

BÀI TẬP BÀI THỰC HÀNH 01. LẬP TRÌNH ỨNG DỤNG VỚI GPIO

1. Họ tên: Nguyễn Thị Thủy

MSV: 2020605575

2. Lớp: FE6044.5

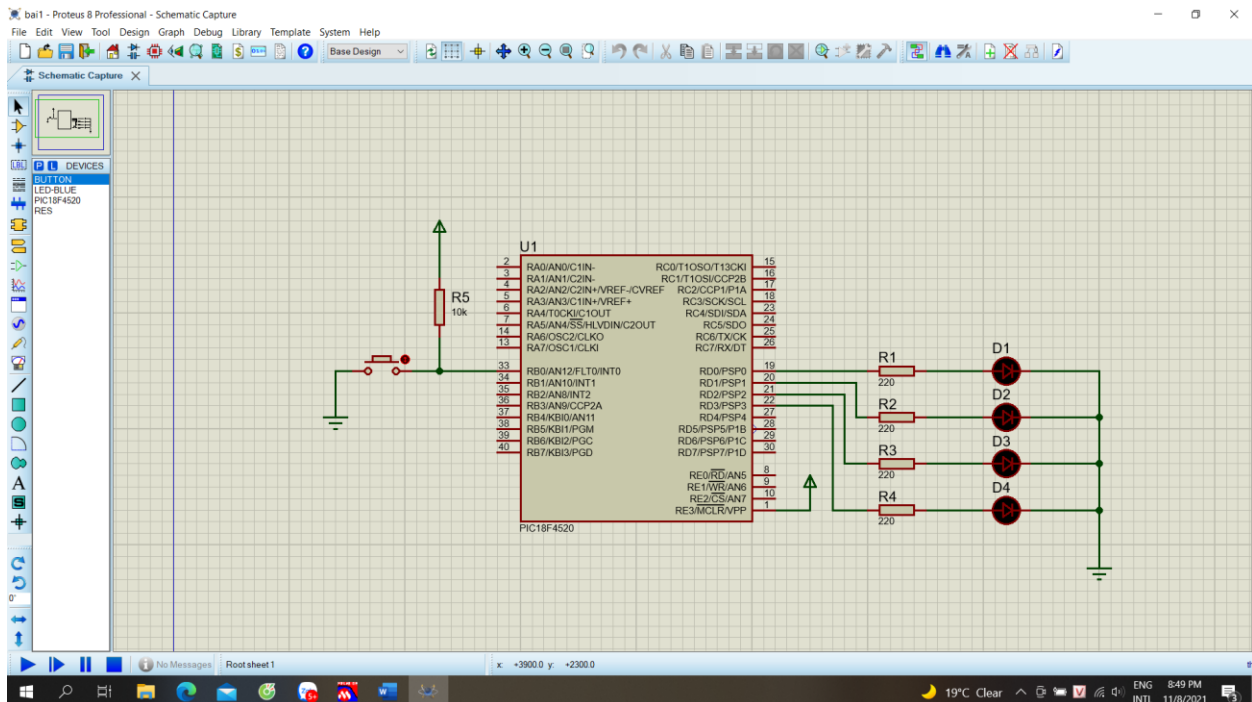
3. Nhóm:
10 11 12

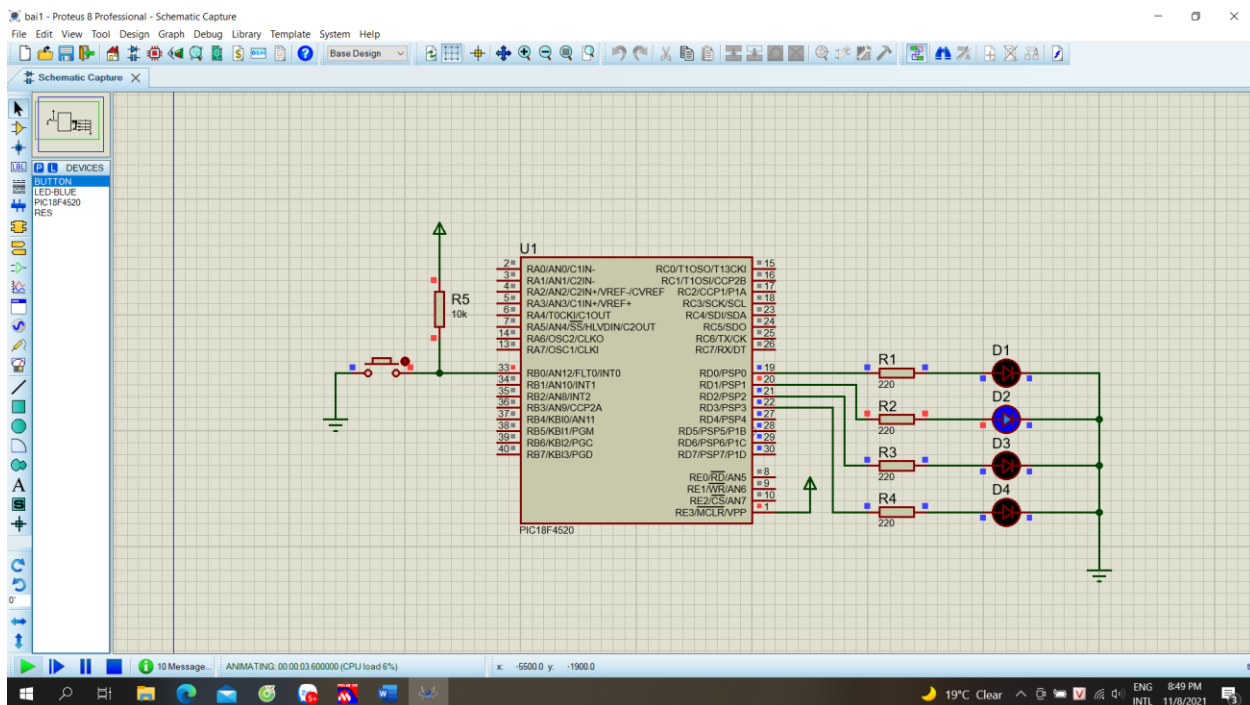
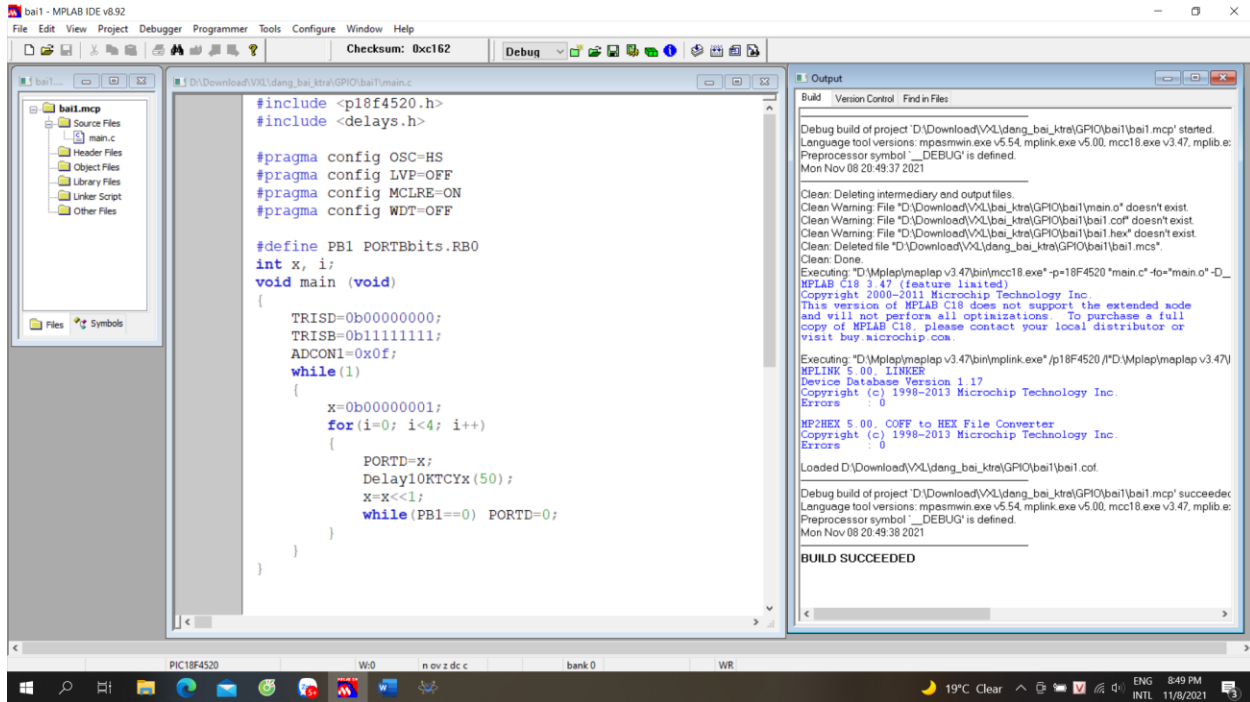
Ngày, thứ, ca thực hành: thứ 3, 2/11/2021, tiết 7 8 9

4. Nội dung bài tập

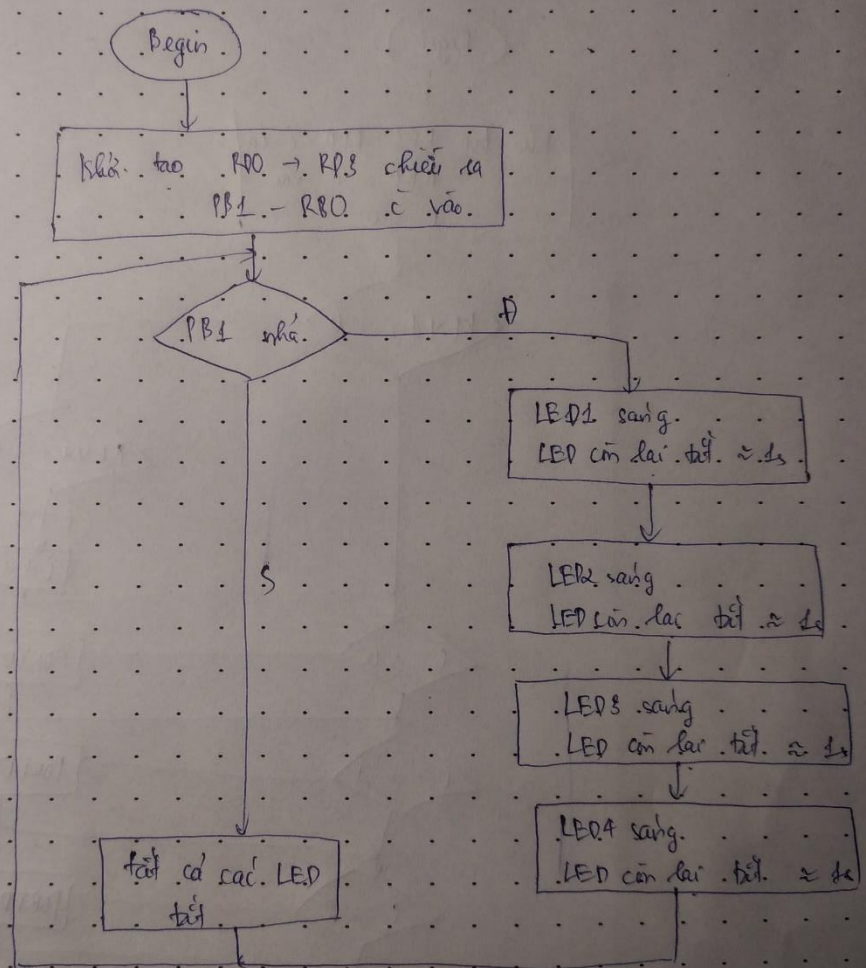
4.1 Bài tập 1.1

- Chụp ảnh mạch điện
- Chụp ảnh viết code
- Chụp ảnh mô phỏng kết quả
- Chụp ảnh lưu đồ thuật toán (vẽ trên giấy sau đó chụp lại).

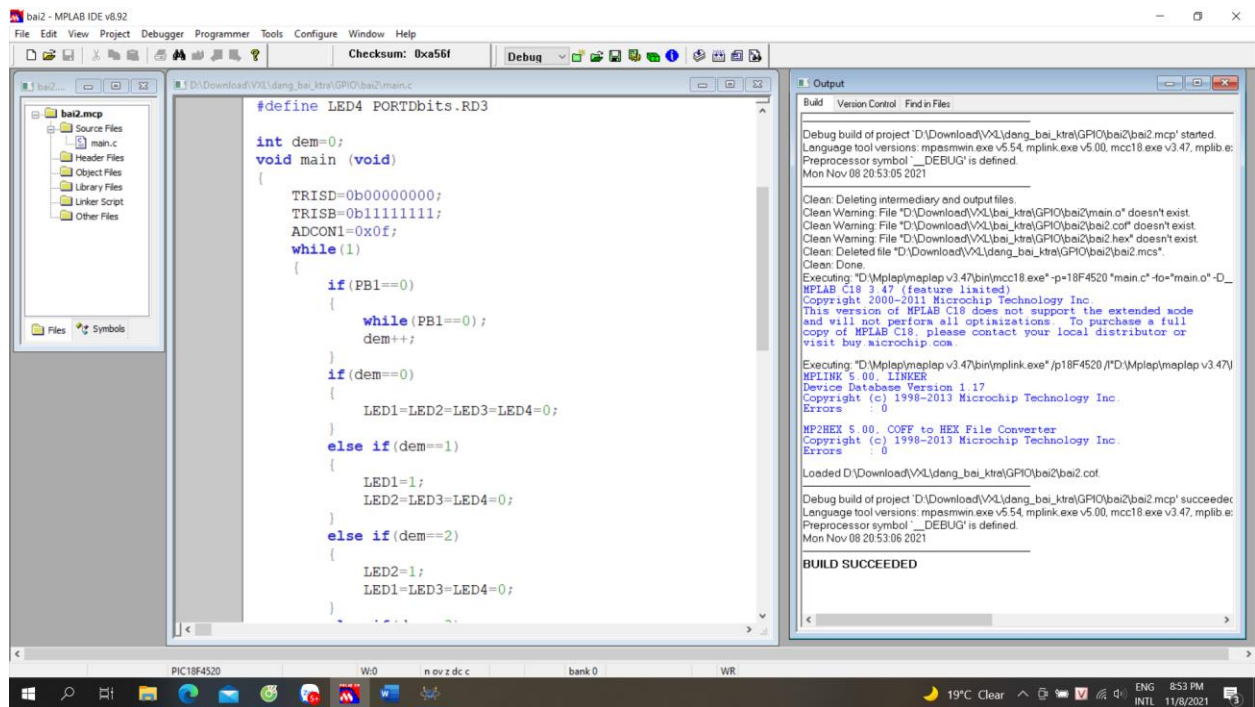


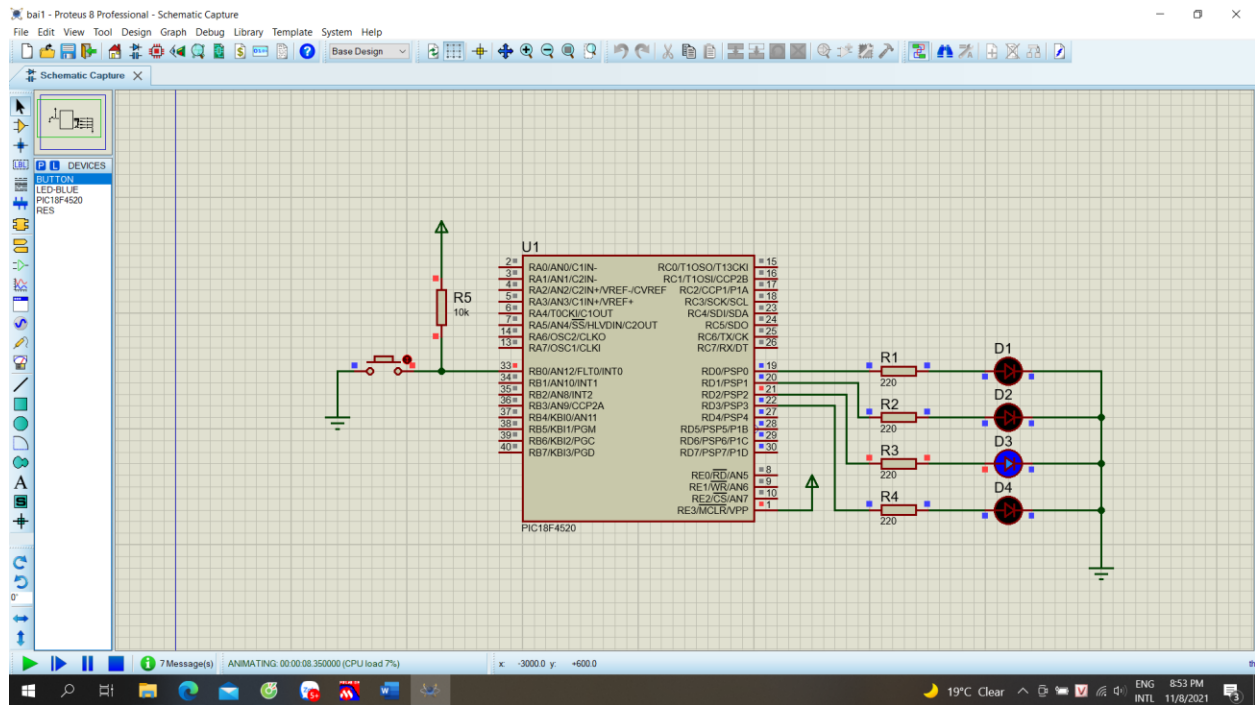


Lưu đồ Bài 1.2

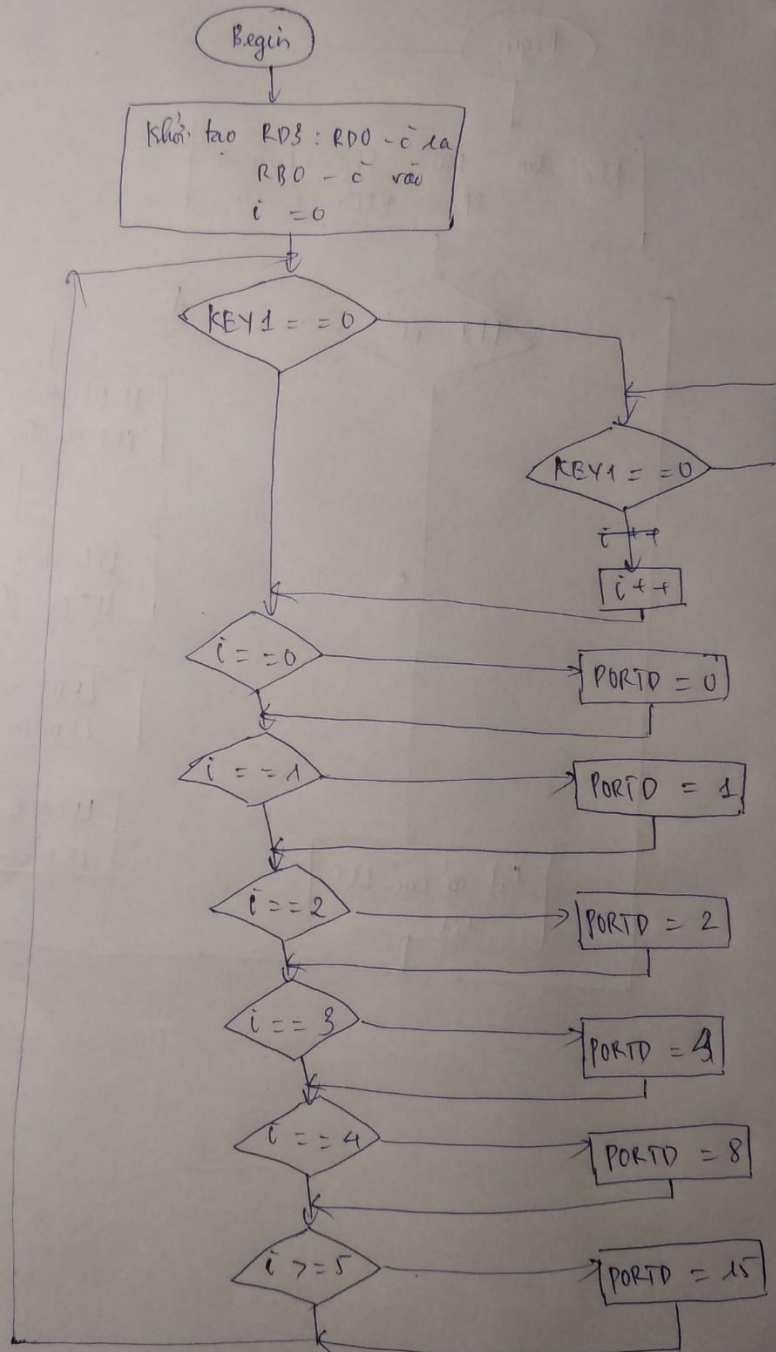


4.2 Bài tập 1.2

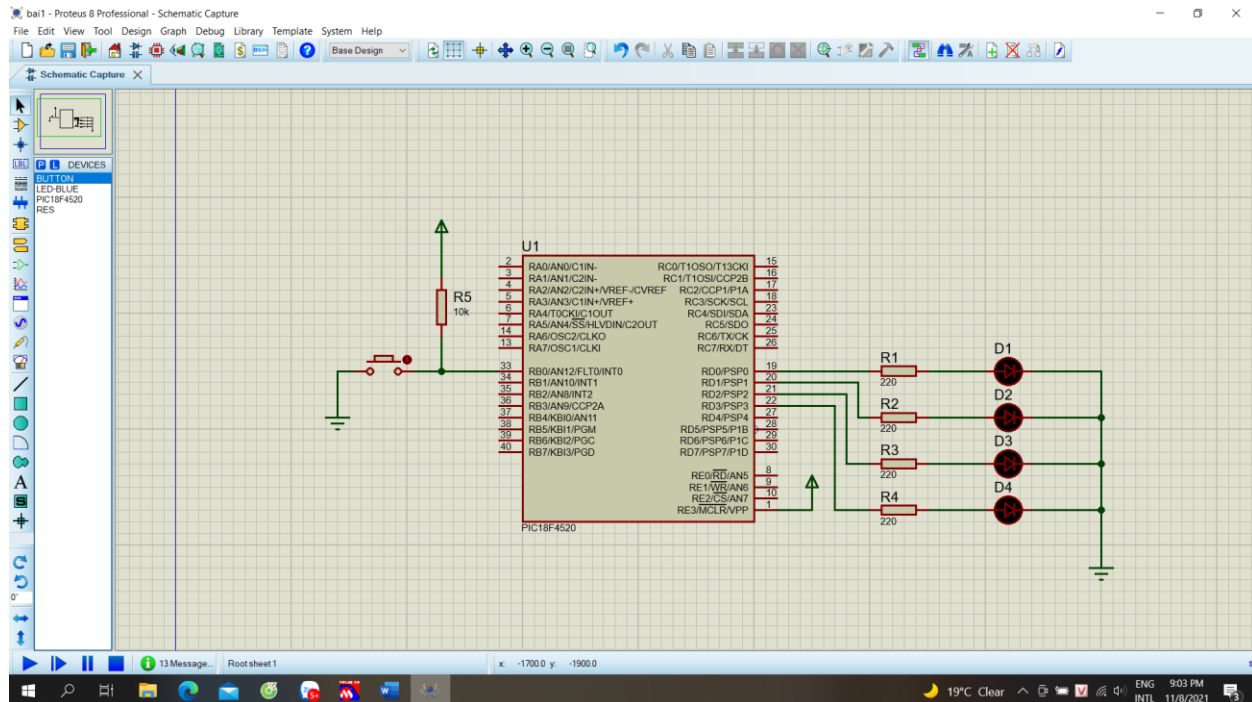




Lưu đồ 1.2



4.3 Bài tập 1.3



MPLAB IDE v6.92

File Edit View Project Debugger Programmer Tools Configure Window Help

Checksum: 0x8502

ba3.mc3

Source Files
main.c
Header Files
Object Files
Library Files
Linker Script
Other Files

```
#pragma config OSC=HS
#pragma config LVP=OFF
#pragma config MCLR=ON
#pragma config WDT=OFF

#define PB1 PORTBbits.RB0
#define LED1 PORTDbits.RD0
#define LED2 PORTDbits.RD1
#define LED3 PORTDbits.RD2
#define LED4 PORTDbits.RD3

int dem=0;
void main (void)
{
    TRISD=0b00000000;
    TRISB=0b11111111;
    ADCON1=0x0f;
    while(1)
    {
        if(PB1==0)
        {
            while(PB1==0);
            dem++;
        }
        PORTD=dem%16;
    }
}
```

Output

Build Version Control Find in Files

Debug build of project 'D:\Download\VL\dang_bai_ktra(GPIO\ba3\ba3.mc3' started.
Language tool versions: mpsasmwin.exe v5.54, mplink.exe v5.00, mccc18.exe v3.47, mplib.exe v3.47
Preprocessor symbol 'DEBUG' is defined.
Mon Nov 08 21:03:26 2021

Clean: Deleting intermediary and output files.
Clean Warning: File 'D:\Download\VL\dang_bai_ktra(GPIO\ba3\main.o' doesn't exist.
Clean Warning: File 'D:\Download\VL\dang_bai_ktra(GPIO\ba3\ba3.cof' doesn't exist.
Clean Warning: File 'D:\Download\VL\dang_bai_ktra(GPIO\ba3\ba3.hex' doesn't exist.
Clean: Deleted file 'D:\Download\VL\dang_bai_ktra(GPIO\ba3\ba3.mcs'.

Clean: Done

Executing: "D:\Mplab\maplap v3.47\bin\mcc18.exe" -p18F4520 "main.c" -fo"main.o" -D_MPLAB C18 3.47 (feature limited)
Copyright 2000-2011 Microchip Technology Inc.
This version of MPLAB C18 does not support the extended mode and will not perform all optimizations. To purchase a full copy of MPLAB C18, please contact your local distributor or visit buy.microchip.com.

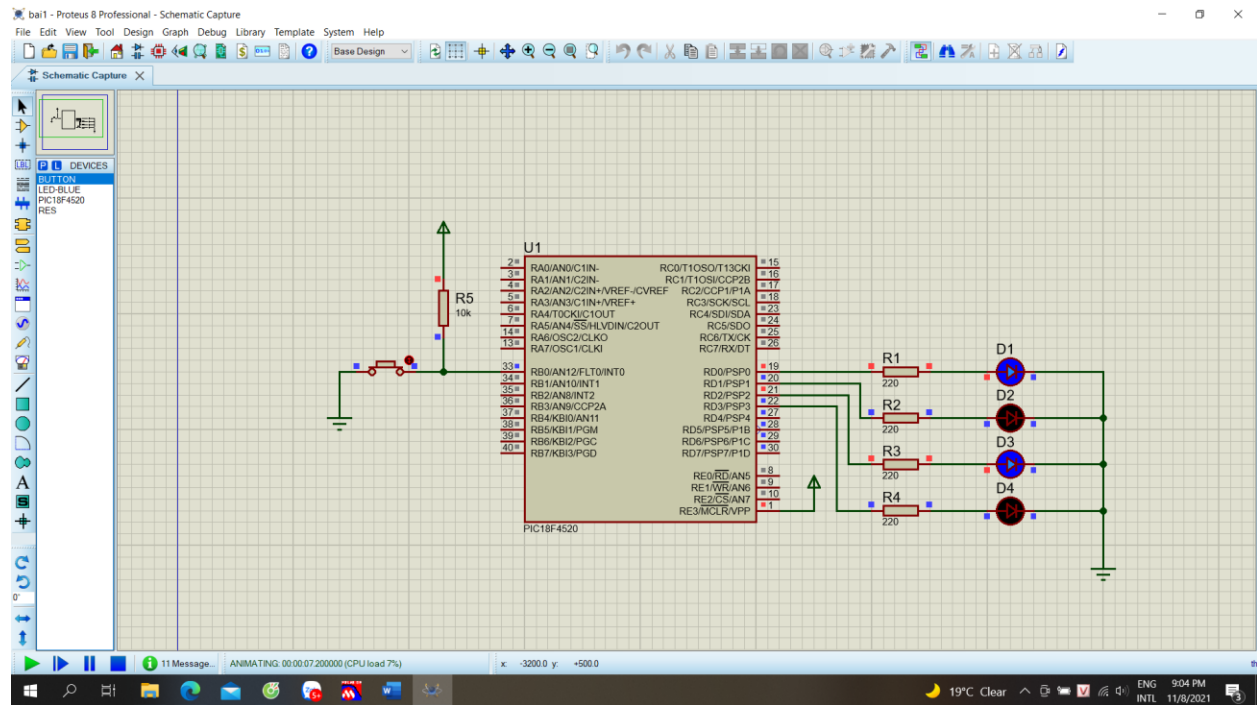
Executing: "D:\Mplab\maplap v3.47\bin\mplink.exe" /p18F4520 /D:\Mplab\maplap v3.47\main.o
MPLINK 5.00, LINKER
Device Database Version 1.17
Copyright (c) 1998-2013 Microchip Technology Inc.
Errors: 0

MP2HEX 5.00, COFF to HEX File Converter
Copyright (c) 1998-2013 Microchip Technology Inc.
Errors: 0

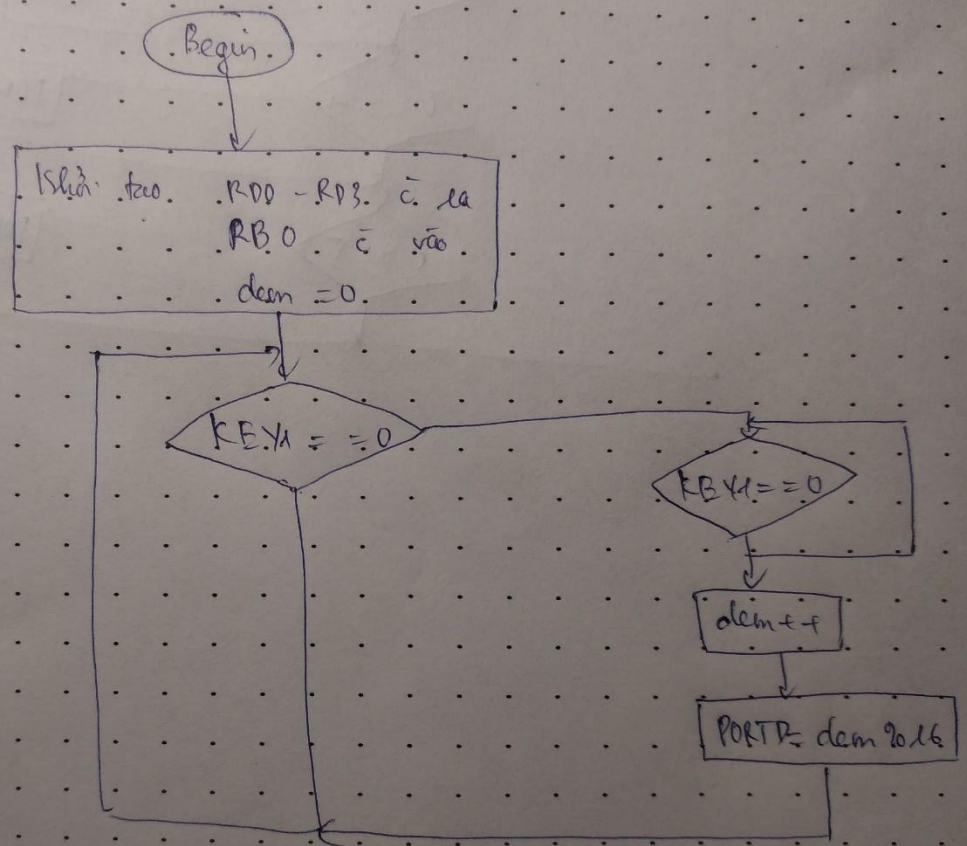
Loaded D:\Download\VL\dang_bai_ktra(GPIO\ba3\ba3.cof

Debug build of project 'D:\Download\VL\dang_bai_ktra(GPIO\ba3\ba3.mc3' succeeded.
Language tool versions: mpsasmwin.exe v5.54, mplink.exe v5.00, mccc18.exe v3.47, mplib.exe v3.47
Preprocessor symbol 'DEBUG' is defined.
Mon Nov 08 21:03:27 2021

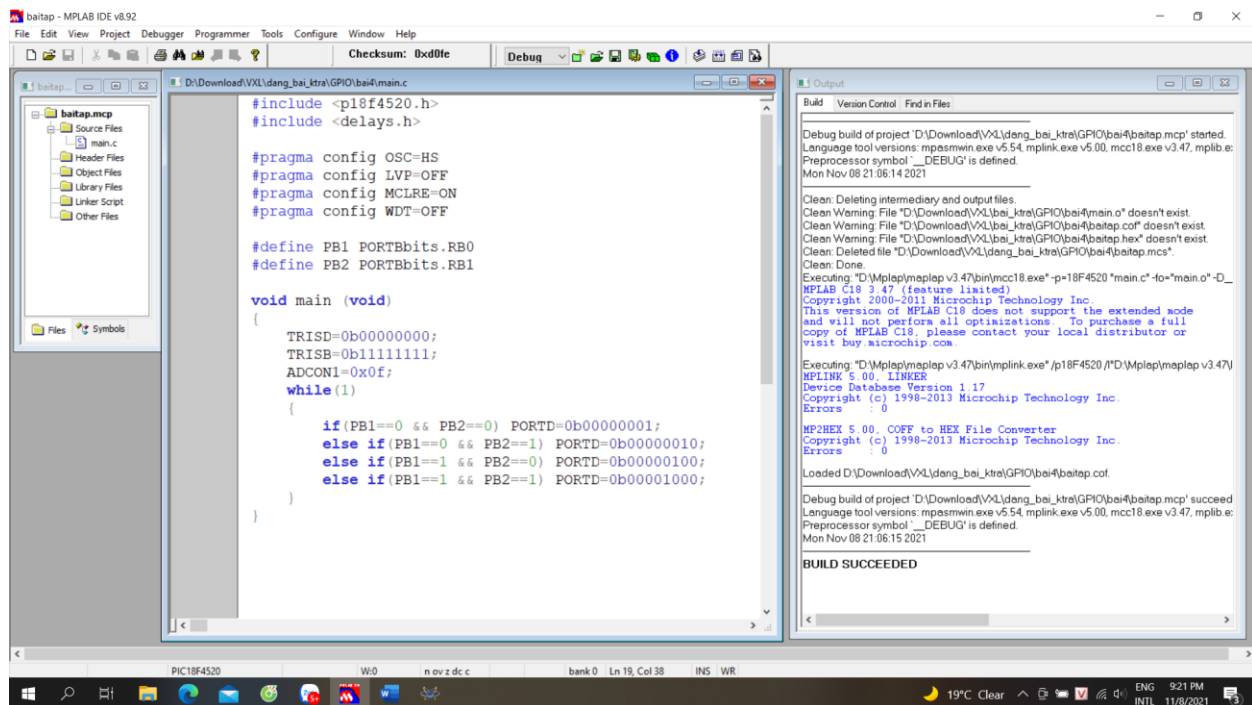
BUILD SUCCEEDED

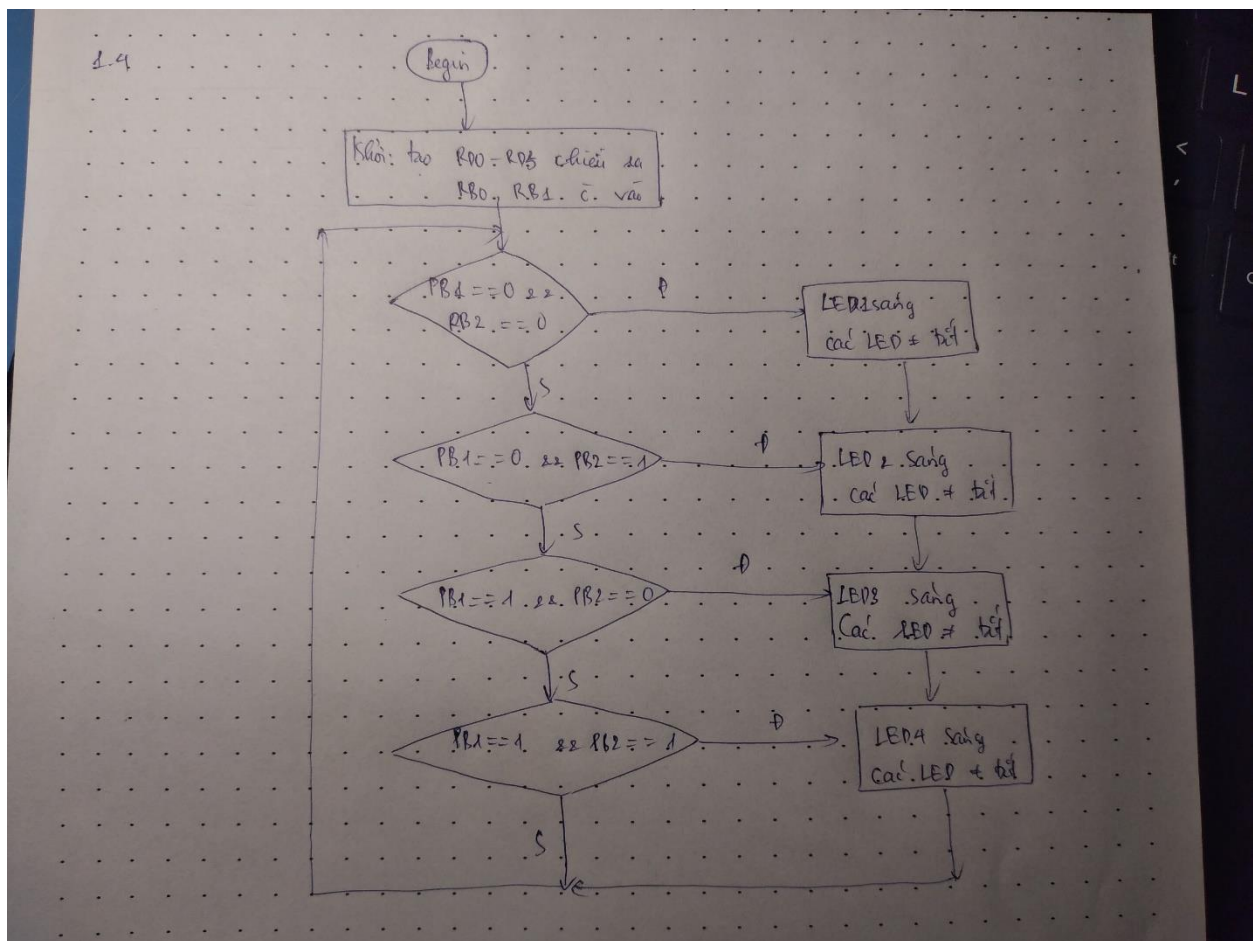
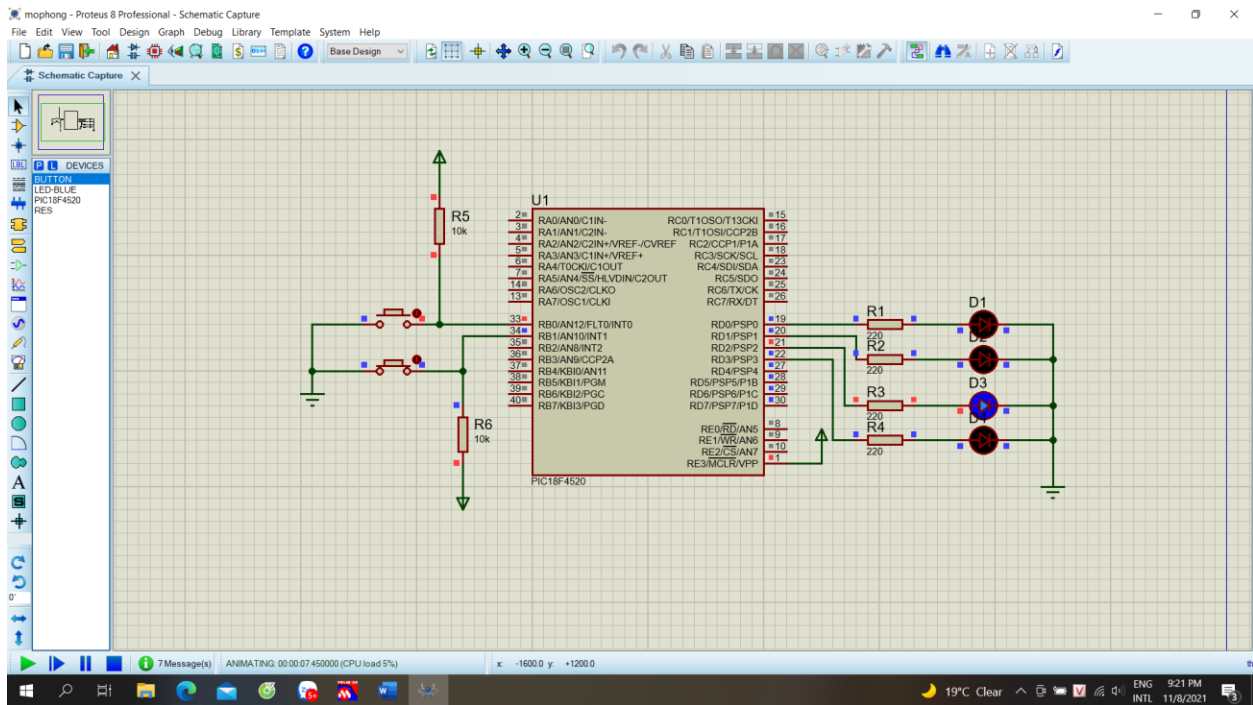


lưu đồ bài 1.8

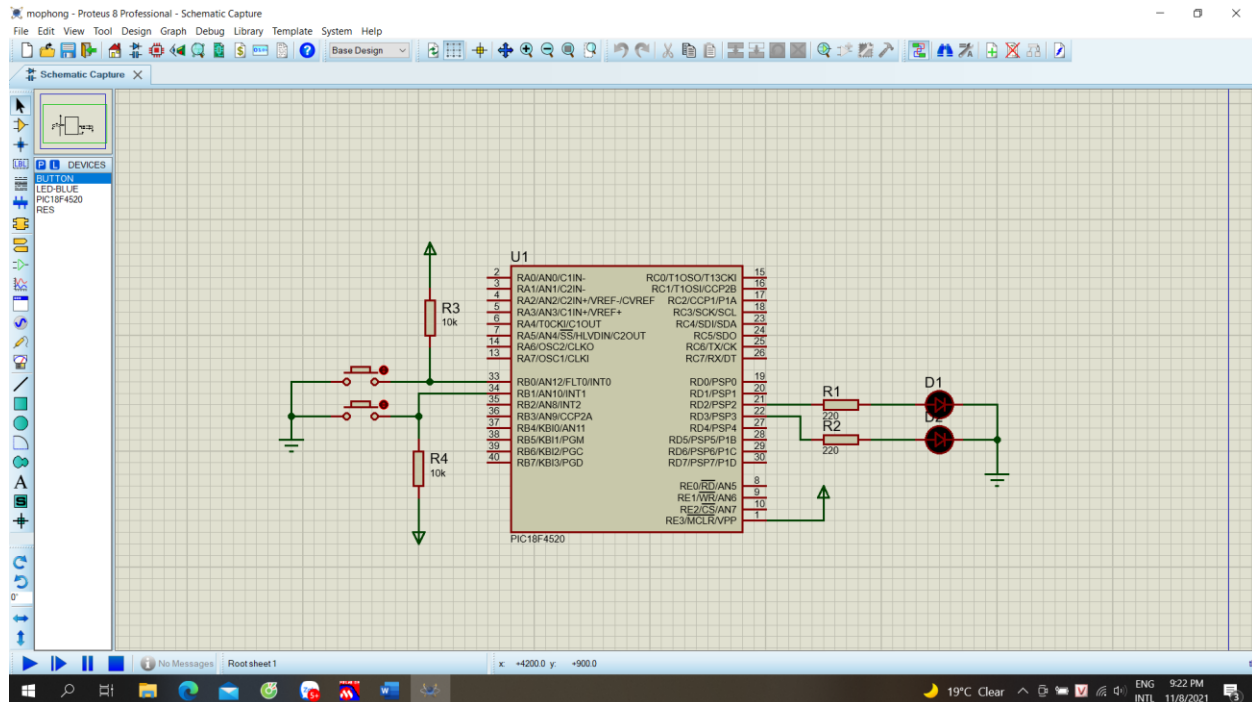


4.4 Bài tập 1.4





4.5 Bài tập 1.5



MPLAB IDE v8.92

File Edit View Project Debugger Programmer Tools Configure Window Help

Checksum: 0xc001

Debug

ba1tap.mcp

Source Files
Header Files
Object Files
Library Files
Linker Script
Other Files

```
#pragma config OSC=HS
#pragma config LVP=OFF
#pragma config MCLR=ON
#pragma config WDT=OFF

#define PB1 PORTBbits.RB0
#define PB2 PORTBbits.RB1

int dem=0;
void main (void)
{
    TRISD=0b00000000;
    TRISB=0b11111111;
    ADCON1=0x0f;
    while(1)
    {
        if(PB1==1) PORTD=0b00000000;
        else if(PB1==0)
        {
            if(PB2==0)
            {
                while(PB2==0);
                dem++;
                if(dem==0) PORTD=0b00000000;
                if(dem==1) PORTD=0b00001000;
                if(dem==2) PORTD=0b00000100;
                if(dem==3) PORTD=0b00001100;
            }
        }
    }
}
```

Output

Build Version Control Find in Files

Debug build of project 'D:\Download\VL\dang_bai_ktra(GPIO\ba5\ba1tap.mcp)' started.
Language tool versions: mpsasmwin.exe v5.54, mplink.exe v5.00, mccc18.exe v3.47, mplib.exe v3.47
Preprocessor symbol 'DEBUG' is defined.
Mon Nov 08 21:23:08 2021

Clean: Deleting intermediary and output files.
Clean Warning: File 'D:\Download\VL\dang_bai_ktra(GPIO\ba5\main.o)' doesn't exist.
Clean Warning: File 'D:\Download\VL\dang_bai_ktra(GPIO\ba5\ba1tap.co)' doesn't exist.
Clean Warning: File 'D:\Download\VL\dang_bai_ktra(GPIO\ba5\ba1tap.hex)' doesn't exist.
Clean: Deleted file 'D:\Download\VL\dang_bai_ktra(GPIO\ba5\ba1tap.mcs'.
Clean: Done.

Executing: 'D:\Mplab\maplap v3.47\bin\mccc18.exe' -p18F4520 -main.c -fo-main.o -D_MPLAB C18 3.47 (feature limited)
Copyright 2000-2011 Microchip Technology Inc.
This version of MPLAB C18 does not support the extended mode and will not perform all optimizations. To purchase a full copy of MPLAB C18, please contact your local distributor or visit buy.microchip.com.

Executing: 'D:\Mplab\maplap v3.47\bin\mplink.exe' /p18F4520 /D:\Mplab\maplap v3.47\main.o
MPLINK 5.00, LINKER
Device Database Version 1.17
Copyright (c) 1998-2013 Microchip Technology Inc.
Errors: 0

MP2HEX 5.00, COFF to HEX File Converter
Copyright (c) 1998-2013 Microchip Technology Inc.
Errors: 0

Loaded D:\Download\VL\dang_bai_ktra(GPIO\ba5\ba1tap.co

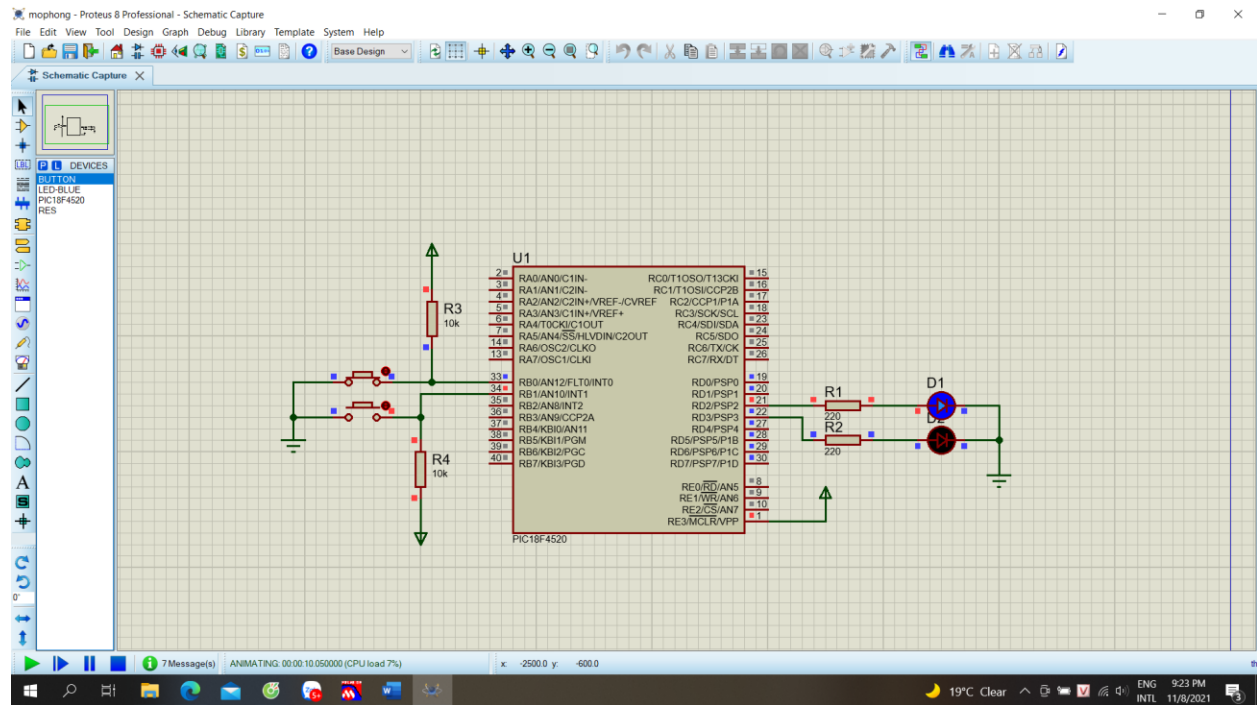
Debug build of project 'D:\Download\VL\dang_bai_ktra(GPIO\ba5\ba1tap.mcp)' succeed
Language tool versions: mpsasmwin.exe v5.54, mplink.exe v5.00, mccc18.exe v3.47, mplib.exe v3.47
Preprocessor symbol 'DEBUG' is defined.
Mon Nov 08 21:23:09 2021

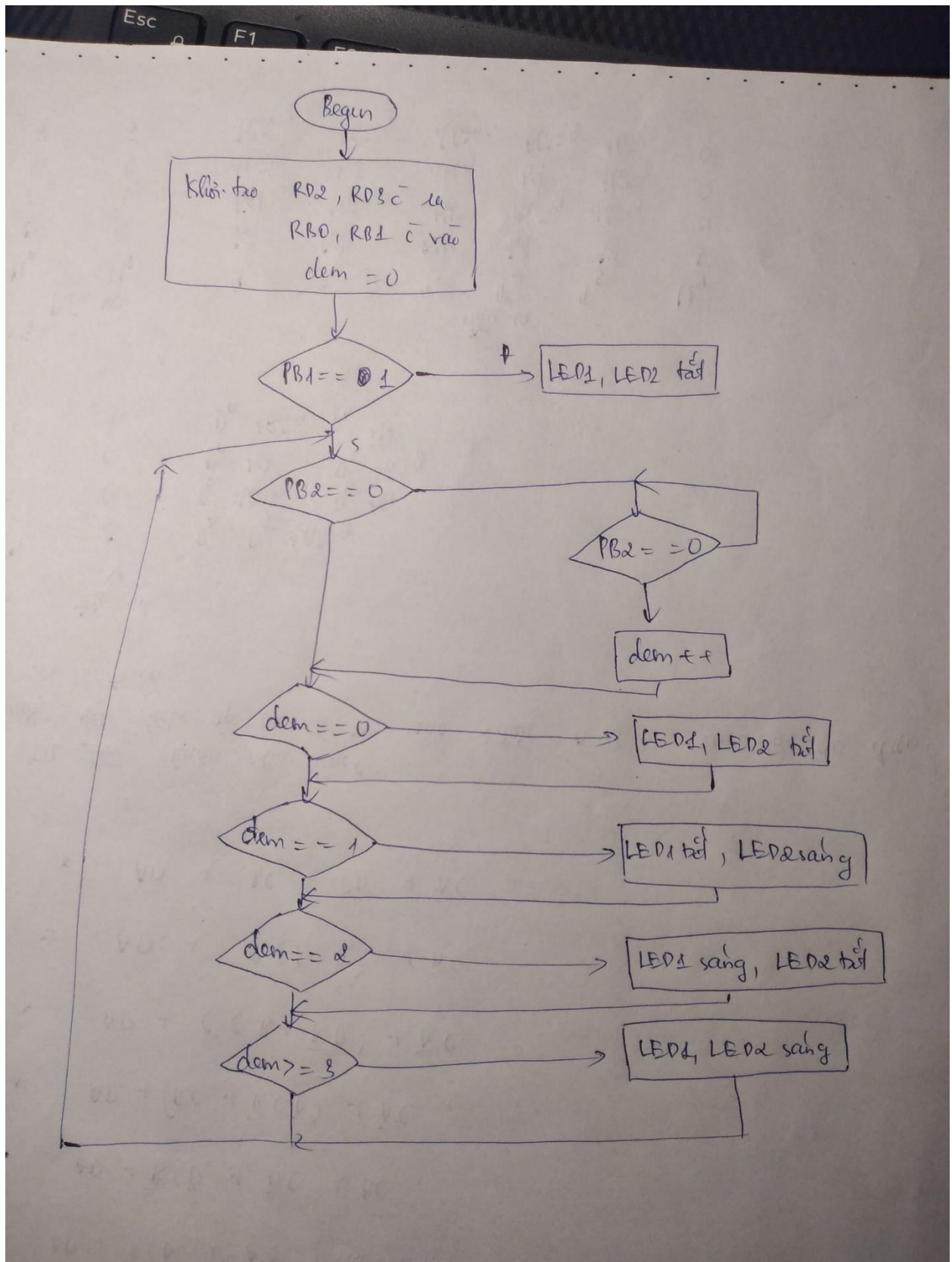
BUILD SUCCEEDED

PIC18F4520 W:0 n ov z dc c bank 0 WR

19°C Clear

ENG 9:23 PM
INTL 11/8/2021





Chú ý: Đổi tên file và số thứ tự theo danh sách lớp.