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سوال 1

```c
#include <avr/io.h>

int main(void)
{
    unsigned int z;
    DDRB = 0xFF; // PORTB  is output
    for (z = 0; z < 50000; z++)
    {
        PORTB = 0x55;
        PORTB = 0xAA;
    }
    while (1)
        ;
    return 0;
}
```

```c
#include <avr/io.h>

void delay100ms(void)
{
    unsigned int i;
    for (i = 0; i < 42150; i++);
}

int main(void)
{
    DDRB = 0xFF; // PORTB is output
    while (1)
    {
        PORTB = PORTB | 0b00010000; // set bit 4(5th bit) of PORTB
        delay100ms();
        PORTB = PORTB & 0b11101111; // clear bit 4(5th bit) of PORTB
        delay100ms();
    }

    return 0;
}
```

```c
#include <avr/io.h>
#include <util/delay.h>

void delay_ms(int d)
{
    _delay_ms(d);
}

int main(void)
{
    DDRB = 0xFF; // PORTB is output
    while (1)
    {
        PORTB = PORTB | 0b00010000; // set bit 4(5th bit) of PORTB
        delay_ms(100);              // 100ms
        PORTB = PORTB & 0b11101111; // clear bit 4(5th bit) of PORTB
        delay_ms(100);              // 100ms
    }

    return 0;
}
```

```c
#include <avr/io.h>
int main(void)
{
    unsigned char temp;
    DDRB = 0;    // PORTB is input
    DDRC = 0xFF; // PORTC is output
    DDRD = 0xFF; // PORTD is output

    while (1)
    {
        temp = PINB;
        if (temp % 2 == 0)
            PORTC = 'E';
        else
            PORTD = 'O';
    }

    return 0;
}
```