

PRACTICAL -5

Aim: - Arduino programming with IR, Control Actuators using Mobile Application and development of Custom Mobile App

Experiment Part -I (On Tinker card)

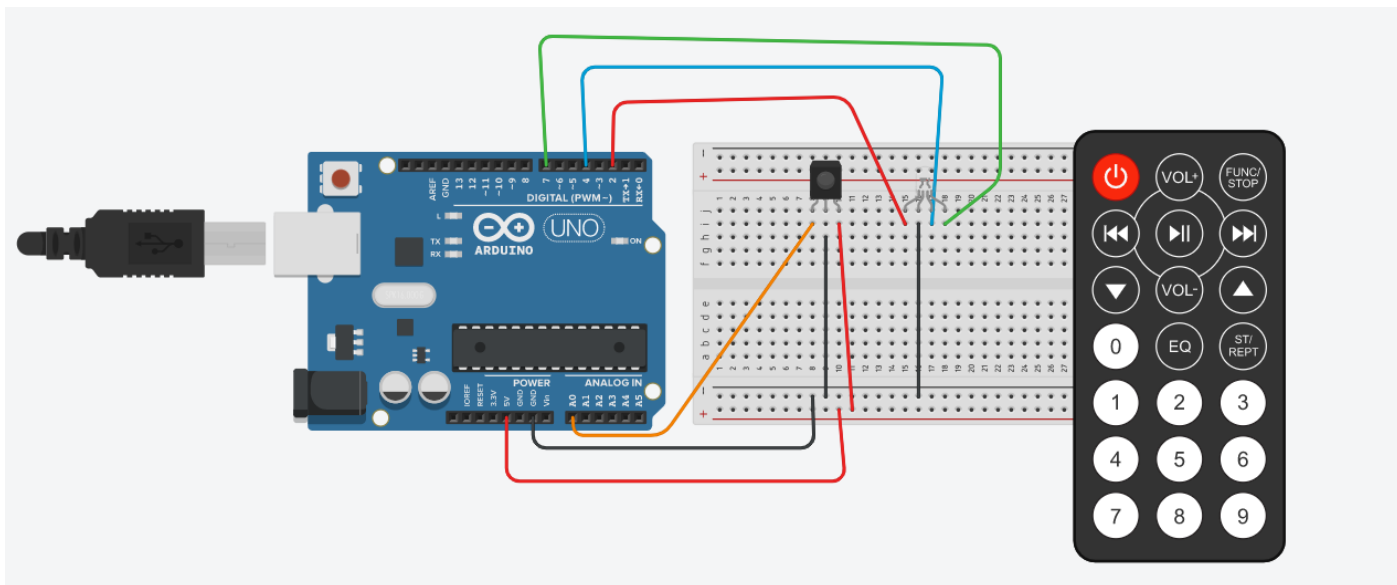
1. Control the RGB LED using IR Sensor and IR Remote Control.

Experiment Part -II (On Arduino Board)

2. Voice Control Application Actuators ON/OFF using mobile application(AMR_Voice)
3. Implementation of custom Mobile Application which works similar to AMR_VOICE application

Connection for Experiment(On Tinkercard)

1. Control the RGB LED using IR Sensor and IR Remote Control.

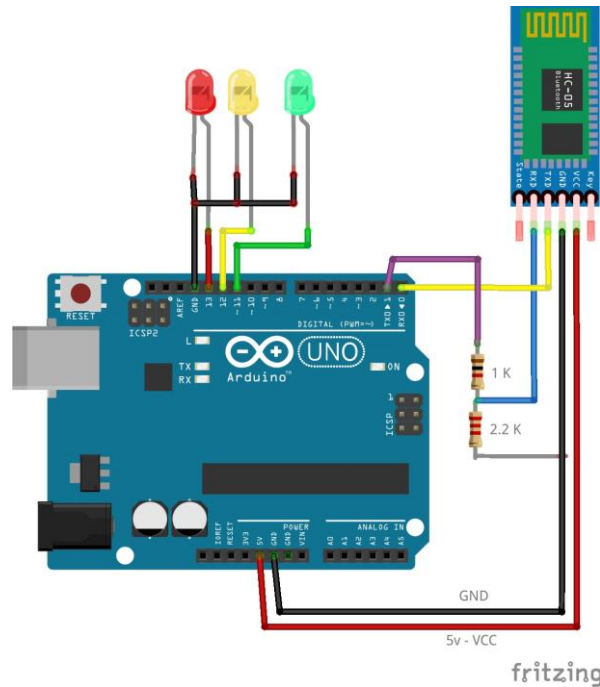


Sample Code for IR

```

#include <IRremote.h>
int receive_pin=A0;
void setup(){
  IrReceiver.begin(receive_pin);
  Serial.begin(9600);
}
void loop()
{
  if(IrReceiver.decode())
  {
    Serial.println(IrReceiver.decodedIRData.command,HEX);
    if(IrReceiver.decodedIRData.command==0xC)
    {
    }
  }
  delay(1500);
  IrReceiver.resume();
}
}

```

Connection for Experiment(On Arduino UNO Board)**Connection for Experiment****1. ON/OFF LED VIA BLUETOOTH Mobile Application****Procedure**

1. Search for AMR_Voice app in Google Play store.
2. You would find an app named "BT Voice Control for Arduino"
3. Install that Application in your phone
4. Once Installed it will Automatically Enable your Bluetooth. If in case it asks for your permission to Enable Bluetooth, please allow it
5. Click The Menu Button in the right Corner
6. Click Connect Robot.
7. It will show you the List of Available Bluetooth devices
8. Please select the device which has it's name as HC-05-(Your-Group No).
Example: If your Group No is 23, you need to select the device named HC-05
If you couldn't find your device it means that your Bluetooth module is not powered properly

9. Once connected please press the MIC button and use any of the following voice commands to control your Arduino

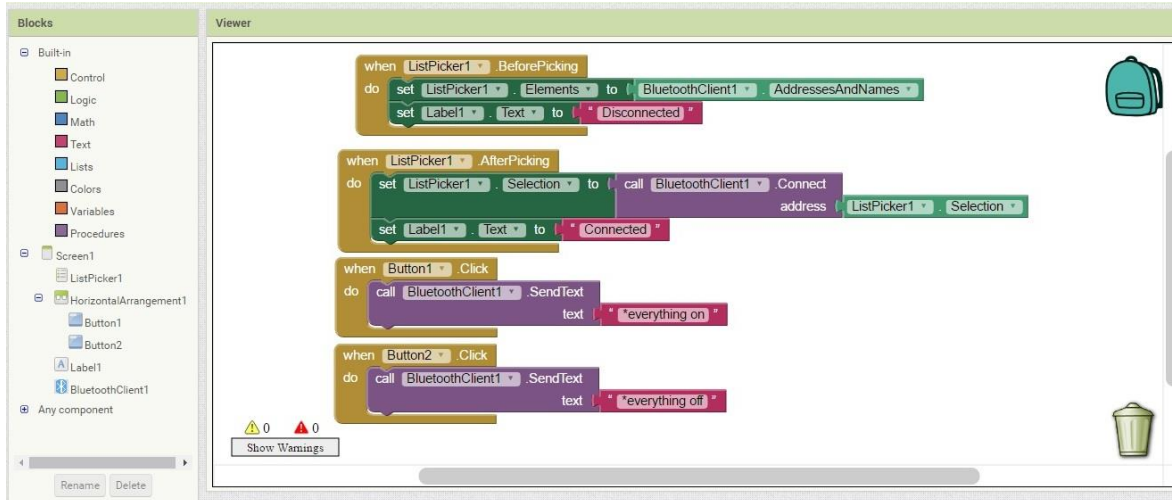
light on
light off
fan on
fan off
ac on
ac off
everything on
everything off

Note: Voice Commands refer that you should speak the above words to your phone

3. Develop Mobile Application which works similar to AMR_VOICE application



Design Block



Code Block