**Planning and Requirements Analysis:**

Purpose:

The aim of this project is to develop a mobile application that collects data from sensors in home appliances and transfers this data to users. Thus, users will be able to monitor and detect potential problems in their smart home devices through the mobile application.

Scope:

-laundry machine

-dishwasher

-fridge

-climate

- Robot Vacuum Cleaners

Target users: Households with a Smart Home User.

Functional requirement:

-Microcontrollers in the device analyze error codes and send them to the mobile application and the mobile application gives feedback to the user.

-Sensors automatically calculate the maintenance period according to the serial number of the device and transfer the data to the mobile application. The user learns the maintenance date of the device early from the mobile application.

-The data from the sensors is transferred to the cloud via Wi-Fi and instant device status, past failures and performance can be monitored via the mobile app.

Non-functional requirements:

- The system must work stably in any environment.

- The Mobile App must react quickly.

- Data must be well secured.

- Basic functions should work even on a poor internet connection.

- The user interface must be simple and straightforward.

- Easy to develop.

- good multilingual support.

Feasibility:

- The mobile application can be developed for existing mobile platforms (Android/iOS) and integrated with cloud-based data management systems.

- Considering the development, hardware and maintenance costs of the project, an average cost may be required.

- The app can save users money by reducing device maintenance costs and extending device lifetime.