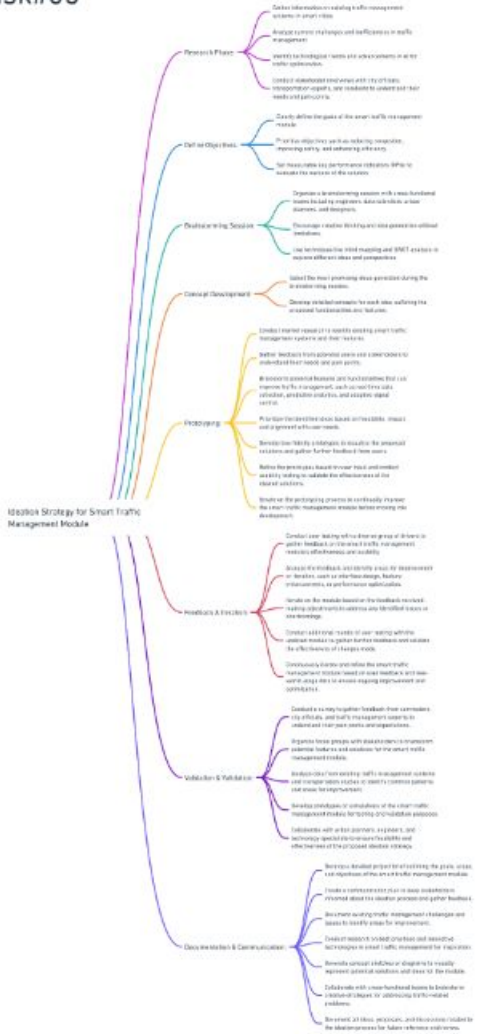
DTC-JECRC-BATCH No.2
-Task 1-9

Task#01

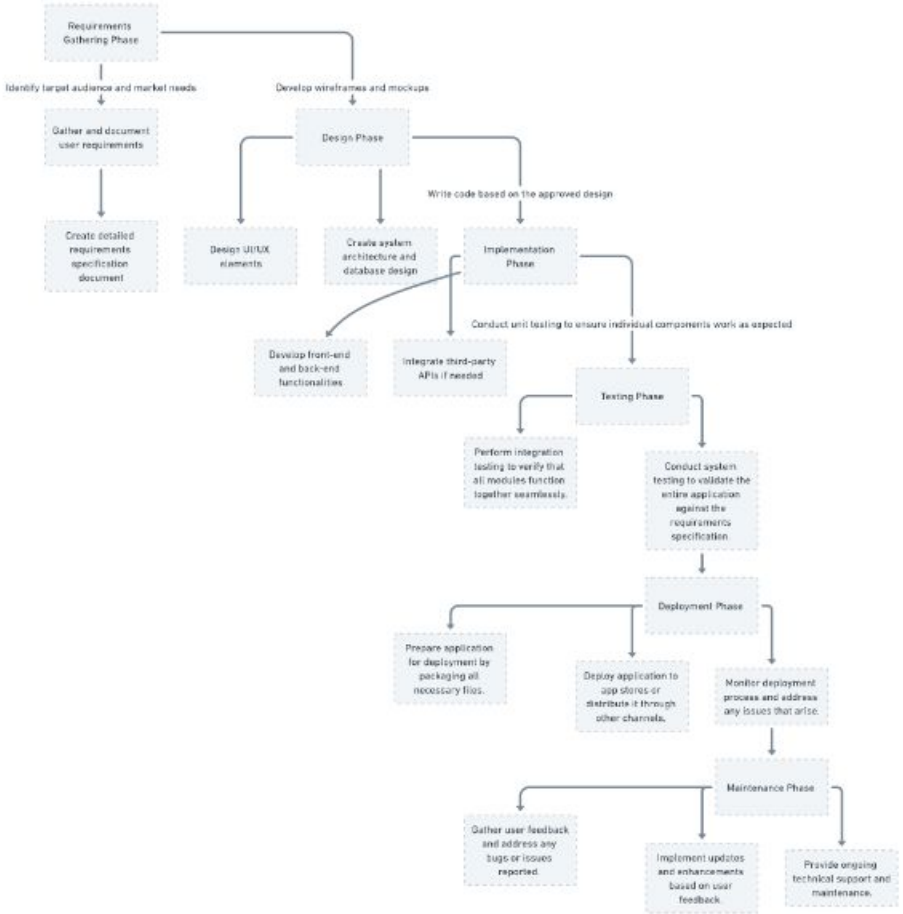
Task#02


Fitness Tracker Journey
Discovery
Research Features and Benefits
Decision to Purchase
Online Purchase
Receive Tracker in the Mail
Setup Tracker and App
Pair Tracker with Smartphone
Wear Tracker Throughout the Day
Monitor Activity Levels and Heart Rate
Receive Notifications and Reminders
Access Personalized Insights and Recommendations
Discover New Workout Routines and Recipes
Encounter Challenges and Pain Points
Seek Support and Solutions

Task#03


Ideation Strategy for Smart Traffic Management Module
Research Phase
Define Objectives
Brainstorming Session
Concept Development
Prototyping
Feedback & Iteration
Validation & Validation
Documentation & Communication

Task#04

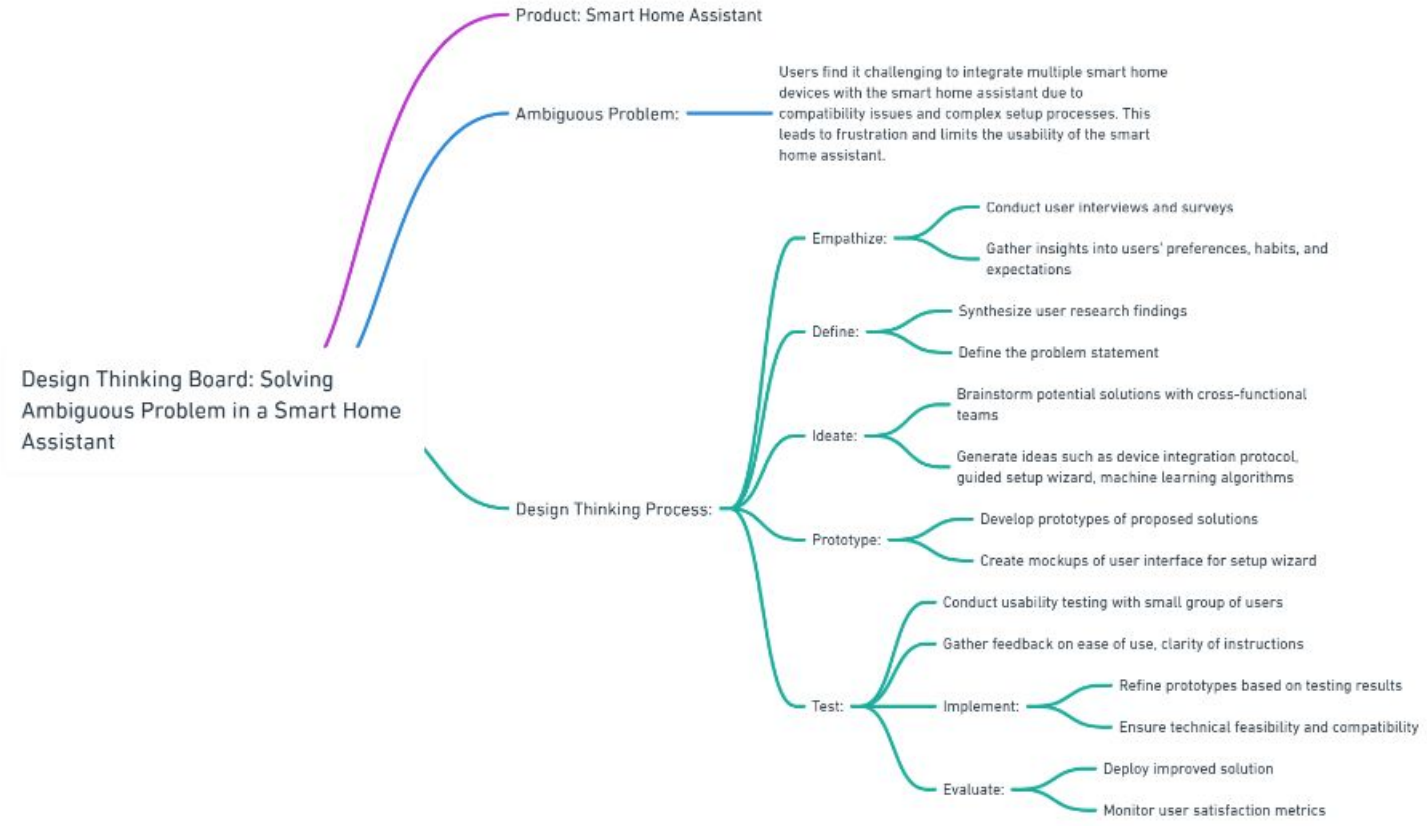

Requirements Gathering Phase
Identify target audience and market needs
Develop wireframes and mockups
Gather and document user requirements
Design Phase
Write code based on the approved design
Create detailed requirements specification document
Design UI/UX elements
Create system architecture and database design
Implementation Phase
Conduct unit testing to ensure individual components work as expected
Develop front-end and back-end functionalities
Integrate third-party APIs if needed
Testing Phase
Perform integration testing to verify that all modules function together seamlessly.
Conduct system testing to validate the entire application against the requirements specification
Deployment Phase
Prepare application for deployment by packaging all necessary files.
Deploy application to app stores or distribute it through other channels.
Monitor deployment process and address any issues that arise.
Maintenance Phase
Gather user feedback and address any bugs or issues reported.
Implement updates and enhancements based on user feedback.
Provide ongoing technical support and maintenance.

Task#05

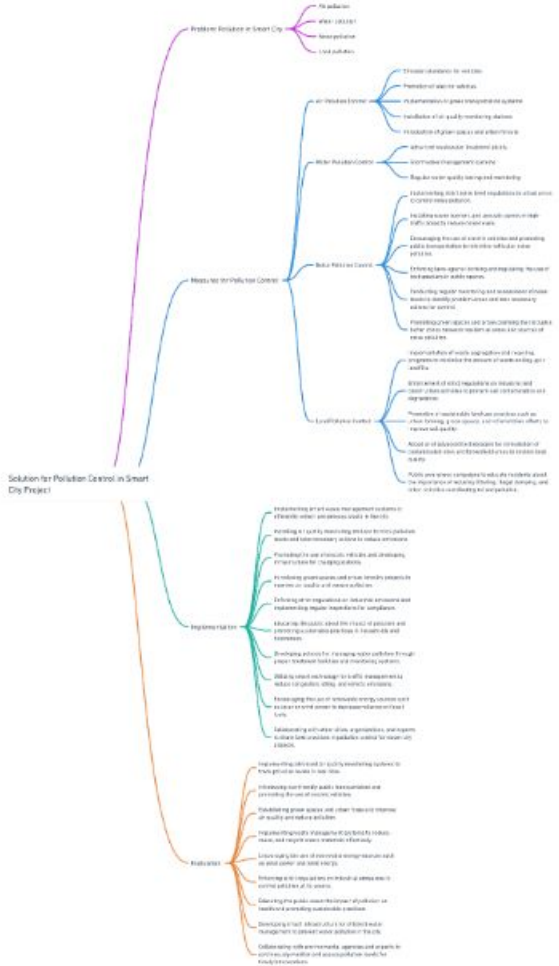
Agile Board: Smartwatch development

Develop firmware for controlling smartwatch hardware components	Design the smartwatch's hardware components, including the processor, sensors, and display	Develop companion mobile apps for iOS and Android platforms	Design the user interface (UI) and user experience (UX) for the smartwatch and companion apps
Conduct unit testing for firmware and software components	Perform integration testing to ensure all features work together seamlessly	Test for compatibility with different devices and operating systems	Develop basic firmware architecture in Sprint 1
Implement core features in firmware in Sprint 2	Refine firmware functionality based on feedback in Sprint 3	Review completed tasks and assess their alignment with sprint goals in Sprint Review	Reflect on the sprint process and identify areas for improvement in Retrospective

Task#06


Design Thinking Board: Solving Ambiguous Problem in a Smart Home Assistant
Product: Smart Home Assistant
Ambiguous Problem:
Users find it challenging to integrate multiple smart home devices with the smart home assistant due to compatibility issues and complex setup processes. This leads to frustration and limits the usability of the smart home assistant.
Design Thinking Process:
Empathize:
Conduct user interviews and surveys
Gather insights into users' preferences, habits, and expectations
Define:
Synthesize user research findings
Define the problem statement
Ideate:
Brainstorm potential solutions with cross-functional teams
Generate ideas such as device integration protocol, guided setup wizard, machine learning algorithms
Prototype:
Develop prototypes of proposed solutions
Create mockups of user interface for setup wizard
Test:
Conduct usability testing with small group of users
Gather feedback on ease of use, clarity of instructions
Implement:
Refine prototypes based on testing results
Ensure technical feasibility and compatibility
Evaluate:
Deploy improved solution
Monitor user satisfaction metrics

Task#07


Solution for Pollution Control in Smart City Project
Problem Related in Smart City
Measures for Pollution Control
Air Pollution Control
Water Pollution Control
Noise Pollution Control
Land Pollution Control
Implementation
Indicators

Task#08

Task#09

Use of Robots in Welding in inaccessible areas / Foundry

Traditional welding in foundries faces challenges in accessing confined or hazardous areas, impacting safety and efficiency

Human welders face risks in extreme temperatures or hazardous environments, affecting productivity and safety

Robotics offer a solution by accessing inaccessible areas without risking human safety

Advanced robotic systems with sensors and AI can navigate complex environments and execute precise welds with minimal human intervention

Increased productivity due to continuous operation without fatigue

Enhanced safety by replacing humans in hazardous environments

Improved quality through consistent and precise welds, minimizing defects

Significant investment in equipment, training, and infrastructure required for implementation

Integration with existing workflows and processes may pose challenges

Adoption of robotics in foundry welding expected to increase as technology advances and costs decrease

Continued research aims to enhance robotic capabilities, such as improved mobility and adaptability.