Abstract:
Now a day's technology becomes ever more invasive, the design challenges in home automation are increasingly apparent. Seamless controlling home, monitoring and programming by the end user have yet to enter the mainstream. This could be legitimate to the challenge of developing a fully independent and extensible home system that can support devices and technologies of differing functionalities and protocols. This part of document describes how to control and monitor home appliances using android application over Bluetooth. There are number of commercial home automation systems available in market. However, these are designed for limited use. Therefore, home appliances can individually be controlled from the. This is very helpful to physically challenged people. The android mobile is used to send the commands to the Arduino to control all the home appliances. The main feature of this system is to control the voltage levels of home appliance in home like speed of fan based on temperature, intensity of light based on light intensity etc. and another feature is we may get the status of our home appliances from our android mobile phone. In this system we use different sensors like temperature, rain sensor and LDR for different applications.

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There are various reasons why Android is at the foreground:

1. Android is a universal front end from which developers can work
Android has risen quickly as a software platform mostly because Google chose to give it away to developers and device makers. The Linux-based software is open source, therefore allowing just about anyone to use its source code and therefore customize it for use in just about any gadget they can imagine.
The number of devices that rely on Android as an operating system today are numerous. With such a large number of devices run on Android it is easy to see how Android acts as a front end for IOT. It is easy and cheap to develop devices for IOT making them even more affordable for consumers.

2. Apps drive IOT

A gadget is just a gadget. However, with the right app to and software to help it run and perform different tasks, it becomes much more. Apps are what make it possible to use IOT devices. Android is currently the world's largest app platform. As of December 2016, Google Play store was reported to host more than 2.6 million apps. It is not surprising that Android drives the IOT movement.

3. IOT is being built on Java

Many IOT devices are being built on Java. It therefore makes sense that Android is driving the IOT market. Android allows for Java to be applied in a way that makes sense as opposed to the use of embedded JAVA which requires dedicated devices.

The Android IOT Ecosystem

To understand the application of Android in IOT, you must understand the IOT ecosystem and Android's role in it.

· The sensor

Sensors detect physical properties such as temperature and generate digital signals. Many hardware vendors rely on specific domains such as Linux, Android and Windows. The popularity and availability of Android makes it an easy winner in this area. The fact that Android is open source and can be tweaked for use in any device makes it a popular choice for device makers.

· Data Transfer

There must be a component that supports the transfer of data from the sensor. The two simplest options available for this are MQTT and XMPP. Android supports both of these open source implementations. The libraries can be used on Windows, Linux and Android.

· **Device**

There must a device or processor with an operating system that supports the components of the IOT ecosystem. This ought to be a small and portable device that doesn't consume too much power but can provide continuous connectivity. In many cases, inexpensive Android devices are chosen for this. Android devices meet the requirements to support a wide variety of sensors. There are also various tutorials available to assist developers.

· **Program**

There must be a program that receives the data and stores it. This could take the form a standard Linux Server. This server receives the data, decodes it and processes it. The data can be used for subsequent analysis.

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Our app design

This first layout (home Screen), it view there button

The first two for our two room that we have in our model

1-bed room

2-living room

3-for paring Bluetooth device that via it we can send

And receiving commands to the Arduino