Bài 3. Cả câu a và b

#include "stm32f10x.h"

#include "stm32f10x\_gpio.h"

void GPIO\_Configure(){

RCC -> APB2ENR |= 0x10;

GPIOC -> CRL |= 0x00000000;

GPIOC -> CRL |= 0x33333333;

GPIOC -> CRH |= 0x00000000;

GPIOC -> CRH |= 0x33333333;

}

void GPIO\_ButtonConfigure(){

RCC -> APB2ENR |= 0x08;

GPIOB -> CRL |= 0xFFFFF000;

GPIOB -> CRL |= 0x00000888;

}

int32\_t lastbut = 0x00, nowbut = 0x00, but =0x00;

int checkbut(){

nowbut = GPIOB -> IDR & 0x07;

if(nowbut!=lastbut && nowbut!= 0x00){

but = nowbut;

return 1;

}

lastbut = nowbut;

return 0;

}

void TIM3\_Configure(){

//cap clock Cho TIM3

RCC -> APB1ENR |= 0x02;

/\*LOAD gia tri thanh ghi ban dau\*/

TIM3 -> ARR = 0xFFFF;//cau hinh cho no o gia tri nay truoc

/\*bo chia tan so\*/

TIM3 -> PSC = 72 - 1;

/\*cau hinh cho bien dem len \*/

TIM3 -> CR1 |= 0x01;

//Cau hinh cho su kien reload UG

TIM3 -> EGR |= 0x01;

}

void delay(int time){

while(time){

TIM3 -> CNT = 0;

while(TIM3 -> CNT < 1000){

}

time--;

}

}

void Sangdan(){

GPIOC -> ODR |= (0xFFFF);

delay(10);

for(int i = 0; i<= 15; i++){

GPIOC -> ODR &= ~(1 << i);

if(checkbut()){

break;

}

delay(10);

}

}

void button1(){

GPIOC -> ODR |= (0xFFFF);

delay(10);

for(int i =0;i<5;i++){

GPIOC -> ODR &= ~ (1 << i) ;

if(checkbut()){

break;

}

delay(10);

}

}

void button2(){

GPIOC -> ODR |= (0xFFFF);

delay(10);

for(int i = 9; i >= 5 ; i--){

GPIOC -> ODR &= ~ (1 << i);

if(checkbut()){

break;

}

delay(10);

}

}

void button3(){

GPIOC -> ODR |= (0xFFFF);

delay(10);

for(int i = 0; i < 3; i++){

GPIOC -> ODR &= ~ ((1 << 12) >> i);

GPIOC -> ODR &= ~ ((1 << 13) << i);

if(checkbut()){

break;

}

delay(10);

}

}

int main(){

TIM3\_Configure();

GPIO\_Configure();

GPIO\_ButtonConfigure();

while(1){

switch(but){

case 0x01:{

button1();

break;

}

case 0x02:{

button2();

break;

}

case 0x04:{

button3();

break;

}

default:{

Sangdan();

break;

}

}

}

}

Bài 4:

MOV R0, #500H;

MOV R1, #512;

MOV R2, #0xFFFF; //LUU GIA TRI MIN

MOV R3, #Ox0000; //LUU GIA TRI MAX

MOV R4, #0;

MOV R6, #1000H;

MOV R7, #1004H;

MOV R8, #1500H;

MOV R9, #2000H;

MOV R10, #3000H;

MOV R11, #4000H;

R9 DCB "LON HON",0;

R10 DCB "NHO HON",0;

R11 DCB "BANG",0;

LOOP

LDR, R5,[R0],#2;

ADD R4,R5; //LUU TONG CUA DAY

CMP R2,R5;

MOVGT R2,R5; // R2 > R5 -> R2 = R5

CMP R3, R5;

MOVLT R3,R5; // R3 < R5 -> R3 = R5

SUB R1,#1;

CMP R1,#0;

BNE LOOP;

ADD R5,R3,R2; // R5 = TONG MAX MIN

STR R5,[R8];

STR R3, [R6];

STR R2, [R7];

SUB R4,R5;

// R4 = R4 - R3 - R2

XUATDL

CMP R5,R4;

STRGT R0,[R9],#1;

STRLT R1,[R10],#1;

STREQ R2,[R11],#1;

MOV PC,LR;