ResolveNow: Project Phases Documentation

1. Ideation Phase

The ideation phase marks the conceptual beginning of the ResolveNow project. The idea originated from the growing need for an efficient and transparent online complaint handling system. Many users face difficulties in registering complaints, tracking their status, and communicating with service providers. Through brainstorming and problem analysis, ResolveNow was envisioned as a centralized digital platform that enables users to register complaints, track progress, interact with assigned agents, and receive timely resolutions. This phase clearly defined the project vision, target users (customers, agents, and administrators), objectives, and scope.

2. Requirement Analysis

In the requirement analysis phase, both functional and non-functional requirements were identified. Functional requirements include user registration and login, complaint submission, complaint tracking, agent assignment, real-time interaction between users and agents, and admin management features. Non-functional requirements include security, confidentiality of user data, performance, scalability, and reliability. This phase ensured that the system aligns with user expectations and operational needs.

3. Project Design Phase

The project design phase transformed requirements into a detailed technical design. The frontend was designed using React.js along with Bootstrap and Material UI to ensure responsiveness and usability. The backend was structured using Node.js and Express.js following RESTful API principles. MongoDB was used for database design to store user, complaint, assignment,

and chat data. ER diagrams were prepared to represent relationships between different entities.

4. Project Planning Phase

The project planning phase focused on organizing tasks, timelines, and resources. The MERN stack was finalized as the technology stack. Team roles and responsibilities were assigned, milestones were set, and potential risks were identified. This phase helped ensure smooth coordination, efficient time management, and timely project delivery.

5. Project Development Phase

The development phase involved the actual implementation of the ResolveNow system. Frontend development included building registration, login, dashboards, complaint forms, and chat interfaces. Backend development involved implementing APIs for authentication, complaint handling, agent assignment, and messaging. JWT authentication and bcrypt password encryption were used to enhance security. MongoDB handled data storage and retrieval operations.

6. Project Documentation

The project documentation phase involved preparing comprehensive documentation for the system. It includes project overview, architecture, setup instructions, API documentation, authentication process, UI design details, testing strategy, known issues, and future enhancements. Proper documentation ensures easy understanding, maintenance, and future scalability.

7. Project Demonstration

The project demonstration phase showcased the working model of ResolveNow. The demo included user registration, complaint submission,

complaint tracking, agent interaction, and admin monitoring. This phase validated that the system functions correctly and meets all defined requirements.