Project General Description:
Our project is Door Unlocking System consists of Hardware as well as Software. First Level of Protection is done by Android Application. Second Level of Protection is done by RFID and it Opens the lock. System can also detect number of Persons Entering into the Room with Optical Sensors.

Project sectors:
- Code for Server /Website Development
- Android Application for lock opening
- Development of Hardware
- Firmware Development

Server:
The server been written in java that can accept a TCP request over some port. (figure 1 and 2) server will maintains the following information:
- User id and passwords
- User id and their associated RFID cards
- Maintain data for any entry requested by a user
- Maintain audit data of who entered through the door, when and with how many people.

Android Application:
We developed an android application, which allows a user to enter his userid and password and request entry through the door. (figure 3)

Hardware:
The major components used in the project are:
Atmega324 Microcontroller, GSM module (Quectel M10), RFID reader (EM18) IR sensor, L293D motor driver and 16x2 Alphanumeric LCD. (figure 4)

Firmware:
We decided to write our firmware in C . We used CAVR as our compiler, which generates a lot of code for us automatically and hence makes our life easier.