**اسم الطالب : أيمن محمد نبيل محمد**

**سكشن : 2**

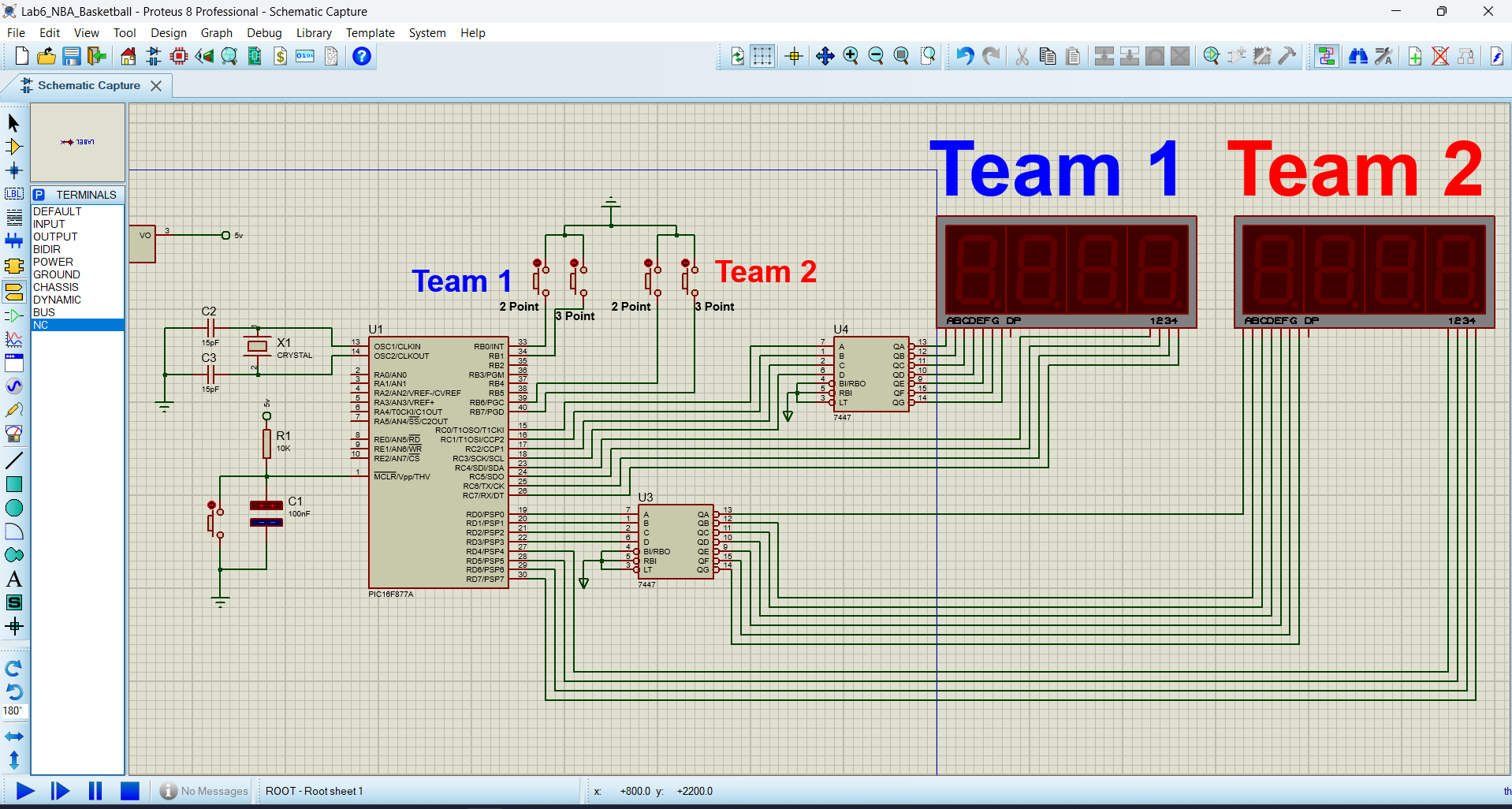
**قسم هندسة الحاسبات ونظم التحكم**

**Lab 6 – Task**

**NBA Basketball Counter**

**……………………………………….**

**Screenshot of the circuit**

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**Code:**

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**\* File: main.c**

**\* Author: engay**

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**\* Created on April 17, 2024, 5:38 AM**

**\*/**

**#include <xc.h>**

**#define \_XTAL\_FREQ (8000000)**

**#define Team1\_2 PORTBbits.RB0**

**#define Team1\_3 PORTBbits.RB1**

**#define Team2\_2 PORTBbits.RB6**

**#define Team2\_3 PORTBbits.RB7**

**#define Team1\_Seg PORTC**

**#define Team1\_D1 PORTCbits.RC7**

**#define Team1\_D2 PORTCbits.RC6**

**#define Team1\_D3 PORTCbits.RC5**

**#define Team2\_Seg PORTD**

**#define Team2\_D1 PORTDbits.RD7**

**#define Team2\_D2 PORTDbits.RD6**

**#define Team2\_D3 PORTDbits.RD5**

**#define ON 1**

**#define OFF 0**

**#define Sev\_delay\_time 10**

**#define delay \_\_delay\_ms**

**void Team1\_Display(unsigned char num)**

**{**

**// First Digit num%10**

**Team1\_Seg=num%10;**

**Team1\_D1=ON;**

**Team1\_D2=OFF;**

**Team1\_D3=OFF;**

**delay(Sev\_delay\_time);**

**// Second Digit (num/10)%10**

**Team1\_Seg=(num/10)%10;**

**Team1\_D1=OFF;**

**Team1\_D2=ON;**

**Team1\_D3=OFF;**

**delay(Sev\_delay\_time);**

**// Third Digit (num/100)%10**

**Team1\_Seg=(num/100)%10;**

**Team1\_D1=OFF;**

**Team1\_D2=OFF;**

**Team1\_D3=ON;**

**delay(Sev\_delay\_time);**

**}**

**void Team2\_Display(unsigned char num)**

**{**

**// First Digit num%10**

**Team2\_Seg=num%10;**

**Team2\_D1=ON;**

**Team2\_D2=OFF;**

**Team2\_D3=OFF;**

**delay(Sev\_delay\_time);**

**// Second Digit (num/10)%10**

**Team2\_Seg=(num/10)%10;**

**Team2\_D1=OFF;**

**Team2\_D2=ON;**

**Team2\_D3=OFF;**

**delay(Sev\_delay\_time);**

**// Third Digit (num/100)%10**

**Team2\_Seg=(num/100)%10;**

**Team2\_D1=OFF;**

**Team2\_D2=OFF;**

**Team2\_D3=ON;**

**delay(Sev\_delay\_time);**

**}**

**void initial\_condition(void)**

**{**

**unsigned char num = 3000/(Sev\_delay\_time\*6);**

**while(num)**

**{**

**Team1\_Display(101);**

**Team2\_Display(103);**

**num--;**

**}**

**Team1\_Display(0);**

**Team2\_Display(0);**

**return;**

**}**

**void main(void) {**

**TRISB=0xff;**

**OPTION\_REGbits.nRBPU = 0;**

**TRISC=0x00;**

**TRISD=0x00;**

**initial\_condition();**

**unsigned char team1=0,team2=0;**

**while(1)**

**{**

**if(Team1\_2==0)**

**{**

**team1+=2;**

**while(Team1\_2==0);**

**}**

**if(Team1\_3==0)**

**{**

**team1+=3;**

**while(Team1\_3==0);**

**}**

**if(Team2\_2==0)**

**{**

**team2+=2;**

**while(Team2\_2==0);**

**}**

**if(Team2\_3==0)**

**{**

**team2+=3;**

**while(Team2\_3==0);**

**}**

**Team1\_Display(team1);**

**Team2\_Display(team2);**

**}**

**return;**

**}**