Phase 8: Data Management & Deployment (IP & Patent Management)

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1. Data Import Wizard

Purpose: Import small to medium volumes of patent, inventor, or user data into Salesforce.
 Steps:

1. Setup → Quick Find → **Data Import Wizard**

2. Choose the object (Patent, Inventor, etc.)

3. Upload CSV file containing your records

4. Map fields from CSV to Salesforce fields → Start Import

5. Verify records in Salesforce

   Use this for initial test data for your project.

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2. Data Loader

Purpose: Import or update **large volumes of data** (more than 50,000 records)
 Steps:

1. Install Salesforce **Data Loader** (if not already)

2. Login using your Salesforce credentials

3. Select **Insert / Update / Upsert**

4. Map CSV columns to Salesforce fields

5. Run operation → Verify success and errors

Useful if you have bulk patent or inventor data, but for this project, **Data Import Wizard is sufficient**.

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3. Duplicate Rules

Purpose: Prevent duplicate records (like same patent being filed twice).
 Steps:

1. Setup → Quick Find → **Duplicate Rules** → New Rule

2. Object: Patent

3. Define Matching Rule (e.g., Patent Title + Inventor combination)

4. Action: Alert user or block duplicate → Save & Activate

   This ensures clean data for IP management.

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4. Data Export & Backup

Purpose: Export Salesforce data for backup or reporting purposes.
 Steps:

1. Setup → Data → **Data Export** → Export Now or Schedule Export

2. Select objects: Patent, Inventor

3. Choose **Include all data / attachments** → Start Export

   Important to ensure your patent data is safely backed up.

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5. Change Sets

Purpose: Deploy configuration changes from Sandbox → Production.
 Steps:

1. Create a **Sandbox** (if not already)

2. Setup → Outbound Change Sets → New → Add Components

3. Include: Objects, Flows, LWC, Apex classes, Approval Processes

4. Upload to Production → Validate & Deploy

Necessary if you want to move your project from Sandbox to a real org.

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6. Unmanaged vs Managed Packages

Not Required for this project

- Reason: Packages are for distributing apps across orgs. In this project, we are building **custom app only in our org**, so packaging is unnecessary.

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7. ANT Migration Tool

Not Required for this project

- Reason: ANT is used for complex deployments or CI/CD pipelines. For this one-week project, **Change Sets or VS Code deployments are sufficient**.

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8. VS Code & SFDX

Purpose: Deploy Lightning Web Components, Apex, and metadata from local environment to Salesforce org.
 Steps:

1. Install **VS Code** + Salesforce Extensions

2. Create Salesforce DX Project: `sfdx force:project:create -n IPPatentProject`

3. Authorize Org: `sfdx force:auth:web:login -d -a MyOrg`

Deploy Components:

sfdx force:source:deploy -p force-app/main/default

4.

Retrieve / Pull changes from org:

sfdx force:source:pull

5.

Best for LWC, Apex, and metadata deployment.