**EXERCISE 07**

**Source Code**

void delay\_1s() {

Delay\_ms(1000); // Use mikroC's built-in delay

}

void delay\_5s() {

int k;

for(k = 0; k < 5; k++) delay\_1s();

}

void main() {

int i;

TRISB = 0b11000011; // RB7, RB6, RB1, RB0 as input; others output

PORTB = 0b00000000; // All outputs off

while(1) {

// Wait for either player to press their button

if(PORTB.F0 == 1 && PORTB.F1 == 0) {

// Player 1 pressed

PORTB.F2 = 1; // Player 1 LED ON (assuming RB2)

PORTB.F4 = 1; // Player 1 Buzzer ON (assuming RB4)

// 10 beeps, 1s each

for(i = 0; i < 10; i++) {

PORTB.F4 = 1; // Buzzer ON

delay\_1s();

PORTB.F4 = 0; // Buzzer OFF

delay\_1s();

}

// Game Over: RB7 ON, Buzzer ON for 5s

PORTB.F7 = 1; // Game Over LED ON

PORTB.F4 = 1; // Buzzer ON

delay\_5s();

PORTB.F4 = 0; // Buzzer OFF

// Wait for both players to press for reset

while(!(PORTB.F0 && PORTB.F1));

PORTB = 0b00000000; // Reset all

}

else if(PORTB.F1 == 1 && PORTB.F0 == 0) {

// Player 2 pressed

PORTB.F3 = 1; // Player 2 LED ON (assuming RB3)

PORTB.F5 = 1; // Player 2 Buzzer ON (assuming RB5)

// 10 beeps, 1s each

for(i = 0; i < 10; i++) {

PORTB.F5 = 1; // Buzzer ON

delay\_1s();

PORTB.F5 = 0; // Buzzer OFF

delay\_1s();

}

// Game Over: RB7 ON, Buzzer ON for 5s

PORTB.F7 = 1; // Game Over LED ON

PORTB.F5 = 1; // Buzzer ON

delay\_5s();

PORTB.F5 = 0; // Buzzer OFF

// Wait for both players to press for reset

while(!(PORTB.F0 && PORTB.F1));

PORTB = 0b00000000; // Reset all

}

// Game Over LED OFF after reset

PORTB.F7 = 0;

    }

}

**Circuit**

