

## **FINAL PROJECT REPORT**

**Project Title:** Field Service Work Order Optimization

**College Name:** GATES Institute Of Technology

### **Team Details**

Team ID : LTVIP2025TMID31031

Team Size : 4

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## **1. INTRODUCTION**

### **Optimizing Field Service Operations through Work Order Management**

In today's fast-paced world, field service organizations are expected to deliver efficient, timely, and accountable services. However, many organizations still rely on outdated, manual processes for managing their daily operations. These challenges include inconsistent work order management, error-prone scheduling, and the lack of centralized visibility.

#### **1.1 Project Overview – Transforming Field Service Operations**

Our project aims to transform field service operations by implementing a centralized work order management system. This system will enable organizations to streamline their operations, automate work order assignment and scheduling, and provide real-time visibility into work order status and technician productivity.

#### **Challenges in Current Field Service Operations:**

- Manual data entry and scheduling
- Lack of real-time visibility into work orders and technician assignments
- Inefficient routing and scheduling
- Poor customer satisfaction due to delays and lack of communication

## **1.2 Purpose – Solving Operational Inefficiencies in Field Service Operations**

The purpose of this project is to address the real-world problems faced by field service organizations due to fragmented workflows, manual data entry, and inefficient work order management. By implementing a centralized work order management system, the project aims to:

- Streamline operations through automated work order assignment and scheduling
- Improve data accuracy using built-in validation rules and relationships
- Enable informed decision-making through dynamic reporting and analytics tools
- Create a system that is flexible, user-friendly, and scalable for future growth and evolving business needs

## **2. IDEATION PHASE**

In our project titled: Field Service WorkOrder Optimization

The ideation phase for the Field Service Work Order Optimization System involves identifying key challenges in field service operations, such as inefficient work order assignment, lack of real-time communication, and limited visibility into technician schedules and skills. Through collaborative brainstorming and analysis, the team generates ideas to leverage technology, such as robust databases, prioritization algorithms, and automated communication, to streamline operations, maximize efficiency, reduce costs, and improve customer satisfaction.

### **2.1 Brainstorming & Idea Prioritization Template:**

#### **Step 1: Team Gathering, Collaboration, and Problem Statement**

Our team convened with the goal of identifying inefficiencies in Assemble a cross-functional team field technicians, operations managers, customer service reps, Salesforce admins, developers- Through collaborative meetings, online whiteboards, and use-case discussions, we collectively explored Collaborate through brainstorming sessions to identify pain points and generate ideas in field service work order management. We reviewed real-world operations and identified that

- Inefficient work order assignment
- lack of real-time updates like work order status, technician location
- Work Order Management
- Inventory Management

After several discussions, we clearly defined the core issue:

## Problem Statement:

Identify key challenges and opportunities in field service work order management Define a clear and concise problem statement, such as Inefficient work order assignment and scheduling lead to delayed responses and decreased customer satisfaction. Lack of real-time updates and communication result in poor visibility into field service operations. Prioritize the problem statement based on impact, feasibility, and alignment with business goals.

## Step 2: Brainstorm, Idea Listing, and Grouping:

The team conducts brainstorming sessions to generate a wide range of ideas for optimizing field service work order management, documenting all ideas without worrying about feasibility. Ideas are then listed and grouped into categories such as Automation, Real-time Updates, Communication, and Analytics & Reporting, allowing for a structured approach to idea evaluation and development.

- **Automation:** Automate work order assignment, scheduling, and notifications.
- **Real-time Updates:** Provide real-time updates on work order status, technician location, and arrival times.
- **Communication:** Improve communication between field technicians, customers, and operations teams.
- **Analytics and Reporting:** Generate reports and analytics to optimize field service operations.

From around 25–30 ideas, we grouped and shortlisted the ones that aligned directly with operational efficiency.

## Step 3: Idea Prioritization

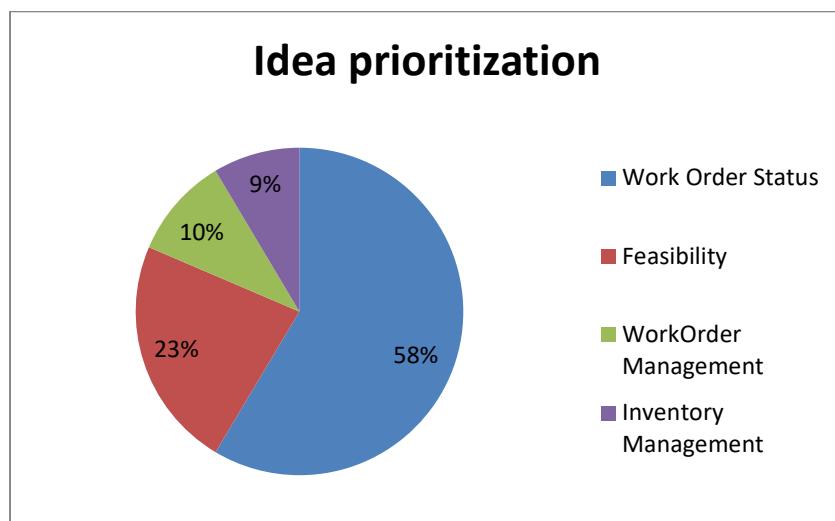
Each grouped idea was evaluated and prioritized ideas generated during brainstorming sessions

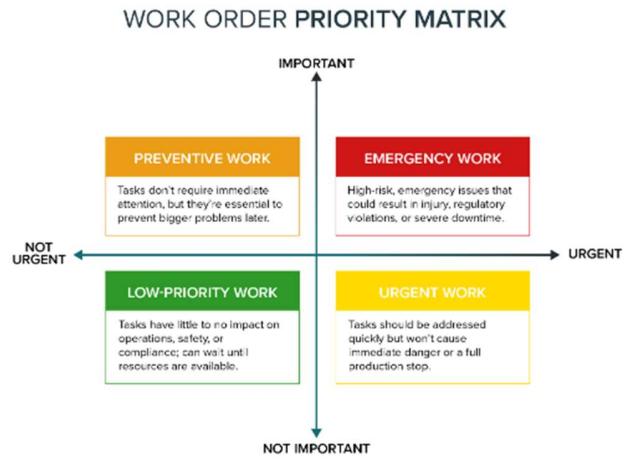
- **Impact on Field Service Operations:** How much will the idea improve field service operations?
- **Feasibility and Practicality:** Is the idea realistic and achievable?
- **Alignment with Business Goals:** Does the idea support business objectives?
- **Potential Return on Investment (ROI):** Will the idea generate significant returns?

**Goal:** Identify top-priority ideas that can drive significant improvements in field service work order management.

### Top-Priority Features:

- **Automated work order assignment:** "Assign work order to nearest available technician."
- **Real-time tracking:** "Track technician's location and estimated arrival time."
- **Mobile app:** "Technician updates work order status from mobile app."
- **Customer notifications:** "Send SMS to customer when work order is completed."
- **Reporting and analytics:** "Generate report on average work order completion time."

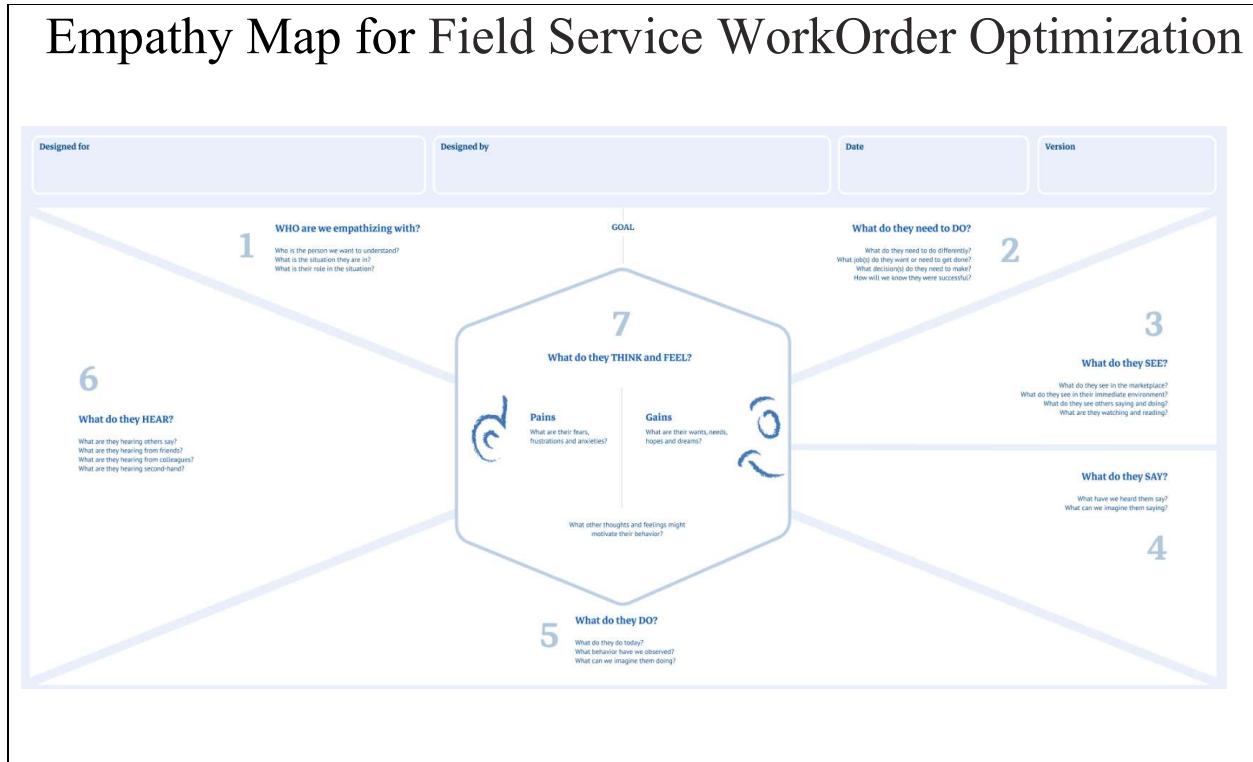




## 2.2 Empathy Mapping- Empathize & Discover:

### Empathy Map Canvas

An empathy map for field service work order optimization helps understand the perspectives of different stakeholders involved in the process, such as technicians, dispatchers, and customers.



By stepping into the user's shoes, we ensured that our Salesforce Field Service WorkOrder Optimization features (formulas, flows, triggers, dashboards) directly addressed their key frustrations.

## **2.3 Define the Problem Statements:**

### Customer Problem Statement Template

Field service operations are plagued by manual processes, disconnected systems, and lack of real-time visibility, resulting in inefficiencies, errors, and lost revenue. A centralized platform is needed to digitize workflows, ensure data accuracy, and provide actionable insights to optimize field service management, thereby enhancing efficiency, reducing errors, and improving overall performance.

### Customer Problem Statement for field service

	I am...	Customer 1
	I am trying to ...	optimize field service operations.
	But ...	manual processes and disconnected systems hinder me.
	Because ...	of inefficiencies and errors, I lose revenue and productivity.
	Which makes me feel ...	frustrated and overwhelmed.

### **3.REQUIREMENT ANALYSIS**

The Requirement phase focus is to collect, organize, and validate requirements to meet the needs of field service technicians, managers, and customers. Key requirements include work order management, real-time tracking, mobile app access, customer notifications, reporting and analytics, integration with existing systems, and optimized scheduling. User journeys involve technicians receiving and completing work orders, managers monitoring performance and optimizing scheduling, and customers receiving notifications. The system requires a user-friendly interface, real-time data updates, scalable architecture, and robust reporting capabilities to improve field service efficiency and effectiveness.

#### **3.1 Customer Journey Map-Understanding User Experience Flow**

**Purpose:** The Customer map visualizes the daily interactions of field service technicians, managers, and customers with the system, highlighting key actions, pain points, and opportunities for improvement. It reveals challenges such as manual data entry, delayed notifications, and inefficient scheduling, and identifies opportunities for automation, real-time updates, and optimized routing to improve efficiency, productivity, and customer satisfaction, guiding system design from a real-world usage perspective.

## Journey steps:

<b>1</b>	<b>Work Order Receipt</b>	Technician receives work order assignment
<b>2</b>	Route Optimization	Technician navigates to customer location
<b>3</b>	On-Site Service	Technician performs service or repair
<b>4</b>	Customer Notification	Customer receives notification of work order completion
<b>5</b>	Feedback Collection	Customer provides feedback on service
<b>6</b>	Reporting and Review	Manager reviews work order completion and technician performance
<b>7</b>	Status Update	Technician updates work order status

This journey helped prioritize features like formula fields, validation rules, and real-time dashboards in our object and flow design

## **3.2 Data Flow Diagram:**

**Purpose:** Mapping Information Flow Between Objects

Data Flow Diagram (DFD) for Field Service Workorder optimization: The DFD models how information moves between system components, structuring relationships between:

Work Order, Technician, Customer, Assignment

❖ Level 1 DFD Overview:

1. Admin/Manager Inputs:

- Creates work orders
- Assigns technicians to work orders
- Updates work order status

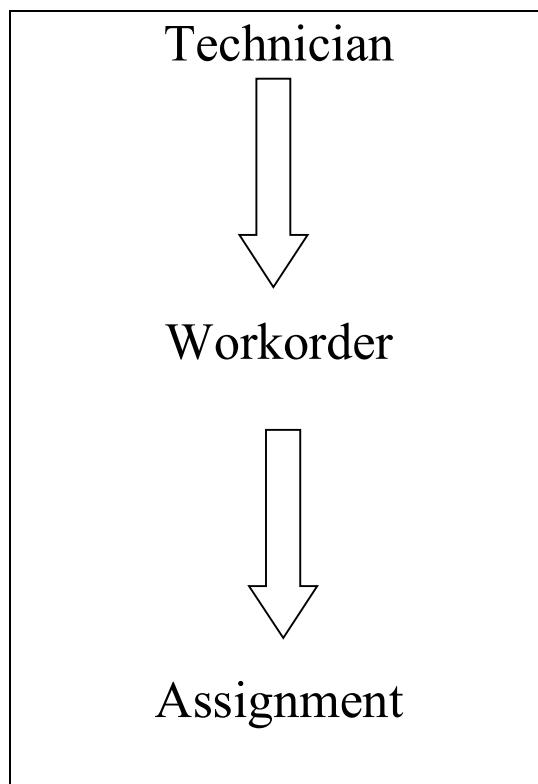
2. System Logic:

- Validates technician availability and skills
- Calculates work order priority and scheduling
- Fetches customer information and work order history

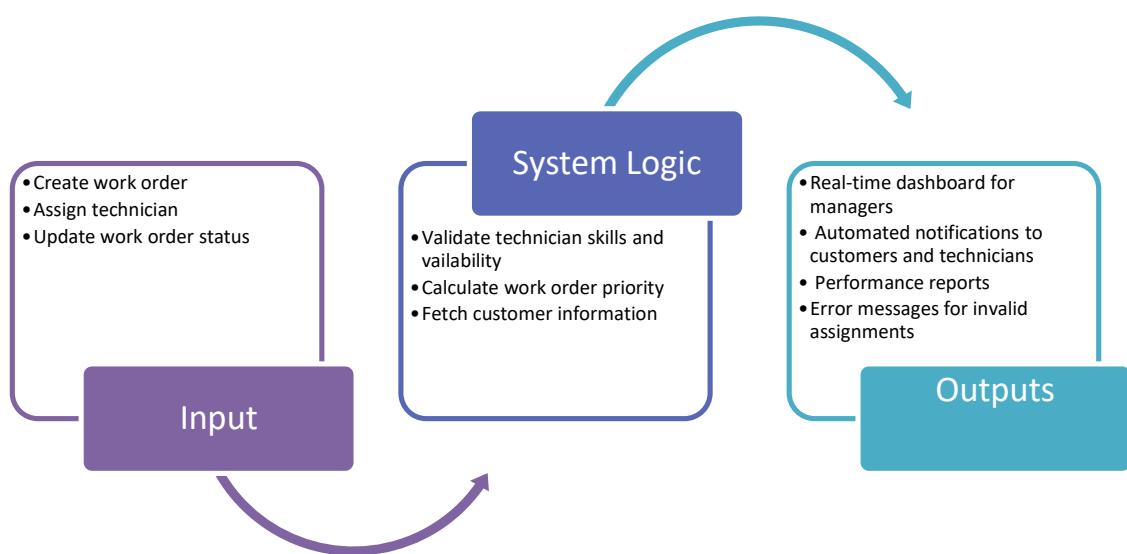
3. Outputs:

- Real-time dashboards for managers to track work orders and technician performance
- Automated notifications to customers and technicians
- Performance insights via reports for managers
- Error messages for invalid work order assignments or technician scheduling conflicts

## Objects involved in field service workorder optimization



## DFD for field service workorder optimization



## User stories: -

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority
Optimizer	Work Order optimization	WO-1	As a manager, I can create and assign work orders to technicians so that I can track and manage field service requests efficiently.	<ul style="list-style-type: none"> <li>• Work orders can be created with relevant details (e.g., customer info, equipment, issue description)</li> <li>• Work orders can be assigned to specific technicians</li> <li>• - Work orders are displayed on the dashboard for tracking and management</li> </ul>	High
Technician	Work Order Assignment	WO-2	As a technician,	<ul style="list-style-type: none"> <li>• Technicians receive</li> </ul>	High

			I can receive work order assignments and updates on my mobile device so that I can stay informed and manage my schedule.	<p>notifications when assigned to a new work order</p> <ul style="list-style-type: none"> <li>• Work order details are displayed on the mobile device</li> <li>• - Technicians can update work order status and capture customer signatures digitally</li> </ul>	
Assignment	Work Order Tracking	WO-3	As a customer, I can track the status of my work order so that I can stay informed and plan accordingly .	<ul style="list-style-type: none"> <li>• Customers receive notifications when work orders are scheduled, in progress, or completed</li> <li>• Customers can view work order status and</li> </ul>	Medium

				details online	
Administrator	Reporting and Analytics	RA-1	As an administrator, I can generate reports on work order performance and technician productivity so that I can analyze and improve field service operations.	<ul style="list-style-type: none"> <li>Reports can be generated on work order completion rates, technician performance, and customer satisfaction</li> <li>Reports are displayed in a clear and actionable format</li> </ul>	High

### **3.3 Solution Requirements**

What the Field service workorder optimization Must Do

➤ **Functional Requirements:**

- Create custom objects for:
  - Work Order
  - Technician
  - Assignment
- Establish relationships using lookup and formula fields
- Validate technician skills and availability using Apex Triggers

- Automate work order assignment and scheduling via Triggers
- Support performance dashboards and summary reports

➤ **Non-Functional Requirements:**

- User-friendly interface for technicians and managers
- Real-time field-level validation for work order and technician data
- Centralized database with accurate relationships between objects
- Scalable and secure architecture for future growth
- Fast and responsive performance for mobile and web applications

**Functional Requirements:-**

<b>FR No.</b>	<b>Functional Requirement (Epic)</b>	<b>Sub Requirement (Story / Sub-Task)</b>
FR-1	User Registration	Registration through Form, Registration through Gmail, Registration through LinkedIn
FR-2	User Confirmation	Confirmation via Email, Confirmation via OTP
FR-3	Work Order optimization	Automated Work Order Assignment, Real-Time

		Scheduling, Route Optimization
FR-4	Technician Management	Technician Profile Management, Technician Assignment, Technician Availability
FR-5	Customer Management	Customer Profile Management, Customer Communication, Customer Feedback
FR-6	Reporting and Analytics	Work Order Reports, Technician Performance Reports, Customer Satisfaction Reports
FR-7	Security	User Authentication, Authorization, Data Encryption

## **Non-Functional Requirements:-**

<b>FR No.</b>	<b>Non-Functional Requirement</b>	<b>Description</b>
NFR-1	<b>Usability</b>	User-friendly, intuitive, and easy to navigate for managers, technicians, and customers, with minimal training required.
NFR-2	<b>Security</b>	Ensure confidentiality, integrity, and availability of data, with secure authentication, authorization, and data encryption.
NFR-3	<b>Reliability</b>	Dependable, consistent, and fault-tolerant, with minimal downtime and errors, ensuring high uptime and data accuracy.
NFR-4	<b>Performance</b>	Respond quickly to user interactions, with fast page loading times, efficient data processing, and minimal latency.
NFR-5	<b>Availability</b>	Accessible and usable at all times, with high uptime and minimal scheduled maintenance, ensuring business continuity.
NFR-6	<b>Scalability</b>	Handle increased traffic, data volume, and user growth, with flexible architecture and scalable infrastructure.

### **3.4 Technology Stack**

#### Tools & Platforms Used for CRM Implementation

Category	Technology Used	Description
Platform	Salesforce Lightning	Used to build custom field service work order optimization using standard & custom objects
Automation	Flows & Validation Rules	Automate fare fetching and restrict invalid data
Custom Logic	Apex Triggers & Classes	Used to validate Work Order ID, Technician ID
Reports & Dashboards	Salesforce Reports	To analyze workorder status reports and dashboards
UI/UX	Lightning App Builder	For creating a unified app view for field service workorder optimization

#### **Summary**

This Requirement Analysis Phase helped ensure that all field service workorder optimization features were grounded in user pain points, supported by data structures, and enabled by the right technologies. It directly shaped how we approached object modeling, data automation, UI design, and performance reporting in Salesforce.

## **4. Project Design Phase**

The Project Design Phase for Field Service Work Order Optimization defines the logical, technical, and functional foundation of the solution. It ensures that the proposed solution not only solves the right problems but is also scalable, maintainable, and aligned with industry best practices.

### **4.1 Problem–Solution Fit:**

Problem Recap:

Inefficient field service operations, including manual data entry, lack of real-time visibility, and poor scheduling.

- Manual data entry and scheduling
- Lack of real-time visibility into work orders and technician assignments
- Inefficient routing and scheduling
- Difficulty in tracking work order status and customer satisfaction

### **Does the Proposed Solution Fit?**

Yes. The Salesforce field service solution:

- Introduces object-level control for **Workorder**, **Assignment**, **Technician**
- Enables automated assignment retrieval through **Flows**
- Validates Workorder id and assignment id using **Apex Triggers**
- Summarizes performance using **Reports and Dashboards**
- Uses **formula fields** to reduce calculation errors
- Creates centralized views using **Lightning App Builder**

Thus, it directly fits the core operational pain points of field service workflows.

## **4.2 Proposed solution**

Our proposed field service workorder optimization application is designed to digitize and streamline Field service operations using Salesforce's declarative and programmatic capabilities.

Key Functional Features:

- **Custom Objects:**

- Workorder, technician, assignment

- **Automation & Validation:**

- Role verification (workorder ID/technician ID) via Apex Triggers

- Input control via Validation Rules

- **Formula Fields for Efficiency:**

<ul style="list-style-type: none"><li>• Technician ID</li><li>• Assignment Date</li><li>• Completion Date</li><li>• date</li></ul>	<p>Lookup (Technician) Formula: return type: Date (WorkOrder_ID__r.Date__c)</p> <p>Formula: return type: Date IF (ISPICKVAL(WorkOrder_ID__r.Status__c , 'Resolved'), WorkOrder_ID__r.LastModifiedDate, NULL)</p> <p>CreatedDate</p>
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- **UI & Navigation:**

- Field service workorder optimization App using Lightning App Builder
  - Tabs for all custom objects
  - Page layouts designed by object and role

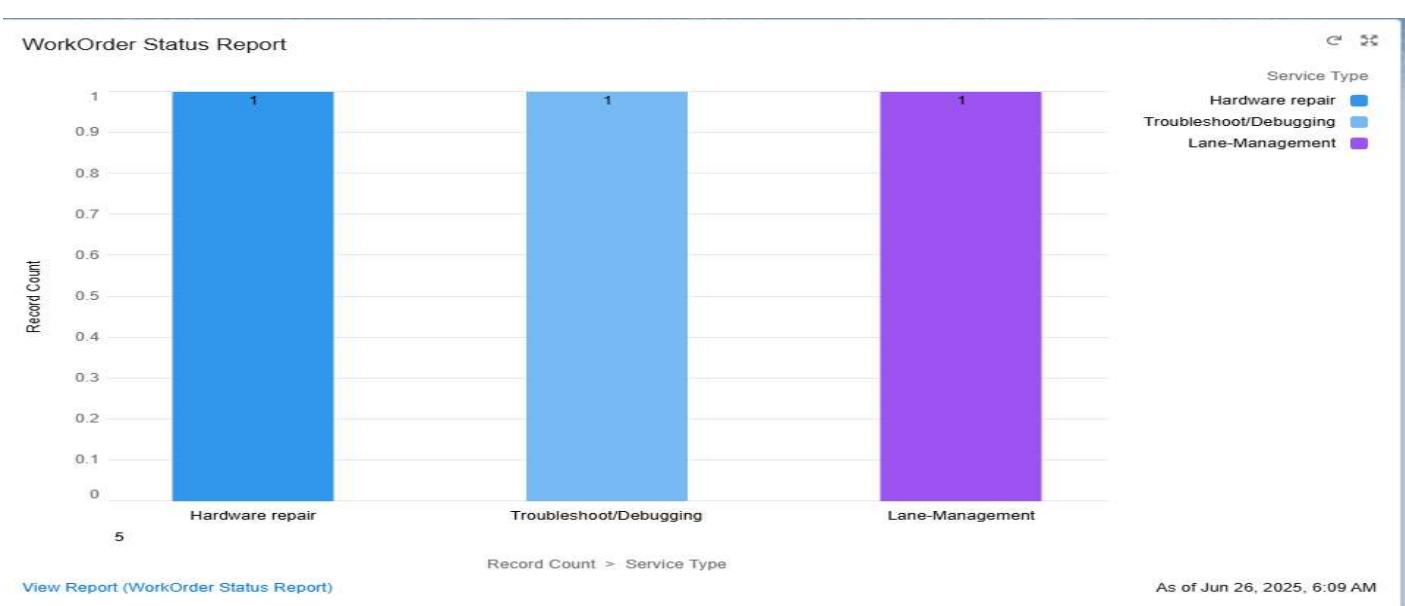
## ● Reports and Dashboards:

- Work Orders Status Reports.
- Technician and Assignment Details Reports.
- Work Orders Status Reports Dashboards representing vertical bar chart
- Technician report representing using table chart

New Technician Report

Technician: Technician ID ↑	Name	Email	Phone	Location
T-0001	Raghu	<a href="mailto:example@gmail.com">example@gmail.com</a>	7892341560	Hyderabad
T-0002	Raghav	<a href="mailto:example@gmail.com">example@gmail.com</a>	7892341560	Pune
T-0003	Shyam	<a href="mailto:example@gmail.com">example@gmail.com</a>	7892341560	Nasik
T-0004	Masthan	<a href="mailto:example@gmail.com">example@gmail.com</a>	7892341560	Warangal
T-0005	Ramesh	<a href="mailto:example@gmail.com">example@gmail.com</a>	7892341560	Nanded

[View Report \(New Technician Report\)](#) As of Jun 26, 2025, 2:38 AM



## **4.3 Solution Architecture:-**

### **Object Relationship Overview:**

<b>Object</b>	<b>Fields/Features</b>
Work Order	WorkorderID, Email, priority, service type, location, status, record count
Assignment	Assignmentdate, Assignment id, completionid, name, phone, email, location, skill
Technician	name, phone, email, location, skill, Technician id

### **Lookups:**

- Technician ID
- WorkOrder ID
- Assignment Date

The screenshot shows the Salesforce Object Manager interface for the 'Assignment' object. At the top, there are navigation links: Setup, Home, and Object Manager. Below that, the path is SETUP > OBJECT MANAGER. The main title is 'Assignment'. On the left, there's a sidebar with various settings like Details, Fields & Relationships, Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, Related Lookup Filters, Search Layouts, List View Button Layout, Restriction Rules, Scoping Rules, Object Access, Triggers, and Flow Triggers.

The central area is titled 'Fields & Relationships' and shows 12 items, sorted by Field Label. It includes columns for FIELD LABEL, FIELD NAME, DATA TYPE, CONTROLLING FIELD, and INDEXED. The fields listed are:

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Assignment Date	Assignment_c	Lookup(Assignment)		✓
Assignment ID	Name	Auto Number		✓
AssignmentDate	AssignmentDate_c	Formula (Date)		✓
CompletionDate	CompletionDate_c	Formula (Date)		✓
Created By	CreatedById	Lookup(User)		✓
Date	Date_c	Formula (Date)		✓
Last Modified By	LastModifiedById	Lookup(User)		✓
Owner	OwnerId	Lookup(User,Group)		✓
Technician ID	Technician_ID_c	Lookup(Technician)		✓
TechnicianID	TechnicianID_c	Lookup(Technician)		✓
WorkOrder ID	WorkOrder_c	Lookup(WorkOrder)		✓
WorkOrder ID	WorkOrder_ID_c	Lookup(WorkOrder)		✓

## **Formulas:**

- Formula: return type : Date  
(WorkOrder\_ID\_\_r.Date\_\_c)
- Formula: return type : Date  
IF(ISPICKVAL( WorkOrder\_ID\_\_r.Status\_\_c ,  
'Resolved'), WorkOrder\_ID\_\_r.LastModifiedDate ,  
NULL)
- CreatedDate

## **Automation:**

- Triggers for id validation
- Reports & dashboards for output

## **Summary:**

The Project Design Phase ensured that field service workorder optimization not only met the users' needs but also followed Salesforce best practices in object modeling, validation, automation, and user experience. This clear blueprint guided our execution in upcoming development and configuration phases.

## **5. PROJECT PLANNING PHASE**

The Project Planning Phase converts high-level milestones into actionable sprints aligned with the internship timeline. This helps streamline delivery and keeps all team members aligned with progress, ownership, and deadlines. Structured task breakdown and time-bound execution planning ensures delivery efficiency.

Sprint	Functional Requirement (Epic)	Task (Mapped from Milestone)	Priority	Team Members
<b>Sprint-1</b>	Developer Setup & Basic Objects	Creating Developer Account & Activating Org	High	Member 1
<b>Sprint-1</b>	Custom Object Creation	Creating custom Objects: Technician, workorder, Assignment	High	Member 1, 2
<b>Sprint-2</b>	UI Tabs & App Creation	Creating Tabs & Lightning App	High	Member 3
<b>Sprint-2</b>	Field Configuration	Creating fields, formula fields, picklists, relationships	Medium	Member 1, 3
<b>Sprint-3</b>	Profiles, users	Creating profiles, users	High	Member 2, 4
<b>Sprint-3</b>	Flows & Triggers	Automations using Flows and Apex Triggers	High	Member 1,2
<b>Sprint-4</b>	Reports & Dashboards	Generate Reports and create Dashboards	High	Member 4
<b>Sprint-4</b>	Final Integration & Conclusion	Final Review, Testing, and Functional Summary	Medium	All Members

# Project Tracker & Sprint Timeline

**Duration:** Each sprint is 6 days, aligned with your **June 2025 internship schedule**

Sprint	Duration	Sprint Start Date	Sprint End Date	Sprint Release Date
<b>Sprint-1</b>	<b>6 Days</b>	<b>03 Jun 2025</b>	<b>08 Jun 2025</b>	<b>08 Jun 2025</b>
<b>Sprint-2</b>	<b>6 Days</b>	<b>09 Jun 2025</b>	<b>14 Jun 2025</b>	<b>14 Jun 2025</b>
<b>Sprint-3</b>	<b>6 Days</b>	<b>15 Jun 2025</b>	<b>20 Jun 2025</b>	<b>20 Jun 2025</b>
<b>Sprint-4</b>	<b>6 Days</b>	<b>21 Jun 2025</b>	<b>21 Jun 2025</b>	<b>26 Jun 2025</b>

## Summary

The Project Planning Phase allowed our team to convert 09 major milestones into 4 streamlined sprints with assigned priorities and contributors. By aligning sprints with real internship dates and breaking tasks down into functional chunks, we ensured steady progress and simplified execution.

## **6.PROJECT EXECUTABLE FILES**

This phase outlines the actual Salesforce configurations, data, and outcomes used and generated during the execution of our project: “Field Service Work Order Optimization. “It ensures that all key project elements-objects, data, and output-are traceable and reusable for future reference or assessment. Where practical configurations and working modules of the project are documented for clarity, replication, and validation.

### **1. Project Files**

#### **Project Executable Files**

The following project files were executed in the Salesforce Developer Org:

Milestone 1: Developer Account Setup

Milestone 2: Object Creation

Milestone 3: Tab Creation

Milestone 4: Lightning App Setup

Milestone 5: Field & Relationship

Milestone 6: Profiles

Milestone 7: Users

Milestone 8: Apex Trigger

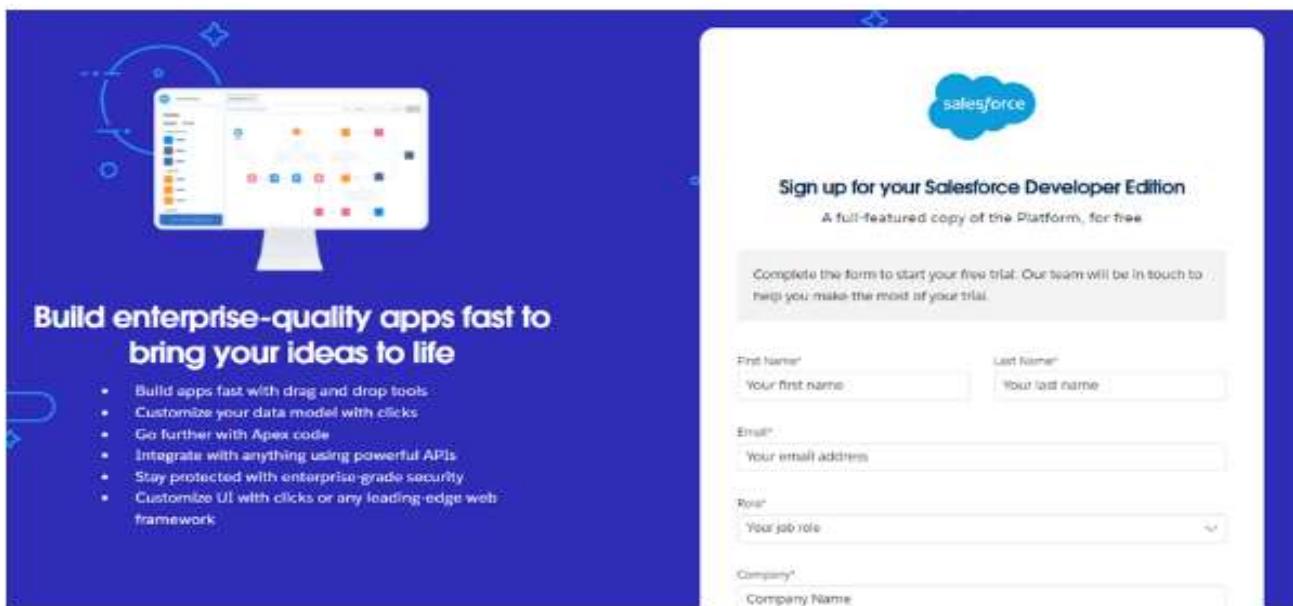
Milestone 9: Reports and Dashboards

List of Milestone Tasks with Supporting Screenshots and Descriptions

#### **Milestone 1: Developer Account Setup**

- Created and activated a Salesforce Developer Org.
- Setup the base environment for Field Service Work Order optimization development.
- Verified access to Object Manager, Users, Profiles, App Builder.

# OUTPUT SCREENSHOT:-



The screenshot shows the Salesforce Lightning Home page for a user named SHAIK ATHIYA. The top navigation bar includes Sales, Home, Opportunities, Leads, Tasks, Files, Accounts, Contacts, Campaigns, Dashboards, Reports, Chatter, Groups, Calendar, People, Cases, Forecasts, and a search bar.

The main area is titled "Seller Home" and displays the message "Good evening, SHAIK ATHIYA. Let's get selling!"

The page is organized into several sections:

- Close Deals:** Opportunities owned by me and closing this quarter. Shows a total pipeline of \$0. Buttons: "View Opportunities".
- Plan My Accounts:** Accounts owned by me. Shows 0 accounts. Buttons: "View Accounts".
- Grow Relationships:** Contacts owned by me and created in the last 90 days. Shows 0 contacts. Buttons: "View Contacts".
- Build Pipeline:** Leads owned by me and created in the last 30 days. Shows 0 leads. Buttons: "View Leads".
- My Goals:** Set personal weekly or monthly goals for emails, calls, and meetings. Includes a "Set goals" button.
- Today's Events:** Shows a calendar icon and the message "Looks like you're free and clear the rest of the day." Button: "View Calendar".
- Today's Tasks:** Shows a task icon and the message "Nothing due today. Be a go-getter, and check back soon." Button: "View All".
- Recent Records:** Message: "You haven't viewed any records recently."

At the bottom left, there is a "Salesblazer" section and a note: "void(0);".

## Milestone 2: Object Creation

- Created 3 custom objects:
  - Work Order, Technician, Assignment
- Established users, profiles.
- Configured relationships using lookup fields.

### OUTPUT SCREENSHOT:-

The screenshot shows the Salesforce Object Manager page. At the top, there is a navigation bar with links for Setup, Home, and Object Manager. A search bar is located at the top right. The main area displays a table of objects, each with its name, API name, and object type. The table includes the following rows:

Name	API Name	Type
Asset State Period	AssetStatePeriod	Standard Object
Assigned Resource	AssignedResource	Standard Object
Assignment	Assignment_c	Custom Object
Associated Location	AssociatedLocation	Standard Object
Authorization Form	AuthorizationForm	Standard Object
Authorization Form Consent	AuthorizationFormConsent	Standard Object
Authorization Form Data Use	AuthorizationFormDataUse	Standard Object
Authorization Form Text	AuthorizationFormText	Standard Object
Business Brand	BusinessBrand	Standard Object
Buyer Group	BuyerGroup	Standard Object
Campaign	Campaign	Standard Object
Campaign Member	CampaignMember	Standard Object
Card Payment Method	CardPaymentMethod	Standard Object
Cart	WebCart	Standard Object
Cart Adjustment Basis	WebCartAdjustmentBasis	Standard Object
Cart Adjustment Group	WebCartAdjustmentGroup	Standard Object
Cart Delivery Group	CartDeliveryGroup	Standard Object
Cart Delivery Group Method	CartDeliveryGroupMethod	Standard Object
Cart Delivery Group Method Adjustment	CartDeliveryGroupMethodAdj	Standard Object

At the bottom right of the table, there are two buttons: "Activate Windows" and "Go to Settings to activate Windows".

Object Manager

18 Items, Sorted by Label

LABEL	API NAME	TYPE	DESCRIPTION	LAST MODIFIED	DEPLOYED
Agent Work	AgentWork	Standard Object			
Approval Work Item	ApprovalWorkitem	Standard Object			
Engagement Channel Work Type	EngagementChannelWorkType	Standard Object			
Orchestration Work Item	FlowOrchestrationWorkitem	Standard Object			
Service Territory Work Type	ServiceTerritoryWorkType	Standard Object			
Shift Work Topic	ShiftWorkTopic	Standard Object			
Waitlist Work Type	WaitlistWorkType	Standard Object			
Work Order	WorkOrder	Standard Object			
Work Order Line Item	WorkOrderLineitem	Standard Object			
Work Plan	WorkPlan	Standard Object			
Work Plan Template	WorkPlanTemplate	Standard Object			
Work Plan Template Entry	WorkPlanTemplateEntry	Standard Object			
Work Step	WorkStep	Standard Object			
Work Step Template	WorkStepTemplate	Standard Object			
Work Type	WorkType	Standard Object			
Work Type Group	WorkTypeGroup	Standard Object			
Work Type Group Member	WorkTypeGroupMember	Standard Object			
WorkOrder	WorkOrder_c	Custom Object		6/25/2025	Activate Windows Go to Settings to activate Windows.

Object Manager

1 Items, Sorted by Label

LABEL	API NAME	TYPE	DESCRIPTION	LAST MODIFIED	DEPLOYED
Technician	Technician_c	Custom Object		6/23/2025	✓

## Milestone 3: Tab Creation

- Created tabs for each custom object.
- Enabled easy navigation and object access in the app.
- Ensured users can create/view records from the UI

## OUTPUT SCREENSHOT:-

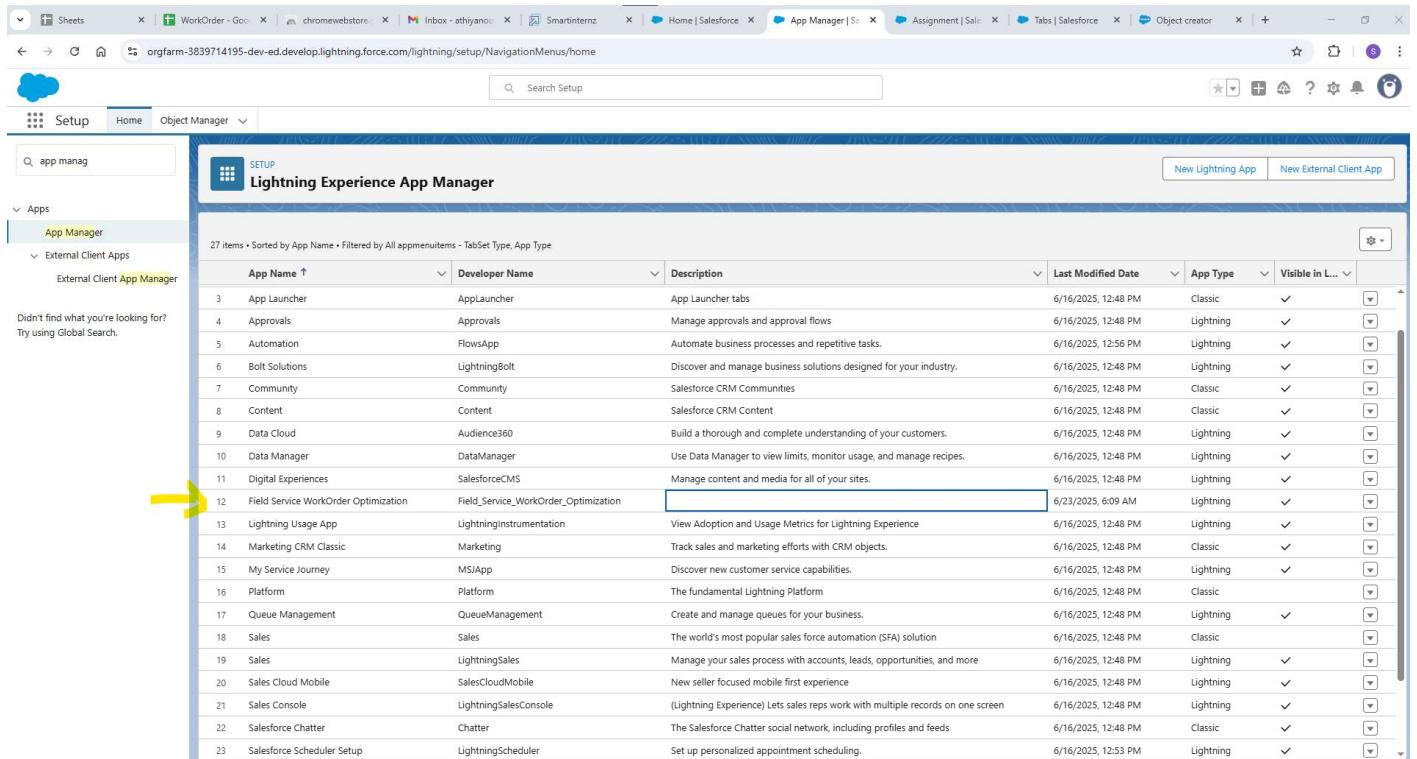
The screenshot shows the Salesforce Setup interface with the URL <https://orgfarm-3839714195-dev-ed.lightning.force.com/lightning/setup/CustomTabs/home>. The page title is "Custom Tabs". The left sidebar shows "User Interface" and "Tabs". The main content area has sections for "Custom Object Tabs", "Web Tabs", "Visualforce Tabs", "Lightning Component Tabs", and "Lightning Page Tabs". Under "Custom Object Tabs", there is a table with three rows:

Action	Label	Tab Style	Description
Edit   Del	Assignments	Books	
Edit   Del	Technician	Box	
Edit   Del	WorkOrder	Box	

Below the table, it says "No Web Tabs have been defined", "No Visualforce Tabs have been defined", "No Lightning component tabs have been defined", and "No Lightning Page Tabs have been defined".

## Milestone 4: Lightning App Setup

- Built a custom Lightning App named "Field Service Work Order Optimization".
- Added relevant tabs to centralize operations
- Created objects for fields and records



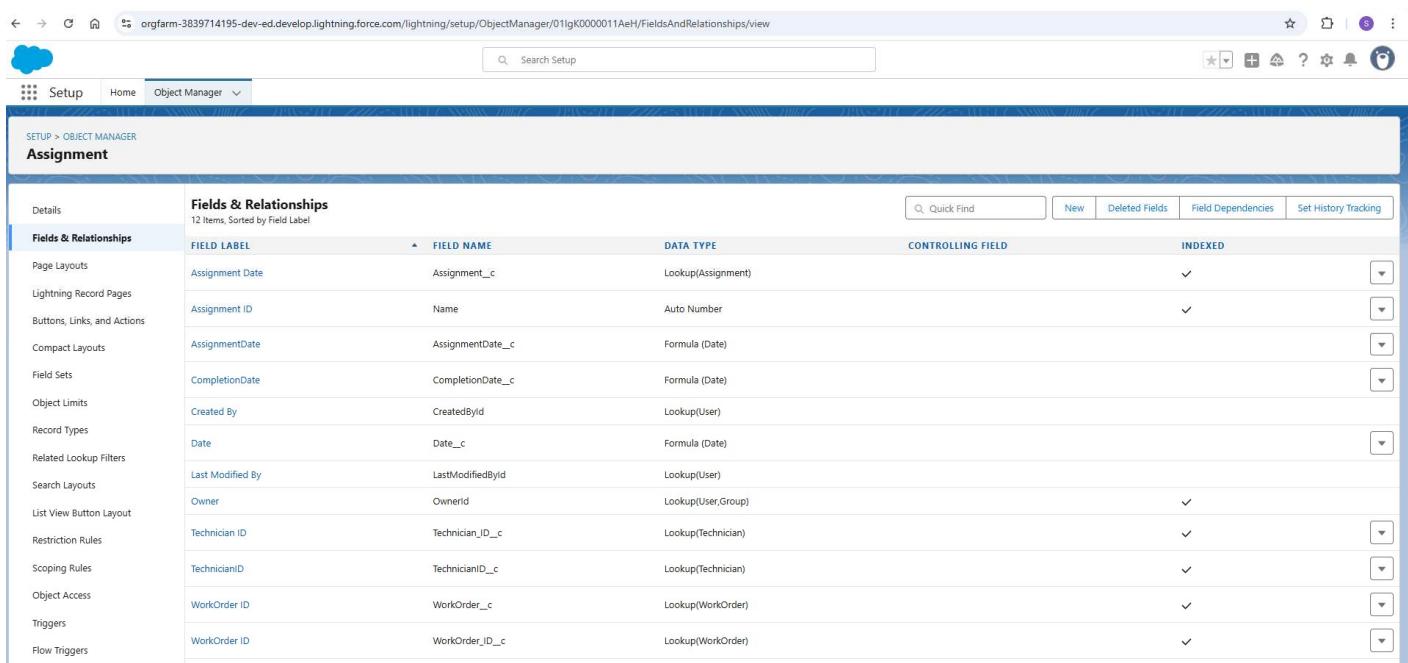
The screenshot shows the Salesforce App Manager interface. The left sidebar has 'App Manager' selected under 'Apps'. The main area is titled 'Lightning Experience App Manager' and displays a table of 27 items. The table columns are: App Name, Developer Name, Description, Last Modified Date, App Type, and Visible in L... (with dropdown arrows). A yellow arrow points to the row for 'Field Service WorkOrder Optimization'.

App Name	Developer Name	Description	Last Modified Date	App Type	Visible in L...
3 App Launcher	AppLauncher	App Launcher tabs	6/16/2025, 12:48 PM	Classic	✓
4 Approvals	Approvals	Manage approvals and approval flows	6/16/2025, 12:48 PM	Lightning	✓
5 Automation	FlowsApp	Automate business processes and repetitive tasks.	6/16/2025, 12:56 PM	Lightning	✓
6 Bolt Solutions	LightningBolt	Discover and manage business solutions designed for your industry.	6/16/2025, 12:48 PM	Lightning	✓
7 Community	Community	Salesforce CRM Communities	6/16/2025, 12:48 PM	Classic	✓
8 Content	Content	Salesforce CRM Content	6/16/2025, 12:48 PM	Classic	✓
9 Data Cloud	Audience360	Build a thorough and complete understanding of your customers.	6/16/2025, 12:48 PM	Lightning	✓
10 Data Manager	DataManager	Use Data Manager to view limits, monitor usage, and manage recipes.	6/16/2025, 12:48 PM	Lightning	✓
11 Digital Experiences	SalesforceCMS	Manage content and media for all of your sites.	6/16/2025, 12:48 PM	Lightning	✓
12 Field Service WorkOrder Optimization	Field_Service_WorkOrder_Optimization	(Lightning Experience) Lets sales reps work with multiple records on one screen	6/23/2025, 6:09 AM	Lightning	✓
13 Lightning Usage App	LightningInstrumentation	View Adoption and Usage Metrics for Lightning Experience	6/16/2025, 12:48 PM	Lightning	✓
14 Marketing CRM Classic	Marketing	Track sales and marketing efforts with CRM objects.	6/16/2025, 12:48 PM	Classic	✓
15 My Service Journey	MSJApp	Discover new customer service capabilities.	6/16/2025, 12:48 PM	Lightning	✓
16 Platform	Platform	The fundamental Lightning Platform	6/16/2025, 12:48 PM	Classic	✓
17 Queue Management	QueueManagement	Create and manage queues for your business.	6/16/2025, 12:48 PM	Lightning	✓
18 Sales	Sales	The world's most popular sales force automation (SFA) solution	6/16/2025, 12:48 PM	Classic	✓
19 Sales	LightningSales	Manage your sales process with accounts, leads, opportunities, and more	6/16/2025, 12:48 PM	Lightning	✓
20 Sales Cloud Mobile	SalesCloudMobile	New seller focused mobile first experience	6/16/2025, 12:48 PM	Lightning	✓
21 Sales Console	LightningSalesConsole	(Lightning Experience) Lets sales reps work with multiple records on one screen	6/16/2025, 12:48 PM	Lightning	✓
22 Salesforce Chatter	Chatter	The Salesforce Chatter social network, including profiles and feeds	6/16/2025, 12:48 PM	Classic	✓
23 Salesforce Scheduler Setup	LightningScheduler	Set up personalized appointment scheduling.	6/16/2025, 12:53 PM	Lightning	✓

## Milestone 5: Fields and Relationships

- Added custom and formula fields like:
- Lookup (Technician)
- Formula:returntype:Date  
(WorkOrder\_ID\_\_r.Date\_\_c)
- Formula:returntype:Date  
IF ISPICKVAL ( WorkOrder\_ID\_\_r.Status\_\_c, 'Resolved'),  
WorkOrder\_ID\_\_r.LastModifiedDate , NULL)
- CreatedDate

### ➤ Assignment Fields and Relationships



The screenshot shows the Salesforce Object Manager interface for the 'Assignment' object. The left sidebar lists various setup categories like Page Layouts, Lightning Record Pages, Buttons, etc. The main content area is titled 'Fields & Relationships' and displays 12 items, sorted by Field Label. The table has columns for FIELD LABEL, FIELD NAME, DATA TYPE, CONTROLLING FIELD, and INDEXED. The indexed column contains dropdown arrows. The data is as follows:

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Assignment Date	Assignment__c	Lookup(Assignment)		▼
Assignment ID	Name	Auto Number		▼
AssignmentDate	AssignmentDate__c	Formula (Date)		▼
CompletionDate	CompletionDate__c	Formula (Date)		▼
Created By	CreatedById	Lookup(User)		▼
Date	Date__c	Formula (Date)		▼
Last Modified By	LastModifiedById	Lookup(User)		▼
Owner	OwnerId	Lookup(User/Group)		▼
Technician ID	Technician__ID_c	Lookup(Technician)		▼
TechnicianID	TechnicianID__c	Lookup(Technician)		▼
WorkOrder ID	WorkOrder__c	Lookup(WorkOrder)		▼
WorkOrder ID	WorkOrder__ID_c	Lookup(WorkOrder)		▼

## ➤ Work Order Fields and Relationships

The screenshot shows the Salesforce Object Manager for the 'WorkOrder' object. The left sidebar lists various setup categories like Page Layouts, Lightning Record Pages, and Field Sets. The main area is titled 'Fields & Relationships' and displays 12 items sorted by Field Label. The table columns are FIELD LABEL, FIELD NAME, DATA TYPE, CONTROLLING FIELD, and INDEXED. Key fields include Created By (CreatedBy), Description (Description\_c), Email (Email\_c), Last Modified By (LastModifiedById), Location (Location\_c), Owner (OwnerId), Priority (Priority\_c), Record Count (Record\_Count\_c), RecordCount (RecordCount\_c), Service Type (Service\_Type\_c), Status (Status\_c), and WorkOrder ID (Name). Most fields have 'Lookup(User)' as their data type, except for Email which is 'Email'.

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Created By	CreatedBy	Lookup(User)		
Description	Description_c	Long Text Area(131072)		
Email	Email_c	Email		
Last Modified By	LastModifiedById	Lookup(User)		
Location	Location_c	Picklist		
Owner	OwnerId	Lookup(User,Group)		✓
Priority	Priority_c	Picklist		
Record Count	Record_Count_c	Picklist		
RecordCount	RecordCount_c	Picklist		
Service Type	Service_Type_c	Picklist		
Status	Status_c	Picklist		
WorkOrder ID	Name	Text(80)		✓

## ➤ Technician Fields and Relationships

The screenshot shows the Salesforce Object Manager for the 'Technician' object. The left sidebar lists various setup categories. The main area is titled 'Fields & Relationships' and displays 10 items sorted by Field Label. The table columns are FIELD LABEL, FIELD NAME, DATA TYPE, CONTROLLING FIELD, and INDEXED. Key fields include Availability (Availability\_c), Created By (CreatedBy), Email (Email\_c), Last Modified By (LastModifiedById), Location (Location\_c), Name (Name\_c), Owner (OwnerId), Phone (Phone), Skills (Skills\_c), and Technician ID (Name). Most fields have 'Picklist' as their data type, except for Email which is 'Email'.

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Availability	Availability_c	Picklist		
Created By	CreatedBy	Lookup(User)		
Email	Email_c	Email		
Last Modified By	LastModifiedById	Lookup(User)		
Location	Location_c	Picklist		
Name	Name_c	Text(255)		
Owner	OwnerId	Lookup(User,Group)		✓
Phone	Phone	Phone		
Skills	Skills_c	Picklist		
Technician ID	Name	Text(80)		✓

## **Milestone 6: Profiles**

- Created a technician profile

## **OUTPUT SCREENSHOTS:-**

The screenshot shows the Salesforce Setup interface for managing Profiles. The top navigation bar includes the Salesforce logo, a search bar labeled "Search Setup", and various global buttons. The left sidebar has links for "Setup", "Home", "Object Manager", "Users", and "Profiles". A search bar in the sidebar contains the text "Q prof". The main content area is titled "Profiles" and shows a table of profiles. The table has columns for "Action", "Profile Name" (sorted by name), "User License", and "Custom". There is one visible row for a "Technician" profile, which is selected, indicated by a checked checkbox in the "Action" column. The "User License" is listed as "Salesforce Platform" and the "Custom" checkbox is checked. Navigation links at the bottom include "1-1 of 1" and "0 Selected".

## Milestone 7: Users

➤ Created user named “Elina Gilbert”

### OUTPUT SCREENSHOT:-

The screenshot shows the Salesforce Setup interface with the 'Users' tab selected. The left sidebar includes links for Permission Set Groups, Permission Sets, Profiles, Public Groups, Queues, Roles, User Management Settings, and Feature Settings. The main content area displays the 'All Users' page with a table of users. The table columns are Action, Full Name, Alias, Username, Role, Active, and Profile. The users listed are:

Action	Full Name	Alias	Username	Role	Active	Profile
<input type="checkbox"/>	Chatter Expert	Chatter	chatty_00dgk000005ax8luqa.rs19nvuqdqj@chatter.salesforce.com		✓	Chatter Free User
<input type="checkbox"/>	EPIC_OrgFarm	OEPIC	epic_9016f16bf18@orgfarm.com		✓	System Administrator
<input type="checkbox"/>	FIRDOUS_SHAIKATHIYA	ath	athiyavanor75362@agentforce.com		✓	System Administrator
<input type="checkbox"/>	Gilbert_Elina	elina	elina@athiya.com		✓	Technician
<input type="checkbox"/>	User_Integration	Integ	integration@00dgk000005ax8luq.com		✓	Analytics Cloud Integration User
<input type="checkbox"/>	User_Security	sec	insightssecurity@00dgk000005ax8luq.com		✓	Analytics Cloud Security User

At the bottom of the page, there are links for New User, Reset Password(s), and Add Multiple Users.

## Milestone 8: Apex Trigger

- Developed a trigger to validate
  - Apex Trigger name as “WorkOrderTrigger” and “Assignment Trigger”
  - Created schedule apex named as “Schedule class”
  - Created apex triggers using developerconsole

## OUTPUT SCREENSHOTS:-

The screenshot shows the Salesforce Setup Apex Triggers page. The left sidebar has a search bar and navigation links for Feature Settings, Chatter, Groups, Triggers (selected), Service, Topics, Objects and Fields, Object Manager, Custom Code, and Apex Triggers (selected). The main content area is titled "Apex Triggers" and includes a message about Apex usage. It lists two triggers:

Action	Name	Namespace Prefix	sObject Type	Api Version	Status	Size Without Comments	Last Modified By	Has Trace Flags
Edit   Del	AssignmentTrigger		Assignment	64.0	Active	165	SHAIKATHIYA FIRDOUS, 6/24/2025, 12:33 AM	<input type="checkbox"/>
Edit   Del	WorkOrderTrigger		WorkOrder	64.0	Active	274	SHAIKATHIYA FIRDOUS, 6/24/2025, 4:28 AM	<input type="checkbox"/>

## ➤ Assignment Trigger in developer console :

The screenshot shows the Salesforce developer console interface. The top navigation bar includes File, Edit, Debug, Test, Workspace, Help, and tabs for various files like WorkOrderTrigger.apxt, RecordDeletions.apxc, ScheduleClass.apxc, etc. The active tab is AssignmentTrigger.apxt. Below the tabs, there's a dropdown for Code Coverage (None) and API Version (64). The main area contains the Apex trigger code:

```
1 trigger AssignmentTrigger on Assignment__c (before insert) {  
2     if(Trigger.IsAfter && Trigger.IsInsert){  
3         AssigningEmail.sendEmailmsg(Trigger.New);  
4     }  
5 }  
6 }
```

Below the code editor, there are tabs for Logs, Tests, Checkpoints, Query Editor, View State, Progress, and Problems. The Problems tab is selected. A table below shows results for Name, Line, and Problem.

## ➤ WorkOrder trigger in developerconsole:-

The screenshot shows the Salesforce developer console interface. The top navigation bar includes File, Edit, Debug, Test, Workspace, Help, and tabs for various files like WorkOrderTrigger.apxt, RecordDeletions.apxc, ScheduleClass.apxc, etc. The active tab is WorkOrderTrigger.apxt. Below the tabs, there's a dropdown for Code Coverage (None) and API Version (64). The main area contains the Apex trigger code:

```
1 trigger WorkOrderTrigger on WorkOrder__c (after insert, after update) {  
2     if(Trigger.IsAfter && Trigger.IsInsert){  
3         WorkOrderClass.workOrder(trigger.new);  
4     }  
5     if(Trigger.IsAfter && Trigger.IsUpdate){  
6         CompletionMail.sendEmailMsg(Trigger.New);  
7     }  
8 }
```

Below the code editor, there are tabs for Logs, Tests, Checkpoints, Query Editor, View State, Progress, and Problems. The Problems tab is selected. A table below shows results for Name, Line, and Problem.

File ▾ Edit ▾ Debug ▾ Test ▾ Workspace ▾ Help ▾ < ▾

WorkOrderTrigger.apxt RecordDeletions.apxc ScheduleClass.apxc WorkOrderClass.apxc CompletionMail.apxc AssigningEmail.apxc AssignmentTrigger.apxt

Code Coverage: None API Version: 64 Go To

```
1 public class RecordDeletions Implements Database.Batchable<Sobject>{
2
3     public Database.QueryLocator start(Database.BatchableContext bc) {
4
5         string query = 'SELECT Id, Name, WorkOrder_ID__c, Technician_ID__c, Assignment_Date__c, Completion_Date__c FROM Assignment'
6
7             return database.GetQueryLocator(query);
8
9     }
10
11     public void execute(Database.BatchableContext bc, List<Assignment__c> query){
12
13         if(!Query.IsEmpty()){
14
```

The screenshot shows the Workbench IDE interface with the following details:

- Toolbar:** File ▾, Edit ▾, Debug ▾, Test ▾, Workspace ▾, Help ▾, < >
- Tab Bar:** WorkOrderTrigger.apxt, RecordDeletions.apxc, **ScheduleClass.apxc**, WorkOrderClass.apxc, CompletionMail.apxc, AssigningEmail.apxc, AssignmentTrigger.apxt
- Code Coverage:** None ▾, API Version: 64 ▾
- Code Editor Content:**

```
1 global class ScheduleClass implements Schedulable {  
2     global void execute(SchedulableContext SC) {  
3         RecordDeletions delrec = new RecordDeletions();  
4         database.executeBatch(delrec, 200);  
5     }  
6 }
```
- Bottom Navigation:** Logs, Tests, Checkpoints, Query Editor, View State, Progress, **Problems**
- Bottom Status Bar:** Name

File ▾ Edit ▾ Debug ▾ Test ▾ Workspace ▾ Help ▾ < >

WorkOrderTrigger.apxc RecordDeletions.apxc ScheduleClass.apxc WorkOrderClass.apxc CompletionMail.apxc AssigningEmail.apxc AssignmentTrigger.apxc

Code Coverage: None API Version: 64 Go To

```
1 public class WorkOrderClass {
2     public static void workOrder(List<WorkOrder__c> newListWorkOrder){
3         Map<Integer, List<String>> maptotech = new map<Integer,List<String>>();
4         integer num = 0;
5         List<WorkOrder__c> properWo = new List<WorkOrder__c>();
6         List<Assignment__c> lstAssignment = new List<Assignment__c>();
7         List<Technician__c> techniciantoAssignment = new List<Technician__c>();
8         for(WorkOrder__c iter : newListWorkOrder){
9             List<String> lststring = new List<String>();
10            If(iter.Service_Type__c != null && iter.Location__c != null ){
11                num = num+1;
12                properWo.add(iter);
13                lststring.add(iter.Service_Type__c);
14                lststring.add(iter.Location__c);
```

File ▾ Edit ▾ Debug ▾ Test ▾ Workspace ▾ Help ▾ < >

WorkOrderTrigger.apxc RecordDeletions.apxc ScheduleClass.apxc WorkOrderClass.apxc CompletionMail.apxc AssigningEmail.apxc AssignmentTrigger.apxc

Code Coverage: None API Version: 64 Go To

```
1 public class CompletionMail {
2     public static void sendEmailMsg(List<WorkOrder__c> workOrderList){
3         List<messaging.SingleEmailMessage> myVar = new List<messaging.SingleEmailMessage>();
4         for(WorkOrder__c con : workOrderList){
5             if(con.Status__c == 'Resolved'){
6                 messaging.SingleEmailMessage mail = new messaging.SingleEmailMessage();
7                 List<String> sendTo = new List<String>();
8                 sendTo.add(con.Email__c);
9                 mail.setToAddresses(sendTo);
10                string subject = 'Status Updated';
11                mail.setSubject(subject);
12                string body = 'email body ';
13                mail.setHTMLbody(body);
14                myVar.add(mail);
```

File ▾ Edit ▾ Debug ▾ Test ▾ Workspace ▾ Help ▾ < >

WorkOrderTrigger.apxt RecordDeletions.apxc ScheduleClass.apxc WorkOrderClass.apxc CompletionMail.apxc **AssigningEmail.apxc** AssignmentTrigger.apxt

Code Coverage: None ▾ API Version: 64 ▾ Go To

```
1 public class AssigningEmail {
2     public static void sendEmailmsg(List<Assignment__c> assRec){
3         List<messaging.SingleEmailMessage> myVar = new List<messaging.SingleEmailMessage>();
4         Map<id,Technician__c> technicians = new Map<id,Technician__c>([SELECT Id, Phone__c, Location__c, Skills__c, Name__c FROM Assignment__c]);
5         try{
6             for(Assignment__c con : assRec){
7                 if(con.Technician_ID__c != null){
8                     messaging.SingleEmailMessage mail = new messaging.SingleEmailMessage();
9                     List<String> sendTo = new List<String>();
10                    sendTo.add(technicians.Get(con.Technician_ID__c).Email__c);
11                    mail.setToAddresses(sendTo);
12                    string subject = 'WorkOrder Assignment ';
13                    mail.setSubject(subject);
14                    string body = 'The following WorkOrder has been assigned to you ';
15                    mail.setHTMLbody(body);
16                    myVar.add(mail);
17                }
18            }
19            Messaging.sendEmail(myvar);
20        }
21    }
22    catch(exception e){}
```

## **Milestone 9:Reports and Dashboards**

### **• Reports**

- Created a report with report type: “WorkOrders Status Reports”.
- Created a report with report type: “Technician and Assignment Details Reports”.

### **• Dashboards**

- Create dashboard showing the technician report in a table chart
- Create Dashboard which shows the details of completed workorder status in a vertical bar graph.

## **OUTPUT SCREENSHOTS:-**

### **• Reports**

The screenshot shows the Salesforce Lightning Report Manager. The URL in the address bar is <https://orgfarm-3839714195-dev-ed.lightning.force.com/lightning/o/Report/home?queryScope=mru>. The page title is "Field Service WorkO...". The top navigation bar includes links for Home, WorkOrder, Assignments, Technician, Reports (which is selected), and Dashboards. On the left, there's a sidebar with sections for Reports, Recent, and 4 items. The main content area displays a table of reports with columns: Report Name, Description, Folder, Created By, Created On, and Subscribed. The table shows five reports:

REPORTS	Report Name	Description	Folder	Created By	Created On	Subscribed
Recent	New Technician Report		Private Reports	SHAIK ATHIYA FIRDOUS	6/25/2025, 4:12 AM	
Created by Me	WorkOrder Status Report		Private Reports	SHAIK ATHIYA FIRDOUS	6/25/2025, 1:10 AM	
Private Reports	New Assignments with WorkOrder ID Report		Private Reports	SHAIK ATHIYA FIRDOUS	6/25/2025, 12:03 AM	
Public Reports	Technician and Assignment Details Report		Private Reports	SHAIK ATHIYA FIRDOUS	6/25/2025, 2:47 AM	

Below the table, there are sections for FOLDERS (All Folders, Created by Me, Shared with Me) and FAVORITES (All Favorites).

## ➤ WorkOrders Status Reports

The screenshot shows a report titled "Report: WorkOrder Status Report". The interface includes a top navigation bar with links for Home, WorkOrder, Assignments, Technician, Reports, and Dashboards. A search bar is at the top right. The main content area displays a table of workorder status data. The table has columns for Record Count, Service Type, WorkOrder ID, WorkOrder: WorkOrder ID, Description, Email, Location, Priority, RecordCount, Status, WorkOrder: Owner Name, WorkOrder: Owner Alias, and WorkOrder: WorkOrder ID. The data shows three records: one for Hardware repair (W-001), one for Troubleshoot/Debugging (W-002), and one for Lane-Management (W-003). Each record includes an email address and a location. The table also includes subtotal rows for each category and a total row at the bottom. At the bottom of the table, there are checkboxes for Row Counts, Detail Rows, Subtotals, and Grand Total.

Record Count	Service Type	WorkOrder ID	WorkOrder: WorkOrder ID	Description	Email	Location	Priority	RecordCount	Status	WorkOrder: Owner Name	WorkOrder: Owner Alias	WorkOrder: WorkOrder ID
5 (3)	Hardware repair (1)	a01gK00000B4DwQ	W-001	-	athiyanoor75@gmail.com	Nasik	High	1	Value1	SHAIK ATHIYA FIRDOUS	ath	-
	<b>Subtotal</b>											
	Troubleshoot/Debugging (1)	a01gK00000B4PRJ	W-002	-	nooru@gmail.com	Warangal	High	0.5	Value1	SHAIK ATHIYA FIRDOUS	ath	-
	<b>Subtotal</b>											
	Lane-Management (1)	a01gK00000B8uQ6	W-003	-	nooru@gmail.com	Nanded	High	1	Value1	SHAIK ATHIYA FIRDOUS	ath	-
	<b>Subtotal</b>											
	<b>Total (3)</b>											

## ➤ Technician and Assignment Details Reports”.

The screenshot shows a report titled "Report: Technician New Technician Report". The interface includes a top navigation bar with links for Home, WorkOrder, Assignments, Technician, Reports, and Dashboards. A search bar is at the top right. The main content area displays a table of technician details. The table has columns for Technician ID, Name, Email, Availability, Phone, and Location. The data shows six records for technicians T-0001 through T-0005, and one record for user 123. Each record includes an email address and a phone number. The table also includes a header row for the columns.

	Technician: Technician ID	Name	Email	Availability	Phone	Location
1	T-0001	Raghu	example@gmail.com	Available	7892341560	Hyderabad
2	T-0002	Raghav	example@gmail.com	Not Available	7892341560	Pune
3	T-0003	Shyam	example@gmail.com	Not Available	7892341560	Nasik
4	T-0004	Masthan	example@gmail.com	Available	7892341560	Warangal
5	T-0005	Ramesh	example@gmail.com	Available	7892341560	Nanded
6	123	raghu	raghu@gmail.com	Available	547890	Pune

## • Dashboards

- Create dashboard showing the technician report in a table chart

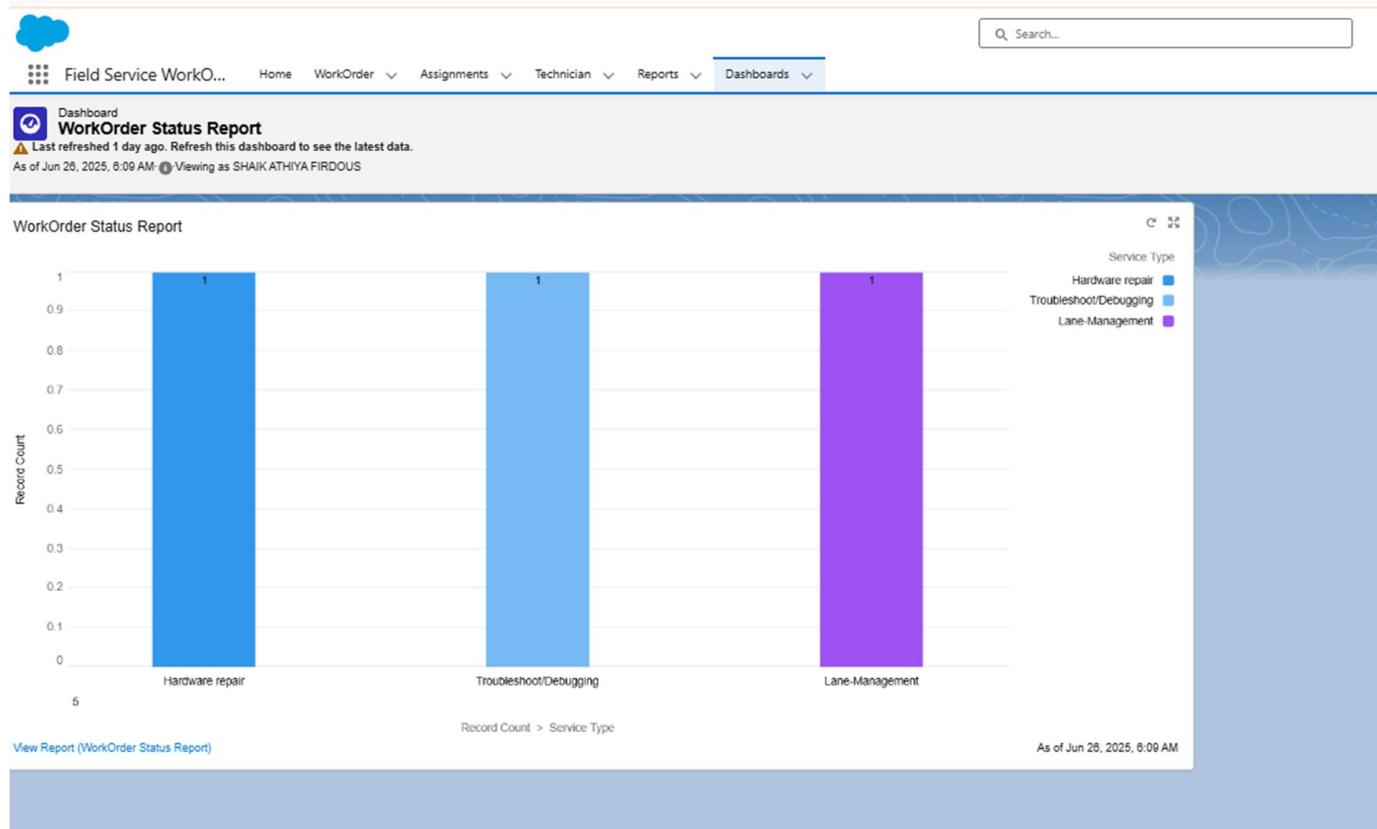
**Dashboard 1**  
Last refreshed 1 day ago. Refresh this dashboard to see the latest data.  
As of Jun 26, 2025, 2:38 AM · Viewing as SHAIKATHIYA FIRDOUS

New Technician Report

Technician: Technician ID ↑	Name	Email	Phone	Location
T-0001	Raghu	example@gmail.com	7892341560	Hyderabad
T-0002	Raghav	example@gmail.com	7892341560	Pune
T-0003	Shyam	example@gmail.com	7892341560	Nasik
T-0004	Masthan	example@gmail.com	7892341560	Warangal
T-0005	Ramesh	example@gmail.com	7892341560	Nanded

[View Report \(New Technician Report\)](#) As of Jun 26, 2025, 2:38 AM

- Create Dashboard which shows the details of completed workorder status in a vertical bar graph.



## **6.1 Final Review**

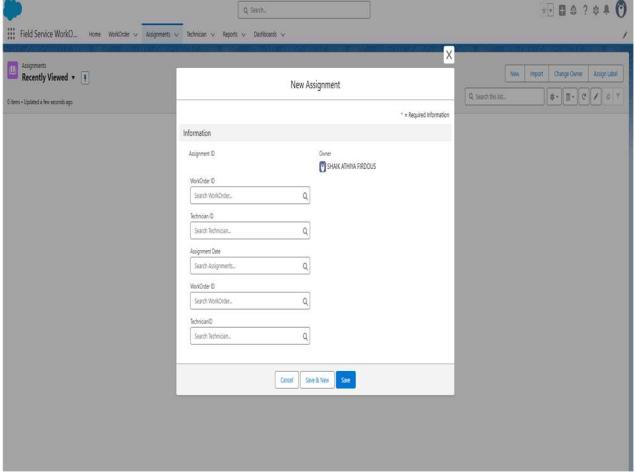
- Conducted full system testing.
- Checked all object links, Profiles, Users, triggers, reports and dashboards.
- Confirmed the Field Service WorkOrder Optimization is fully functional and stable.

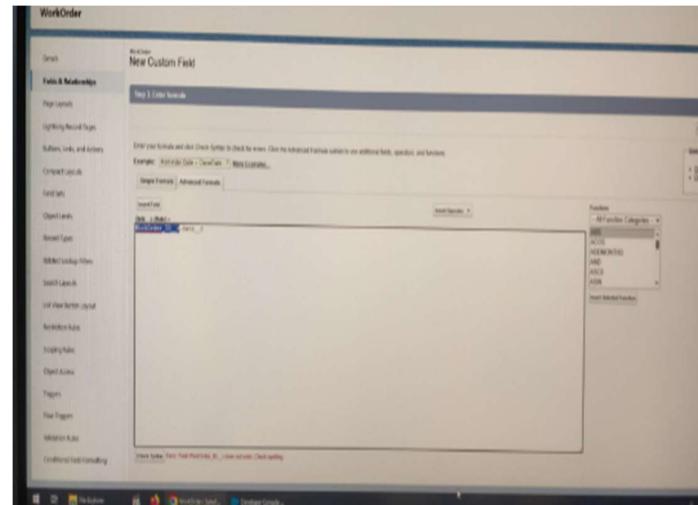
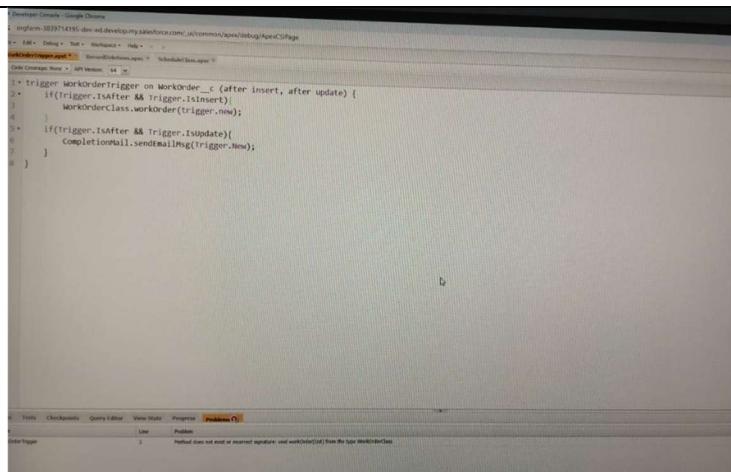
## **6.2 Dataset**

<b>Object</b>	<b>Sample Fields Used</b>
WorkOrder	WorkOrder ID: W-001, Email: athiyanoor75@gmail.com, Service type: Hardware repair, Location: Nasik, Priority: High
Assignment	Technician ID:123, Name: Raghu, Phone:57894, Assignment: available
Technician	Technician ID:001, Name: Raghu, Phone:789264571, Skills: machine Installation

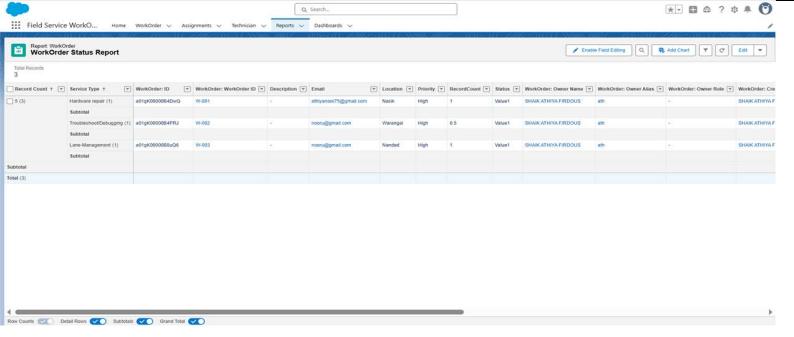
## **7. FUNCTIONAL AND PERFORMANCE TESTING**

The Functional and Performance Testing Phase ensures that every feature implemented—such as object creation, field validation, automation, flows, triggers, reports, and dashboards—works exactly as intended. This phase guarantees stability, correctness, and user-readiness of our Field Service WorkOrder Optimization Application. Where the system is validated for accuracy, behavior, and data correctness across all configured objects and logic.

S. N o	Paramet er	Value / Observatio n	Screenshot Suggestion
1	Model Summary	<p>Salesforce field Service setup for WorkOrder Optimization using Objects, Relationships, Reports, Flows, and Triggers.</p> <p>Note: Test data import only succeeds if object relationships and formats are correct.</p> <p>Mismatched values will</p>	

		raise validation errors.	
2	Field Validation	<p>Tested rules such as:</p> <p>Mandatory fields cannot be empty.</p> <p>System blocks incorrect data.</p>	
3	Automation Accuracy (Trigger)	<p>Trigger:</p> <p>Checks if selectedWorkOrder Id matches</p> <ul style="list-style-type: none"> <li>- All logic executed successfully in test runs.</li> </ul>	

4	Reports Testing	<p>Report download &amp; export functions verified.</p>	<table border="1"> <thead> <tr> <th>Record Count</th><th>Service Type</th><th>WorkOrder ID</th><th>WorkOrder WorkOrder ID</th><th>Description</th><th>Email</th><th>Location</th><th>Priority</th><th>RecordCount</th><th>Status</th><th>WorkOrder Owner Name</th><th>WorkOrder Owner Alias</th><th>WorkOrder</th></tr> </thead> <tbody> <tr> <td>3</td><td>Hardware repair (1)</td><td>a1tgk000000BQwQ</td><td>W001</td><td>-</td><td>shyam007@gmail.com</td><td>Nashik</td><td>High</td><td>1</td><td>Valid</td><td>SHAKTHIKA PRUDOUS</td><td>sh</td><td>-</td></tr> <tr> <td></td><td><b>Subtotal</b></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr> <td></td><td>Troubleshoot(Debugging) (1)</td><td>a1tgk000000B4PwJ</td><td>W002</td><td>-</td><td>rcou@gmail.com</td><td>Warangal</td><td>High</td><td>0.5</td><td>Valid</td><td>SHAKTHIKA PRUDOUS</td><td>sh</td><td>-</td></tr> <tr> <td></td><td><b>Subtotal</b></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr> <td></td><td>Lane Management (1)</td><td>a1tgk000000BQwQ</td><td>W003</td><td>-</td><td>rcou@gmail.com</td><td>Nanded</td><td>High</td><td>1</td><td>Valid</td><td>SHAKTHIKA PRUDOUS</td><td>sh</td><td>-</td></tr> <tr> <td></td><td><b>Subtotal</b></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr> <td></td><td><b>Total (3)</b></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </tbody> </table> <p>Row Counts: Detail Rows: Subtotals: Grand Total:</p>	Record Count	Service Type	WorkOrder ID	WorkOrder WorkOrder ID	Description	Email	Location	Priority	RecordCount	Status	WorkOrder Owner Name	WorkOrder Owner Alias	WorkOrder	3	Hardware repair (1)	a1tgk000000BQwQ	W001	-	shyam007@gmail.com	Nashik	High	1	Valid	SHAKTHIKA PRUDOUS	sh	-		<b>Subtotal</b>													Troubleshoot(Debugging) (1)	a1tgk000000B4PwJ	W002	-	rcou@gmail.com	Warangal	High	0.5	Valid	SHAKTHIKA PRUDOUS	sh	-		<b>Subtotal</b>													Lane Management (1)	a1tgk000000BQwQ	W003	-	rcou@gmail.com	Nanded	High	1	Valid	SHAKTHIKA PRUDOUS	sh	-		<b>Subtotal</b>													<b>Total (3)</b>											
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	<b>Total (3)</b>																																																																																																										
5	Dashboard Verification	<ul style="list-style-type: none"> <li>○ Dashboards built using correct source reports.</li> <li>○ Visuals reflect live WorkOrder status report</li> </ul> <p>Tested filter logic and component refresh.</p>	<p>Add Widget</p> <p>Report: WorkOrder Status Report</p> <p>Use chart settings from report: <input checked="" type="checkbox"/></p> <p>Display All</p> <p>Groups: Add group... <input type="button"/></p> <p>Columns: Add column... <input type="button"/></p> <p>Service Type <input type="button"/> RecordCount <input type="button"/></p> <p>Sort By: Service Type <input type="button"/></p> <p>Display limit: <input type="button"/></p> <p>Preview: WorkOrder Status Report</p> <p>Service Type: RecordCount</p> <p>Hardware repair: 1</p> <p>Troubleshoot(Debugging): 0.5</p> <p>Lane Management: 1</p> <p>View Report (WorkOrder Status Report)</p>																																																																																																								
6	Data Accuracy	<ul style="list-style-type: none"> <li>- Manual test records were entered to run the records .</li> </ul>																																																																																																									

	(Manual +Automated)	- Output matched expected values in all test cases	
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## Summary

All Salesforce components were thoroughly tested for:

- User Interface Testing
- Trigger logic correctness
- Report reliability
- Dashboard accuracy

## 8. RESULTS

### 8.1 Output Screenshots Key functional screenshots include:

- Fields and relationships error trigger cleared

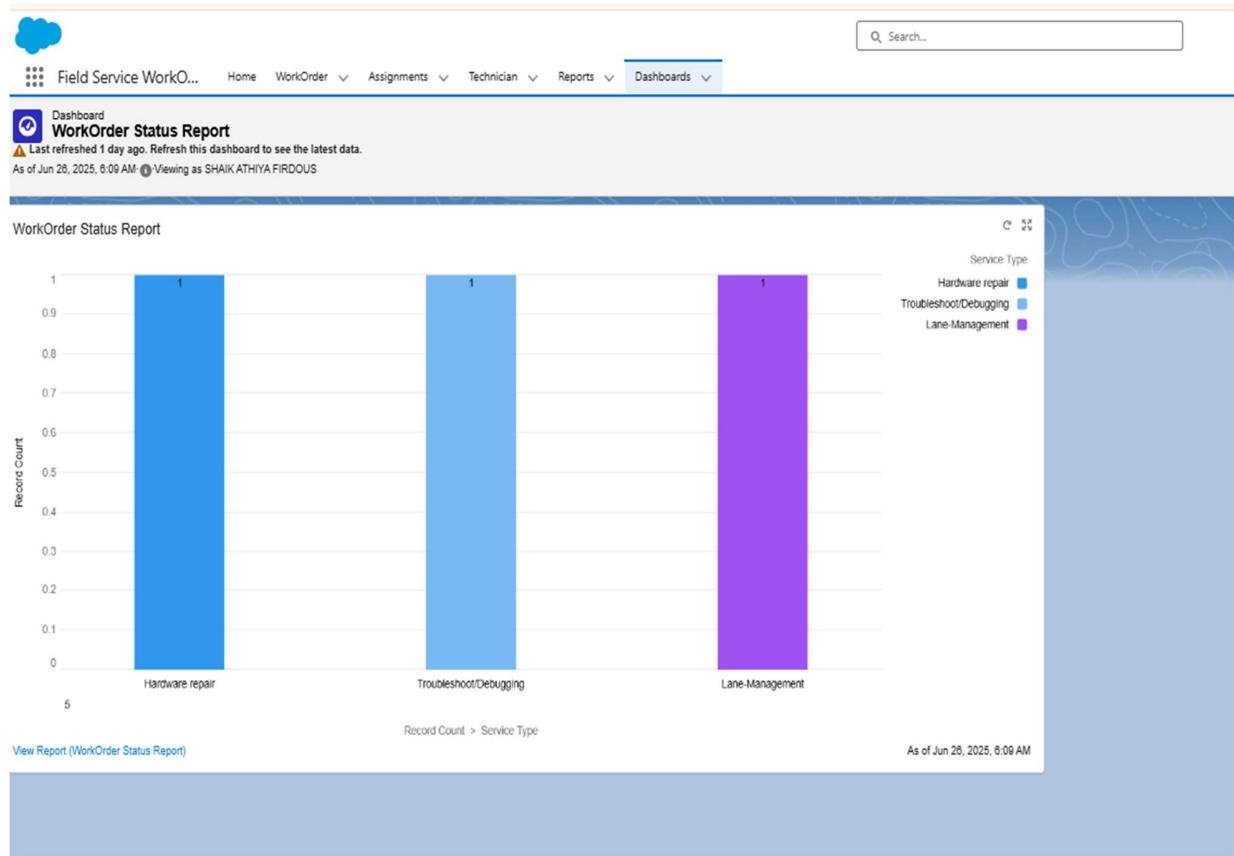
The screenshot shows the Salesforce Setup interface with the Object Manager for the 'Technician' object. The 'Fields & Relationships' tab is selected. A table lists various fields with their details:

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Availability	Availability__c	Picklist		
Created By	CreatedById	Lookup(User)		
Email	Email__c	Email		
Last Modified By	LastModifiedById	Lookup(User)		
Location	Location__c	Picklist		
Name	Name__c	Text(255)		
Owner	OwnerId	Lookup(User,Group)		✓
Phone	Phone__c	Phone		
Skills	Skills__c	Picklist		
Technician ID	Name	Text(80)		✓

- Worderorder trigger problem solved

```
1 * trigger WorkOrderTrigger on WorkOrder__c (after insert, after update) {
2     if(Trigger.IsAfter && Trigger.IsInsert){
3         WorkOrderClass.workOrder(trigger.new);
4     }
5     if(Trigger.IsAfter && Trigger.IsUpdate){
6         CompletionMail.sendEmailMsg(Trigger.New);
7     }
8 }
```

- Dashboard problem of creating vertical barchart solved



## **9. ADVANTAGES & DISADVANTAGES**

### **Advantages:**

- Real-time data validation and automation
- Modular structure allows easy customization
- Centralized and streamlined process for work order management:
- Visual reports and dashboards for decision-making:

### **Disadvantages:**

- Requires knowledge of platform for advanced use:
- Limited functionality in offline mode due to cloud dependency
- Dependent on correctly established data relationships

## **10. CONCLUSION**

The Field Service Work Order Optimization project successfully delivered a tailored solution that streamlined work order management processes, improved efficiency and productivity, and enhanced customer satisfaction. The project addressed key inefficiencies and brought structure to field service operations, serving as a valuable learning experience for the team.

## **11. FUTURE SCOPE**

The Field Service Work Order Optimization system can be extended further with features such as:

- Integration with third-party systems external systems, such as customer portals or inventory management systems, to enhance functionality and streamline operations.
- Automating notifications and alerts to customers and technicians for improved communication and satisfaction.
- Mobile-first user interface with Salesforce Experience Cloud
- AI-powered forecasting using Salesforce Einstein

## **12. APPENDIX**

**GitHub Link:**

**Project demo link:**