

Ideation Phase – Empathize & Discover

Date : 09/11/2025

Team ID : NM2025TMID02283

Project Name : Medical Inventory Management

Maximum Marks : 4 Marks

1. Empathize & Discover Stage

Empathize & Discover stage is the first step of the **Design Thinking process** used in software development. Its goal is to **understand the users' needs, pain points, emotions, and environment** before designing the system.

In the context of **Medical Inventory Management**, this means interacting with:

- Pharmacists
- Hospital administrators
- Nurses
- Procurement officers
- Inventory managers

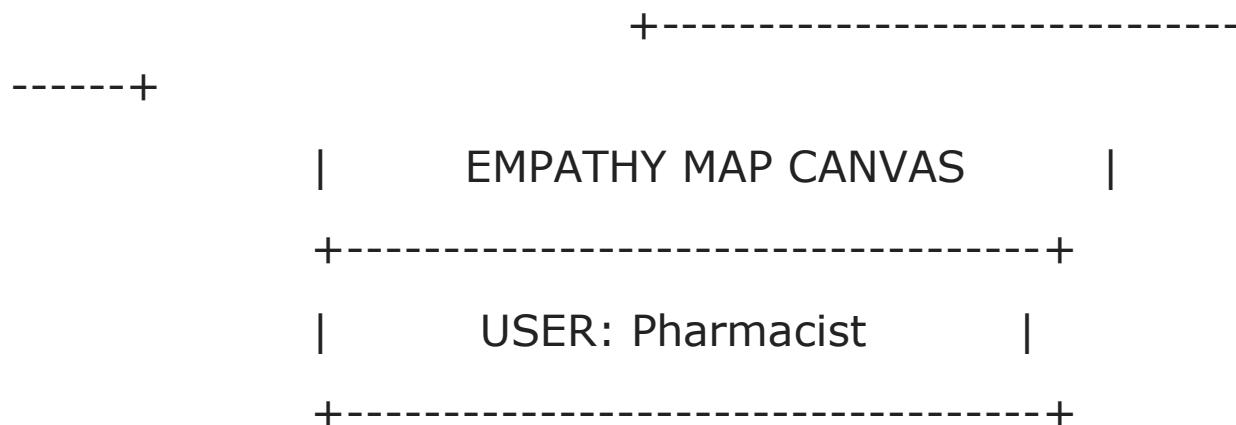
2. Key Findings (Discovery Insights)

During interviews and observations, the following problems were identified:

- Manual stock entry causes frequent **errors** and **duplication**.
- Staff often forget to check **expiry dates**, leading to **wastage**.
- There is **no real-time update** between pharmacy, stores, and wards.
- **Emergency shortages** occur because staff are unaware of low stock levels.
- **Reporting and audits** are time-consuming.

💡 Empathy Map Canvas Diagram (Example)

Below is a simple structure for the **Empathy Map Canvas** diagram you can include in your project:



| THINKS: |

| "Need accurate data." |

| "Must avoid stockouts." |

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| FEELS: |

| Frustrated, stressed, responsible |

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| SAYS: |

| "The system is slow and manual." |

| "We waste medicines often." |

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| DOES: |

| Manually records stock, checks |

| expiry dates, requests supplies |

+-----+

| PAINS: |

| Errors, delays, expired stock |

+-----+

| GAINS: |

| Real-time alerts, automation, data |

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4. Example Analogy: Food Ordering & Delivery Application

To better understand the concept, let's compare **Medical Inventory Management** with a **Food Ordering & Delivery App**:

| Aspect | Food Delivery App | Medical Inventory Management System |
|------------|---|--|
| User | Customer ordering food | Pharmacist or hospital staff managing supplies |
| Need | Fast food delivery | Timely supply of medicines |
| Process | User places order → Restaurant prepares → Delivery updates → Delivered | Department requests medicine → Inventory updates → Procurement → Restocked |
| Pain Point | Delayed delivery, wrong order | Stockouts, expired medicines |
| Solution | Real-time order tracking | Real-time inventory monitoring |
| Outcome | Customer satisfaction | Improved patient care & resource use |

The **Empathize & Discover** phase in developing a **Medical Inventory Management System** focuses on:

- Understanding user pain points and workflow challenges
- Mapping user emotions, actions, and needs through empathy maps
- Discovering opportunities for automation and efficiency

This phase ensures that the software is **human-centered**, addressing real-world problems faced by healthcare professionals and improving **accuracy, speed, and patient safety**.