Name: Rasha Parmar

ID: 202301012

(b) Elicitation Techniques for Stakeholders (with Justification)

- Citizens

Elicitationn techniques: Surveys, Interviews, Focus Groups

Justification: Citizens are the main end users reporting issues like potholes or garbage overflow. Surveys capture large-scale input on common problems, while feedback forms provide continuous insights into complaint submission, tracking, and satisfaction.

- Gov. Authorities

Elicitationn techniques: Workshops, Document Analysis

Justification: Responsible for resolving complaints across departments like roads, sanitation, and streetlights. Workshops allow them to share workflows, responsibilities, and challenges, while document analysis helps align the system with existing processes and rules for complaint handling and prioritization.

- System Administration

Elicitationn techniques: Interviews, Observation, Brainstorming

Justification: Interviews provide direct technical requirements and constraints, observation reveals hidden workflow challenges and inefficiencies, and brainstorming encourages collaborative idea generation for scalable, secure, and maintainable system solutions.

(c) Apply Elicitation Techniques to Gather Requirements

1. Citizens (End Users)

- **Functional Requirements**
    1. Submit complaints with details.
    2. Upvote complaints to highlight common issues.
    3. Track complaint status in real-time.
    4. Provide feedback and satisfaction ratings.

- **Non-Functional Requirements**
    1. Simple, user-friendly interface.
    2. Multilingual support for inclusivity.
    3. Quick response time.
- **Domain Requirements**
    1. Ensure anonymity/privacy for sensitive complaints.
    2. Accessibility features (for elderly/disabled users).

2. Government Authorities

- **Functional Requirements**
    1. Receive auto-routed complaints relevant to their department.
    2. Update status (pending, in-progress, resolved, closed).
    3. View prioritized complaints .
    4. Access analytics dashboards (resolution time, performance).
- **Non-Functional Requirements**
    1. Secure login and role-based access.
    2. System reliability.
    3. Real-time updates/notifications.
- **Domain Requirements**
    1. Escalation rules as per government SOPs.
    2. Compliance with grievance redressal policies.
    3. Accountability through audit trails.

3. System Administration / Developers

- **Functional Requirements**
    1. Manage user accounts and permissions.
    2. Configure complaint categories and workflows.
    3. Monitor system health and performance.

4. Update and retrain AI/ML models.

- **Non-Functional Requirements**
    1. High availability and scalability.
    2. Strong data security and encryption.
    3. Maintainability (easy to update modules).
- **Domain Requirements**
    1. Integration with existing government portals and databases.
    2. Compliance with IT security standards.
    3. Detailed logging for accountability.

(d) Write user stories (both front and back of the card) – Product Backlog

1. Complaint Submission

- **Front :**
  As a citizen, I want to submit a complaint (public/private/anonymous), so that I can raise issues securely and transparently.
- **Back :**
    - **Success:** Complaint with all required fields is saved, visible in user dashboard, and routed to correct department.
    - **Failure:** Complaint missing mandatory fields (e.g., description) is rejected with an error message; invalid location input prompts correction.

2. Upvoting Complaints

- **Front:**
  As a citizen, I want to upvote existing complaints, so that common issues receive higher priority.
- **Back:**
    - **Success:** User upvote is recorded once; complaint priority increases; confirmation shown.
    - **Failure:** Duplicate upvote attempt is blocked; unauthorized users (not logged in) cannot upvote.

3. Complaint Tracking

- **Front:**
  As a citizen, I want to track my complaint's status in real time, so that I know if it's being addressed.
- **Back:**
  - **Success:** Status updates (submitted → in-progress → resolved → closed) are displayed; notifications sent for each change.
  - **Failure:** If complaint ID is invalid, system shows "not found"; if system fails to update, user sees "status unavailable."

4. Resolution Feedback

- **Front:**
  As a citizen, I want to rate the resolution of my complaint, so that the system can ensure accountability.
- **Back:**
  - **Success:** Feedback saved successfully, visible in analytics; ratings linked to department performance.
  - **Failure:** Feedback not submitted if complaint not resolved; incomplete/invalid feedback rejected.

5. Complaint Routing

- **Front:**
  As an authority, I want complaints auto-routed to my department, so that I only see relevant issues.
- **Back:**
  - **Success:** Complaint is routed automatically with ≥90% accuracy; wrongly routed complaints can be reassigned.
  - **Failure:** Misclassified complaints appear in wrong department; system shows option for manual correction.

6. Prioritization Dashboard

- **Front:**
  As an authority, I want to view prioritized complaints, so that I can resolve the most urgent ones first.
- **Back:**
  - **Success:** Dashboard displays complaints ranked by priority (AI severity + upvotes); critical ones highlighted.
  - **Failure:** If filters are invalid, system prompts correction; if dashboard fails, “unable to load complaints” message shown.

7. Performance Analytics

- **Front:**
  As an authority, I want to see resolution analytics, so that I can measure my department’s efficiency.
- **Back:**
  - **Success:** Dashboard shows avg. resolution time, pending cases, and satisfaction scores; reports downloadable.
  - **Failure:** If no data is available, display “no analytics data”; report generation errors prompt retry option.

8. System Management

- **Front:**
  As a system admin, I want to manage users and system settings, so that the platform remains secure and functional.
- **Back:**
  - **Success:** Admin can add/remove users, assign roles, and configure categories; changes logged.
  - **Failure:** Invalid role assignment is blocked; unauthorized admin actions denied with warning.

9. System Monitoring

- **Front:**
  As a system admin, I want to monitor system performance, so that I can ensure uptime and reliability.

- **Back:**
    - **Success:** Alerts trigger for downtime; performance metrics (uptime, response time, load) tracked; logs stored.
    - **Failure:** If monitoring fails, system alerts admin with “metrics unavailable”; downtime without alert logged as error.