Embedded System Design (EC342)

Project Evaluation - 1

SMART ROOM

TEAM:

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Project introduction & motivation:

The idea of our project is to implement a next generation room, which literally does all the work like switch on/off the lights, fan and other appliances, automatically regulating the temperature, surveillance or monitor the activities in the room, security system using a facial recognition and many more by using our voice and/or by a smart phone or a desktop application. This next generation room can be called as a smart room.

Current State of the Art:

The home automation has been achieved a couple of years back where the user can control all the electrical appliances in their house by a voice command or by a smart phone app. Google made a device called as google home to achieve the above. Automatic temperature regulating air conditioner are also available. Room surveillance is also not a new things. Even though all this things exist separately, they are rarely seen together. Our aim is to bring all this together and hence the smart room.

FEATURES:

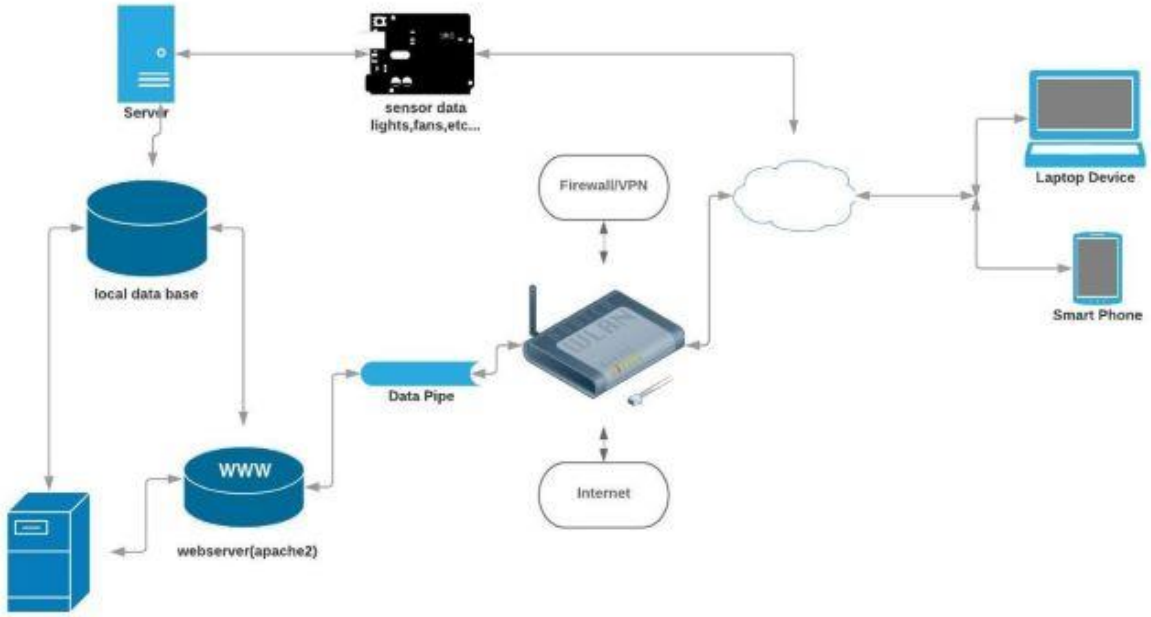
- Home automation.
- Facial recognition.
- Automatically regulating the temperature.
- Surveillance with a live stream.
- Database for security purposes.
- Personal app to control the authorization, and to access the database.
- Notification in app for granting access.

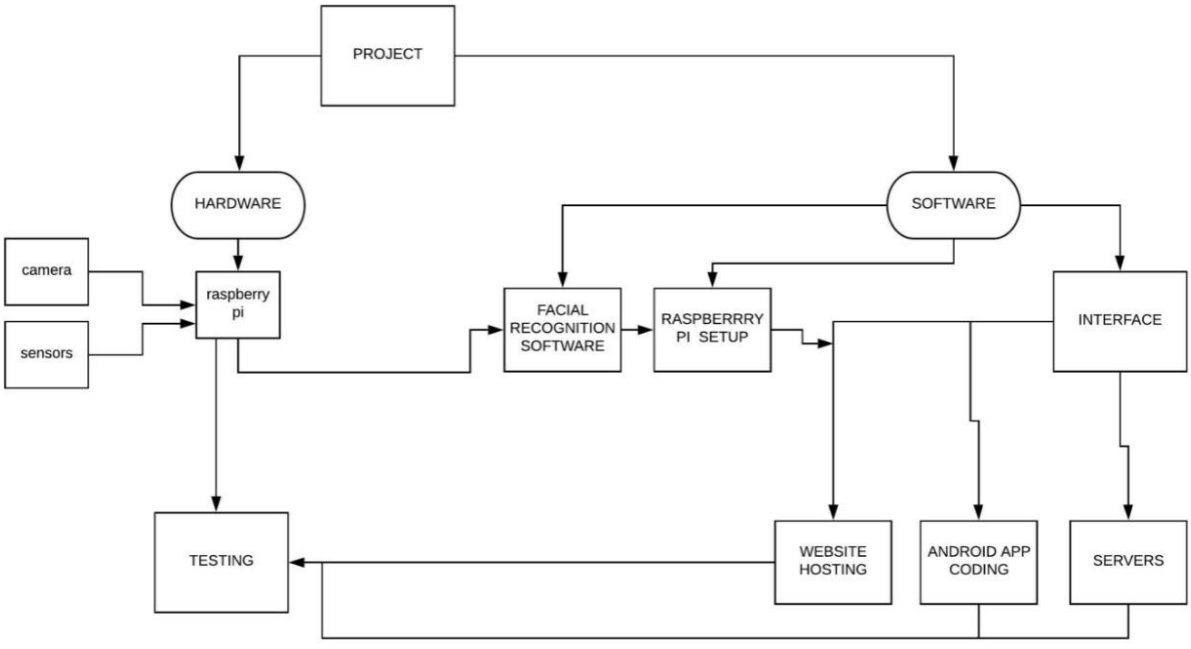
Detail of implementation:

Components Required

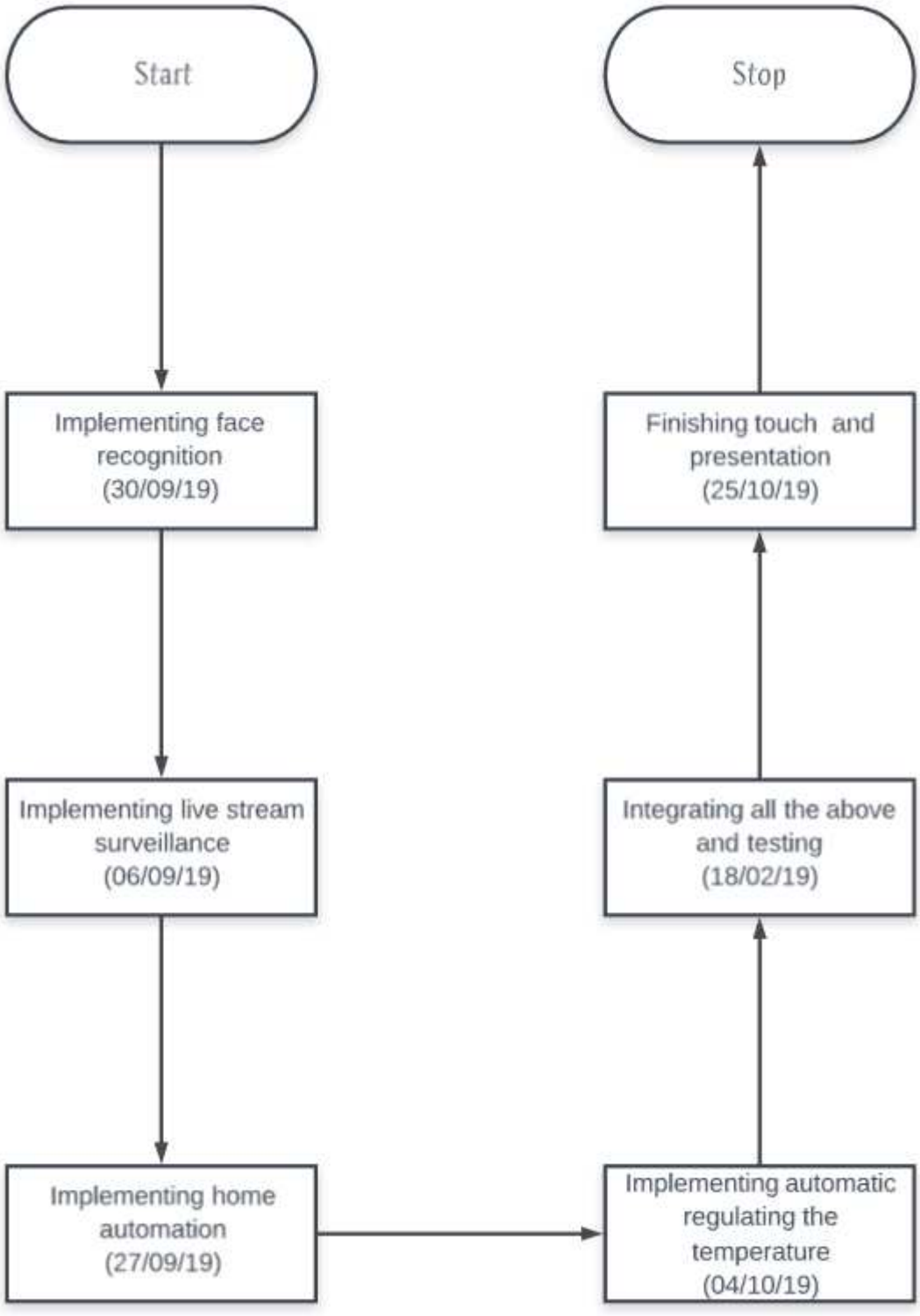
- Nodemcu wifi module(esp 8266)
- Relay board
- Power source(9V Batteries)
- Leds
- Connecting wires
- Smart phone(connected to internet)
- Raspberry pi
- Raspberry pi camera module

Project Module and Block Diagram:





Timeline:


Start
Implementing face recognition (30/09/19)
Implementing live stream surveillance (06/09/19)
Implementing home automation (27/09/19)
Implementing automatic regulating the temperature (04/10/19)
Integrating all the above and testing (18/02/19)
Finishing touch and presentation (25/10/19)
Stop