

IT314: Software Engineering

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Crowd-Powered Smart Complaint Management System

Task-1

Group : 6

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Stakeholders/End Users

1. Citizens(End users)

Primary users who will complain.

2. Government Authority

Official who will entertain the complaints made by Citizens.

3. System Administrator

Manages the application. Maintenance work, security, etc.

Elicitation Techniques

Stakeholder	Elicitation techniques	Reason
Citizens	Interviews, Workshops, Surveys, User Stories	Citizens are the primary users; these techniques help capture diverse needs, pain points, and expectations directly from their perspective in a structured and unstructured way.
Government Authority	Interviews, Document Analysis, Background reading	Officials handle complaints and processes; interviews capture their workflow needs, while document/background reading ensures compliance with regulations and policies.
System Administrator	Analysis of existing systems, Brainstorming	Administrators manage the system's backend; analyzing existing systems and observing workflows helps identify technical requirements, while brainstorming addresses security, scalability, and maintenance needs.

Functional Requirement

● For Citizens

1. Submit a complaint by Photo, Video, Description, Location.

2. Track the status of the complaint.
3. Upvote and report the existing complaint.

- **Government Authority**

4. View all complaints related to a specific department/Authority on the dashboard.
5. Complaints are automatically prioritized by seriousness, emotional impact, and number of upvotes.
6. Authorities can show the progress of a complaint by current status or comments.

- **System Administrator**

7. Manages system performance, security and Policy.
8. Manages access for specific citizens or government authorities.

Non Functional Requirement

1. Usability
2. Scalability
3. Reliability
4. Performance
5. Security & Privacy
6. Transparency

Domain Requirement

1. Adherence to government security and privacy laws is mandatory.
2. Data must be stored in accordance with government record-keeping regulations.
3. Complainants are to be issued unique identification numbers.

User Stories

1. Complaints

Front of the card

As a citizen, I want to submit a complaint with photo, video, description, and location, so that I can report issues effectively.

Back of the card

- Acceptance Criteria:
 - User can upload photos/videos along with descriptions.
 - Location auto-detected or entered manually.
 - Complaint ID generated after submission.

2. Status of Complaint

Front of the card

As a citizen, I want to track the status of my complaint, so that I know the progress and resolution updates.

Back of the card

- Statuses: Submitted → Under Review → In Progress → Resolved.
- Users get notifications when status changes.

3. Upvote or Report existing complaints

Front of the card

As a citizen, I want to upvote or report existing complaints, so that important issues get more visibility and duplicates are avoided.

Back of the card

- Users can upvote a complaint only once.
- The reporting option requires reason selection.

4. Conforming whether complaint is resolved or not

Front of the card

As a citizen, I want an option to confirm whether my complaint is resolved properly or not, so that authorities get feedback and unresolved issues can be re-opened.

Back of the card

- After complaint status changes to *Resolved*, user gets a prompt:

- “Is your issue resolved properly?” → Yes / No.
- If Yes → complaint is marked as *Closed*.
- If No → complaint is re-opened or flagged for review.
- Feedback is stored for performance evaluation of authorities.

5. View Complaints

Front of the card

As a government authority, I want to view all complaints related to my department on a dashboard, so that I can take action on relevant issues.

Back of the card

- Dashboard categorized by type/department/location.
- Filters for date, severity, and priority.

6. Automatically Prioritizing complaints

Front of the card

As a government authority, I want complaints to be automatically prioritized by seriousness, emotional impact, and upvotes, so that I can resolve urgent issues first.

Back of the card

- LLM based prioritization algorithm.
- High-priority complaints highlighted in the dashboard.

7. Updating Status of Complaints

Front of the card

As a government authority, I want to update the progress/status of complaints, so that citizens stay informed about resolutions.

Back of the card

- Authorities can add comments or update status.
- System logs updates with timestamp.

8. Data security of Citizens and Privacy

Front of the card

As a government authority, I want the system to ensure data security and comply with regulations, so that citizens' personal data is protected.

Back of the card

- Data encryption in storage and transfer.
- Adherence to government privacy laws.

9.

Front of the card

As a system administrator, I want to manage system performance, security, and policies, so that the application runs smoothly without downtime.

Back of the card

- Monitor server logs and performance.
- Apply regular security patches.
- Perform backups.

10.

Front of the card (NFR)

As a system administrator, I want to manage access control for citizens and government authorities, so that only authorized users can perform specific actions.

Back of the card

- Role-based access control (Citizen, Authority, Admin).
- Authentication via secure login.

11.

Front of the card (NFR)

As a system administrator, I want the system to be scalable and reliable, so that it can handle increasing complaints without crashing.

Back of the card

- Cloud-based infrastructure with load balancing.
- Disaster recovery and failover plans.

12.

Front of the card (Domain Requirement)

As a system administrator, I want to ensure complaints are stored with unique IDs and comply with government record-keeping laws, so that audit and retrieval are easy.

Back of the card

- Each complaint gets a unique ID.
- Data retention policies match government standards.