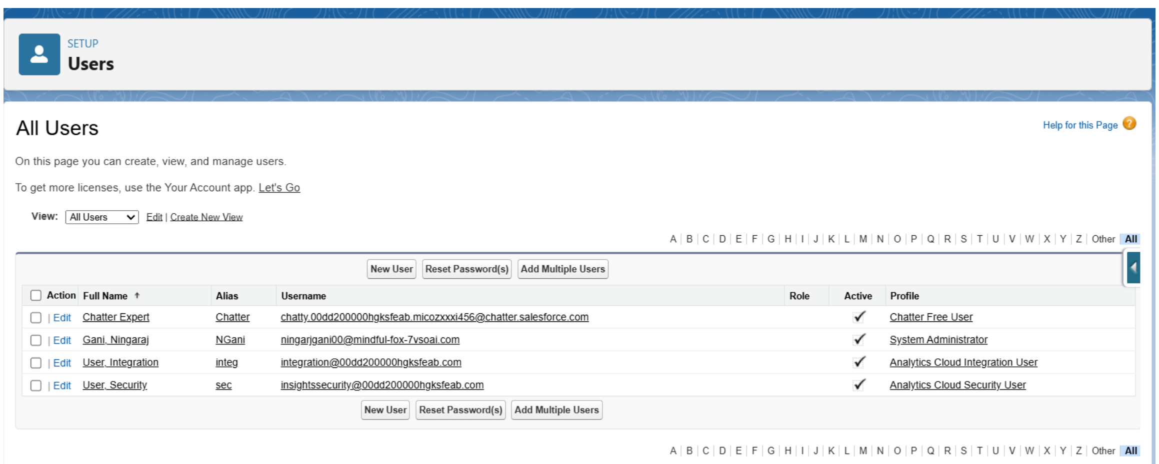
- Defined official working hours: Monday to Friday, 9 AM – 6 PM.
- Added key holidays (Independence Day, Republic Day, Diwali, Christmas, New Year).
- Ensures travel requests submitted during holidays or after office hours are handled the next business day.
- Approval workflows and notifications respect business hours.

4. Fiscal Year Settings

- Configured fiscal year: April to March, as per Indian business standards.
- Ensures travel expenses and reports are aligned with quarterly and yearly budget planning.
- Helps finance/admin generate department-wise and yearly expense reports.

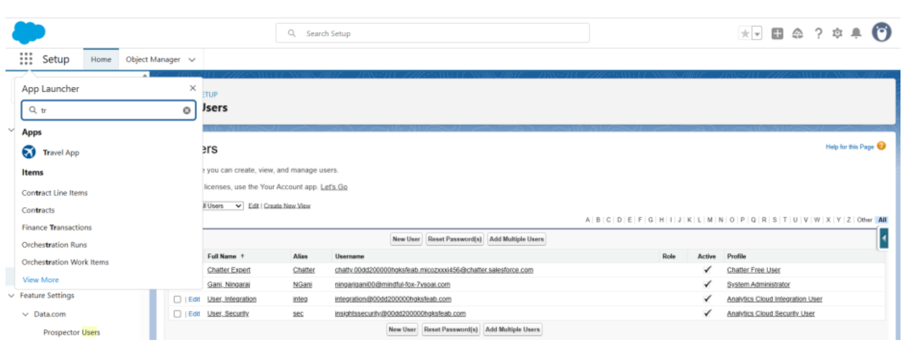
5. User Setup & Licenses

- Created Employee Users to submit travel requests.
- Created Manager Users to approve/reject requests.
- Assigned Admin Users to configure app, manage data, and monitor usage.
- Defined roles & profiles to control access levels:
- - Employees → Limited access (submit/view own requests).
- - Managers → Approvals + view team requests.
- - Admins → Full access (all requests, expenses, dashboards).



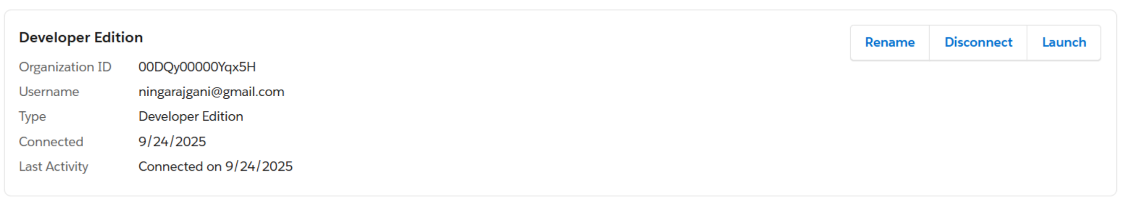
6. Login Access Policies

- Configured IP restrictions so only office/approved networks can access Salesforce.
- Enabled Multi-Factor Authentication (MFA) for employees and managers.
- Applied login hour restrictions (8 AM – 8 PM) to avoid unauthorized midnight logins.
- Improves overall security of sensitive travel and expense data.



7. Developer Org Setup

- Created a Salesforce Developer Org for app building.
- Used this org to create Department, Travel Approval, and Expense Item objects.
- Designed and tested workflows, approvals, and reports before moving to production.

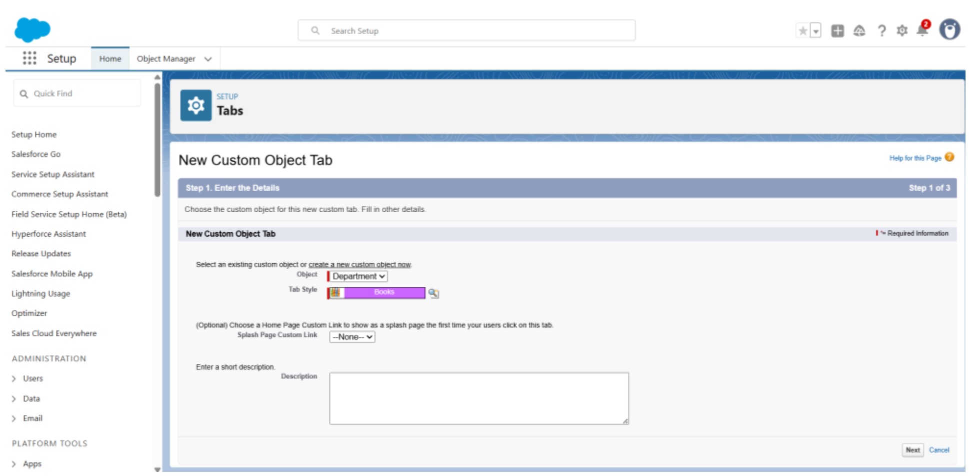


8. Sandbox Usage

- Used Sandbox to test:
- - Approval workflows (Manager approvals).
- - Validation rules (e.g., End Date must be after Start Date).
- - Expense logging automation.
- Allowed safe testing without affecting live data.
- Ensured bugs were fixed before deployment.

9. Deployment Basics

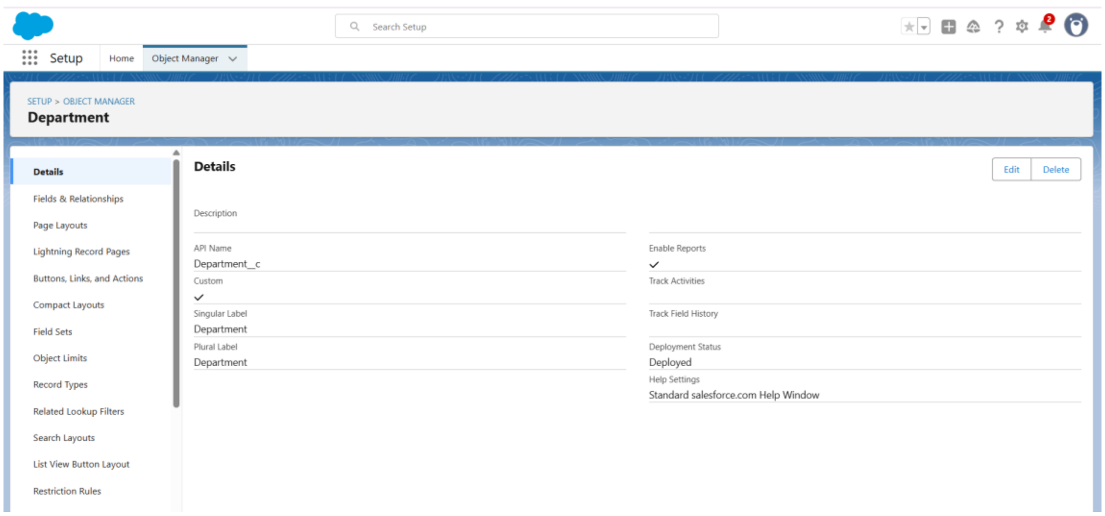
- Used Change Sets for deploying components to production.
- Deployed:
- - Custom Objects (Department, Travel Approval, Expense Item).
- - Fields and Page Layouts.
- - Approval Process and Flows.
- - Reports and Dashboards.
- Ensured smooth migration from sandbox to production environment.



Phase 3: Data Modeling & Relationships

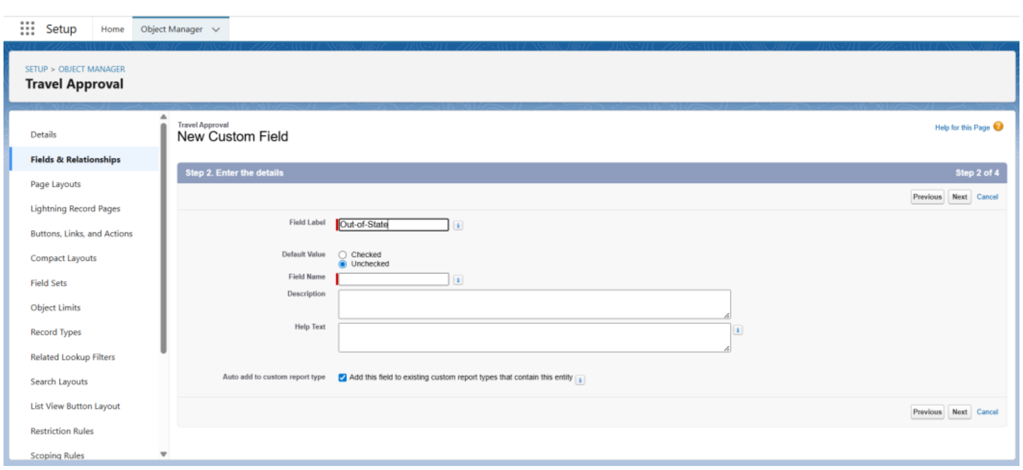
1. Standard & Custom Objects

- Used Salesforce Standard Object: User for employees, managers, and admins.
- Created Custom Objects specific to project:
- - Department: Stores department details.
- - Travel Approval: Stores employee travel requests.
- - Expense Item: Stores expenses linked to each travel request.



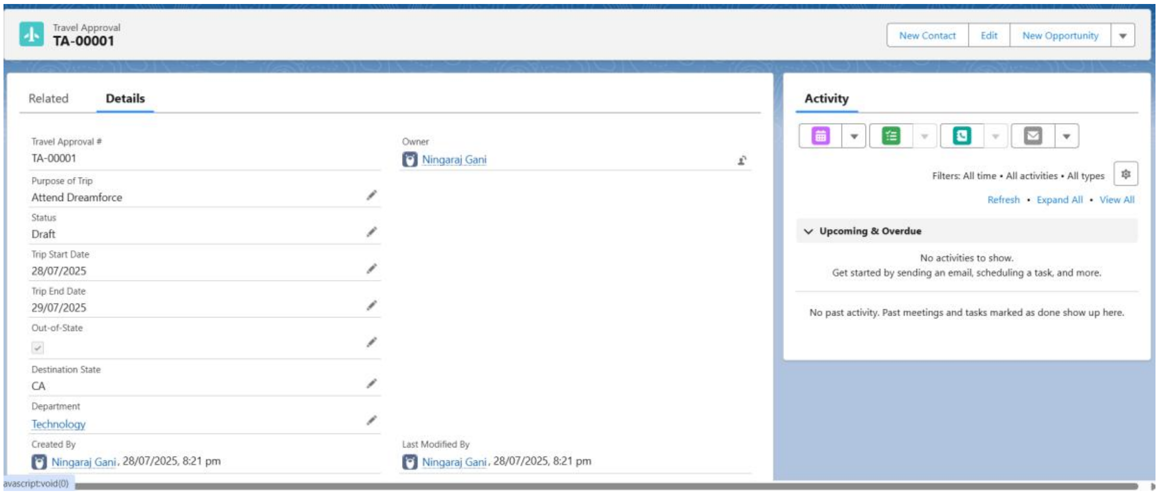
2. Fields

- Department → Department Name, Department Code.
- Travel Approval → Purpose of Trip, Start Date, End Date, Status (Pending/Approved/Rejected), Out of State (Yes/No), Destination State.
- Expense Item → Expense Type (Airfare, Hotel, Meals), Amount.



3. Record Types

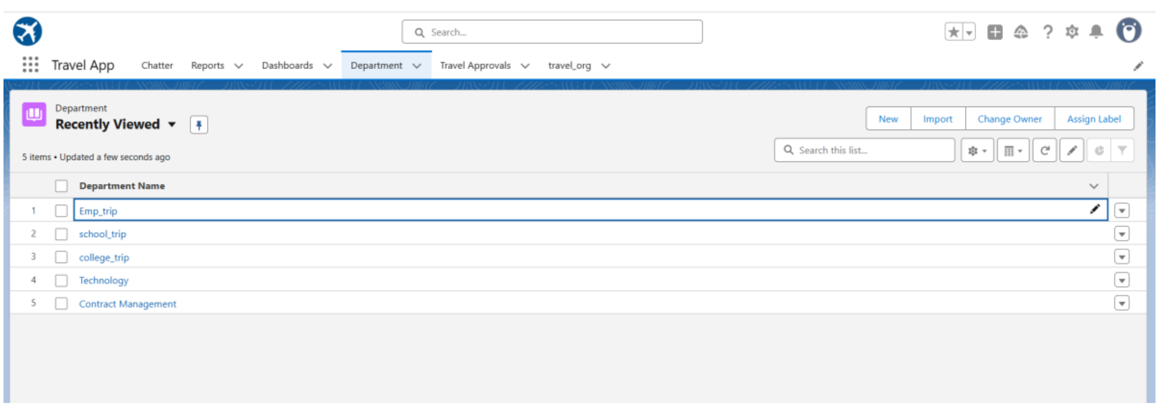
- Travel Approval Record Types created:
- - Domestic Travel → Shows Destination State field.
- - International Travel → Shows Country and Visa Required fields.



4. Page Layouts

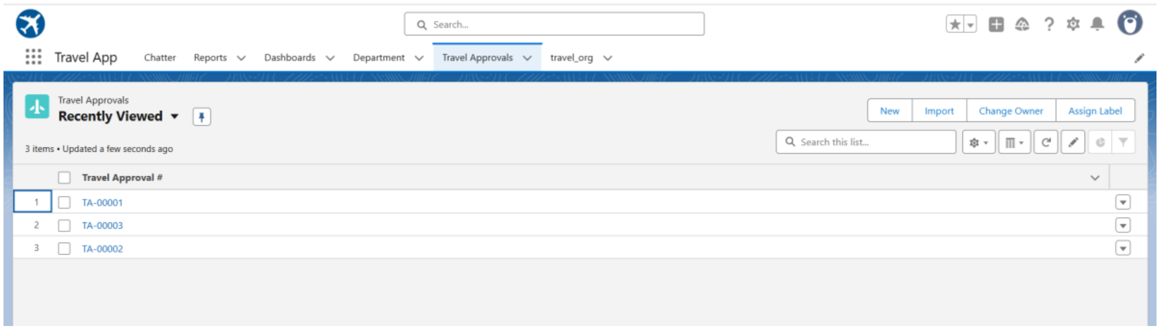
- Employees → Page layout shows only request details.
- Managers → Page layout includes Approval Status and Manager Comments.
- Finance/Admin → Page layout displays expense details and related records.

1.Page Layout of Department:



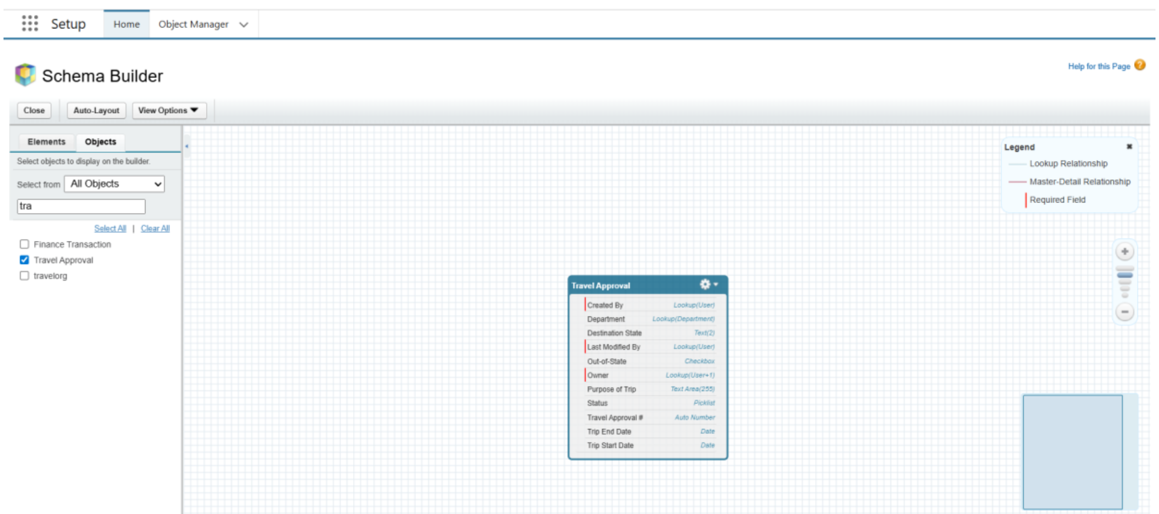
5. Compact Layouts

- Travel Approval → Displays Purpose of Trip, Status, Start Date, End Date in highlights panel.
- Expense Item → Displays Expense Type and Amount in highlights panel.
- **Compact Layout of Travel Approval:**



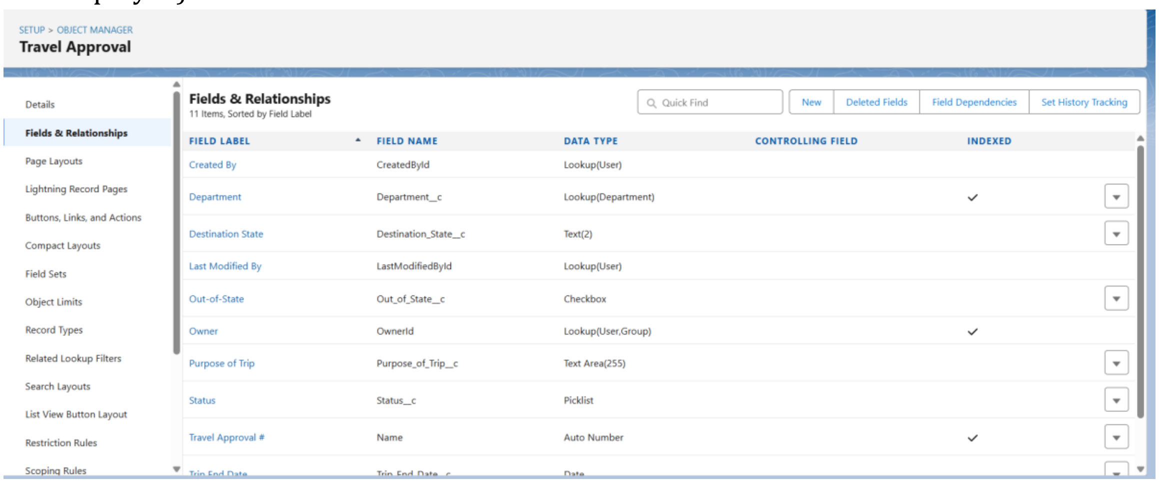
6. Schema Builder

- Used Schema Builder to visualize relationships between objects.
- Department ↔ Travel Approval (Lookup).
- Travel Approval ↔ Expense Item (Master-Detail).



7. Lookup vs Master-Detail vs Hierarchical Relationships

- Lookup Relationship → Child record can exist independently (e.g., Travel Approval → Department).
- Master-Detail Relationship → Child depends on parent (e.g., Expense Item → Travel Approval).
- Hierarchical Relationship → Available only for User object (e.g., Manager assigned to Employee).



8. Junction Objects

- Introduced Travel Participant as a junction object (future use case).
- Links multiple employees to one Travel Approval for group/team trips.

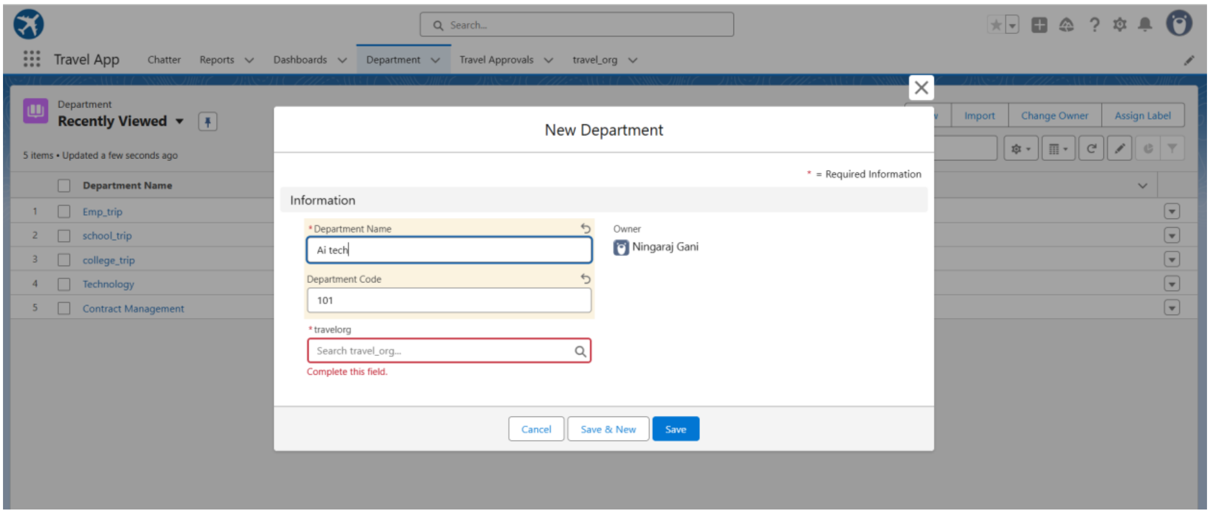
9. External Objects

- Used External Object (optional use case) for integrating data from outside Salesforce.
- Example: External Booking Object fetches flight/hotel booking details from third-party system.
- Linked external booking details to Travel Approval records.

Phase 4: Process Automation (Admin)

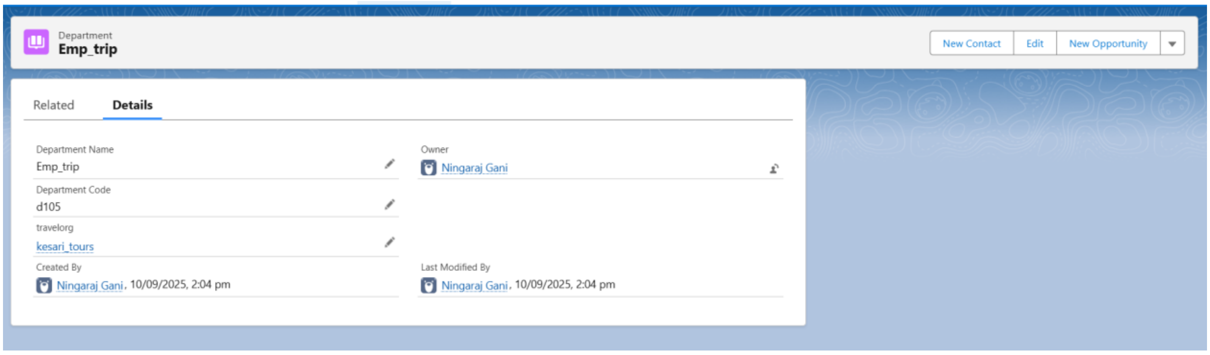
1. Validation Rules

- **Use Case:** Ensure data entered by users meets specific criteria before saving.
    - Example: A travel request cannot be submitted if the travel department does not add travel Organizer name.
- **Implementation:** Create a validation rule on the Travel Request object.



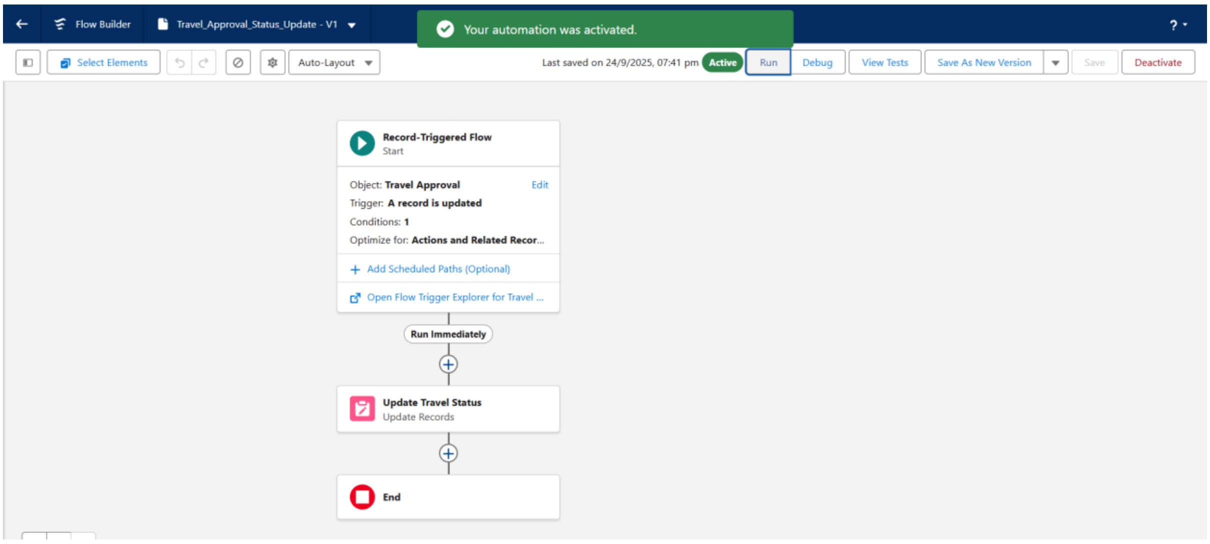
2. Workflow Rules

- **Use Case:** Automate standard actions when certain criteria are met.
    - Example: When a travel request is approved, automatically send an email to the employee.
- **Implementation:** Set up a workflow on the Travel Request object, with a condition like Status = Approved.
- **Actions:** Email alerts, field updates, tasks.



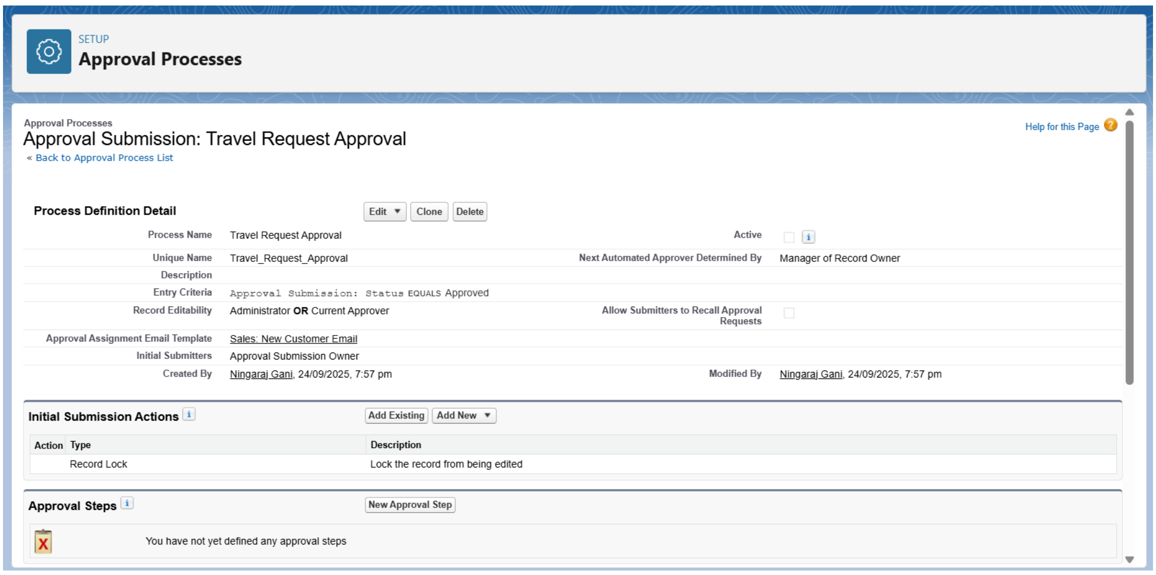
3. Process Builder

- **Use Case:** Automate complex processes with multiple if-then conditions.
  - Example: If a travel request exceeds $1000, notify both the manager and finance team.
- **Implementation:** Build a process on the Travel Request object, define criteria and actions.



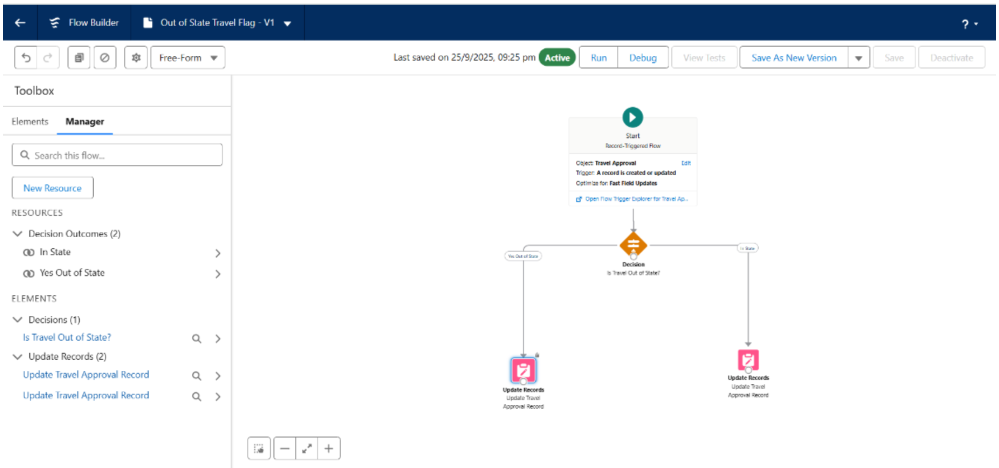
4. Approval Process

- **Use Case:** Route requests for approval based on specific conditions.
  - Example: Travel requests above a certain budget require manager approval before submission.
- **Implementation:** Configure an approval process on the Travel Request object. Define entry criteria, approval steps, and final actions.



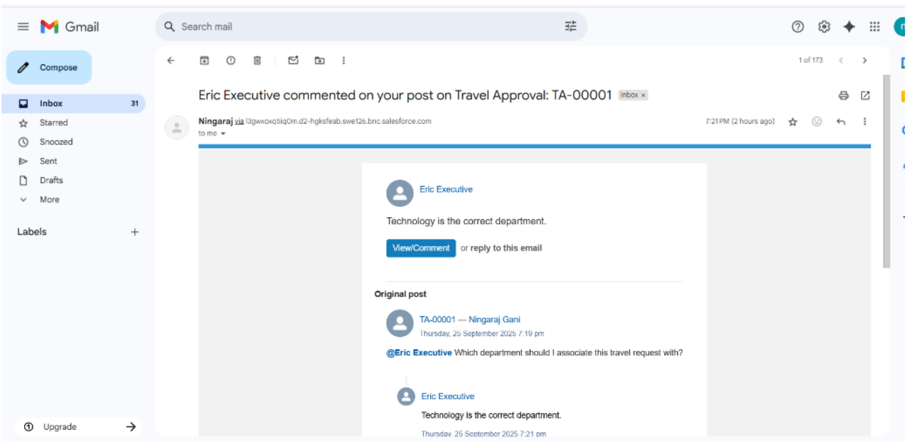
5. Flow Builder

- **Use Case:** Automate both simple and complex business processes.
  - **Types of Flows in your project:**
    1. **Screen Flow:** Employee submits a travel request using a guided form.
    2. **Record-Triggered Flow:** Automatically update request status when a manager approves it.
    3. **Scheduled Flow:** Send weekly summary emails of all pending travel requests.
    4. **Auto-launched Flow:** Update related records automatically, e.g., update employee travel balance.



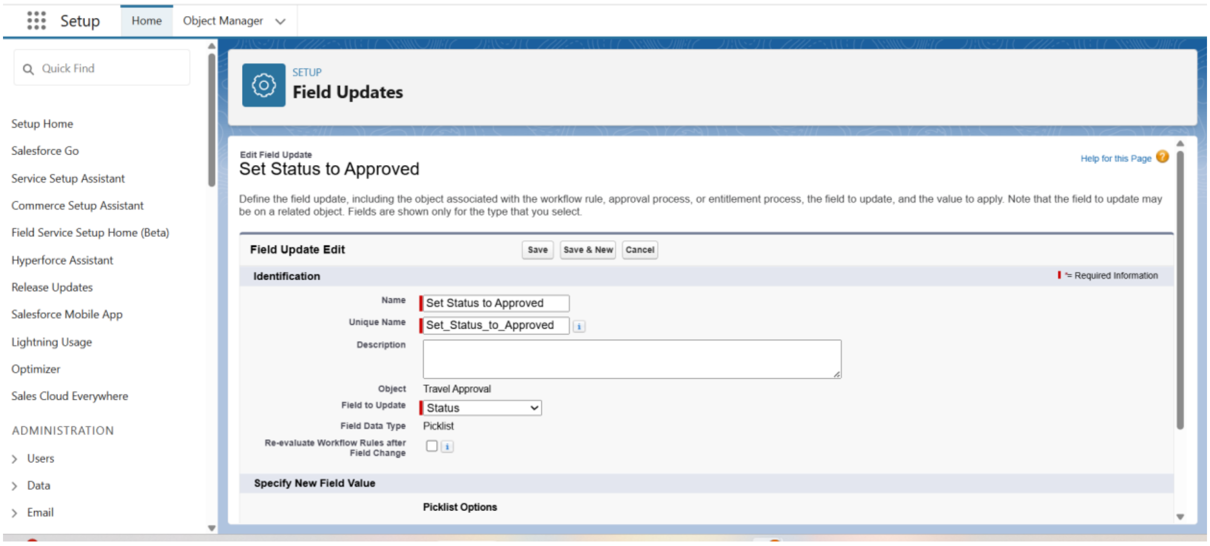
6. Email Alerts

- **Use Case:** Notify users automatically via email.
  - Example: Notify the manager when a travel request is submitted.
- **Implementation:** Create an email alert and associate it with workflow, process, or flow.



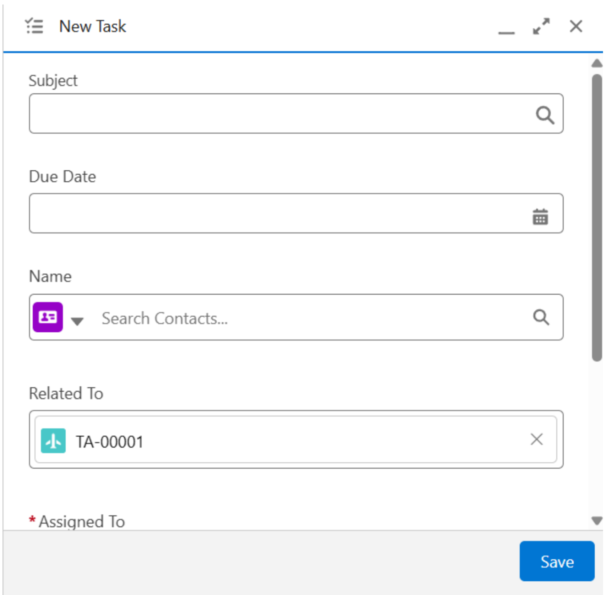
7. Field Updates

- **Use Case:** Automatically update fields based on conditions.
  - Example: Change the status of travel request from Submitted to Approved after manager approval.
- **Implementation:** Use workflow or process builder to update the field.



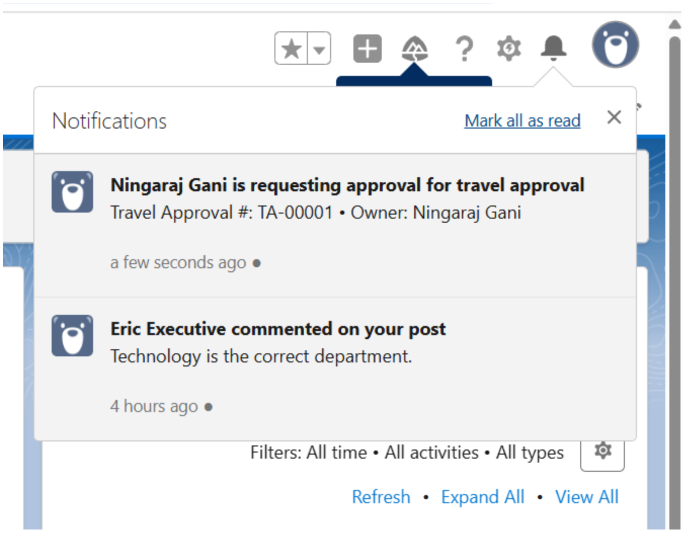
8. Tasks

- **Use Case:** Automatically create tasks for users.
  - Example: Assign a follow-up task to the finance team after a travel request is approved.
- **Implementation:** Use workflow or process builder to create a task.



9. Custom Notifications

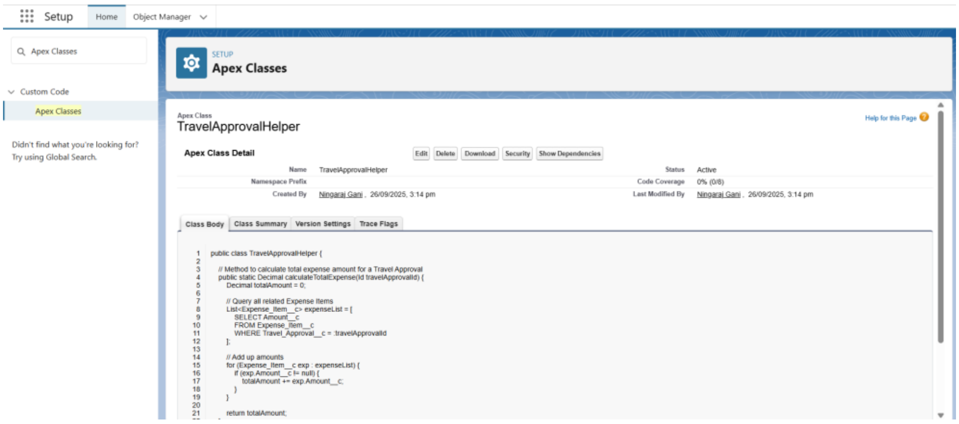
- **Use Case:** Alert users within Salesforce without emails.
    - Example: Notify an employee instantly when their travel request is approved or rejected.
- **Implementation:** Configure custom notifications and trigger them using process builder or flow.



Phase 5: Apex Programming (Developer)

1. Classes & Objects

- **Use Case:** Create a helper class to calculate total travel expenses.
- Apex classes group logic into reusable units.
- Example: TravelApprovalHelper calculates total expense from related expense items.



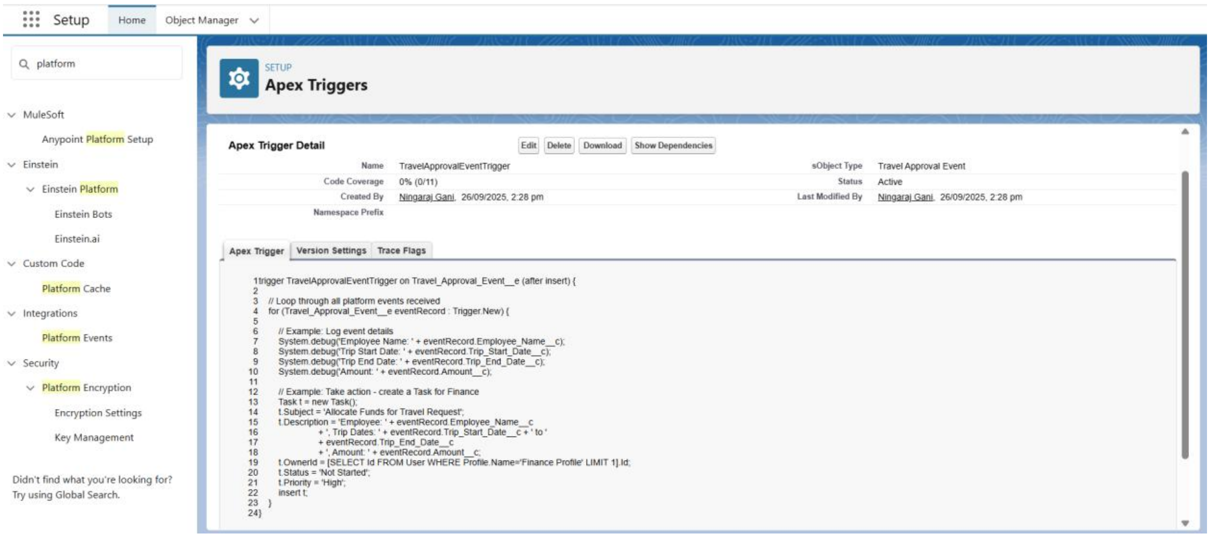
Code:

```
public class TravelApprovalHelper {

  // Method to calculate total expense amount for a Travel Approval
  public static Decimal calculateTotalExpense(Id travelApprovalId) {
    Decimal totalAmount = 0;

    // Query all related Expense Items
    List<Expense_Item__c> expenseList = [
      SELECT Amount__c
      FROM Expense_Item__c
      WHERE Travel_Approval__c = :travelApprovalId
    ];

    // Add up amounts
    for (Expense_Item__c exp : expenseList) {
      if (exp.Amount__c != null) {
```

```
            totalAmount += exp.Amount__c;
        }
    }

    return totalAmount;
  }
}
```

2. Apex Triggers (before/after insert/update/delete)

- **Use Case:** Automatically create a Task when a Travel Request is approved.
- Triggers listen to changes in objects and execute logic.
- Example: On Travel_Approval__c, when Status__c = Approved, assign a Task to Finance.



Code:

```
trigger TravelApprovalEventTrigger on Travel_Approval_Event__e (after insert) {

  // Loop through all platform events received
  for (Travel_Approval_Event__e eventRecord : Trigger.New) {

    // Example: Log event details
    System.debug('Employee Name: ' + eventRecord.Employee_Name__c);
    System.debug('Trip Start Date: ' + eventRecord.Trip_Start_Date__c);
    System.debug('Trip End Date: ' + eventRecord.Trip_End_Date__c);
```

```
        System.debug('Amount: ' + eventRecord.Amount__c);

        // Example: Take action - create a Task for Finance
        Task t = new Task();
        t.Subject = 'Allocate Funds for Travel Request';
        t.Description = 'Employee: ' + eventRecord.Employee_Name__c
                + ', Trip Dates: ' + eventRecord.Trip_Start_Date__c + ' to '
                + eventRecord.Trip_End_Date__c
                + ', Amount: ' + eventRecord.Amount__c;
        t.OwnerId = [SELECT Id FROM User WHERE Profile.Name='Finance Profile' LIMIT 1].Id;
        t.Status = 'Not Started';
        t.Priority = 'High';
        insert t;
    }
```

3. Trigger Design Pattern

- **Use Case:** Avoid writing all logic directly inside triggers.
- Instead, call helper classes from the trigger.
- Improves **readability, reusability, and testing**.

4. SOQL & SOSL

- **SOQL (Salesforce Object Query Language):** Query records.
  - Example: Fetch all Approved Travel Approvals.
- **SOSL (Salesforce Object Search Language):** Search across multiple objects.
  - Example: Search travel requests by employee name or trip purpose.

Code:

```
// Fetch all Approved Travel Approvals
List<Travel_Approval__c> approvedRequests = [
  SELECT Id, Name, Employee_Name__c, Status__c, Total_Expense__c
  FROM Travel_Approval__c
  WHERE Status__c = 'Approved'
];
```

```
for (Travel_Approval__c ta : approvedRequests) {
    System.debug('✅ Approved Travel: ' + ta.Name + ' | Employee: ' + ta.Employee_Name__c + ' | Expense: ' + ta.Total_Expense__c);
}
```

5. Collections: List, Set, Map

- **List:** Ordered collection (e.g., list of Travel Approvals).
- **Set:** Unique values (e.g., list of unique employee IDs requesting travel).
- **Map:** Key-value pairs (e.g., Map<EmployeeId, TravelApproval>).

6. Control Statements

- **Use Case:** Decision making in code.
- Example:
    - If Status = "Submitted", send for approval.
    - Else if Status = "Approved", notify Finance.

Code:

```
public class TravelApprovalHelper {

    // Method to categorize travel request by expense amount
    public static String getBudgetCategory(Decimal totalExpense) {
        String category;

        // if-else control
        if (totalExpense > 5000) {
            category = 'High Budget';
        } else if (totalExpense >= 1000 && totalExpense <= 5000) {
            category = 'Medium Budget';
        } else {
            category = 'Low Budget';
        }

        return category;
    }
```

```
  // for loop example - display employee names in list
  public static void printEmployeeNames(List<Travel_Approval__c> requests) {
    for (Travel_Approval__c ta : requests) {
      System.debug('Employee Name: ' + ta.Employee_Name__c);
    }
  }
}
```

7. Exception Handling

- **Use Case:** Prevent app crashes and log errors.
- Example: If Expense API call fails, catch the exception and notify Admin.
- Syntax: try { … } catch(Exception e) { … } finally { … }.

  Code:

```
public class TravelApprovalHandler {

  public static void updateApprovalStatus(Id recordId, String newStatus) {
    try {
      // Query the record
      Travel_Approval__c ta = [SELECT Id, Status__c FROM Travel_Approval__c WHERE Id = :recordId
LIMIT 1];

      // Update status
      ta.Status__c = newStatus;
      update ta;

      System.debug('✅ Travel Approval updated successfully: ' + recordId);
    }
    catch (QueryException qe) {
      System.debug('⚠️ Query failed: ' + qe.getMessage());
    }
    catch (DmlException de) {
      System.debug('⚠️ DML failed: ' + de.getMessage());
    }
```

```
        catch (Exception e) {
          System.debug('⚠️ Unexpected Error: ' + e.getMessage());
        }
        finally {
          System.debug('Process finished (success or failure).');
        }
      }
    }
```

8. Test Classes

- **Use Case:** Every Apex class/trigger must have test coverage.
- Example: Create TravelApprovalTest to test approval trigger logic.
- Ensures code works correctly before deployment.

Code:

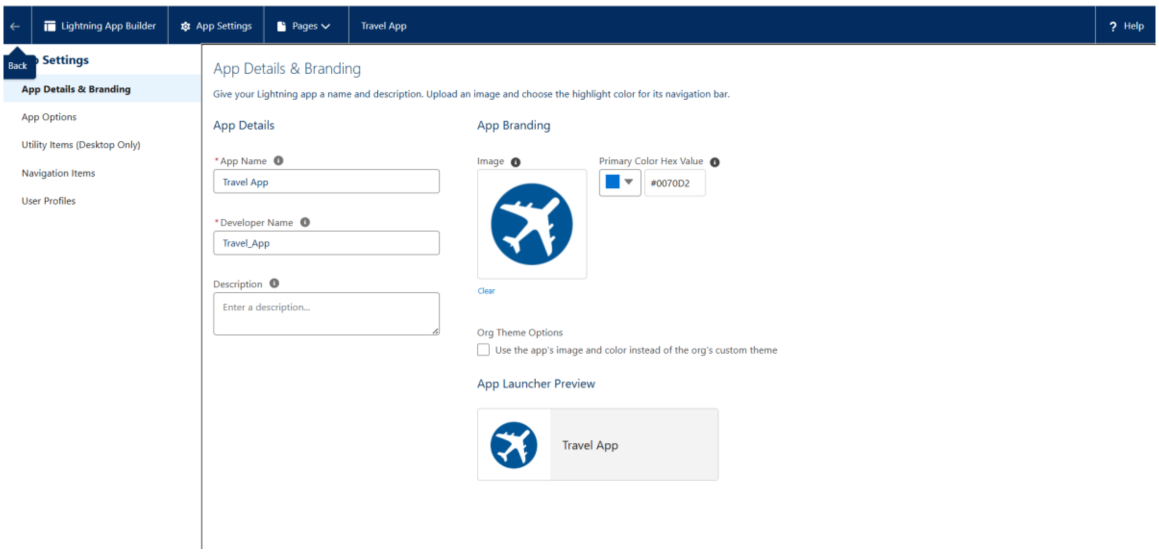
```
@isTest
public class TravelApprovalHandlerTest {

  @isTest
  static void testUpdateApprovalStatus() {
    // Step 1: Create test Travel Approval record
    Travel_Approval__c ta = new Travel_Approval__c(
      Name = 'Test Trip',
      Status__c = 'Submitted'
    );
    insert ta;

    // Step 2: Call the handler method
    Test.startTest();
    TravelApprovalHandler.updateApprovalStatus(ta.Id, 'Approved');
    Test.stopTest();

    // Step 3: Query the updated record
```

```
        Travel_Approval__c updatedTa = [SELECT Id, Status__c FROM Travel_Approval__c WHERE Id = :ta.Id
LIMIT 1];


        // Step 4: Assert the expected result
        System.assertEquals('Approved', updatedTa.Status__c, 'Status should be updated to Approved');
    }
}
```

Phase 6: User Interface Development

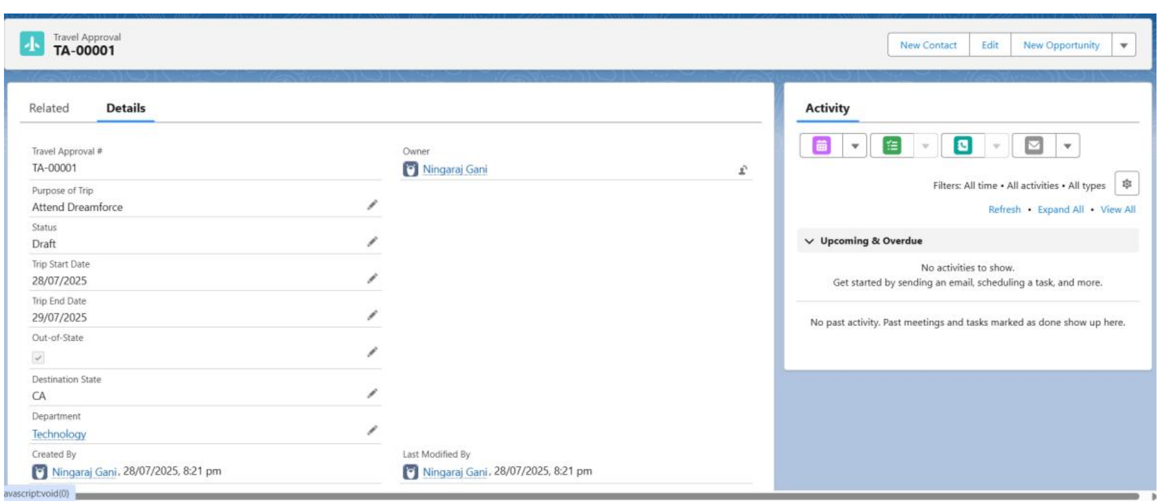
1. Lightning App Builder

- Built a Travel Approval Lightning App for streamlined navigation.
- Added custom objects (Department, Travel Approval, Expense Item) as tabs.
- Customized navigation bar for employees, managers, and admins.



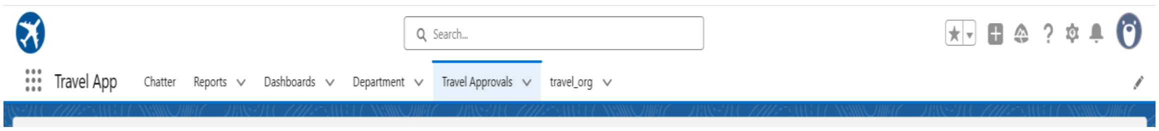
2. Record Pages

- Customized record pages for better user experience.
- Travel Approval Record Page: Shows trip details, related expenses, and approval status.
- Expense Item Record Page: Displays expense type, amount, and linked travel approval.
- Managers' record page includes quick approval actions.



3. Tabs

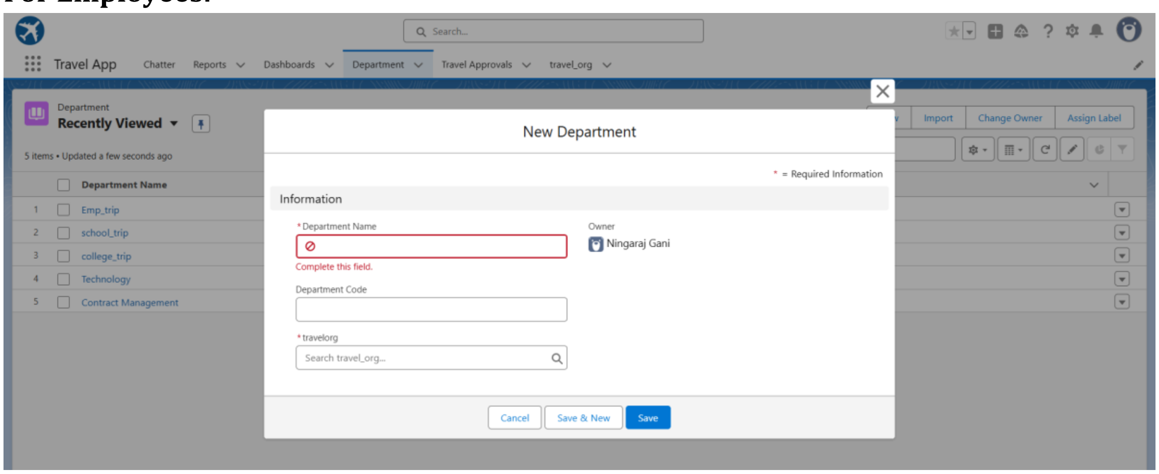
- Created custom tabs for:
- - Department → Manage departments.
- - Travel Approval → Submit/view travel requests.
- - Expense Item → Track and manage expenses.
- Tabs were added to the app navigation bar for easy access.



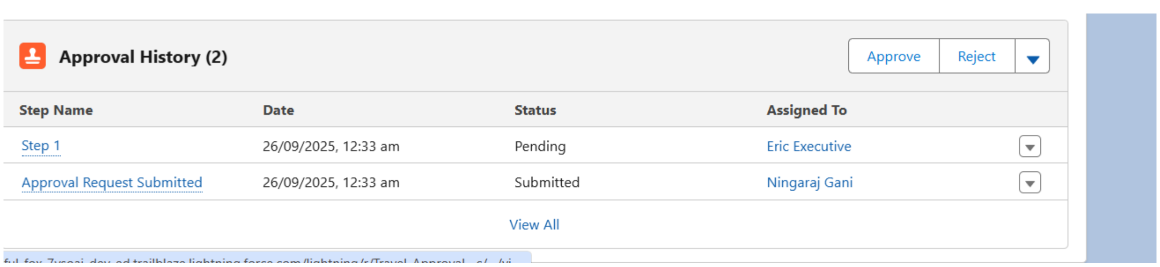
4. Home Page Layouts

- Customized the home page for different roles.
- Employees: Quick action to submit new travel request.
- Managers: Dashboard component showing pending approvals.
- Admins: Reports & analytics snapshot (department-wise requests, expenses).

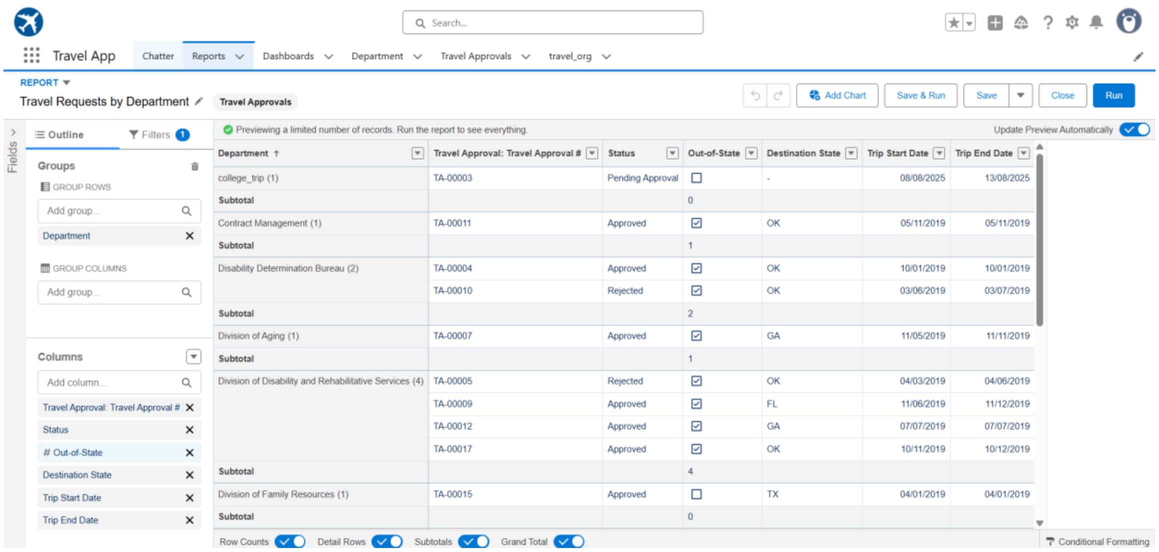
For Employees:



For Manager:



For Admins:

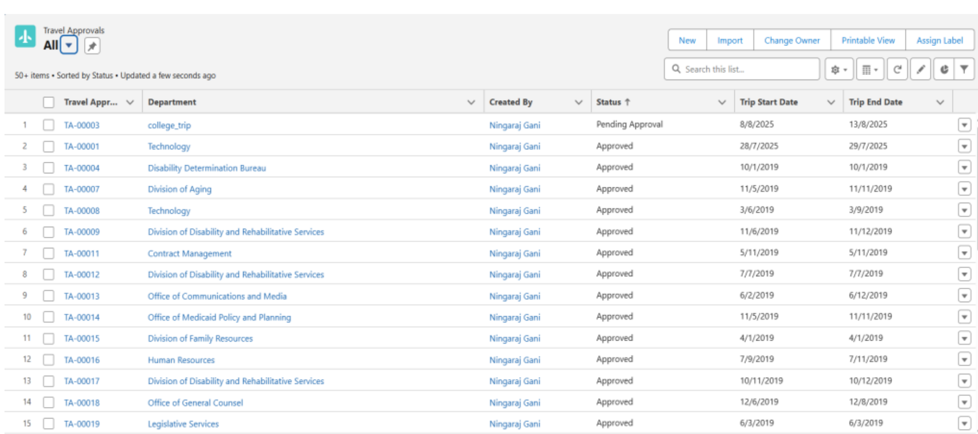


5. Utility Bar

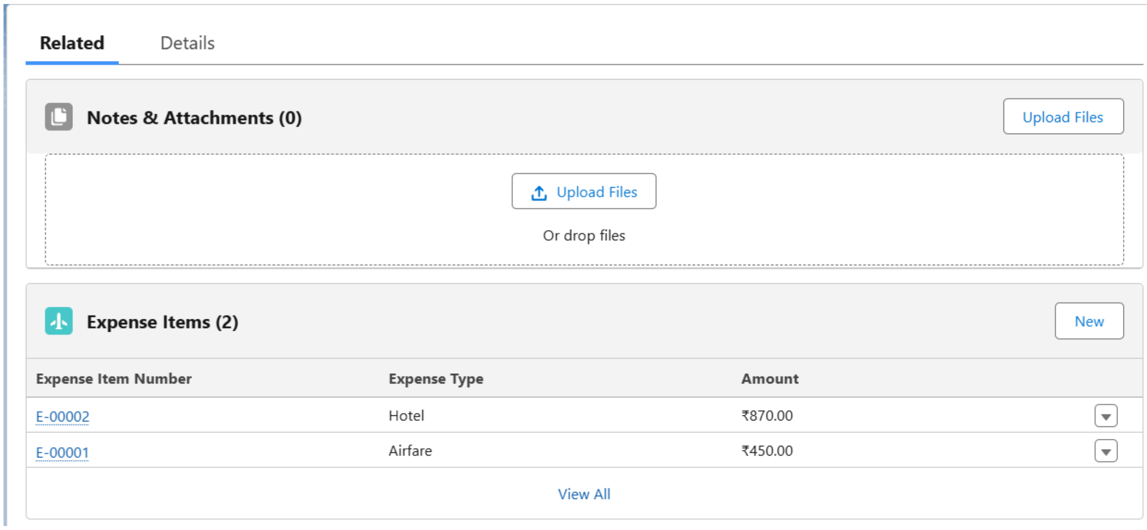
- Added a Utility Bar for frequently used tools.
- Included:
- - Notes for managers to add comments.
- - Recent Items to quickly open recent travel approvals.
- - Approval Status Tracker (custom flow).

6. LWC (Lightning Web Components)

- Developed simple LWCs for enhanced UI.
- Examples in project:
- - Expense Summary Component: Displays total expenses for a travel request.
- - Approval Button Component: Allows managers to approve/reject directly.



Expense Item Component:



7. Apex with LWC:

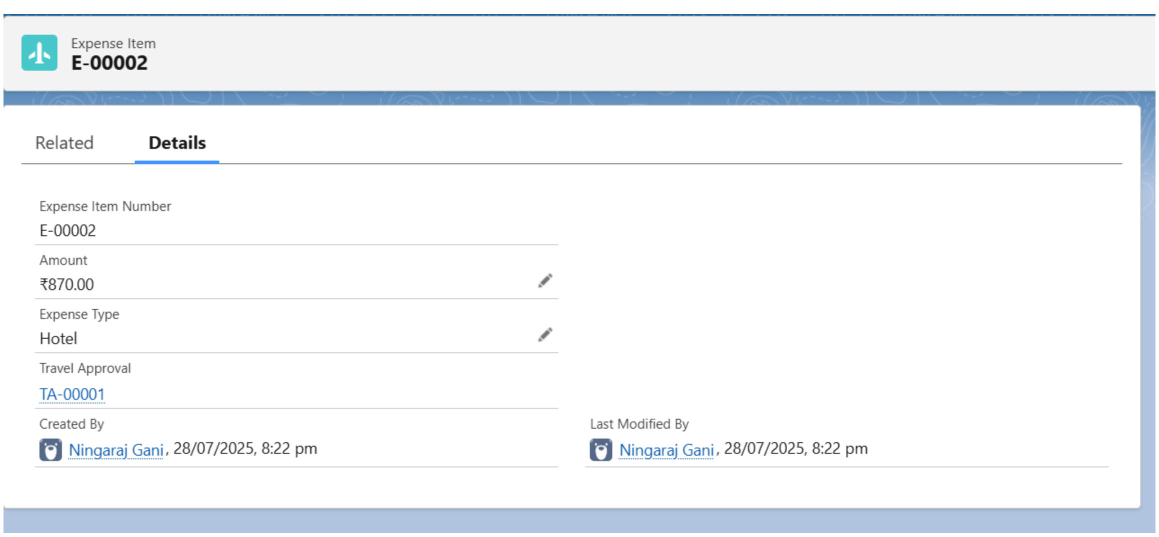
No Usage of Apex

8. Events in LWC

- Used events to communicate between components.
- Use case: When a new expense is added, an event triggers the parent LWC to refresh the total expense summary.

9. Navigation Service

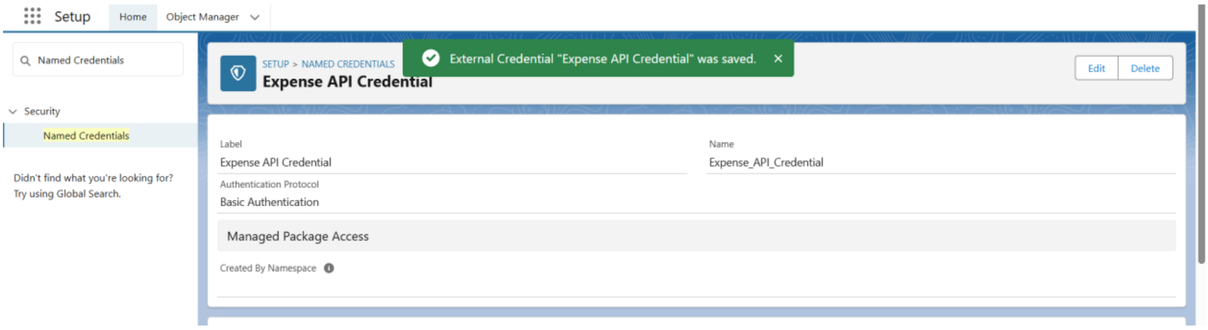
- Used to navigate between pages in the app.
- Use case: From the Expense Summary LWC, users can click a button to directly open the related Travel Approval record page.



Phase 7: Integration & External Access

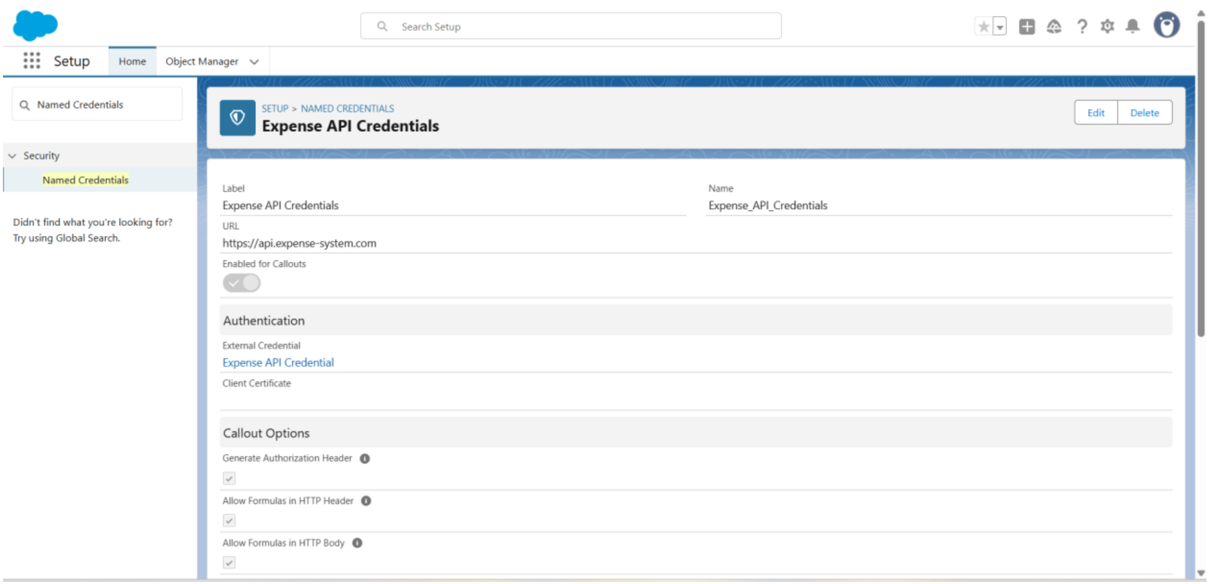
1. Named Credentials

- Securely store external API URLs and authentication.
- Avoid hardcoding credentials in Apex or Flows.
- Example: Expense_API_Credentials connects Salesforce to Expense Management System.
- Can be used in **Apex callouts**, Flows, or External Services.



2. External Services

- Declarative way to integrate REST APIs into Salesforce without code.
- Example: Expose Flight Booking API as a named service; employees select flights directly in Travel Request Flow.
- Generates **invocable actions** usable in Flows.



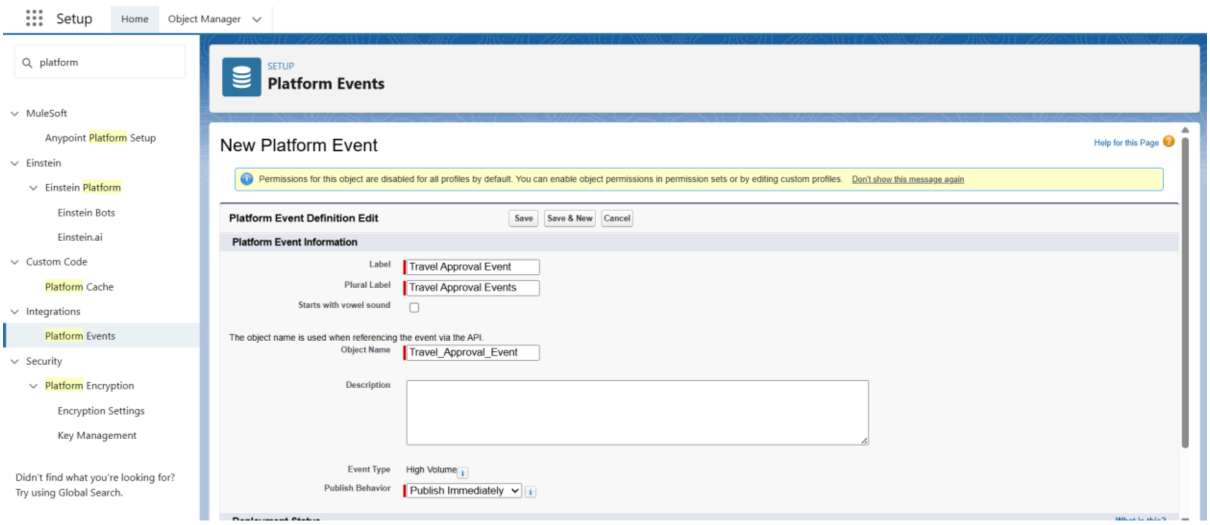
3. Web Services (REST/SOAP)

- Provide Travel Approval data to external systems.
- Example: HR portal can **create, update, or fetch Travel Requests** via Salesforce REST API.
- Enables integration with **ERP, Finance, or custom portals**.

.

4.Platform Events

- Asynchronous notifications for real-time integrations.
- Example: Travel_Approval_Event__e triggers when a request is submitted, notifying Finance to allocate funds.
- Can be subscribed by **Flows, Apex triggers, or external subscribers**.

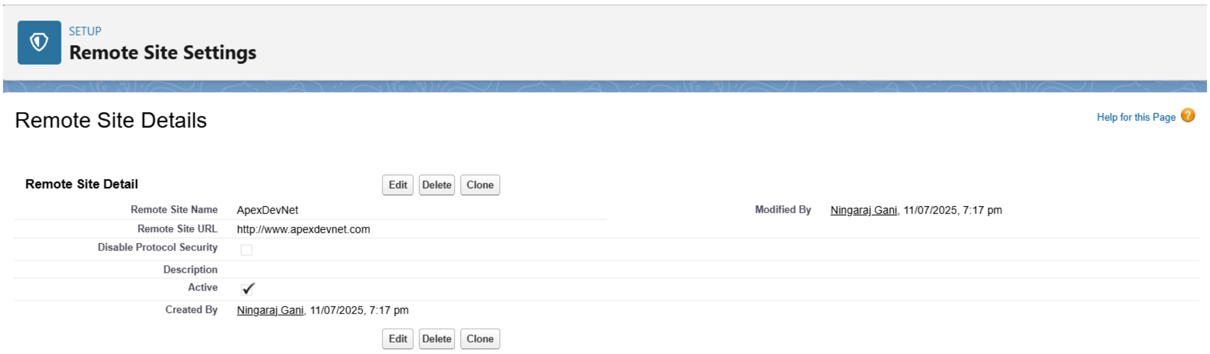


5.OAuth & Authentication

- Secure, token-based authentication for external apps.
- Example: Finance portal uses OAuth tokens via a **Connected App** to fetch travel approvals.
- Scopes and access can be controlled without sharing passwords.

6.Remote Site Settings

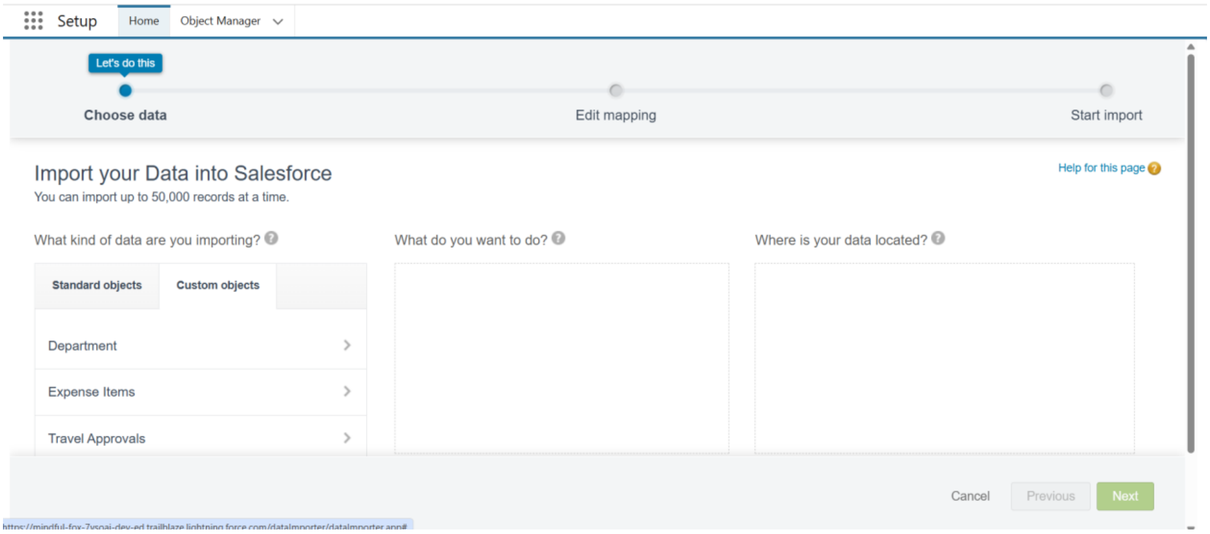
- Whitelist external URLs to allow Salesforce callouts.
- Example: Hotel_API and Expense_API URLs added in setup.
- Prevents unauthorized connections and ensures security.



Phase 8: Data Management & Deployment

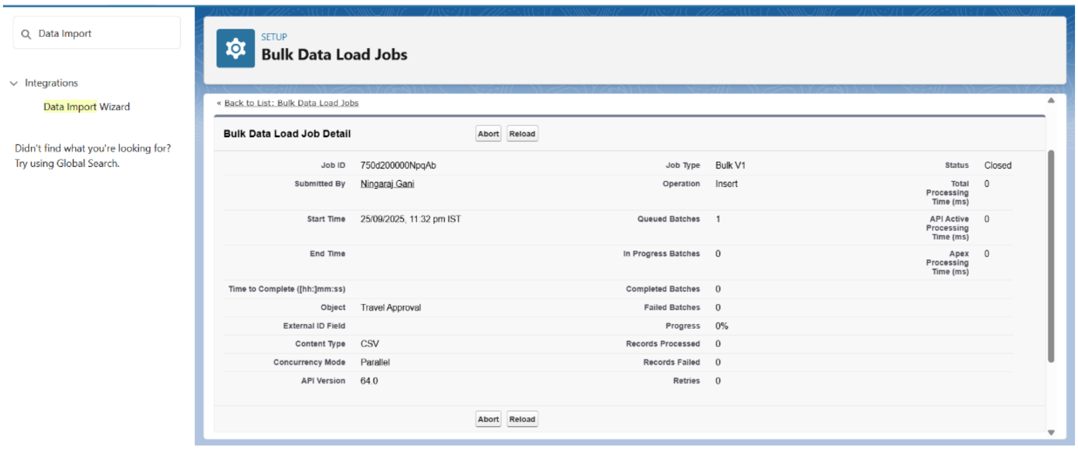
1. Data Import Wizard

- Used to upload sample data like Departments, Travel Approvals, and Expense Items.
- Example: Import a CSV with 10 department records (HR, IT, Finance, etc.) and 20 travel requests.
- Provides a simple UI for small-scale imports.



2. Data Loader

- Used for bulk data import/export when records are large in number.
- Example: Import 1000+ travel expense records for testing scalability.
- Supports scheduling and handling large CSV files



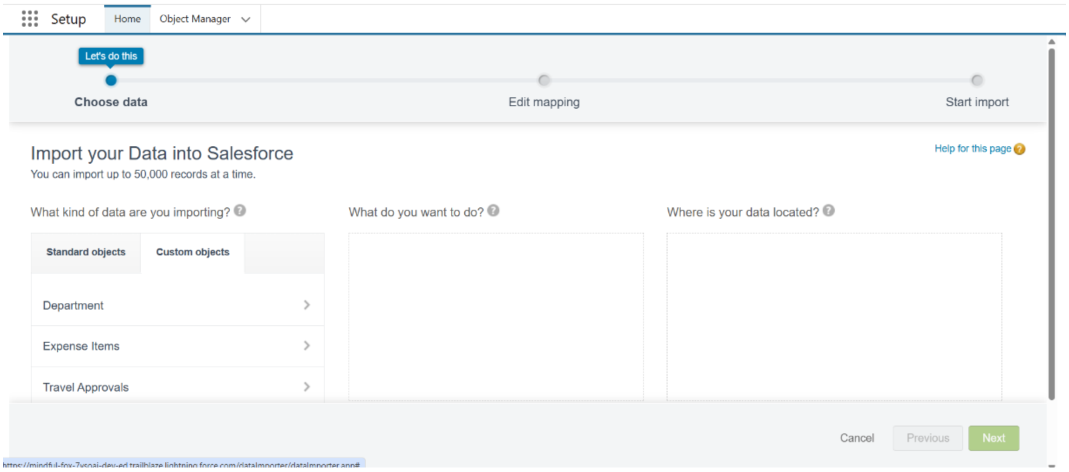
.

3. Duplicate Rules

- Prevents users from creating duplicate records.
- Example: Avoids creating two departments with the same name or two travel requests with the same ID.
- Ensures data integrity in the system.

4. Data Export & Backup

- Exports Salesforce data regularly to create backups.
- Example: Weekly export of Travel Approval and Expense Item records for recovery.
- Ensures business continuity and protects against accidental deletions.



5. Change Sets

- Used to move custom objects, fields, validation rules, and flows from Sandbox to Production.
- Example: Move Travel Approval object with its fields and approval process from test environment to live system.

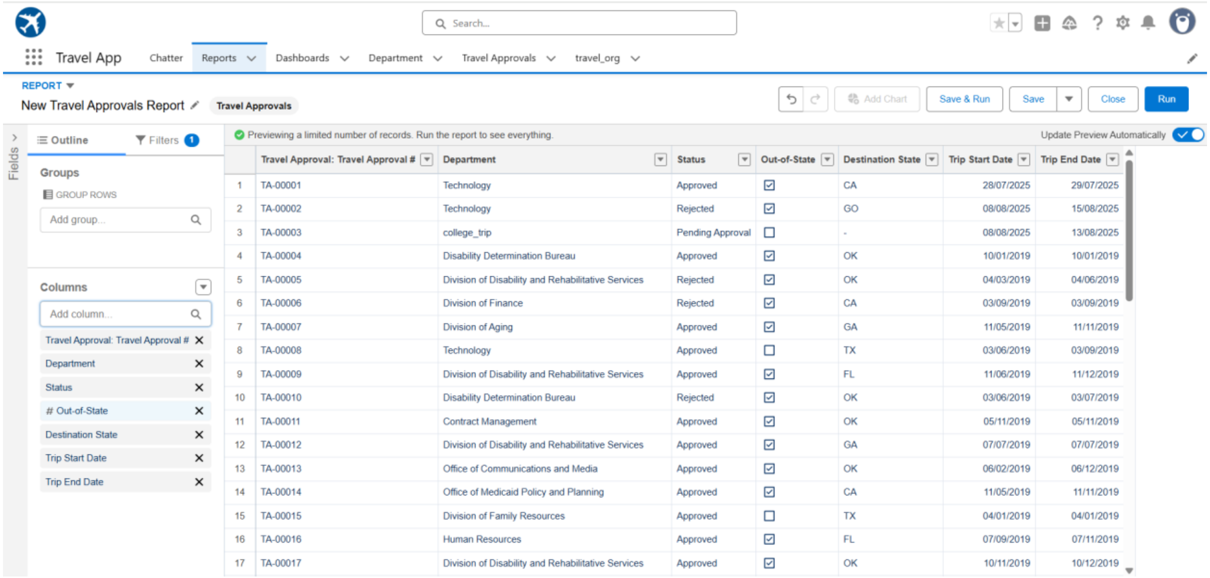
6. Unmanaged vs Managed Packages

- **Unmanaged Packages**: Used to share project configuration for development/testing.
- **Managed Packages**: Used for distribution (like apps on AppExchange).
- Example: The Travel Approval App could be shared with other orgs via an Unmanaged Package.

Phase 9: Reporting, Dashboards & Security Review

1. Reports (Tabular, Summary, Matrix, Joined)

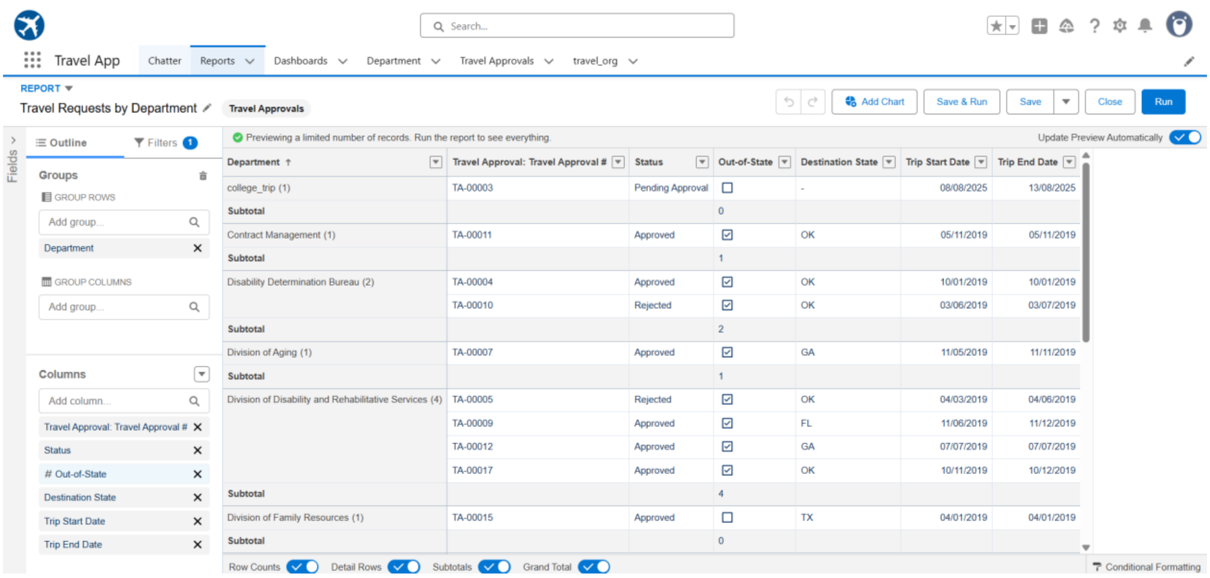
- **Tabular Report** → Simple list of travel requests.
- **Summary Report** → Grouped by Department for approval insights.
- **Matrix Report** → Expenses by Department vs. Approval Status.
- **Joined Report** → Combine Travel Approvals with Expense Items.



	Travel Approval: Travel Approval #	Department	Status	Out-of-State	Destination State	Trip Start Date	Trip End Date
1	TA-00001	Technology	Approved	☑	CA	28/07/2025	29/07/2025
2	TA-00002	Technology	Rejected	☑	GO	08/08/2025	15/08/2025
3	TA-00003	college_trip	Pending Approval	☐	-	08/08/2025	13/08/2025
4	TA-00004	Disability Determination Bureau	Approved	☑	OK	10/01/2019	10/01/2019
5	TA-00005	Division of Disability and Rehabilitative Services	Rejected	☑	OK	04/03/2019	04/06/2019
6	TA-00006	Division of Finance	Rejected	☑	CA	03/09/2019	03/09/2019
7	TA-00007	Division of Aging	Approved	☑	GA	11/05/2019	11/11/2019
8	TA-00008	Technology	Approved	☐	TX	03/06/2019	03/09/2019
9	TA-00009	Division of Disability and Rehabilitative Services	Approved	☑	FL	11/06/2019	11/12/2019
10	TA-00010	Disability Determination Bureau	Rejected	☑	OK	03/06/2019	03/07/2019
11	TA-00011	Contract Management	Approved	☑	OK	05/11/2019	05/11/2019
12	TA-00012	Division of Disability and Rehabilitative Services	Approved	☑	GA	07/07/2019	07/07/2019
13	TA-00013	Office of Communications and Media	Approved	☑	OK	06/02/2019	06/12/2019
14	TA-00014	Office of Medicaid Policy and Planning	Approved	☑	CA	11/05/2019	11/11/2019
15	TA-00015	Division of Family Resources	Approved	☐	TX	04/01/2019	04/01/2019
16	TA-00016	Human Resources	Approved	☑	FL	07/09/2019	07/11/2019
17	TA-00017	Division of Disability and Rehabilitative Services	Approved	☑	OK	10/11/2019	10/12/2019

2. Report Types

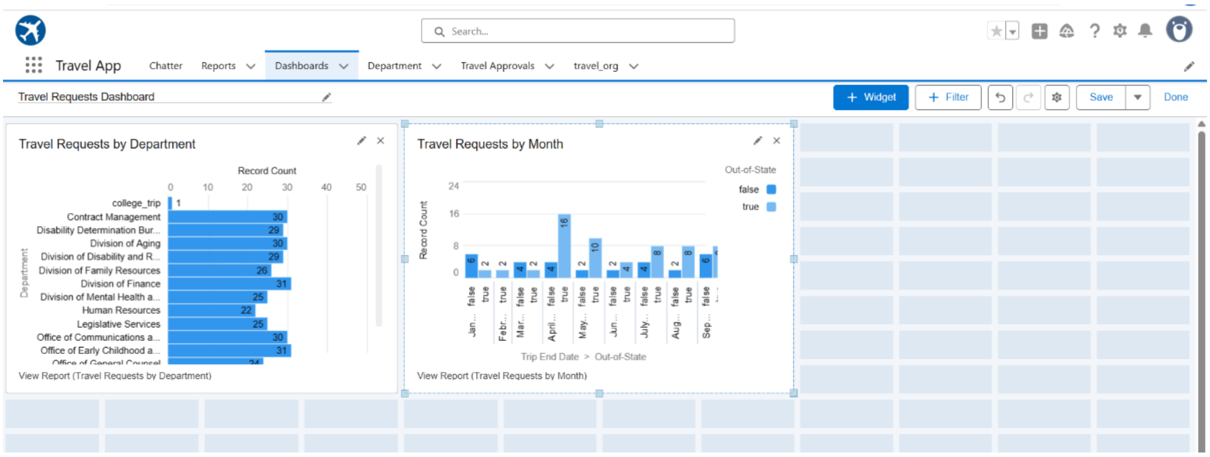
- Custom report types created to link **Travel Approvals with Expense Items**.
- Helps generate department-wise or trip-wise financial reports.



Department ↑	Travel Approval: Travel Approval #	Status	Out-of-State	Destination State	Trip Start Date	Trip End Date
college_trip (1)	TA-00003	Pending Approval	☐	-	08/08/2025	13/08/2025
Subtotal			0			
Contract Management (1)	TA-00011	Approved	☑	OK	05/11/2019	05/11/2019
Subtotal			1			
Disability Determination Bureau (2)	TA-00004	Approved	☑	OK	10/01/2019	10/01/2019
	TA-00010	Rejected	☑	OK	03/06/2019	03/07/2019
Subtotal			2			
Division of Aging (1)	TA-00007	Approved	☑	GA	11/05/2019	11/11/2019
Subtotal			1			
Division of Disability and Rehabilitative Services (4)	TA-00005	Rejected	☑	OK	04/03/2019	04/06/2019
	TA-00009	Approved	☑	FL	11/06/2019	11/12/2019
	TA-00012	Approved	☑	GA	07/07/2019	07/07/2019
	TA-00017	Approved	☑	OK	10/11/2019	10/12/2019
Subtotal			4			
Division of Family Resources (1)	TA-00015	Approved	☐	TX	04/01/2019	04/01/2019
Subtotal			0			

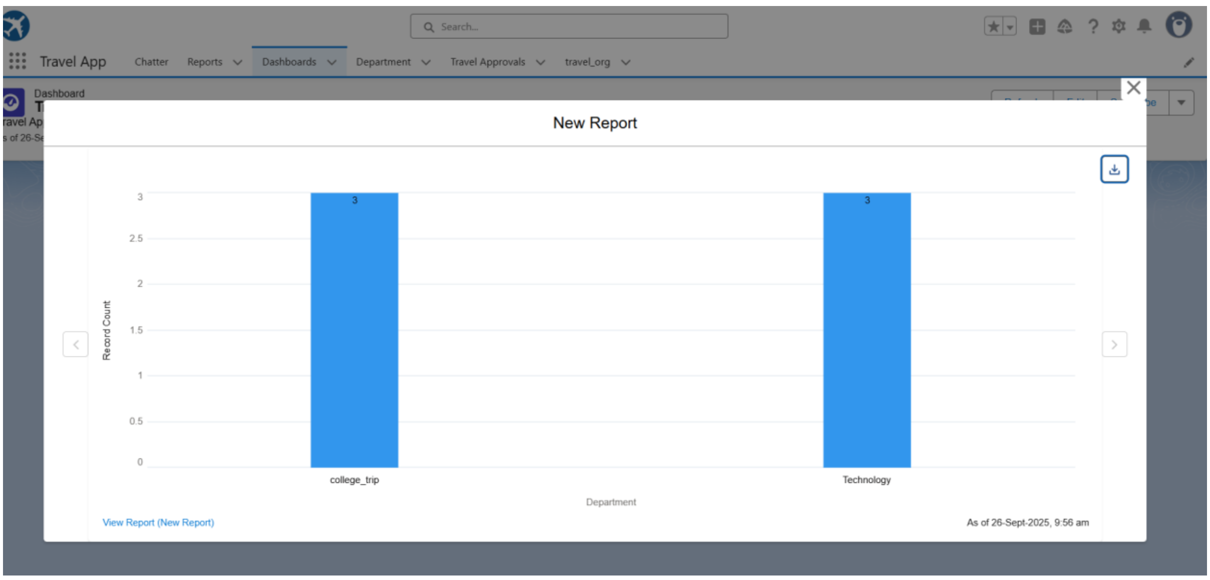
3. Dashboards

- Dashboards built for quick visualization:
    - Bar Chart → Pending Approvals by Department.
    - Pie Chart → Expense Breakdown.
    - Line Chart → Monthly Travel Requests.
    - Gauge → Budget Utilization.



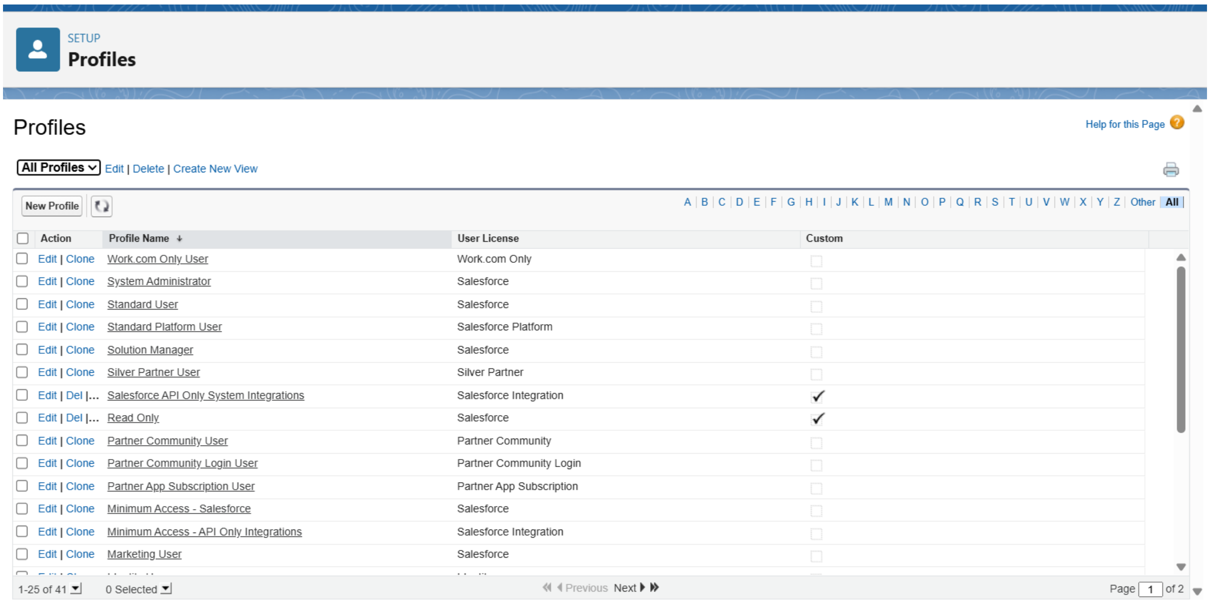
4. Dynamic Dashboards

- Each user sees only **their own data**.
- Employee → only own requests.
- Manager → requests from team.
- Admin → all requests.



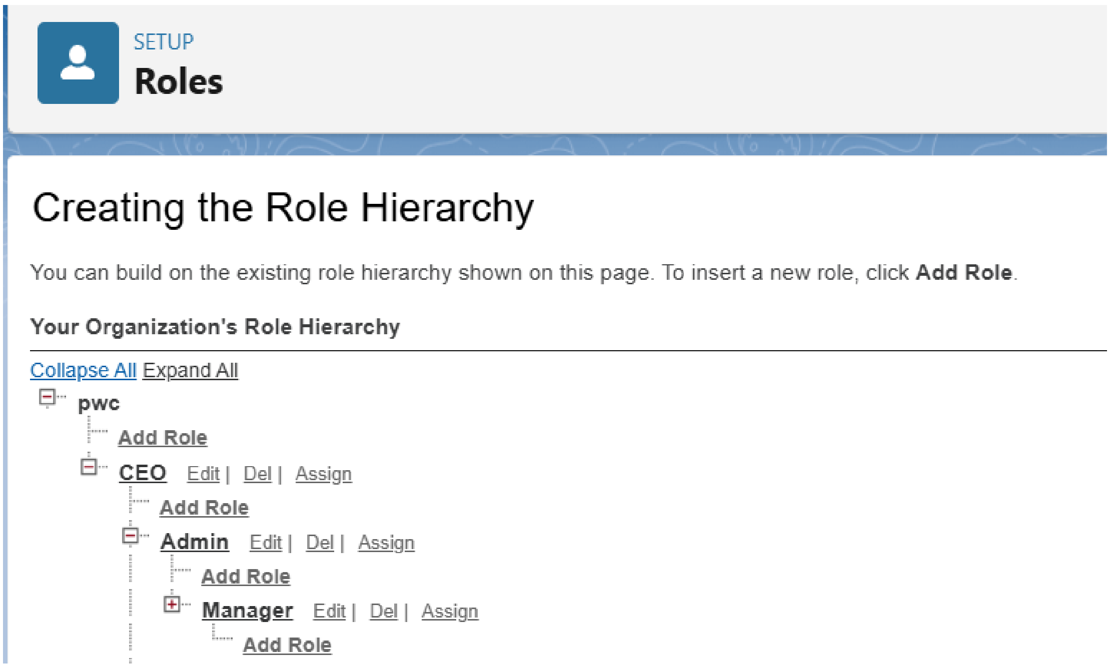
5. Profiles

- **Employee Profile** → Create requests, view own.
- **Manager Profile** → Approve/reject requests.
- **Admin Profile** → Full access.



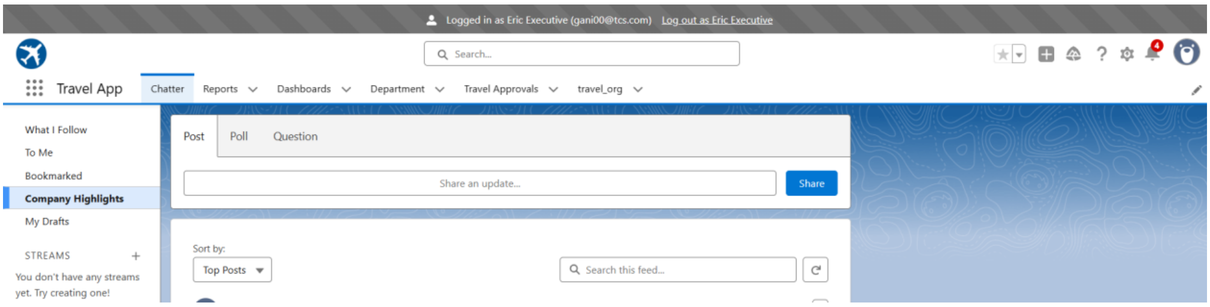
6. Roles

- Role hierarchy: Admin → Manager → Employee.
- Ensures managers see subordinates' records automatically.



7. Permission Sets

- Extra access granted without changing profile.
- Finance Team → Expense Report Access.
- Travel Desk → View All Requests.



8. Organization-Wide Defaults (OWD)

- Travel Approval → Private.
- Expense Item → Controlled by Parent.
- Department → Public Read Only.

Department	Public Read/Write	Private	✓
Expense Item	Controlled by Parent	Controlled by Parent	
Travel Approval	Public Read/Write	Private	✓
travelorg	Public Read/Write	Private	✓

9. Sharing Rules

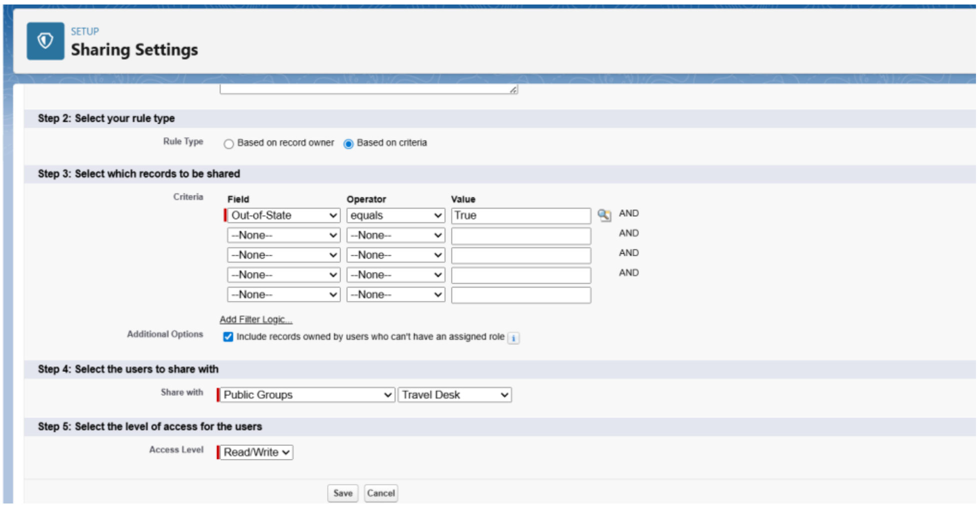
- Approved Travel Requests shared with Finance.
- International requests shared with Travel Desk.

Travel Approval Sharing Rules New Recalculate — Travel Approval Sharing Rules Help ?

Action	Criteria	Shared With	Access Level
Edit | Del	`Travel Approval: Status` EQUALS Approved	Group: Finance Team	Read/Write
Edit | Del	`Travel Approval: Out-of-State` EQUALS True	Group: Travel Desk	Read/Write

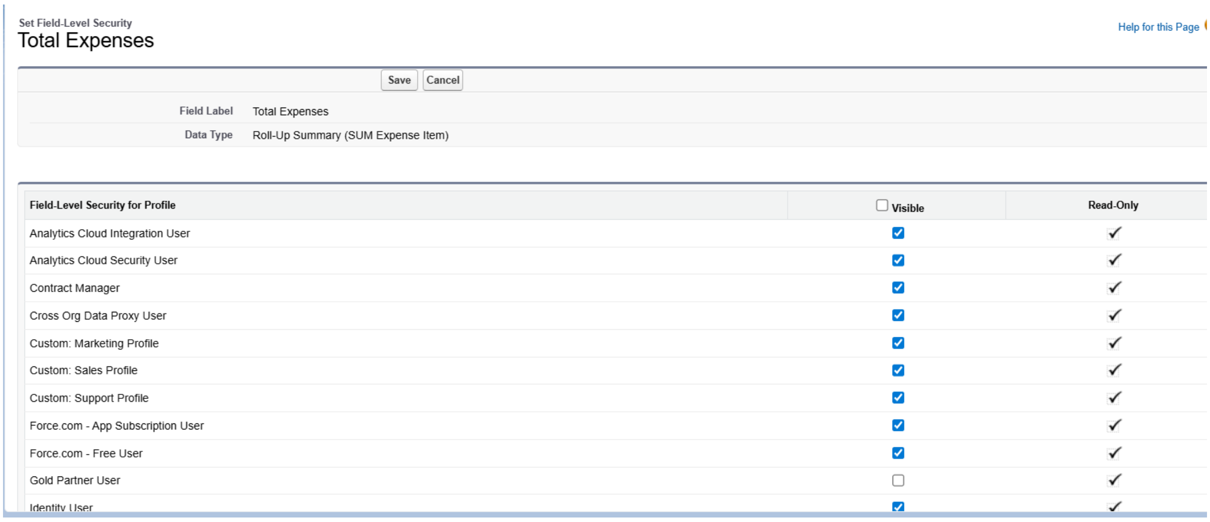
10. Sharing Settings

- Enabled manual sharing for Travel Approvals.
- Fine-tuned object-level sharing in Setup.



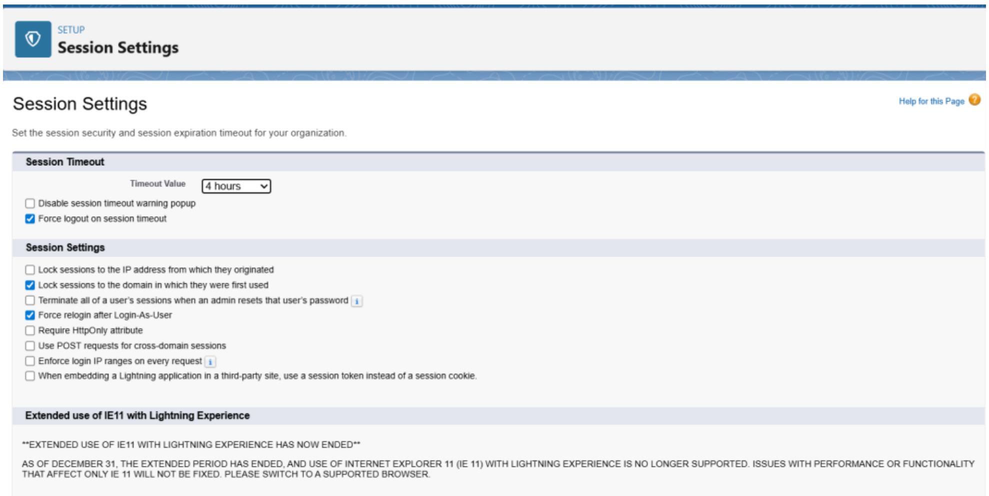
11. Field Level Security (FLS)

- Employees cannot see Manager Comments.
- Only Finance sees Expense Amount.



12. Session Settings

- Auto logout after 2 hours inactivity.
- Restrict multiple device logins.



13. Login IP Ranges

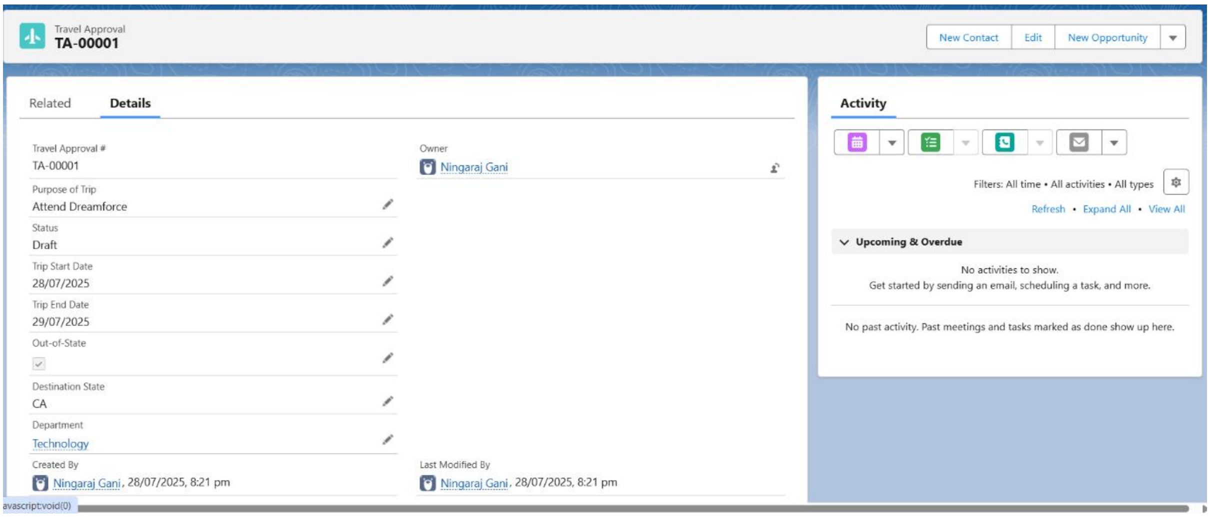
- Allowed only from corporate VPN/office IPs.
- Blocks unauthorized access.

Phase 10: Quality Assurance Testing – Travel Approval App

1. Test Case Template

Use Case / Scenario	Test Steps (Input)	Expected Result	Actual Result (with Screenshot)
Example: Create Travel Request	1. Log in as Employee. 2. Go to Travel Approval object. 3. Click "New". 4. Enter Employee Name, Start Date, End Date, Travel Type, Status = Submitted. 5. Save.	Travel request record is successfully created with Status = Submitted.	Bellow ScreenShot

Actual Result (with Screenshot):



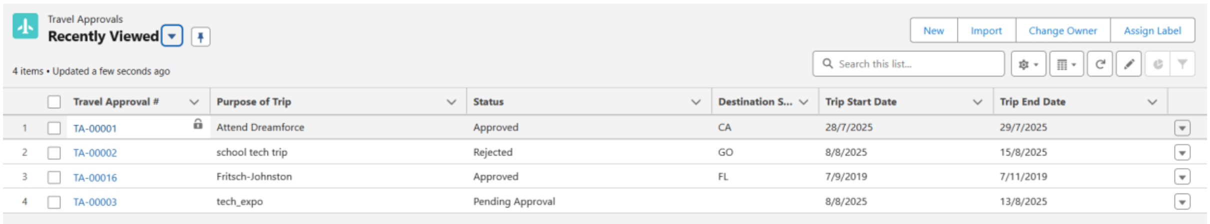
2. Sample Test Cases

A. Record Creation

Use Case: Employee submits a new travel request.

Test Steps (Input)	Expected Result	Actual Result (Screenshot)
Fill all required fields (Employee Name, Dates, Travel Type, Status = Submitted) and Save	Travel Request is created; record appears in Travel Approval tab; Status = Submitted	[Attach Screenshot]

Actual Result (Screenshot):

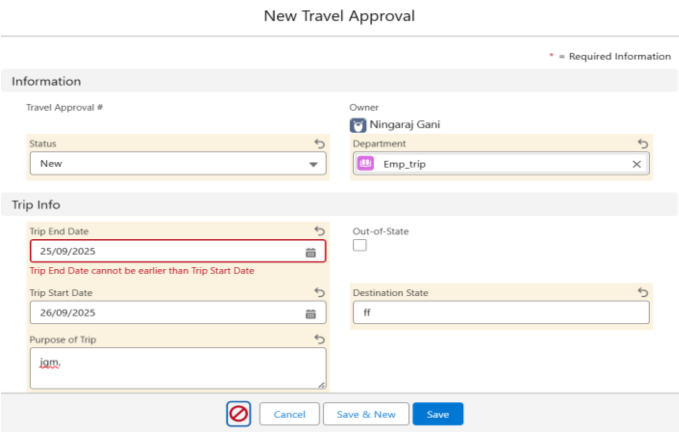


B. Validation Rule

Use Case: Prevent travel request submission with End Date earlier than Start Date.

Test Steps (Input)	Expected Result	Actual Result (Screenshot)
Enter Start Date = 26-Sep-2025, End Date = 25-Sep-2025 and Save	Error message: “End Date cannot be earlier than Start Date.” Record not saved	[Attach Screenshot]

Actual Result (Screenshot):

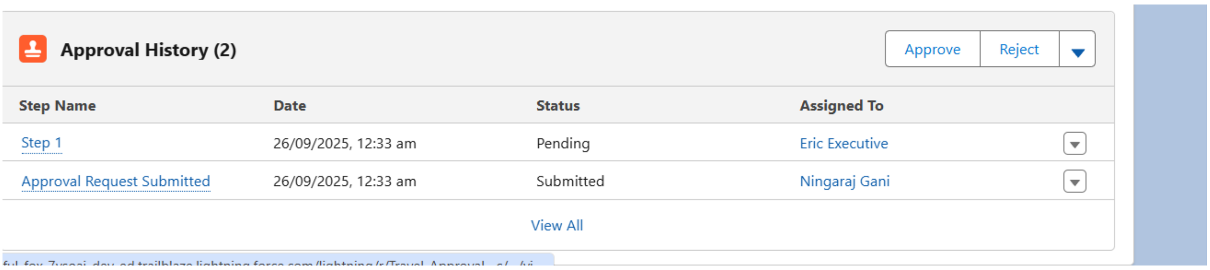


C. Approval Process

Use Case: Travel request requires manager approval.

Test Steps (Input)	Expected Result	Actual Result (Screenshot)
Submit a travel request with Status = Submitted. Login as Manager → Approve request	Travel request status updates to Approved; Employee receives email notification	[Attach Screenshot]

Actual Result (Screenshot):

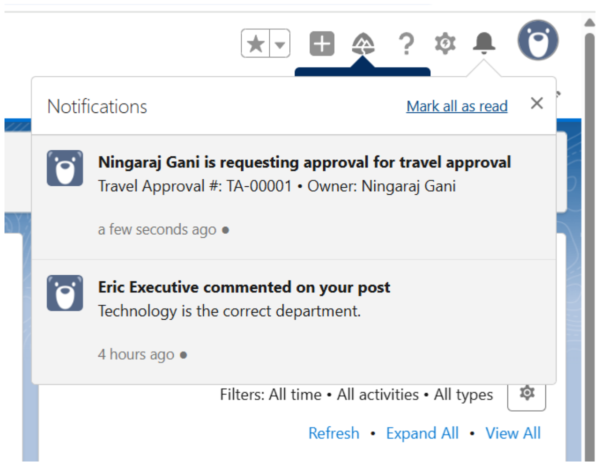


D. Flow Builder (Record-Triggered Flow)

Use Case: Automatically update status when manager approves.

Test Steps (Input)	Expected Result	Actual Result (Screenshot)
Update Status field = Approved	Flow triggers; Status updated to Approved; Email notification sent	[Attach Screenshot]

Actual Result (Screenshot):

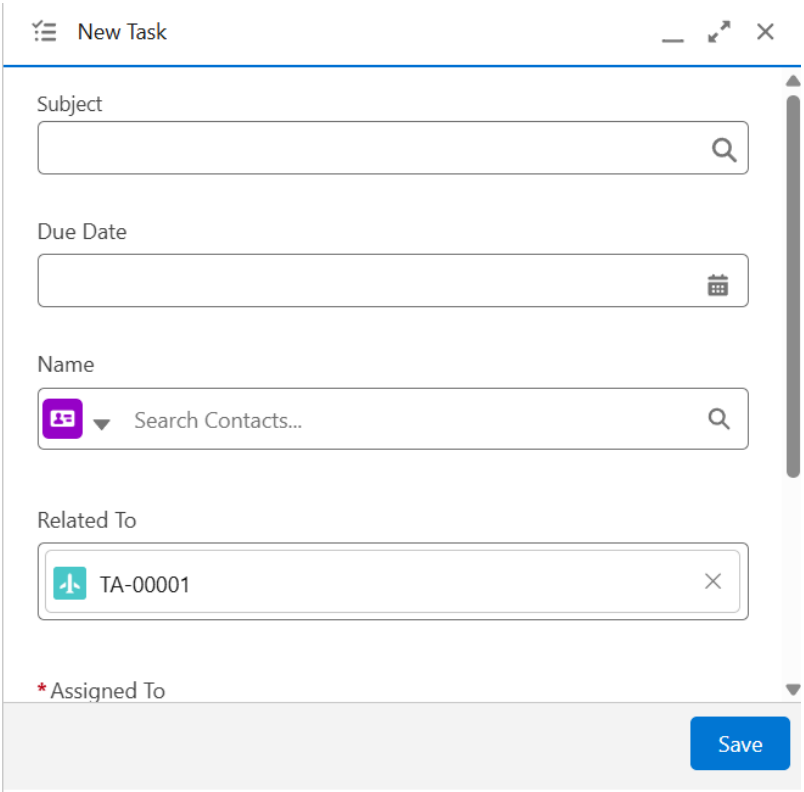


E. Automatic Task Creation

Use Case: Finance needs a task when request is approved.

Test Steps (Input)	Expected Result	Actual Result (Screenshot)
Manager approves request	Task created for Finance user: “Process reimbursement for Travel Request #”	[Attach Screenshot]

Actual Result (Screenshot):

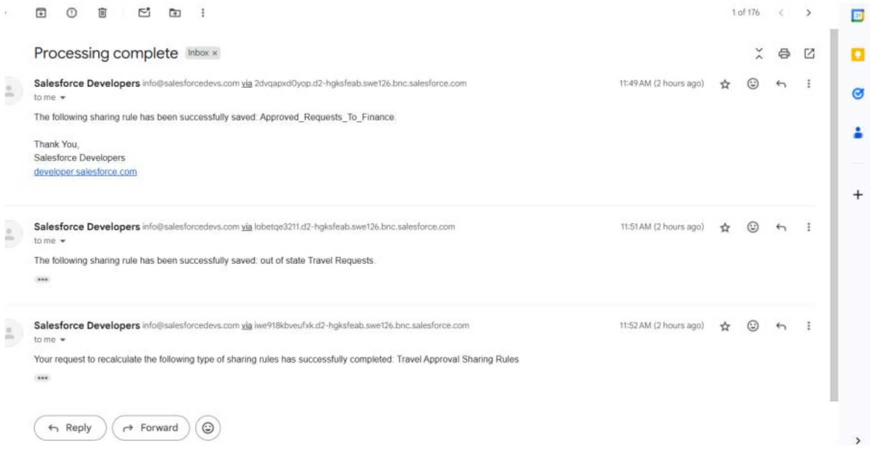


F. Email Alerts

Use Case: Notify employee when travel request is approved.

Test Steps (Input)	**Expected Result**	**Actual Result (Screenshot)**
Approve travel request	Employee receives email: “Your Travel Request has been Approved”	[Attach Screenshot]

Actual Result (Screenshot):

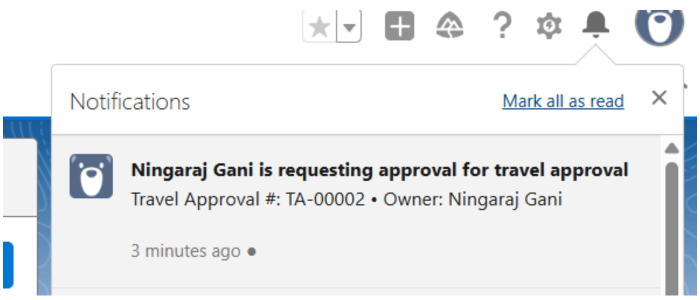


G. Custom Notifications

Use Case: Notify manager of pending approvals.

Test Steps (Input)	**Expected Result**	**Actual Result (Screenshot)**
Submit travel request	Manager receives Salesforce notification: “New Travel Request pending approval”	[Attach Screenshot]

Actual Result (Screenshot):



H. Reporting & Dashboards:

Use Case: Manager views Summary Report of travel requests by department.

Test Steps (Input)	Expected Result	Actual Result (Screenshot)
Go to Reports → Select Summary Report	Report displays grouped travel requests by Department and Status	[Attach Screenshot]

Actual Result (Screenshot):