#include <REGX51.H>

void Delay(void);

unsigned int code pitch[10] = {65536 - 1758 + 65, 65536 - 1567 + 65, 65536 - 1396 + 65, 65536 - 1320 + 65, 65536 - 1175 + 65, 65536 - 1047 + 65, 65536 - 931 + 65, 65536 - 876 + 65, 65536 - 2360 + 65};

unsigned char code loop[10] = {33, 37, 42, 45, 48, 55, 63, 66, 24};

unsigned char code pi[66] = {2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 3, 1, 2, 0, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 3, 1, 2, 0, 2, 2, 2, 2, 2, 1, 1, 2, 2, 2, 1, 1, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 3, 1, 2, 0};

unsigned char code song[66] = {4, 4, 4, 5, 5, 4, 3, 2, 1, 1, 2, 3, 3, 2, 2, 0, 3, 3, 4, 5, 5, 4, 3, 2, 1, 1, 2, 3, 2, 1, 1, 0, 2, 2, 3, 1, 2, 3, 4, 3, 1, 2, 3, 4, 3, 2, 1, 2, 9, 3, 3, 3, 4, 5, 5, 4, 3, 2, 1, 1, 2, 3, 2, 1, 1, 0};

bit play = 0; // Use "play" to control song playback

bit lastP2\_5 = 1; // Initialize lastP2\_5

void main()

{

unsigned char d = 0, x = 0, y = 0, z = 0;

TMOD = 0x01;

P2 = 0xFF;

IE = 0x84;

TCON = 0x04;

play = 0; // Initialize play flag to 0

while (1)

{

if (P2\_5 && lastP2\_5 && !play) // Start playing the song when P2.5 is pressed

{

play = 1;

}

lastP2\_5 = P2\_5;

if (play)

{

for (x = 0; x < 66; x++)

{

if (!play)

{

break;

}

if (song[x] != 0)

{

for (y = 0; y < loop[song[x] - 1] \* pi[x]; y++)

{

TH0 = (pitch[song[x] - 1]) >> 8;

TL0 = (pitch[song[x] - 1]);

TR0 = 1;

while (TF0 == 0);

if (!play)

break;

TR0 = 0;

TF0 = 0;

P3\_7 = 0xff;

TH0 = (pitch[song[x] - 1]) >> 8;

TL0 = (pitch[song[x] - 1]);

TR0 = 1;

while (TF0 == 0);

if (!play)

break;

TR0 = 0;

TF0 = 0;

P3\_7 = 0x00;

}

if (x != 49)

Delay();

}

else

{

for (d = 0; d < 15; d++)

Delay();

}

}

}

}

}

void Delay(void)

{

int i = 0;

for (i = 0; i < 20; i++) // Delay for a short period

{

TH0 = (65536 - 1000) >> 8;

TL0 = (65536 - 1000);

TR0 = 1;

while (TF0 == 0);

TR0 = 0;

TF0 = 0;

}

}

void INT1\_ISR(void) interrupt 2

{

if (play)

{

play = 0; // Stop the song when INT1 is pressed

}

}