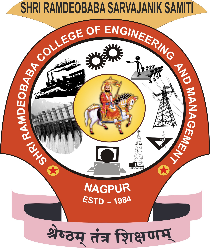
**Department of Computer Science and Engineering**

**Shri Ramdeobaba College of Engineering and Management, Nagpur**

**2017-2018**



**Project Synopsis**

**Of**

**Voice Controlled Home Automation**

**Group Members Project Guide**

Ekta Chawda (36) Dr. T. Diwan

Akshay Rathi (44)

Kanak Kaushik (51)

Samarth Sanghi (63)

Shubham Jha (69)

**Project Synopsis**

**Of**

**Voice Controlled Home Automation**

**Problem Definition:**

* We have reached the era of home automation where we have a system that allow you to control your home appliances using smart phones and remotes, is old concept now.
* In the proposed system we will be implementing the next generation technology i.e. “Voice operated device Controlling”.

**Aim and Objectives:**

* To develop an automated home automation that works on speech recognition and processing.
* System eases the home automation task by listening to user’s speech and controlling appliances as per user voice commands.

**Advantages:**

* Easy to install and use.
* **Managing all of your home devices from remote location.**
* Able to know the status of the appliances.
* It’s possible to make your space more energy-efficient.
* Saves Money and Increases Convenience.
* **Maximizing home security.**
* No hassle of ever switching the lights, fans, etc.

**Applications:**

* It can also be used in Industries.
* Important application for physically handicapped people and elderly people.

**Proposed plan of Work:**

|  |  |  |
| --- | --- | --- |
| **Sr. no** | **Activity** | **Estimated Time** |
| 1. | Discussion on project topic with project guide. | 1 week |
| 2. | Deciding the best suitable platform (technology) to be used for the project. | 3 days-1week |
| 3. | Planning user interface and modules of the project. | 1 week |
| 4. | Development of the project. | 4-5 week |
| 5. | Debugging and testing the project. | 2 weeks |
| 6. | Approval by project guide and implementing the suggested changes. | 2-3 weeks |
| 7. | Documentation | 1 week |

**Methodology:**

* In this system we use a microphone to record user’s speech and transfer these commands to the Raspberry Pi through our circuitry.
* The application now processes user’s speech to extract keywords related to load switching.
* It analyses the sentence of user to check if user said a command to switching off loads in his speech.
* If the system detects a command in user’s sentence, it analyses which load is referred to and what command is issued.
* On processing of user spoken keywords the board operates a relay based circuit to switch loads on/off.
* The relay based circuit is used to switch AC supply loads easily using user commands.

**Hardware Specifications:**

* [Raspberry Pi model B](https://www.allaboutcircuits.com/electronic-components/?p=raspberry+pi+model+b) with memory card preloaded with an OS.
* Solder dot prototyping board.
* 9V battery.
* WiFidongle : [Edimax EW 7811UN](http://www.ebay.in/itm/like/edimax-ew-7811un-150mbps-wireless-ieee802-11b-g-n-nano-usb-adapter-wifi-dongle-/271315447794?pt=lh_defaultdomain_203" \t "_blank).
* USB keyboard.
* HDMI monitor.
* Lamps.

**Software Specifications :**

* Android SDK.
* Google speech recognition API.
* NOOBS OS.
* Apache server.
* C++/Python.

**Outcome:**

* We will be able to finally implement the voice over control of home appliances.
* A step closer to an IOT (Internet Of Things) environment.

**Project Team:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Name** | | **Roll number** | **Signature** | **Name and signature of Project Guide** |
| **Ekta Chawda** | | **36** |  | **Dr. T. Diwan** |
| **Akshay Rathi** | | **44** |  |
| **Kanak Kaushik** | | **51** |  |
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**Dr. M. B. Chandak**

**HOD, CSE Dept.**