

Micro Lab

Ödev

5

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```
#include <main.h>
#fuses +15, NOWDT, NOPROTECT
#use delay (clock = 4000000)
```

```
#define pin-up PhE0
#define pin-down pin-E1
#define display1 pin-C0
#define display2 pin-C1
#define display3 pin-C2
#define display4 pin-C3
```

```
int k;
int loop = 0;
int birler, onlar = 0;
int up, stop = 0;
unsigned long int digit = 0;
int number[10] = {0x3F, 0x06, 0x5B,
0x4F, 0x66, 0x6D, 0x7C, 0x07,
0x7F, 0x6F};
int cls[4] = {0x58, 0x38, 0x6D, 0x79};
int opa[4] = {0x5C, 0x73, 0x7B, 0x54};
int itr[4] = {0x80, 0xD4, 0xF8, 0xBF};
```

```

void button-stop() {
    if (input(pin-stop) && !input(pin-up))
    {
        stop = 1;
        up = 0;
        output-c(0x00);
        output-d(0x00);
        digit = 0;
        while (input(pin-stop));
    }
    up = 0;
}

```

```

void button-up() {
    if (!input(pin-stop) && input(pin-up))
    {
        output-c(0x00);
        up = 1;
        loop = 0;
        stop = 0;
        if (digit == 99)
            digit = 0;
        while (input(pin-up));
    }
}

```

#int-ext

```

void ext-kesmesi() {
    for (k=0; k<40; k++)
    {
        output-high(display1);
        output-d(itr[3]);
        delay-ms(5);
        output-low(display1);
    }
}

```

```

output_high (display 2);
output_d (itr[2]);
delay_ms (5);
output_low (display 2);
output_high (display 3);
output_d (itr[1]);
delay_ms (5);
output_low (display 3);
output_high (display 4);
output_d (itr[0]);
delay_ms (5);
output_low (display 4);
} }

```

```

void main () {
    set_tris_b (0xFF);
    set_tris_e (0xFF);
    set_tris_d (0x00);
    set_tris_c (0x00);
    output_d (0x00);
    output_c (0x00);
}

```

```

enable_interrupts (INT_EXT);
enable_interrupts (GLOBAL);
ext_int_edge (H_TO_L);

```

```

while (TRUE) {
    output_c (0xFF);
    output_d (0x00);
    delay_ms (20);
    loop = 0;
}

```



```
output - d ( 0x80);  
delay - ms(20);  
button - stop();  
button - up();
```

```
while (up == 1) {  
    for (int t=0; t < 25; t++)  
    {  
        output - high ( display 1);  
        output - d ( opn [3]);  
        delay - ms(5);  
        output - low ( display 1);  
        output - high ( display 2);  
        output - d ( opn [2]);  
        delay - ms(5);  
        output - low ( display 2);  
        output - high ( display 3);  
        output - d ( opn [1]);  
        output - low ( display 3);  
        output - high ( display 4);  
        output - d ( opn [0]);  
        delay - ms(5);  
        output - low ( display 4);  
  
        button - stop();  
  
        if (stop == 1)  
            break;  
    }  
}
```

```

if (stop == 1) break;
for (int y=0; y<500; y++) {
    birler = digit % 10;
    onlar = digit / 10;
    digit++;
}

```

```

if (digit == 100) {
    digit = 0;
    loop++;
}

```

```

for (int k=0; k<10; k++)
{
    output-high (display 1);
    output-d (number[birler]);
    delay-ms (5);
    output-low (display 1);
}

```

```

output-high (display 2);
output-d (number[onlar]);
delay-ms (5);
output-low (display 2);

```

```

button-stop();
if (stop == 1) break;
if (stop == 1) break;
if (stop == 1) break;
}
}
}

```

```

if (loop == 2)
{

```

```

for (int t=0; t<25; t++)
{
    output - high (display 1);
    output - d (CLS[3]);
    delay - ms (5);
    output - low (display 1);

    output - high (display 2);
    output - d (CLS[2]);
    delay - ms (5);
    output - low (display 2);

    output - high (display 3);
    output - d (CLS[1]);
    delay - ms (5);
    output - low (display 3);

    output - high (display 4);
    output - d (CLS[0]);
    delay - ms (5);
    output - low (display 4);

    button - stop();
    if (stop == 1) break;
}
up = 0;
break;
}
if (stop == 1) break; } } } }

```