**Phase 8: Data Management & Deployment**

1. **Data Import Wizard**

The **Data Import Wizard** is a simple Salesforce tool for importing small to medium-sized datasets (up to 50,000 records). It supports standard objects (like Accounts, Contacts, Leads) and custom objects. Users can map fields, avoid duplicates, and load data through a step-by-step guided interface.

1. **Data Loader**

**Data Loader** is a client application for bulk data operations. It supports importing, updating, deleting, and exporting up to **5 million records**. It is more powerful than the Import Wizard and is often used by admins and developers for mass data management.

1. **Duplicate Rules**

Duplicate Rules help maintain **data quality** by preventing or alerting users when duplicate records are created. Salesforce uses **matching rules** to identify duplicates based on specific fields (like email, phone, or custom logic). They can block duplicates or allow them with warnings.

1. **Data Export & Backup**

Salesforce provides **Data Export Service** (manual or scheduled) to back up all org data in .CSV files. Regular exports are essential for disaster recovery and compliance. Many organizations also integrate third-party backup solutions for real-time data protection.

1. **Change Sets**

**Change Sets** allow admins to migrate metadata (custom objects, fields, validation rules, flows, etc.) between Salesforce environments (e.g., Sandbox → Production). They are point-and-click, but limited to connected orgs and can only deploy supported metadata.

1. **Unmanaged vs Managed Packages**

* **Unmanaged Packages:** Used for one-time distribution of metadata, mostly for open-source projects. The recipient can modify the contents.
* **Managed Packages**: Used by ISVs (Independent Software Vendors) for distributing apps via AppExchange. They are versioned, upgradeable, and protect intellectual property.

1. **ANT Migration Tool**

The **ANT Migration Tool** is a command-line utility that uses Salesforce Metadata API for retrieving and deploying metadata between environments. It supports scripting and automation, making it ideal for CI/CD pipelines.

1. **VS Code & SFDX**

* **Visual Studio Code (VS Code)** is the recommended IDE for Salesforce development, with Salesforce extensions installed.
* **Salesforce DX (SFDX)** is a powerful CLI that supports modern DevOps practices such as source-driven development, scratch orgs, continuous integration, and version control (Git). Together, VS Code + SFDX enable advanced deployment, testing, and automation workflows.