**Proposal: Fully Functioning House + Street**

Description:

Our group intends to create fully functioning house alongside a mini street and possibly an alarm system and/or miniature car.

The house would consist of four rooms; a kitchen, a bathroom, a bedroom, and a living room. All of which will consist mostly of exterior design made of cardboard, it will have lighting powered by LEDs and a fan system in one of the rooms, of some sort. In addition to this, the house would be able to open, like a barbie house concept, through the use of two motors and through that anyone would be able to see the interior contents of the house. Also, this house will be built with a garage that would have an automated garage door made from cardboard that will open and close. All this would be protected by an alarm system composed of a buzzer and a sensor.

The miniature car is an add-on that might be added to the project only if time allows. This car would be stationed in the garage and would move in and out of the garage using two tracks and a motor.

Finally, we intend to create a miniature street outside the house consisting of one traffic light using 3 LEDs.

All of these components will be controlled by a remote.

Details:

The house fans would be made to rotate 360o on a continuous loop if a certain button on the remote is pressed. The lights would be made to be either high (on) or low (off) based on the button pressed by the user as well. Each button will respectively be programmed to respond to a certain room and a certain function (e.g. 1 = lights in room one, Vol Up + 1 = lights in room one) and because of the conditional statements in the code specified for each and every function. The front side of the house would be made to open roughly 90o-180o one clockwise other counter-clockwise and would also be controlled by a conditional statement based on the user’s input on the remote. The garage would consist of an LED and a motor which would be controlled by a conditional statement where if true the LED would be high and the motor would be made to rotate such that it raises the garage door, these two components would be controlled by one button on the remote.

The miniature car would be controlled by a conditional statement and would make the motors under the garage spin a certain amount of degrees and after a short delay move back into the garage through the strings attached to the car move back and forth.

The traffic lights would be controlled by a conditional statement based on the button placed by the user, if the button is pressed the traffic light will turn on and will be made to turn each LED high/low to mimic a traffic light.

This is the assumed coding required to complete this project.