

Smart Home Project

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I. Introduction

The Project Consists of two Atmega32 Microcontrollers one in a Control Room that Receives commands from a mobile device via Bluetooth and transmits these commands to the other Microcontroller which is located in a Smart Room via SPI communication protocol and shows the commands on a LCD. The Atmega32 located in the smart room controls the Light, the Fan, and the Door of the room and reads the Temperature of the Room and shows it on the LCD.

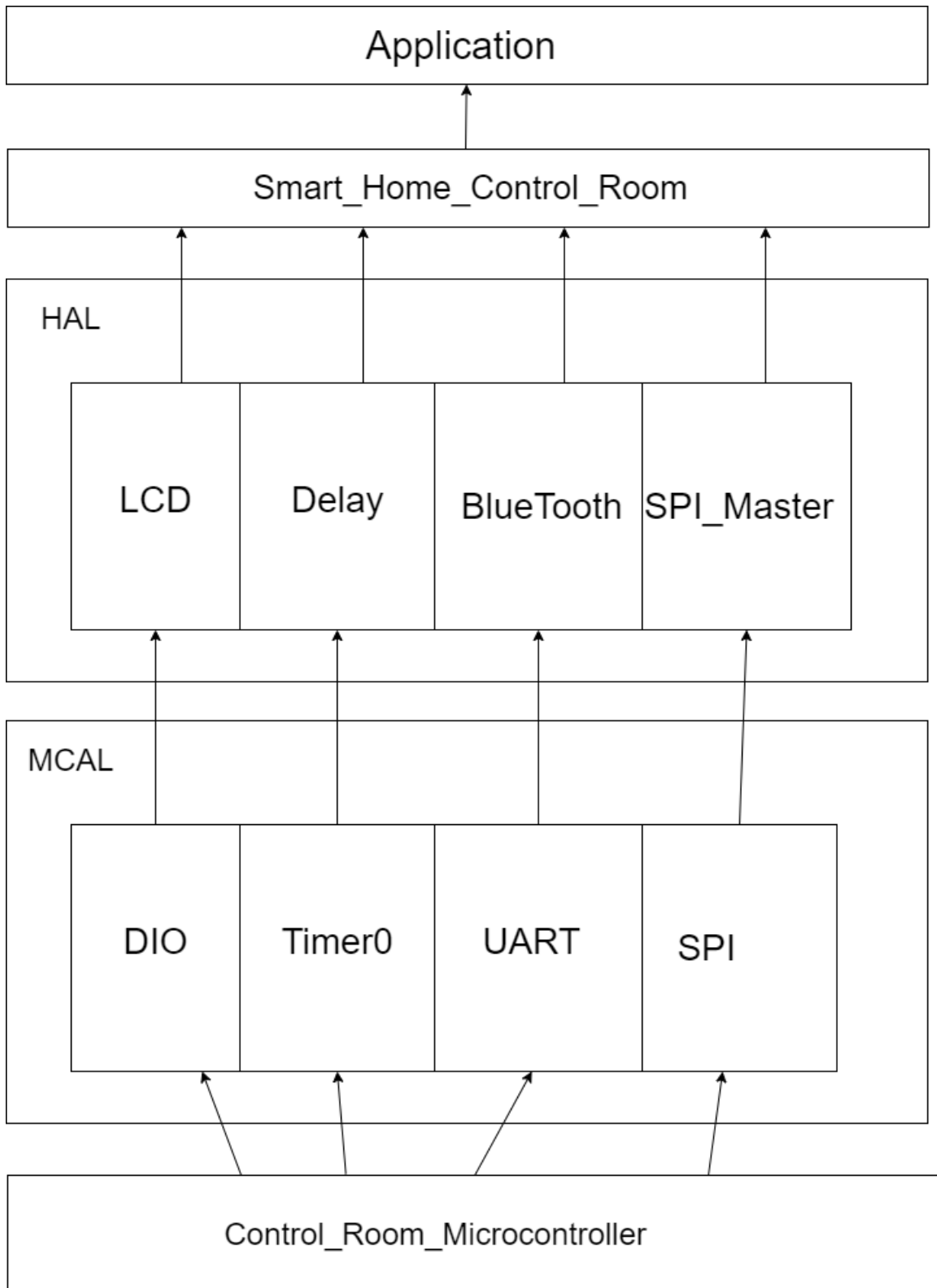
II. List of Commands Received From the mobile device:

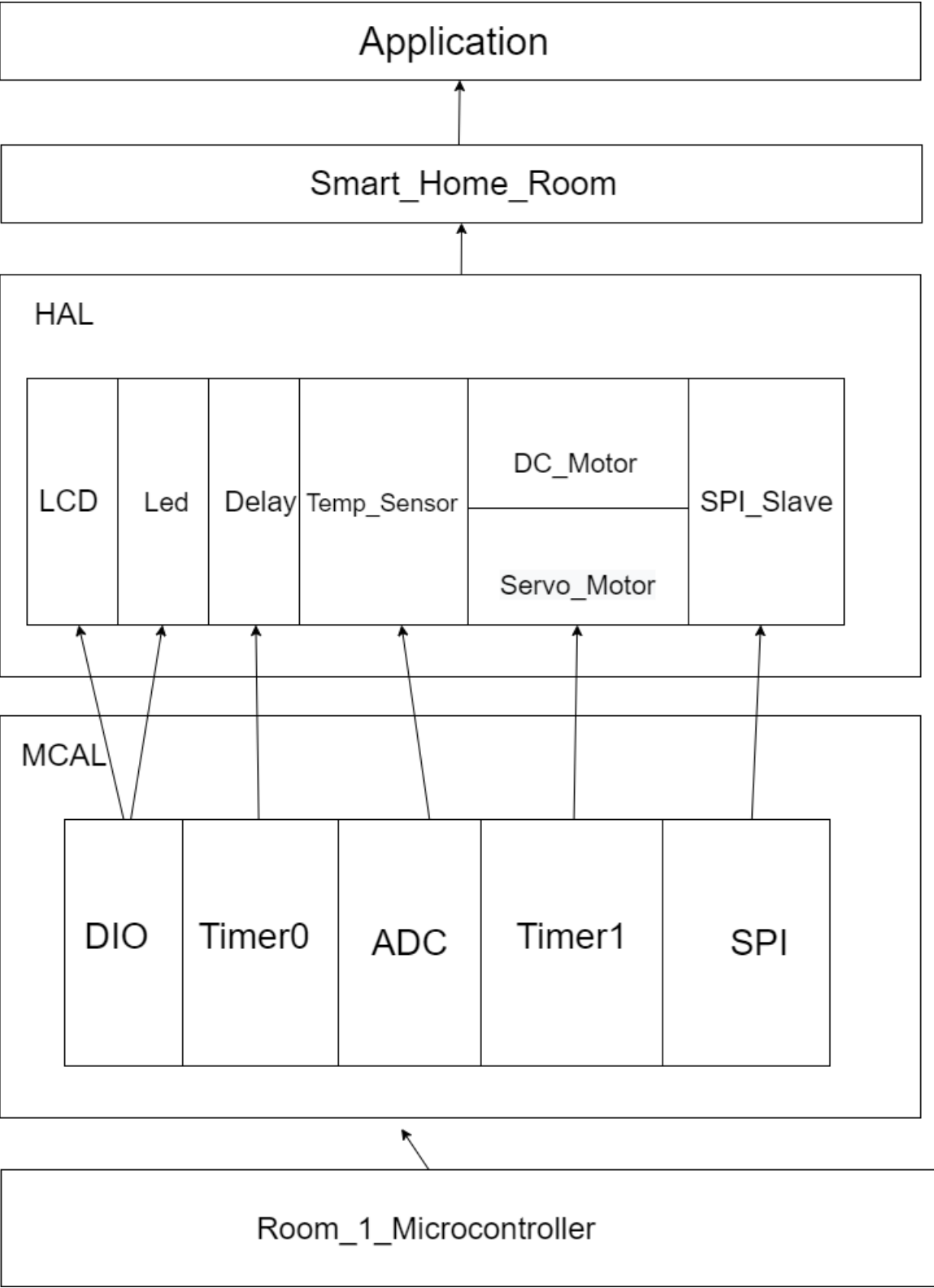
1. Toggle the Light of the Room which corresponds to the character '0' .
2. Measure the Temperature of the room which corresponds to the character '1' .
3. Speed up the Fan of the Room which corresponds to the character '2' .
4. Speed Down the Fan of the Room which corresponds to the character '3' .
5. Stop the Fan of the room which corresponds to the character '4' .
6. Close the door of the Room which corresponds to the character '5' .
7. Open the door of the Room which corresponds to the character '6' .

III. Hardware

Two Atmega32 , one Led Acts as the Room light , one Servo to control the Room's Door, One Motor to control the Room's Fan, LM35 Temperature Sensor, L293D Motor Driver, Bluetooth Module, and two LCDs one For each Room.

IV. Software Layered Architecture





V. Code Flow Chart :

