

سیہر رضایی - سوال ۱ :

$$\frac{178 \text{ Hz}}{1} = 100 \text{ kHz} \Rightarrow T = \frac{1}{f} = 0.144 \mu\text{s}$$
$$\xrightarrow{\text{مثال}} 0.144 \times 100 = 44 \mu\text{s} \Rightarrow \frac{0.144 \times 100}{44 \mu\text{s}} = 100 \text{ V} \leftarrow \text{interrupt}$$
$$255 - 100 = 155 \leftarrow \text{TCNT0}$$

CS Scanned with CamScanner

```
#include <mega16.h>
```

```
int countedTime;
```

```
Interrupt [TIMO_OVF] void timer0_ovf_isr(void) {
```

```
    TCCR0=0x00;
```

```
    TCNT0=155;
```

```
    countedTime++;
```

```
    If (countedTime == 7575) {
```

```
        PORTC0 = PORTC0 ^ 1;
```

```
        countedTime = 0;
```

```
    }
```

```
}
```

```
void main(void)
```

```
{
```

```
    DDRC = 0x01;
```

```
    TCCR0 = 0x02;
```

```
    TIMSK = 0x01;
```

```
    #asm("sei")
```

```
    while (1) {
```

```
    }
```

```
}
```