Coimbatore Institute of Technology

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Department of AI and DS

Home Appliance Control System

Requirement Elicitation Document

Version: 1.0

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1. Introduction:

This document presents the outcomes of the requirements elicitation process conducted for the Home Appliance Control System (HACS) project, commissioned by CIT Tech Consulting. The primary goal of this stage was to gather, clarify, and prioritize the needs and expectations of stakeholders before proceeding to the formal requirements specification phase.

Elicitation activities included surveys, interviews, observation sessions, and brainstorming discussions with the project team, as well as meetings with the client to understand the functional scope, operational constraints, and desired system features. These activities ensured that the requirements collected are comprehensive, feasible, and aligned with the project's objectives.

The information captured in this document will serve as the foundation for creating the Software Requirements Specification (SRS), ensuring that the final system design meets the needs of both the client and the end-users.

2.Stake Holders :

- Homeowners / End Users – Individuals who will operate and benefit from the Home Appliance Control System.

- CIT Tech Consulting – The client commissioning the project.

- Project Development Team – Designers, developers, and testers building the system.

- Maintenance Technicians – Responsible for system upkeep and troubleshooting.

- Customer Support Staff – Handling user queries and technical assistance.

- Network / Internet Service Providers – Ensuring connectivity for smart appliances.

- Smart Appliance Manufacturers – Producing devices compatible with the system.

- Regulatory Authorities – Overseeing compliance with safety and technical standards.

- Energy Providers – Supplying electricity and integrating with smart energy features

3. Elicitation Methods Used:

To gather accurate and comprehensive requirements for the Home Appliance Control System, the following elicitation techniques were used:

- Survey – Collected feedback from potential end users regarding desired features, usability, and common appliance control issues.

- Interview – Conducted structured discussions with the client (CIT Tech Consulting) to understand business goals, constraints, and technical expectations.

- Brainstorming – Collaborated with team members to explore innovative features, prioritize requirements, and address potential challenges.

4. Summary Of Findings :

From the survey conducted, the following observations and insights were gathered:

- Centralized platform to control and monitor multiple home appliances.

- Remote access capability to manage appliances from any location.

- Scheduling and automation features for operating devices at specific times.

- Energy consumption tracking for efficiency and cost savings.

- Robust security features, including alerts and controlled access.

- Safety-focused emergency handling mechanisms.

- Multiple interaction modes to ensure ease of use.

- Accessibility support for all user groups.

- Intelligent automation for predictive and optimized operation.

- Stable performance under different network conditions.

- AI integration.

Conclusion :

The requirement elicitation process, carried out through surveys and brainstorming sessions, provided a clear understanding of user needs and system expectations for the Home

Appliance Control System (HACS). The insights gathered will serve as the foundation for defining functional and non-functional requirements, ensuring that the system is user-friendly, efficient, secure, and aligned with stakeholder objectives.

This structured approach will help in delivering a reliable and effective solution that meets the intended goals.