Field Service WorkOrderOptimization

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Abstract—The Field Service Work Order Optimization System streamlines operations for a company providing installations and repairs. Utilizing a robust database, the system efficiently matches work orders with skilled technicians based on technicians location, availibility, and skills. The system employs a prioritization algorithm, focusing on assigning tasks to technician. Automated communication keeps technicians informed, while analytics offer insights for continuous improvement. Overall, this solution maximizes efficiency, reduces operational costs, and improves customer satisfaction in the dynamic realm of field service operations.

# Developer Account Creation & Activation

In this section, we will create a Salesforce developer account and activate it by following a simple sign-up process.

**1.1 Creating Developer Account:**

1. Navigate to [Salesforce Developer Signup](https://developer.salesforce.com/signup).
2. Fill in the form with the required details:
   * First name & last name
   * Email (a valid email address)
   * Role: Developer
   * Company: College Name
   * Country: India
   * Postal Code
   * Username (in the format username@organization.com)
3. Submit the form by clicking **Sign Me Up**.

**1.2 Account Activation:**

1. Check the email inbox used during sign-up for a verification email from Salesforce.
2. Click on **Verify Account**.
3. Set a password and answer the security question.
4. Once the account is verified, you will be redirected to the Salesforce Setup page.

# Creating Objects in Salesforce

In this section, we will create three custom objects—Technician, WorkOrder, and Assignment—to store and manage relevant data in Salesforce.

**2.1 Create Technician Object:**

1. Download and edit the Technician spreadsheet.
2. Navigate to Salesforce **Setup** → **Object Manager** → **Create** → **Custom Object from Spreadsheet**.
3. Upload the spreadsheet, set **Technician ID** as the Record Name, and validate field types.
4. Finalize and save the Technician object.

**2.2 Create WorkOrder Object:**

1. Repeat the process for the WorkOrder spreadsheet.
2. Ensure proper field mapping and finalize creation.

**2.3 Create Assignment Object:**

1. Navigate to **Object Manager** → **Create** → **Custom Object**.
2. Configure the following:
   * Label Name: **Assignment**
   * Record Name Label: **Assignment ID**
   * Auto Number Format: **A-{0000}**, Starting Number: **1**
3. Enable additional features (reports and search).
4. Save the object.

# Custom Tabs in Salesforce

This section explains how to create a custom tab for the Assignment object in Salesforce. Tabs provide a user-friendly way to access and manage object data.

**3.1 Creating a Custom Tab for Assignment:**

1. Navigate to **Setup** → **Tabs**.
2. Click **New** under the **Custom Object Tabs** section.
3. Select **Assignment** as the object and choose a tab style.
4. On the **Add to Profiles** page, retain default settings and click **Next**.
5. On the **Add to Custom App** page, keep default settings and click **Next**.
6. Click **Save** to finalize the tab creation.

**Note:** Tabs for **WorkOrder** and **Technician** objects are created automatically when the objects are created.

# The Lightning App

This section guides the creation of a Lightning App to manage and streamline navigation across custom objects and other relevant items for the Field Service WorkOrder Optimization system.

**4.1 Steps to Create a Lightning App:**

1. **Access App Manager:**
   * Navigate to **Setup** → **App Manager** → **New Lightning App**.
2. **Provide App Details:**
   * App Name: Field Service WorkOrder Optimization
   * Developer Name: Auto-populated
   * Description: "An app to optimize field service operations by streamlining work orders, technicians, and assignments."
   * Image: Optional
   * Primary Color Hex Value: Default
3. **Configure App Options:**
   * Keep default settings.
4. **Add Navigation Items:**
   * Items to include: **Home, WorkOrder, Technician, Assignment, Reports, Dashboard**.
   * Ensure proper mapping for custom objects (e.g., **Asset** for custom object).
5. **Add User Profiles:**
   * Assign the **System Administrator** profile to the app.
6. **Save and Finalize:**
   * Click **Save & Finish** to complete the app creation.