

PHASE - 8

Project: AI-Powered HR & Employee Management Bot

Data Import Wizard (Simple Data Upload)

When to use?

- Small data ($\leq 50,000$ records)
- Non-technical users
- Initial employee onboarding

Step-by-step (Employee Data Import)

1. Go to **Setup → Data Import Wizard**
2. Click **Launch Wizard**
3. Choose **Custom Objects**
4. Select **Employee__c**
5. Upload CSV file (example headers):
6. Name,Employee_ID__c,Department__c,Email__c,Status__c
7. Map fields automatically
8. Start Import
9. Verify records in **Employee Tab**

📌 Best for:

- Employee master data
- Department setup

Data Loader (Large & Advanced Data Operations)

When to use?

- Large data (up to millions)
- Update / Delete operations
- Data migration

Step-by-step (Update Employee Status)

1. Download **Data Loader**
 - Setup → Data Loader
2. Open Data Loader
3. Login using Salesforce credentials
4. Choose operation:

- Insert / Update / Upsert / Delete
- 5. Select **Employee__c**
- 6. Choose CSV with Id column
- 7. Map fields
- 8. Execute
- 9. Review success & error logs

✚ Used for:

- Attendance bulk upload
- Leave history migration
- Cleanup records

Duplicate Rules (Prevent Data Issues)

Why important?

HR systems **must not allow duplicate employees.**

Step-by-step

Step 1: Matching Rule

1. Setup → Matching Rules
2. New Rule → Employee
3. Match fields:
 - Employee_ID__c (Exact)
 - Email__c (Exact)
4. Activate

Step 2: Duplicate Rule

1. Setup → Duplicate Rules
2. New Rule → Employee
3. Select Matching Rule
4. Action:
 - Block creation
 - Show alert
5. Activate

✚ Result:

- No duplicate employee creation
- Clean HR data

Data Export & Backup (VERY IMPORTANT)

Why?

- Salesforce is not your backup
- Required for compliance & exams

Manual Export (Weekly / Monthly)

1. Setup → Data Export
2. Export Now or Schedule
3. Select:
 - Employee
 - Leave
 - Attendance
 - Performance
4. Choose ZIP format
5. Download & store securely

✚ Salesforce allows:

- Weekly export
- Daily export (Enterprise+)

Change Sets (Deployment – Admin Friendly)

Use case

Deploy objects, LWCs, Apex from **Dev → Test / Prod**

Step-by-step

Step 1: Create Outbound Change Set

1. Setup → Change Sets
2. Outbound Change Sets → New
3. Name: HR_Project_Deployment
4. Add components:
 - Custom Objects
 - Apex Classes
 - Triggers
 - LWC
 - Flows
5. Upload to target org

Step 2: Deploy Inbound Change Set

1. Target Org → Setup → Change Sets
2. Inbound Change Sets
3. Validate
4. Deploy

✚ Requires:

- All test classes passing
- Dependencies resolved

Unmanaged vs Managed Packages (Theory + Use)

Feature	Unmanaged	Managed
Editable	✓ Yes	✗ No
Used for	Projects, learning	AppExchange
Upgrades	Manual	Automatic
IP Protection	✗ No	✓ Yes

🔴 Your project → Unmanaged Package

Create Unmanaged Package (Optional)

1. Setup → Packages
2. New Package
3. Add all HR components
4. Upload

Used for:

- Sharing project
- Backup deployment

ANT Migration Tool (Metadata Deployment)

When to use?

- Scripted deployment
- CI/CD pipelines
- Legacy DevOps

Basic Steps (High-Level)

1. Install:
 - Java
 - Apache ANT

2. Download Salesforce ANT Tool
3. Configure:
 - build.xml
 - package.xml
4. Run:
5. ant retrieve
6. ant deploy

✦ **Not mandatory** for your project

✦ Mention in documentation for completeness

VS Code & Salesforce DX (MOST IMPORTANT SKILL)

Why SFDX?

- Industry standard
- Source-driven development
- Git integration

Step-by-step Setup

Step 1: Install Tools

- VS Code
- Salesforce CLI
- Salesforce Extension Pack

Step 2: Create Project

```
sfdx force:project:create -n hr-management
```

```
cd hr-management
```

Step 3: Authenticate Org

```
sfdx force:auth:web:login
```

Step 4: Retrieve Metadata

```
sfdx force:source:retrieve -m ApexClass
```

Step 5: Deploy to Org

```
sfdx force:source:deploy -p force-app
```

✦ Now your entire project is:

- Version controlled
- Deployable

- Industry-ready

Recommended Minimum Implementation (IMPORTANT)

To score **maximum marks**:

- ✓ Data Import Wizard (Employee data)
- ✓ Duplicate Rule (Employee ID)
- ✓ Data Export (Backup)
- ✓ Change Sets (Deploy Phase 7 + 8)
- ✓ SFDX setup explanation

◆ Phase 8 Flow (Simple Diagram)

CSV / External Data



Data Import / Loader



Duplicate Rules



Salesforce Objects



Backup / Export



Deployment (Change Sets / SFDX)