Design thinking lab.

Problem statement

**Title:**  Home Garden Management

**Domain**: IoT in Agriculture

**INTRODUCTION TO DOMAIN:**

IoT in Agriculture integrates smart devices and sensors to optimize farming practices, improving efficiency and sustainability. It enables real-time monitoring of soil, weather, crop health, and livestock, facilitating data-driven decision-making. This technology enhances yield, reduces resource waste, and supports precision agriculture for better productivity.

**PROBLEM STATEMENT:**

Busy urban lifestyles and limited support for plant care are leading to a decline in home gardening adoption and a reduction in garden sizes. The lack of time and knowledge to maintain plants further discourages individuals from pursuing gardening. This trend impacts not only personal well-being but also urban green spaces and biodiversity.

**EXPECTED OUTCOME:**

1. Water Management: Using real-time data to automatically adjust the watering schedule ensuring plants receive the appropriate amount of water.
2. Temperature Control: Help grow plants at temperatures optimum for their growth through a variety of methods
3. Condition Tracking: To track environmental parameters (air quality, temperature, humidity) and provide early alerts on conditions that could negatively affect plant growth, allowing users to take corrective actions.
4. Time Management: Help busy users to effectively make the best of their time as well maintain their gardens
5. Reducing Wastage: Helping to reduce wastage of water through effective water management

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| **Signature of Faculty Mentor Name:** | **Signature of the HOD**  **Prof. & Head, Dept. of AIML** |