**Project Initialization and Planning Phase**

| Date | 20 July 2025 |
| --- | --- |
| Team ID | SWTID1750360304 |
| Project Name | Power consumption analysis for households |
| Maximum Marks | 3 Marks |

**Define Problem Statements (Customer Problem Statement Template):**

The project aims to analyze power consumption patterns in households to provide insights for energy efficiency and cost-saving measures. By analyzing historical power consumption data along with other relevant factors such as weather conditions, occupancy patterns, and appliance usage, the project seeks to identify trends and patterns that can help households optimize their energy usage.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Problem**  **Statement (PS)** | **I am**  **(Customer)** | **I’m trying to** | **But** | **Because** | **Which makes me feel** |
| PS-1 | A homeowner concerned about high energy bills | Reduce my electricity costs and environmental impact | I lack visibility into which appliances or habits are driving up my usage | My utility bill doesn’t break down usage patterns, and I don’t know where to start | Frustrated and powerless to take action |
| PS-2 | An energy utility provider | Improve grid efficiency and customer satisfaction | My customers lack tools to manage peak demand, leading to grid strain and costly infrastructure upgrades | Current solutions are generic and don’t incentivize behavioral change | Strained by operational costs and missed sustainability targets |