PC Game controller using Arduino UNO R3



1.

This project has a tricky part when it comes to coding the Arduino, because here the UNO r3 does not support the joystick or keyboard and mouse library unlike the Leonardo or the pro micro. So we have to write the code for each keystroke using a different software to interface the UNO r3 with the computer as mouse and keyboard controls.

https://gfycat.com/forcefulinfamousanglerfish

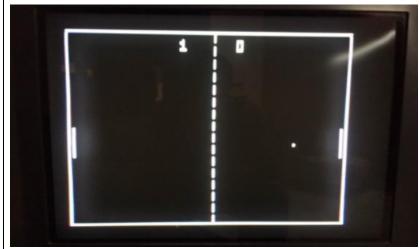
Home automation using Arduino and mobile app Link to the gif:



2.

In this project its possible to use Bluetooth or Wi-fi modules to interact with the Arduino. We would require an Arduino UNO, Bluetooth/Wi-fi module, relay, and a power source. The software required to control Arduino using your phone is https://efy.efymag.com/admin/issuepdf/Home%20automation%20using%20Android.zip

Arduino Ping pong game



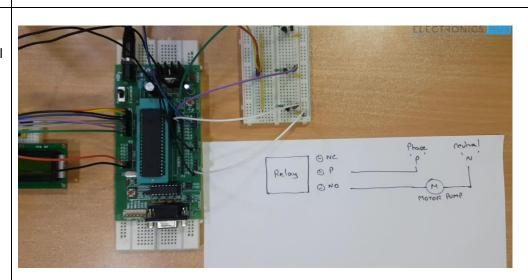
3.

The objective of this project is to make a ping pong game using Arduino. Here there are different options available for the display output like different types of oleds, lcds, etc. Improvements such as addition of an environment using java or python and use of different displays so that more content of the game can be displayed.

https://github.com/jerwil/Arduino_Pong

In the above mentioned link the gif, code and logic for the project are available

Water level controller using 8051 micro controller



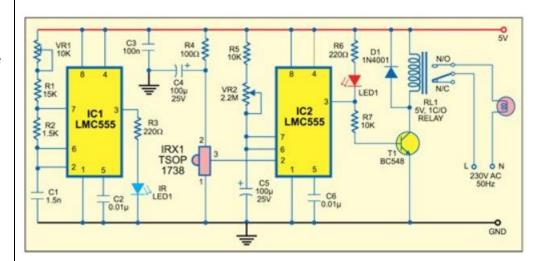
4.

This project uses 8051 microcontroller instead of Arduino so the software Arduino IDE cannot be used to instruct the microcontroller, Instead Keil is being used. The goal of this project is to maintain a specific water level of the water tank by refilling there by avoiding unnecessary wastage of water by spilling or by filling more than the load that the container could handle.

More information on the project is available on

https://www.electronicshub.org/water-level-controller-using-8051-microcontroller/

Touch free timer switch using LMC 555



5.

The objective of this project is to make a switch that can be operated by using infrared proximity sensors or its equivalents , so that there is no need to touch the switch. They can be used in places where hygiene is of utmost importance.

For further information:

https://www.electronicsforu.com/electronics-projects/touch-free-timer-switch

Making a video streaming camera using Raspberry Pi



6.

The objective of this project is to make a camera that allows us to view its feed in multiple devices and also allows us to adjust the positioning of the lens, all by using wi-fi connection. This project involves the installation of the libraries using the command terminal for operating the camera and a python code to control the servo movement to adjust the positioning of the camera.

Making a 3D printer controller using raspberry pi

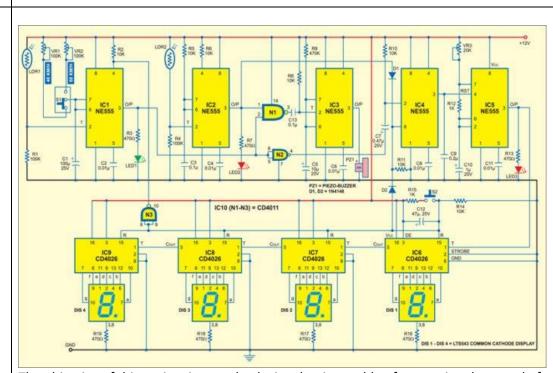


7.

The objective of this project is to make a controller for the 3d printer hardware using raspberry pi that will take the instructions in the form of G code and instruct the other parts of the printer like cooling fan, nozzle, heating pad, etc in terms of electrical signals to get the required 3d model. Improvements for such a project would be addition of a camera and connectivity to the internet so that the printer could be monitored and operated from anywhere.

Vehicle speed checker using LMC555

8.



The objective of this project is to make device that is capable of measuring the speed of vehicles and also alerting the user with a buzzer if the speed of the vehicle is more than a specific set limit.