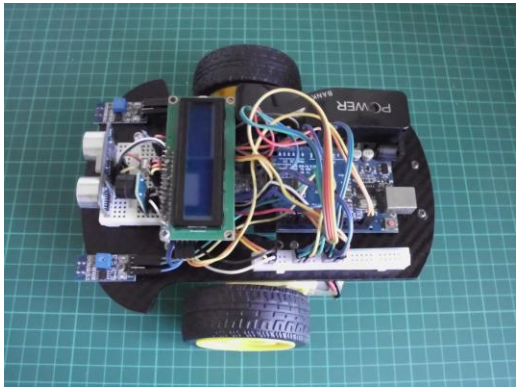

Figure 1. Arduino RC car

How it works?

It is based on the Arduino Uno microcontroller. It has infrared sensors, which are used for remote control and reflection measurement. It also has an ultrasonic sensor to calculate proximity, an active piezoelectric buzzer to produce sounds and lastly an LCD screen to print messages.

- Can be remotely controlled by any infrared transmitter device.
- It is suitable for line tracing or maze solving problems
- It has the ability to save some of the input commands so that the user can just press the redo or reset button to execute them, without calling them again.
- It also has an adjustable real-time digital clock.

My projects based on Arduino platforms

About Them

My first programming experience was programming Arduino boards. My first project was building the RC vehicle in Figure 1. After that I built the IR TV controller in Figure 2. My future ideas include gesture control with a Kinect sensor and small 3D printed robots. I have also created a small project based on Arduino Leonardo which can be used to control the computer devices like keyboard. Specifically what I did was connect an IR receiver and using the TV remote I can type buttons from the keyboard without using it.

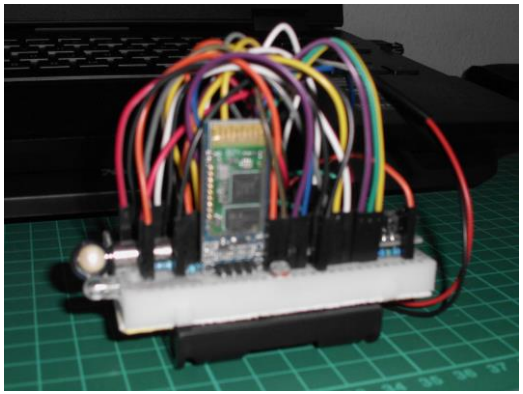

Figure 2. TV IR remote controller

How it works?

It is based on the Arduino Nano microcontroller. It has a bluetooth sensor, which is used to connect wirelessly with an Android device. By communicating between these two, a TV can be controlled remotely without needing its original remote control. By downloading an Arduino app from the Playstore, the smartphone or tablet sends messages to the Arduino which transmits the corresponding message to the TV, using an IR led. It also has an accelerometer, to control the TV only with gestures, without the need to connect to a smartphone. Another feature is that it glows in the dark as it has a photoresistor that measures the brightness of the room and also a tiny DC vibrating motor for a more realistic experience when in use.