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***COURSE:*** *COMPUTER ARCHITECTURE* ***(LAB)***

***ASSIGNMENT # 1***

***SUBMITTED TO:*** *SIR ABUZAR ZAFAR*

***CODE:***

*#include <IRremote.h>*

*int rc\_pin=6;*

*int Red=13;*

*int Blue=12;*

*int White=11;*

*int Yellow=10;*

*int Green=9;*

*int led[] = {0,0,0,0,0,0,0,0,0,0};*

*const int s1=2;*

*const int s2=3;*

*const int s3=4;*

*const int s4=5;*

*#define code0 12495*

*#define code1 2295*

*#define code2 34935*

*#define code3 18615*

*#define code4 10455*

*#define code5 43095*

*#define code6 26775*

*#define code7 6375*

*#define code8 39015*

*#define code9 22695*

*IRrecv irrecv(rc\_pin);*

*decode\_results results;*

*void setup()*

*{*

*irrecv.enableIRIn();*

*pinMode(Red, OUTPUT);*

*pinMode(Blue, OUTPUT);*

*pinMode(White, OUTPUT);*

*pinMode(Yellow, OUTPUT);*

*pinMode(Green, OUTPUT);*

*}*

*void loop()*

*{*

*if (irrecv.decode(&results))*

*{*

*unsigned int value=results.value;*

*switch(value)*

*{*

*case code0:*

*digitalWrite(s1,B0);*

*digitalWrite(s2,B0);*

*digitalWrite(s3,B0);*

*digitalWrite(s4,B0);*

*digitalWrite(Red,LOW);*

*digitalWrite(Blue,LOW);*

*digitalWrite(White,LOW);*

*digitalWrite(Yellow,LOW);*

*digitalWrite(Green,LOW);*

*break;*

*case code1:*

*digitalWrite(s1,B1);*

*digitalWrite(s2,B0);*

*digitalWrite(s3,B0);*

*digitalWrite(s4,B0);*

*if(led[1] == 1) {*

*digitalWrite(Red, LOW);*

*led[1] = 0;*

*}*

*else {*

*digitalWrite(Red, HIGH);*

*led[1] = 1;*

*}*

*break;*

*case code2:*

*digitalWrite(s1,B0);*

*digitalWrite(s2,B1);*

*digitalWrite(s3,B0);*

*digitalWrite(s4,B0);*

*if(led[2] == 1) {*

*digitalWrite(Blue, LOW);*

*led[2] = 0;*

*}*

*else {*

*digitalWrite(Blue, HIGH);*

*led[2] = 1;*

*}*

*break;*

*case code3:*

*digitalWrite(s1,B1);*

*digitalWrite(s2,B1);*

*digitalWrite(s3,B0);*

*digitalWrite(s4,B0);*

*if(led[3] == 1) {*

*digitalWrite(White, LOW);*

*led[3] = 0;*

*}*

*else {*

*digitalWrite(White, HIGH);*

*led[3] = 1;*

*}*

*break;*

*case code4:*

*digitalWrite(s1,B0);*

*digitalWrite(s2,B0);*

*digitalWrite(s3,B1);*

*digitalWrite(s4,B0);*

*if(led[4] == 1) {*

*digitalWrite(Yellow, LOW);*

*led[4] = 0;*

*}*

*else {*

*digitalWrite(Yellow, HIGH);*

*led[4] = 1;*

*}*

*break;*

*case code5:*

*digitalWrite(s1,B1);*

*digitalWrite(s2,B0);*

*digitalWrite(s3,B1);*

*digitalWrite(s4,B0);*

*if(led[5] == 1) {*

*digitalWrite(Green, LOW);*

*led[5] = 0;*

*}*

*else {*

*digitalWrite(Green, HIGH);*

*led[5] = 1;*

*}*

*break;*

*case code6:*

*digitalWrite(s1,B0);*

*digitalWrite(s2,B1);*

*digitalWrite(s3,B1);*

*digitalWrite(s4,B0);*

*for (int i=13;i>=9;i--)*

*{*

*digitalWrite(i,HIGH);*

*delay(500);*

*digitalWrite(i,LOW);*

*}*

*break;*

*case code7:*

*digitalWrite(s1,B1);*

*digitalWrite(s2,B0);*

*digitalWrite(s3,B0);*

*digitalWrite(s4,B0);*

*for (int i=9; i<=13; i++)*

*{*

*digitalWrite(i,HIGH);*

*delay(500);*

*digitalWrite(i,LOW);*

*}*

*break;*

*case code8:*

*digitalWrite(s1,B0);*

*digitalWrite(s2,B0);*

*digitalWrite(s3,B0);*

*digitalWrite(s4,B1);*

*for( int i=9; i<=20; i++)*

*{*

*digitalWrite(i,HIGH);*

*digitalWrite(i,LOW);*

*}*

*break;*

*case code9:*

*digitalWrite(s1,B1);*

*digitalWrite(s2,B0);*

*digitalWrite(s3,B0);*

*digitalWrite(s4,B1);*

*for(int i=0; i<=25; i++)*

*{*

*int ran=random(9,14);*

*digitalWrite(ran,HIGH);*

*delay(100);*

*digitalWrite(ran,LOW);*

*}*

*break;*

*}*

*irrecv.resume();*

*}*

*}*