

## **PROJECT ABSTRACTS**

### **1. ARDUINO BASED HOME AUTOMATION**

In today's world automation is playing an important role in developing human's life and enhancing safety and security protocol. Mobile phones nowadays are very common to all people. Everyday household can now switch ON /OFF the fan or lights, decrease or increase in air conditioner temperature using smart phone this is nothing but home automation.

Home automation allows us to control household electrical appliances like light, door, fan, AC etc. It also provides home security and emergency system to be activated. Home automation not only refers to reduce human efforts but also energy efficiency and time saving. The main objective of home automation is to help handicapped and old aged people to control home appliances without taking any effort

The home automation system (HAS) designed on android platform has been interfaced with 8 bit microcontroller i.e. Arduino to control the home appliances using relay. Bluetooth has been used as the most reliable and efficient technology for short range communication. This is a novel approach enhancing automation in household works and eliminating the traditional method of switching. Home appliances are connected to the microprocessor and communication is established between the Arduino and Android mobile device or tablet via Bluetooth module.

## **AN EMBEDDED SYSTEM BASED LIBRARY MANAGEMENT**

The aim of this project is to implement library management system by maintaining database for issuing and returning of books by using RFID. Now a days we are using the bar-coding technology to identify the particular book and also to identify the student. In this system there are so many disadvantages like if the bar-code is folded then it's very difficult to identify book number at that time we have to enter the code manually and this is time consuming process. so we are using the RFID technology due to that we have to avoid the disadvantages of existed system. Here, we are using finger print system is to identify the student. The controller checks whether the student got membership or not (finger print Validation) by communicating with finger print database. If the finger print is proved to be valid then the student is allowed else buzzer will buzz. An RFID tag is attached into the book with the relevant information like book name, book number etc. The detailed information regarding the book is also captured in the microcontroller. The communication between the microcontroller and RFID Card Reader is through Serial Communication and also the time and date (of issued & returned) also will be stored in the PC.

## **SMART HEALTH PREDICTOR**

This project in detail explains about prediction of diseases symptoms which users want to check and it also gives precautions. It might have happened so many times that you or someone needs doctor help immediately, but they are not available due to some reason.

The Health Prediction system is an end user support . Here we propose a system that allows users to get instant guidance on their health issues through an intelligent health care system online. The system is fed with various symptoms and the disease/illness associated with those systems. The system allows user to share their symptoms and issues. It then processes user's symptoms to check for various illness that could be associated with it. Here we use some intelligent data mining techniques such as Naive – Bayes to guess the most accurate illness that could be associated with patient's symptoms. If the system is able to provide suitable results, it informs the user about the type of disease or disorder it feels user's symptoms are associated with. If user's symptoms do not exactly match any disease in our database is shows the diseases user could probably have judging by his/her symptoms.