Phase 8: Data Management & Deployment

Goal: To manage data (import, backup, avoid duplicates) and move the Parking Slot Reservation System from the **Sandbox (development)** environment to the **Production** environment in Salesforce.

Step 1: Importing Data with Data Import Wizard

- Opened **Data Import Wizard** in Setup.

- Imported **sample parking slot records** (Slot No, Location, Type, Status).

- Used CSV files to map columns to Salesforce fields.

- Validated that all records were correctly imported and displayed in Parking Slots tab.

Outcome: Initial demo data successfully imported for testing.

Step 2: Bulk Data Upload with Data Loader

- Installed **Salesforce Data Loader** for handling large data sets.

- Imported bulk **Reservation records** for employees.

- Used CSV with Employee ID, Slot ID, Start Time, End Time, Status.

- Verified by running a report that all reservations were correctly loaded.

Outcome: Large volumes of reservations uploaded efficiently.

Step 3: Duplicate Management

- Configured **Duplicate Rules** for Parking Slots:

  o Prevented multiple records with the same Slot Number.

- Configured **Matching Rules** for Employee reservations to avoid accidental duplicates.

Outcome: Data quality maintained by avoiding duplicate slot entries.

Step 4: Backup & Export Strategy

- Scheduled **Weekly Data Export Service** in Salesforce.

- Exported Parking Slot and Reservation objects to encrypted .zip files.

- Saved backups to external secure storage.

Outcome: Regular data backup ensures recovery in case of data loss.

Step 5: Sandbox → Production Migration using Change Sets

- Created **Outbound Change Set** in Sandbox.

- Added components: Objects (Parking Slot, Reservation), Apex Classes, Triggers, Flows, LWCs.

- Uploaded Change Set to **Production Org**.

- Validated and deployed successfully.

Outcome: All system configurations and customizations moved from Sandbox to Production.

Step 6: Managed vs Unmanaged Packages

- Created **Unmanaged Package** for internal learning and development.

- Learned how **Managed Package** can be used for publishing to AppExchange (optional for future).

Outcome: System packaged for easier sharing and reusability.

Step 7: ANT Migration Tool (Advanced)

- Installed **Salesforce ANT Migration Tool** for command-line deployments.

- Prepared package.xml file with metadata.

- Used ANT commands to deploy code/config from Sandbox to Production.

Outcome: Alternative automated way of deployment tested successfully.

Step 8: VS Code & Salesforce DX (SFDX)

- Installed **VS Code with Salesforce Extensions**.

- Used **SFDX CLI commands** to:

  - Pull metadata from Sandbox.

  - Push changes to Production.

  - Track source control in Git.

Outcome: Developer-friendly deployment with version control support.

Final Output of Phase 8

✔ All **Parking Slot & Reservation data imported** successfully.
✔ **Duplicate rules** ensure data accuracy.
✔ **Weekly data backups** scheduled for safety.
✔ System configurations **migrated from Sandbox → Production** using Change Sets.
✔ **Advanced deployment tools (ANT & SFDX)** tested for scalability.