

# Phase 8: Data Management and Deployment

Phase 8 of the TalentBridge project focuses on the **structured management of data** and the **deployment of the application to the production environment**, ensuring a smooth transition from development to live usage.

## Data Management:

- **Sample Data Upload:** Initial data for Jobs, Candidates, Applications, and Users was prepared in **CSV files**. Using Salesforce's **Data Import Wizard** and **Data Loader**, this data was uploaded into the system.
- **Field Mapping and Validation:** During the import process, fields in the CSV were carefully mapped to the corresponding Salesforce objects and fields, ensuring data integrity. Validation rules were enforced to maintain consistency, such as mandatory fields for candidate email, job title, and application stage.
- **Duplicate Management:** Duplicate detection rules were applied to avoid creating multiple records for the same candidate or job.
- **Data Quality Checks:** Post-upload, all records were reviewed to confirm accuracy, proper relationships between objects (e.g., linking candidates to applications and jobs), and correct picklist values.

## Deployment Using Salesforce DX:

- **Version Control and CLI Deployment:** Salesforce DX CLI was used to retrieve metadata from the development org, manage source in version control, and deploy to the **production environment**.
- **Validation Before Deployment:** The deployment was executed in **"validation mode"** to ensure there were no compilation errors, missing dependencies, or failing Apex tests. This helped identify issues without affecting production data.
- **Apex Tests and Code Coverage:** All Apex classes and triggers were tested to achieve the required code coverage, ensuring that business logic and automated notifications work as expected in the production environment.

- **Final Deployment:** After successful validation and testing, the changes were deployed to production, including all custom objects, Apex classes, triggers, Lightning components, and Flows.

#### **Best Practices Followed:**

- Ensured proper **sandbox-to-production deployment workflow** using Salesforce DX.
- Maintained **data integrity** through mapping, validation, and duplicate management.
- Verified **automated processes** such as triggers, email notifications, and Flows after deployment.
- Documented the deployment steps and **rollback plan** in case of unexpected issues.

This phase ensures that **all data is clean, consistent, and accurately represented** in the production environment, and that the TalentBridge application is fully functional and ready for HR and candidate use.