City Waste Collection & Complaint App

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- Name - Yashika Saraf
- Roll no.- 150096725035
- Larry Page
- Subject- No Code
- Faculty Name- Prof Chandrika
- Academic Year:2025-2029
- Project Title- City Waste Collection & Complaint App

Problem Statement

A municipal body wants to track garbage
collection points, schedules, vehicles, and complaints.

Data Design (Sheets Used)

Sheet 1- Collection Points

Sheet 2 - Vehicles

	A	B	C	D	E	F	G	H
1	VehicleID	VehicleName	RegNumber	Zone				
2	VH001	Truck 1	MH-01-GC-2001	South				
3	VH002	Truck 2	MH-01-GC-2002	East				
4	VH003	Truck 3	MH-01-GC-2003	West				
5	VH004	Truck 4	MH-01-GC-2004	North				
6	VH005	Truck 5	MH-01-GC-2005	South				
7	VH006	Truck 6	MH-01-GC-2006	East				
8	VH007	Truck 7	MH-01-GC-2007	West				
9	VH008	Truck 8	MH-01-GC-2008	North				
10	VH009	Truck 9	MH-01-GC-2009	South				
11	VH010	Truck 10	MH-01-GC-2010	East				
12	VH011	Truck 11	MH-01-GC-2011	West				
13	VH012	Truck 12	MH-01-GC-2012	North				
14	VH013	Truck 13	MH-01-GC-2013	South				
15	VH014	Truck 14	MH-01-GC-2014	East				
16	VH015	Truck 15	MH-01-GC-2015	West				
17	VH016	Truck 16	MH-01-GC-2016	North				
18	VH017	Truck 17	MH-01-GC-2017	South				
19	VH018	Truck 18	MH-01-GC-2018	East				
20	VH019	Truck 19	MH-01-GC-2019	West				
21	VH020	Truck 20	MH-01-GC-2020	North				
22								
23								
24								
25								
26								
27								
28								
29								

Sheet1   Sheet2   Sheet3

Sheet 3- Complaints

	A	B	C	D	E	F	G	H	I
1	ComplaintID	ResidentName	Phone	Area	IssueType	Status	PointID	CreatedDate	
2	CP001	Resident 1	9877000001	Area 2	Overflowing Bin	In Progress	PT001	2025-02-02	
3	CP002	Resident 2	9877000002	Area 3	Smell	Closed	PT002	2025-02-03	
4	CP003	Resident 3	9877000003	Area 4	Garbage Not Collected	Open	PT003	2025-02-04	
5	CP004	Resident 4	9877000004	Area 5	Overflowing Bin	In Progress	PT004	2025-02-05	
6	CP005	Resident 5	9877000005	Area 6	Smell	Closed	PT005	2025-02-06	
7	CP006	Resident 6	9877000006	Area 1	Garbage Not Collected	Open	PT006	2025-02-07	
8	CP007	Resident 7	9877000007	Area 2	Overflowing Bin	In Progress	PT007	2025-02-08	
9	CP008	Resident 8	9877000008	Area 3	Smell	Closed	PT008	2025-02-09	
10	CP009	Resident 9	9877000009	Area 4	Garbage Not Collected	Open	PT009	2025-02-10	
11	CP010	Resident 10	9877000010	Area 5	Overflowing Bin	In Progress	PT010	2025-02-11	
12	CP011	Resident 11	9877000011	Area 6	Smell	Closed	PT011	2025-02-12	
13	CP012	Resident 12	9877000012	Area 1	Garbage Not Collected	Open	PT012	2025-02-13	
14	CP013	Resident 13	9877000013	Area 2	Overflowing Bin	In Progress	PT013	2025-02-14	
15	CP014	Resident 14	9877000014	Area 3	Smell	Closed	PT014	2025-02-15	
16	CP015	Resident 15	9877000015	Area 4	Garbage Not Collected	Open	PT015	2025-02-16	
17	CP016	Resident 16	9877000016	Area 5	Overflowing Bin	In Progress	PT016	2025-02-17	
18	CP017	Resident 17	9877000017	Area 6	Smell	Closed	PT017	2025-02-18	
19	CP018	Resident 18	9877000018	Area 1	Garbage Not Collected	Open	PT018	2025-02-19	
20	CP019	Resident 19	9877000019	Area 2	Overflowing Bin	In Progress	PT019	2025-02-20	
21	CP020	Resident 20	9877000020	Area 3	Smell	Closed	PT020	2025-02-21	

App Views Created

View Name	Table	Purpose
Collection Points View	Collection	Display collection locations.

Vehicles View	Vehicles	Track vehicle status.
Complaints View	Complaints	Manage submitted complaints.
Dashboard	All	Summarize key operations
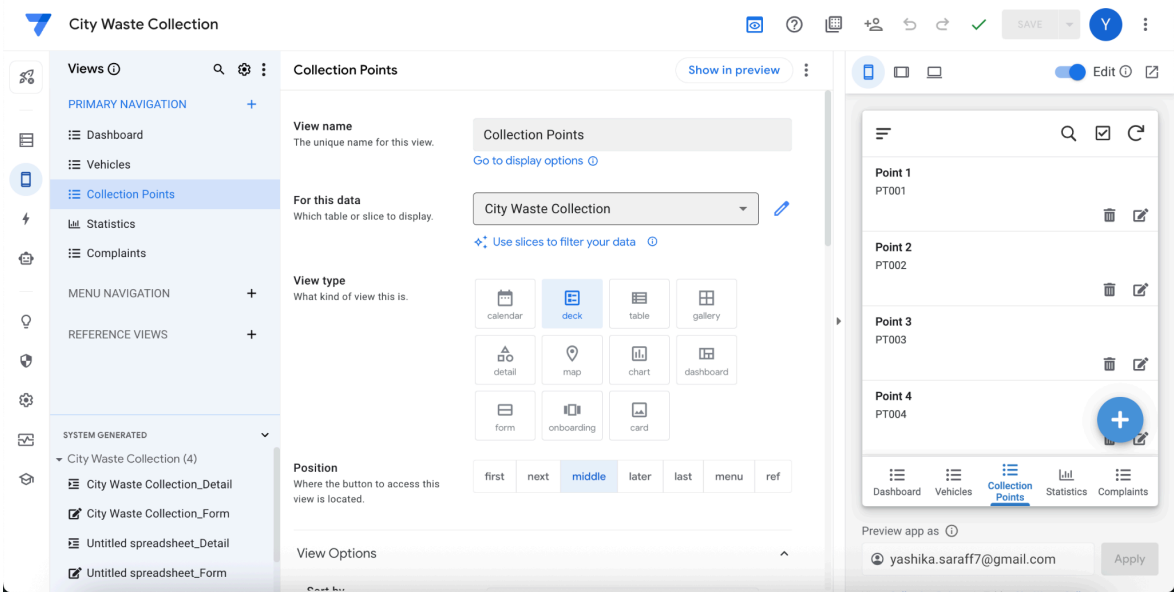
App Views

Dashboard Components

Component	Description

Complaints by area	Shows complaint distribution geographically.
Collection status	Indicates the current state of collection operations.
Missed pickups	Lists or counts pickups that were not completed.
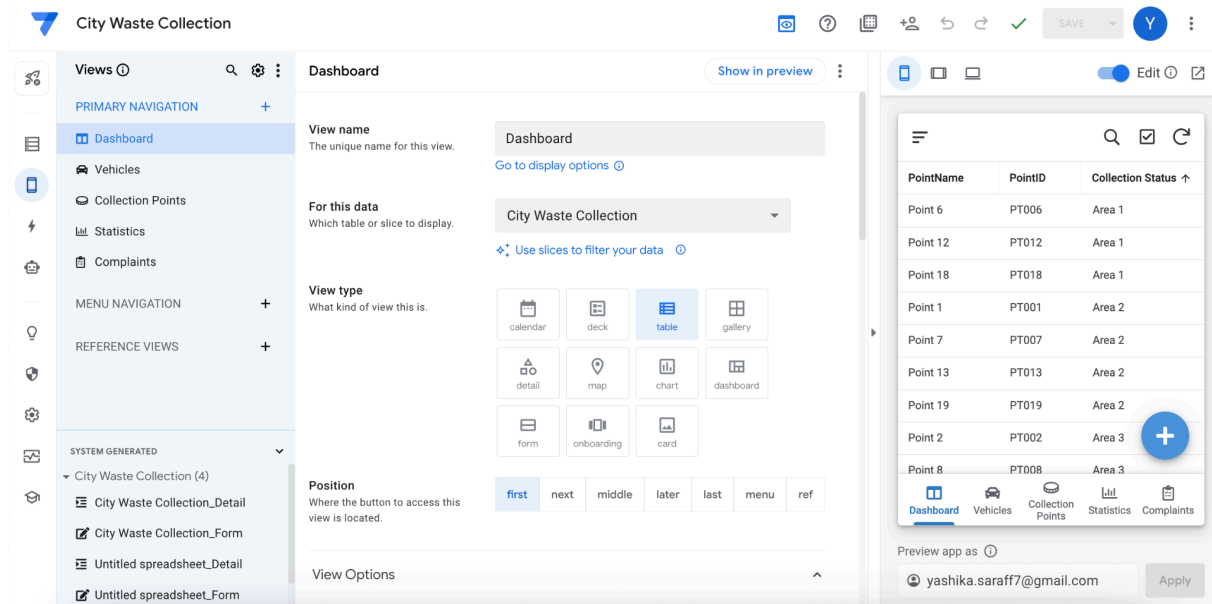
Dashboard View

Slices Used

OpenComplaintsSlice

→ [Status] = "Open"

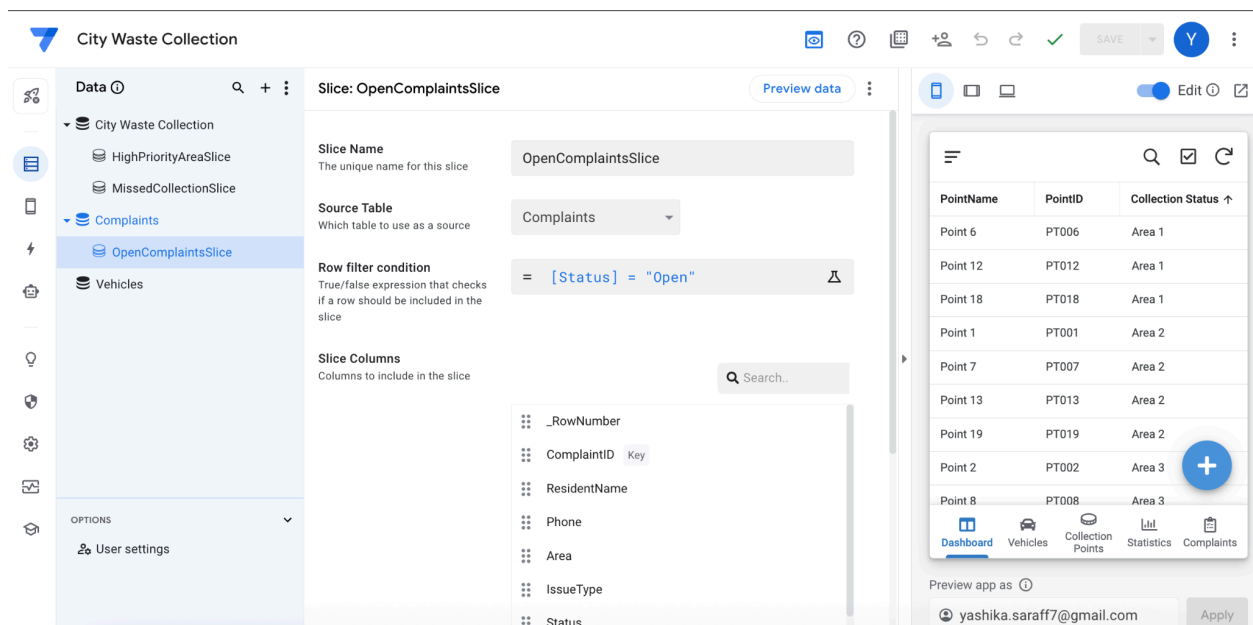Purpose: Tracking currently open complaints

MissedCollectionSlice
→ [LastCollectedDate] < (TODAY() - 2)
Purpose: Alerting about overdue collections

HighPriorityAreaSlice
→ [AreaPriority] = "High"
Purpose: Prioritizing work in high-priority areas

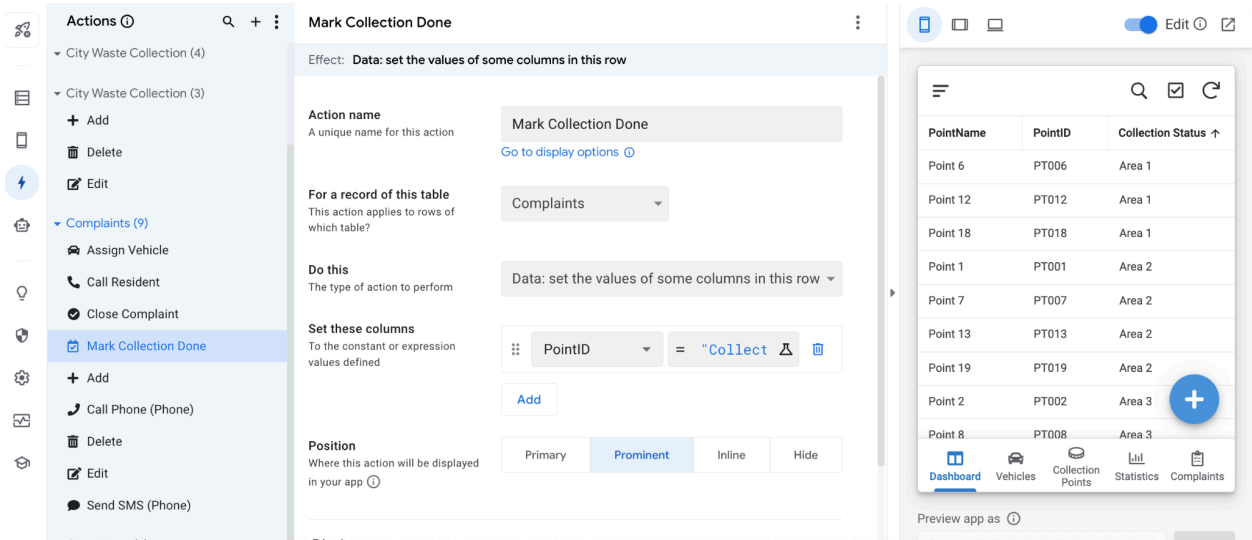Slice Configuration

Actions Implemented

Action Name	Table	Function
Assign Vehicle	Complaints	AssignVehicleForm

Close Complaint	Complaints	"Resolved"
Call Resident	Complaints	start a phone call
Mark Collection Done	Complaints	"Collected"

Action Buttons

Format Rules Applied

Condition	**Color**
High priority areas with open complaints	Red

Resolved complaints	Green
Missed collections	Orange

Format rules

Automation (Bot)
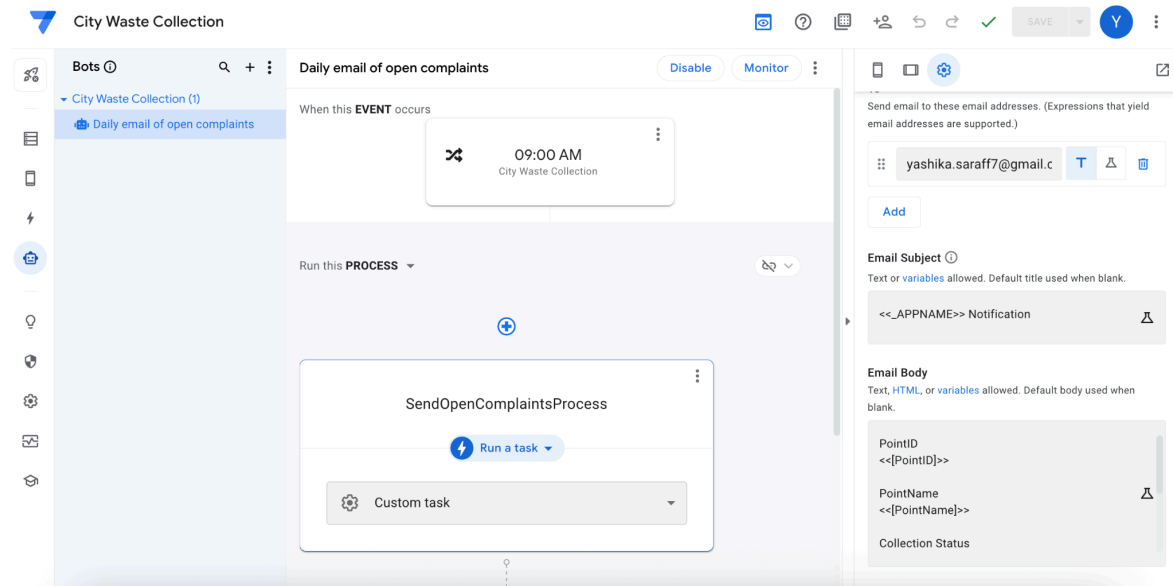
App Workflow Explanation

This application manages a City Waste Collection & Complaint system for a municipal body. The workflow involves tracking key operational elements like collection points, vehicles, and complaints through dedicated views. Users can perform actions such as Approving/Rejecting Loans (potentially indicating a related financial process) and Adding Repayments. The system uses various data slices to filter and prioritize tasks, such as tracking Open Complaints and identifying Missed Collections. The Dashboard provides an operational overview, including metrics like Collection Status and Complaints by Area. And in the actions its for the warning to the complaints section .Automation is implemented through a daily bot that sends an email of open complaints to the area supervisor.

Challenges Faced & Learning

1. Managing waste services and loan features together was challenging, so the app needs clear separate modules.

2. Tracking large amounts of complaints, collections, and repayments was difficult, so filters and actions are needed.

3. Quick monitoring was required, so dashboards and status colors help in faster decisions.

Conclusion

The application is a complete dashboard that helps management see all municipal services and financial details in one place. It uses clear views, filters, actions, and automatic daily emails to make work faster, focus on important tasks, and ensure everyone is responsible for their work.

Declaration

I declare that this project is my original work and has not been copied from any source.

Student Signature: Yashika Saraf

Date:16-12-2025

FINAL LINK

EXCEL SHEET-

https://docs.google.com/spreadsheets/d/1KdE5RUQ4R9h3XbaMPQZkZcoU9KuVjhIAZeW_5VfdgUY/edit?usp=sharing

APP SHEET

https://www.appsheet.com/Template/AppDef?appName=Untitledspreadsheet-602522115-25-12-12&utm_source=share_app_link