Team: Epsilon-Delta

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Abstract:

Main aim : To make a model of a smart(automated) room.
The level of automation may vary from partial automation to complete artificial intelligence driven devices to take care of day to day functions of the home.
The main focus will be on the following:

- Energy efficiency
- Increased convenience of use
- Improved Security

We plan to develop sensors/detectors for various factors such as the following:

- Temperature
- Humidity
- Light intensity
- Motion detectors
- Face recognition

These sensors will provide data to a computational device that will take decisions and control various gadgets in the most optimum way to ensure best power saving capability and minimum wastage.
We aim to achieve the following:

- Automated lighting system
  - Switches on/off according to light intensity
  - Option for controlling intensity/dimming
- Controlling fan and air conditioner based on temperature and humidity
  - Regulator for fan controlled by microcontroller
  - Automatic switching on/switching off of fan
  - Controlling AC using microcontroller
  - Providing optimum settings as suggestion to user based on input from sensors
  - Optimising combined use of fan and AC
- User interface

  - Android app which takes input from user regarding states of devices
  - Used for overriding and setting the automatic control
  - May transmit data through bluetooth or internet

- If the above modules are completed well within time, we may attempt the security module comprising of the following features:
  - Face detection based system
  - Laser based detection system for number of persons in room
  - Live feed to user regarding visitors
  - Controlling devices based on user presence