

# IT314: Software Engineering

Prof. Saurabh Tiwari

## Project Title: Crowd-Powered Smart Complaint Management System

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### Contributions (Group 6)

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Name	Student ID
JAINIL SHAILESH JAGTAP	202301032
SHAMIT GANDHI	202301041
MEHTA DHRUVIL VIMALKUMAR (LEADER)	202301061
BHATT PARTH BHASKARBHAI	202301022
OM KANTILAL SANTOKI	202301019
NEEV VEGADA	202301031
TIRTH KORADIYA	202301018
KARAN MAKASANA	202301053
RASHA PARMAR	202301012
SAMARTH AGARWAL	202301040

# SPRINT 1: Setting Up the Project and Creating a Secure Login/Signup System for All Users

Name & ID	Role	Work Done
<b>JAINIL SHAILESH JAGTAP</b> 202301032	Backend + Non-Tech	<ul style="list-style-type: none"> <li>Created initial User Model</li> <li>Interviewed Government officials for requirements</li> <li>Documented elicitation techniques, functional requirements &amp; user stories for Government Authority</li> <li>Proof of Concept for Sprint 1.</li> </ul>
<b>SHAMIT GANDHI</b> 202301041	Backend + Non-Tech	<ul style="list-style-type: none"> <li>Initial sign up/sign in/login views</li> <li>User creation/deletion testing</li> <li>OTP verification backend</li> <li>Survey creation &amp; requirements elicitation for Citizens</li> <li>Epics and Conflicts documentation</li> </ul>
<b>MEHTA DHRUVIL VIMALKUMAR</b> 202301061	Backend + Non-Tech	<ul style="list-style-type: none"> <li>Serializers and URL routing</li> <li>Signup OTP validation</li> <li>Government departments ListView</li> <li>Survey creation &amp; user stories for Citizens</li> <li>Epics and Conflicts documentation</li> </ul>
<b>BHATT PARTH BHASKARBHAI</b> 202301022	Non-Tech	<ul style="list-style-type: none"> <li>FIGMA designs creation</li> <li>Sequence diagram</li> <li>Survey creation &amp; conduct</li> <li>Stakeholders and end users documentation</li> </ul>
<b>OM KANTILAL SANTOKI</b> 202301019	Frontend + Non-Tech	<ul style="list-style-type: none"> <li>React rerouting integration</li> <li>System admin requirements elicitation</li> <li>Non-functional requirements documentation</li> <li>User stories for system admin</li> </ul>
<b>NEEV VEGADA</b> 202301031	Frontend + Non-Tech	<ul style="list-style-type: none"> <li>React frontend &amp; CSS setup</li> <li>Field worker requirements documentation</li> <li>Functional requirements for field workers</li> <li>User stories for field workers</li> </ul>
<b>TIRTH KORADIYA</b> 202301018	Non-Tech	<ul style="list-style-type: none"> <li>Elicitation techniques for field workers</li> <li>Functional requirements documentation</li> <li>Activity diagram</li> </ul>

		<ul style="list-style-type: none"> <li>User stories development</li> <li>Workflow notes documentation</li> </ul>
<b>KARAN MAKASANA</b> 202301053	Frontend + Non-Tech	<ul style="list-style-type: none"> <li>Tailwind changes to signup forms</li> <li>Corrected routing</li> <li>Field worker requirements elicitation</li> <li>User stories for field workers</li> </ul>
<b>RASHA PARMAR</b> 202301012	Frontend + Non-Tech	<ul style="list-style-type: none"> <li>Static home page for citizens</li> <li>Survey creation &amp; conduct</li> <li>Citizen requirements elicitation</li> <li>User stories for citizens</li> </ul>
<b>SAMARTH AGARWAL</b> 202301040	Frontend + Non-Tech	<ul style="list-style-type: none"> <li>Responsive homepage with React/Tailwind</li> <li>Tech support requirements elicitation</li> </ul>

## SPRINT 2: Letting Citizens Report Problems and See All Complaints in a Public Feed

Name & ID	Role	Work Done
<b>JAINIL SHAILESH JAGTAP</b> 202301032	Backend	<ul style="list-style-type: none"> <li>Migrated auth to JWT with Redis+PostgreSQL</li> <li>Static analysis + Unit testing (97% coverage)</li> </ul>
<b>SHAMIT GANDHI</b> 202301041	Backend	<ul style="list-style-type: none"> <li>Complaint posting/viewing/deleting/upvoting functionality</li> <li>GPS coordinates to address geolocation</li> <li>Database hosting on Railway + Cloudinary</li> <li>Search complaints functionality</li> </ul>
<b>MEHTA DHRUVIL VIMALKUMAR</b> 202301061	Backend	<ul style="list-style-type: none"> <li>Designed complaints models</li> <li>Forgot/reset password</li> <li>Past complaints viewing functionality</li> </ul>
<b>BHATT PARTH BHASKARBHAI</b> 202301022	Frontend+ UI/UX	<ul style="list-style-type: none"> <li>Trending complaints &amp; leaderboard UI</li> <li>Upvote and report functionality</li> <li>GPS integration in raise complaint</li> <li>Figma Files</li> </ul>

<b>OM KANTILAL SANTOKI</b> 202301019		
<b>NEEV VEGADA</b> 202301031	Frontend	<ul style="list-style-type: none"> <li>GPS coordinates in raise-complaint modal</li> <li>Government Authority home page</li> <li>File upload functionality</li> <li>New frontend layout and routing</li> </ul>
<b>TIRTH KORADIYA</b> 202301018	Frontend	<ul style="list-style-type: none"> <li>Improved Government Authority home page</li> <li>Forgot password</li> </ul>
<b>KARAN MAKASANA</b> 202301053	Frontend	<ul style="list-style-type: none"> <li>Search functionality in navbar</li> </ul>
<b>RASHA PARMAR</b> 202301012	Testing	<ul style="list-style-type: none"> <li>GUI Testing</li> </ul>
<b>SAMARTH AGARWAL</b> 202301040		

## **SPRINT 3: Government Can Assign Complaints to Field Workers, Who Then Submit Their Fixes**

Name & ID	Role	Work Done
<b>JAINIL SHAILESH JAGTAP</b> 202301032	Backend	<ul style="list-style-type: none"> <li>Resolution by FieldWorker</li> <li>Citizen Profile with password change</li> </ul>
<b>SHAMIT GANDHI</b> 202301041	Backend + Non-Tech	<ul style="list-style-type: none"> <li>Field worker home page backend</li> <li>Class diagrams for sprint 3</li> <li>Backend unit testing until sprint 3</li> <li>Admin user functionality maintenance</li> </ul>

<b>MEHTA DHRUVIL</b> <b>VIMALKUMAR</b> 202301061	Backend	<ul style="list-style-type: none"> <li>• Government Home Page backend</li> <li>• Added user_type in ParentUser model</li> </ul>
<b>BHATT PARTH BHASKARBHAI</b> 202301022	Frontend+UI/UX	<ul style="list-style-type: none"> <li>• Field worker resolution submission</li> <li>• Help page for all users</li> <li>• Figma Files</li> </ul>
<b>OM KANTILAL SANTOKI</b> 202301019		
<b>NEEV VEGADA</b> 202301031	Frontend	<ul style="list-style-type: none"> <li>• Signup based on user type</li> <li>• Field Worker Resolution submission functionality</li> </ul>
<b>TIRTH KORADIYA</b> 202301018	Frontend	<ul style="list-style-type: none"> <li>• Assign fieldworker functionality</li> </ul>
<b>KARAN MAKASANA</b> 202301053	Frontend	<ul style="list-style-type: none"> <li>• Past complaints frontend for citizens</li> <li>• Profile page with password-change</li> </ul>
<b>RASHA PARMAR</b> 202301012		
<b>SAMARTH AGARWAL</b> 202301040		

## **SPRINT 4: Citizens Can Approve or Reject Fixes - Rejected Complaints Go Back for Reassignment**

Name & ID	Role	Work Done
<b>JAINIL SHAILESH JAGTAP</b> 202301032	Backend	<ul style="list-style-type: none"> <li>• Approval of resolution by Citizen backend</li> <li>• Optimized API performance (20s to 2s)</li> </ul>

<b>SHAMIT GANDHI</b> 202301041	Backend + Non-Tech	<ul style="list-style-type: none"> <li>Generalized my_complaints view</li> <li>Class diagrams for sprint 4</li> </ul>
<b>MEHTA DHRUVIL VIMALKUMAR</b> 202301061	Backend	<ul style="list-style-type: none"> <li>Detailed complaint view</li> <li>Anonymous complaint creation and display</li> <li>Notification-based redirection</li> <li>Backend unit testing until sprint 4</li> </ul>
<b>BHATT PARTH BHASKARBHAI</b> 202301022	Frontend+UI/UX	<ul style="list-style-type: none"> <li>Figma design of pages</li> <li>My complaints for all users</li> <li>Figma Files</li> </ul>
<b>OM KANTILAL SANTOKI</b> 202301019		
<b>NEEV VEGADA</b> 202301031	Frontend	<ul style="list-style-type: none"> <li>Anonymous complaint submission frontend</li> </ul>
<b>TIRTH KORADIYA</b> 202301018	Frontend	<ul style="list-style-type: none"> <li>Citizen approval of resolution</li> </ul>
<b>KARAN MAKASANA</b> 202301053	Frontend + Testing	<ul style="list-style-type: none"> <li>Complaint detailed view for all users</li> </ul>
<b>RASHA PARMAR</b> 202301012		
<b>SAMARTH AGARWAL</b> 202301040		

## SPRINT 5: AI Suggests Correct Department and Predicts How Long Fixing Will Take

Name & ID	Role	Work Done
<b>JAINIL SHAILESH JAGTAP</b> 202301032	Backend + Non-Tech	<ul style="list-style-type: none"> <li>• AI pipeline for Severity analysis and Time prediction</li> <li>• Computer Vision+GenAI implementation</li> <li>• AI Department suggestion feature</li> <li>• Documented Sprint 5 with Sequence and Class Diagram</li> </ul>
<b>SHAMIT GANDHI</b> 202301041	Backend	Generalized profile view for all users
<b>MEHTA DHRUVIL VIMALKUMAR</b> 202301061	Backend	<ul style="list-style-type: none"> <li>• Fake confidence values generation</li> </ul>
<b>BHATT PARTH BHASKARBHAI</b> 202301022	Frontend+UI/UX	<ul style="list-style-type: none"> <li>• AI integration in raise complaint</li> <li>• Figma Files</li> </ul>
<b>OM KANTILAL SANTOKI</b> 202301019	Testing	<ul style="list-style-type: none"> <li>• System Testing</li> <li>• Frontend Unit Testing</li> </ul>
<b>NEEV VEGADA</b> 202301031	Frontend	<ul style="list-style-type: none"> <li>• Added AI component in home page</li> </ul>
<b>TIRTH KORADIYA</b> 202301018	Documentation	<ul style="list-style-type: none"> <li>• Design Document</li> </ul>
<b>KARAN MAKASANA</b> 202301053	Testing	<ul style="list-style-type: none"> <li>• Profile page for all users</li> </ul>
<b>RASHA PARMAR</b> 202301012	Testing	<ul style="list-style-type: none"> <li>• GUI testing</li> </ul>
<b>SAMARTH AGARWAL</b> 202301040		

## SPRINT 6: Final Integration, Testing & Documentation

Name & ID	Role	Work Done
<b>JAINIL SHAILESH JAGTAP</b> 202301032	Backend + Testing	<ul style="list-style-type: none"> <li>Mutation Testing of Users and Notifications App (100% score)</li> </ul>
<b>SHAMIT GANDHI</b> 202301041	Backend + Non-Tech	<ul style="list-style-type: none"> <li>Unit Tests for remaining backend</li> <li>Class diagrams for sprint 6</li> <li>AI inputs stored in database</li> </ul>
<b>MEHTA DHRUVIL</b> <b>VIMALKUMAR</b> 202301061	Backend	<ul style="list-style-type: none"> <li>Final backend improvements</li> <li>Unit Tests for remaining backend</li> </ul>
<b>BHATT PARTH</b> <b>BHASKARBHAI</b> 202301022	UI/UX	<ul style="list-style-type: none"> <li>Figma file</li> </ul>
<b>OM KANTILAL SANTOKI</b> 202301019	Testing	<ul style="list-style-type: none"> <li>Load Testing</li> </ul>
<b>NEEV VEGADA</b> 202301031	Frontend	<ul style="list-style-type: none"> <li>Unit Testing for Frontend</li> </ul>
<b>TIRTH KORADIYA</b> 202301018	Frontend + Testing	<ul style="list-style-type: none"> <li>Notification redirect</li> <li>Frontend Unit Testing</li> </ul>
<b>KARAN MAKASANA</b> 202301053	Testing	<ul style="list-style-type: none"> <li>Mutation testing of complaints</li> </ul>
<b>RASHA PARMAR</b> 202301012	Testing	<ul style="list-style-type: none"> <li>GUI testing</li> </ul>
<b>SAMARTH AGARWAL</b> 202301040		