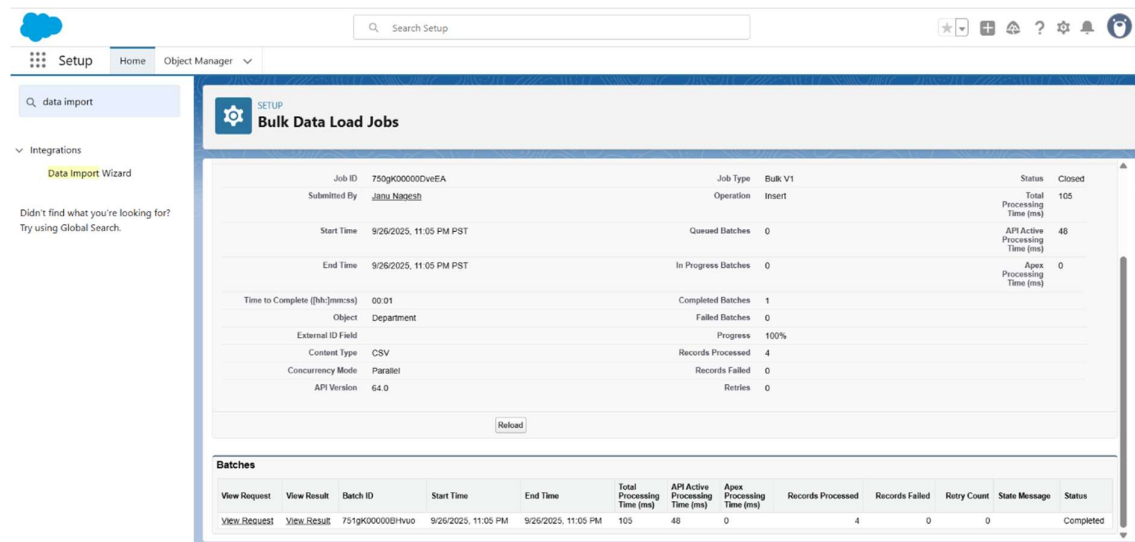


# Phase 8: Data Management & Deployment

## 1. Data Import Wizard

- **Where:** Setup → Data Import Wizard.
- **Object:** Complaint\_\_c.
- **File:** complaints.csv.
- **Map fields** → Start Import.



The screenshot shows the Salesforce Setup interface for Bulk Data Load Jobs. The left sidebar contains a search bar with 'data import' and a list of integrations including 'Data Import Wizard'. The main content area is titled 'Bulk Data Load Jobs' and displays details for a specific job. The job ID is 750gK00000v0eEA, submitted by Janu Nageshi, and is of type Bulk V1. The operation is 'Insert'. The status is 'Closed'. The start time is 9/26/2025, 11:05 PM PST, and the end time is also 9/26/2025, 11:05 PM PST. The time to complete is 00:01. The object is 'Department'. The external ID field is 'Progress', the content type is 'CSV', and the concurrency mode is 'Parallel'. The API version is '64.0'. The job has 105 total processing time (ms), 48 API active processing time (ms), and 0 API processing time (ms). It has 4 records processed, 0 records failed, and 0 retries. A 'Reload' button is present. Below the job details is a table of batches.

Job ID	Submitted By	Job Type	Bulk V1	Status	Closed
750gK00000v0eEA	Janu Nageshi	Operation	Insert	Total Processing Time (ms)	105
		Queued Batches	0	API Active Processing Time (ms)	48
		In Progress Batches	0	API Processing Time (ms)	0
		Completed Batches	1		
		Failed Batches	0		
		Progress	100%		
		Records Processed	4		
		Records Failed	0		
		Retries	0		

View Request	View Result	Batch ID	Start Time	End Time	Total Processing Time (ms)	API Active Processing Time (ms)	API Processing Time (ms)	Records Processed	Records Failed	Retry Count	State Message	Status
View Request	View Result	751gK00000Hhvu0	9/26/2025, 11:05 PM	9/26/2025, 11:05 PM	105	48	0	4	0	0		Completed

## 2. Matching Rules

**Goal:** prevent duplicates (e.g., same Citizen\_Email\_\_c).

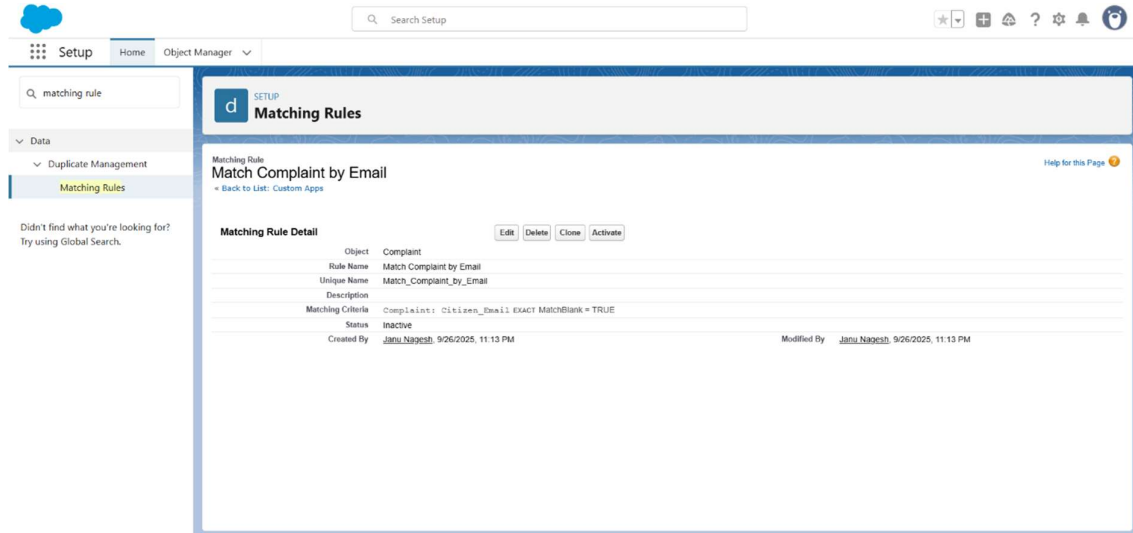
**Where:** Setup → Duplicate Management → Matching Rules

### Create a Matching Rule

1. Setup → Quick Find → **Matching Rules** → New.
2. Object: Complaint (Complaint\_\_c).
3. Label: Match Complaint by Email → Name auto-fills.
4. Matching Criteria:
  - Field: Citizen\_Email\_\_c
  - Matching Method: Exact (or Fuzzy if you want)

- Click **Save**.

5. Click **Activate** on the rule.



### 3. Duplicate Rules

#### Create a Duplicate Rule

1. Setup → Duplicate Rules → New Rule.
2. Object: Complaint (Complaint\_\_c).
3. Label: Duplicate Complaint by Email.
4. Matching Rule: pick Match Complaint by Email.
5. Actions:
  - **Record-Level Security:** Allow or Block — choose **Block** to stop save OR **Alert** to show warning.
  - **Alert Text:** “A complaint with this email already exists.”
6. Save → Activate.

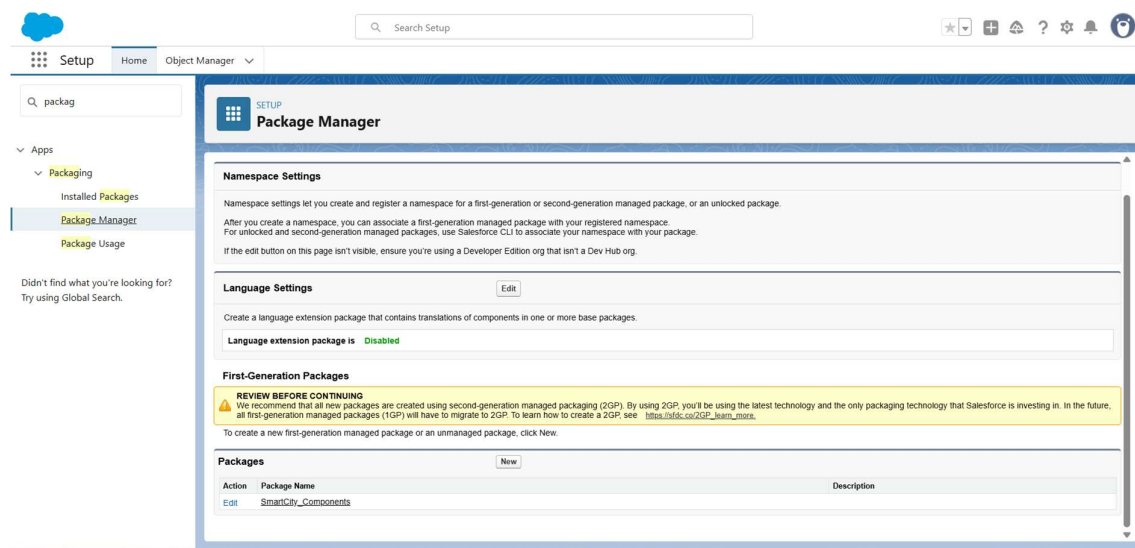


## 5. Unmanaged vs Managed Packages

**Unmanaged package** (good for sharing open-source code):

- Setup → Quick Find → Packages → New.
- Fill:
  - Package Name: SmartCity\_Components
  - Description
- Add Components → add objects, classes, pages.
- Upload → creates a package link anyone can install (no upgrade support).

**Managed package** (for AppExchange / versioning / upgrades): requires packaging org and specific steps. Not necessary for student project.



## 6. VS Code & Salesforce CLI

- **Authorize org (web)**

```
sf auth web login --set-default-dev-hub --alias DevHub # for Dev Hub
```

```
sf org login web --alias SmartCityMain
```

- **Deploy source (new sf CLI)**

Deploy a single folder:

```
sf project deploy start --source-dir force-app/main/default/classes --target-org SmartCityMain
```

- **Deploy entire project:**

```
sf project deploy start --source-dir force-app --target-org SmartCityMain
```

- **Retrieve metadata from org:**

```
sf project retrieve start --source-dir force-app/main/default --target-org SmartCityMain
```

- **Run Apex tests:**

```
sfdx force:apex:test:run --classnames ComplaintUtilityTest --resultformat human --wait 10
```

# or using sf if available:

```
sf apex test run --classnames ComplaintUtilityTest --resultformat human --wait 10
```