IT314: Software Engineering

Prof. Saurabh Tiwari

Project Title - Crowd Powered Smart Complaint Management System
Group - 6

Name - Samarth Agrawal
Id - 202301040

(b) Identification of Elicitation Techniques for each of the stakeholders(justification):-

Stakeholder	Elicitation Techniques	Justification
End Users (Customers)	Surveys, Interviews, Focus Groups, User Stories	Ensures user-centric design, highlights pain points, captures needs efficiently.
Administrators/Support Staff	SME Interviews, Shadowing, Workshops, Task Analysis	Optimizes workflows, identifies inefficiencies, enhances operational support.
Management (Executives)	Executive Interviews, Brainstorming, SWOT, Business Process Mapping	Aligns system with strategic goals, identifies strengths/weaknesses, optimizes business processes.
IT/Technical Team	Technical Interviews, Prototyping, Use Case Analysis, System Modeling	Ensures technical feasibility, clarifies system architecture, integrates seamlessly with IT infrastructure.
Third-Party Partners	Collaborative Workshops, Contracts/SLAs, Feedback Loops	Formalizes partnerships, clarifies expectations, enables continuous improvement.

Legal and Compliance Teams	Regulatory Research, Interviews, Document Analysis	Ensures legal compliance, prevents future issues related to privacy and data management.
Customers' Feedback (Crowd)	Social Media Monitoring, Crowdsourcing, Sentiment Analysis	Gathers diverse feedback, uncovers customer pain points, allows for real-time adjustments.

(c) Apply Elicitation Techniques – Requirements:-

Functional Requirements:

1. User Registration & Login
2. Complaint Submission
3. Crowd Verification / Voting
4. Complaint Categorization & Routing (system auto-routes to correct department).
5. Status Tracking
6. Notifications & Alerts (via email/SMS/app).
7. Admin Dashboard Search & Filter
8. Feedback & Rating
9. Escalation Mechanism

Non-Functional Requirements:

1. Performance – System should handle large volume of complaints
2. Reliability – High uptime (99.9%) with data backup & recovery.
3. Security – User authentication, role-based access, data encryption.
4. Usability – Simple UI (web + mobile), multilingual support.
5. Scalability – Able to expand for more cities/regions.
6. Interoperability – Should integrate with govt. databases/APIs.
7. Response Time – Complaint submission < 3 sec, dashboard < 2 sec load.

8. **Maintainability – Easy to update and patch.**

Domain Requirements

1. Legal Compliance – Must follow government grievance redressal guidelines
2. Data Retention Policies – Complaints must be stored for X years as per govt. norms.
3. Localization – Support local languages (since it's for citizens).
4. Transparency – Complaints and resolutions visible to public
5. Priority Rules – Health/safety complaints get auto-priority over minor issues.
6. Escalation Timeline – If not resolved in N days, escalate to higher authority.
7. Audit Trails – Every action must be logged for accountability.

(d) Write User Stories (Product Backlog):

Example 1: Complaint Registration

Back of Card (Acceptance Criteria):

- Users can enter complaint details (title, description).
- Users can attach a photo/video (optional).
- Users can select complaint categories (e.g., roads, electricity, water).
- The system generates a unique complaint ID after submission.
- A confirmation message is displayed after successful submission.
- The user receives a notification (push/email/SMS) confirming registration.

Example 2: Complaint Tracking

Back of Card (Acceptance Criteria):

- Complaint status is displayed with stages (*Submitted → Verified → In Progress → Resolved*).

- Users can view the date/time of the last update.
- Notifications are sent whenever status changes.
- Proof of resolution (photo/remark) is visible when a complaint is marked “Resolved.”
- Users can provide feedback once a complaint is closed.