#include <stdio.h>

#include <stdlib.h>

#include <stddef.h>

#include <time.h>

#include <math.h>

#define output "out"

#define input "in"

FILE \*f;

void ctz(){ ***//close all LEDs***

char r0[100]="/sys/class/leds/beaglebone:green:usr0/brightness";

char r1[100]="/sys/class/leds/beaglebone:green:usr1/brig

htness";

char r2[100]="/sys/class/leds/beaglebone:green:u

sr2/brightness";

char r3[100]="/sys/class/leds/beaglebone:green:usr3/brightness";

f=fopen(r0,"w");

if(f==NULL) exit(EXIT\_FAILURE);

fprintf(f,"0");

fclose(f);

f=fopen(r1,"w");

if(f==NULL)

exit(EXIT\_FAILURE);

fprintf(f,"0");

fclose(f);

f=fopen(r2,"w");

if(f==NULL)

exit(EXIT\_FAILURE);

fprintf(f,"0");

fclose(f);

f=fopen(r3,"w");

if(f==NULL)

exit(EXIT\_FAILURE);

fprintf(f,"0");

fclose(f);

} ***//end of ctz() function***

void delay(int milliseconds) {

long pause;

clock\_t now,then;

pause = milliseconds\*(CLOCKS\_PER\_SEC/1000);

now = then = clock();

while( (now-then) < pause )

now = clock();

}

int main(void){

//define file handles

FILE \*ifp\_ain0;

float ain0\_value;

int num1 =0, num2 =0, num3 =0, num =0;

ctz();

ifp\_ain0 = fopen("/sys/devices/ocp.2/helper.14/AIN0", "r");

if (ifp\_ain0 == NULL) {printf("Unable to ain0.\n");}

while(1){

ifp\_ain0 = fopen("/sys/devices/ocp.2/helper.14/AIN0", "r");

if (ifp\_ain0 == NULL) {printf("Unable to ain0.\n");}

fseek(ifp\_ain0, 0, SEEK\_SET);

fscanf(ifp\_ain0, "%f", &ain0\_value);

printf("%f\n", ain0\_value);

if(ain0\_value < 500){ ***//light sensitivity value <500,turn on the light***

f = fopen("/sys/class/leds/beaglebone:green:usr3/brightness","w");

if(f==NULL){

exit(EXIT\_FAILURE);

}

fprintf(f,"1");

fclose(f);

}

else { ***//normal value***

f = fopen("/sys/class/leds/beaglebone:green:usr3/brightness","w");

if(f==NULL){

exit(EXIT\_FAILURE);

}

fprintf(f,"0");

fclose(f);

}

fclose(ifp\_ain0);

delay(1000);

}

return 1;

}