**Abstract**

A home automation system will monitor and control home attributes such as lighting, climate, entertainment systems, and appliances. It may also include home security such as access control and alarm systems. When connected with the Internet, home devices are an important constituent of the Internet of Things. The user interface for control of the system uses either wall-mounted terminals, tablet or desktop computers, a mobile phone application, or a Web interface that may also be accessible off-site through the Internet.

Unity is a cross-platform game engine developed by Unity Technologies. The engine has since been gradually extended to support a variety of desktop, mobile, console and virtual reality platforms. Firebase is a platform developed by Google for creating mobile and web applications. It was originally an independent company founded in 2011. In 2014, Google acquired the platform and it is now their flagship offering for app development.

Using unity game engine a home environment is developed which consists of 3D models of home appliances. This application helps users to navigate to rooms and turn on or off devices virtually. By clicking the left and right mouse button over 3D models, status on and off is pushed to the firebase real-time database respectively. At the same time unity fetches data from firebase in order to indicate the status of devices to the user. On the other end NodeMCU fetches status of devices from firebase and changes the status accordingly. The Application allows only authorized users, thus home automation is done securely.

**Software Used:**

* Unity
* Visual Studio
* Blender
* Arduino IDE

**Hardware Used:**

* NodeMCU
* Relay module
* Connecting wires
* Light and Fan

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