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Q) You have to control 3 to 4 different color LED using IR remote. Like when 1 is pressed by remote so one LED will turn ON when again the same button is pressed the LED will turn OFF. You also have to show the code values of every button on the LCD.

```
#include <IRremote.h>

#include <LiquidCrystal.h>

const int RECV_PIN = 6;

int Red = 7;

int Yellow = 8;

int Green = 9;

int itsONled[] = {0,0};

LiquidCrystal lcd(12, 11, 5, 4, 3, 2);


#define code1 2295

#define code2 34935

#define code3 18615

IRrecv irrecv(RECV_PIN);

decode_results results;

void setup()

{

lcd.begin(16,2);

irrecv.enableIRIn();

pinMode(Red, OUTPUT);

pinMode(Yellow, OUTPUT);

pinMode(Green, OUTPUT);

}

void loop()

{

if (irrecv.decode(&results))

{
```

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```
unsigned int value = results.value;

switch(value)

{

case code1:// FOR GREEN LED

if(itsONled[1] == 1)

{

digitalWrite(Green, LOW);

itsONled[1] = 0;

}

else

{

digitalWrite(Green, HIGH);

itsONled[1] = 1;

}

break;


case code2:// FOR YELLOW LED

if(itsONled[1] == 1)

{

digitalWrite(Yellow, LOW);

itsONled[1] = 0;

}

else

{

digitalWrite(Yellow, HIGH);

itsONled[1] = 1;

}

break;


case code3:// FOR RED LED
```

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```
if(itsONled[1] == 1)

{

digitalWrite(Red, LOW);

itsONled[1] = 0;

}

else

{

digitalWrite(Red, HIGH);

itsONled[1] = 1;

}

break;


}

lcd.print(value);

delay(500);

lcd.clear();

irrecv.resume();

}

}
```

Q1) What are the common carrier frequencies for IR?

ANSWER:

30.3 KHz, 33 KHz, 36 KHz, 38 KHz, 40 KHz and 56 KHz are the common carrier frequencies of IR.

Q2) What is IR Photodiode?

ANSWER:

IR Photodiode is a detector which capture reflected light of an IR LED.

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Q3) Name some projects where IR Remote and Receiver can be used

ANSWER:

- AC.
- TV.
- Remote Control Fan.
- Remote Control Door Lock.
- Controlled Robots.