PWM-PULSE WITH MODULATION

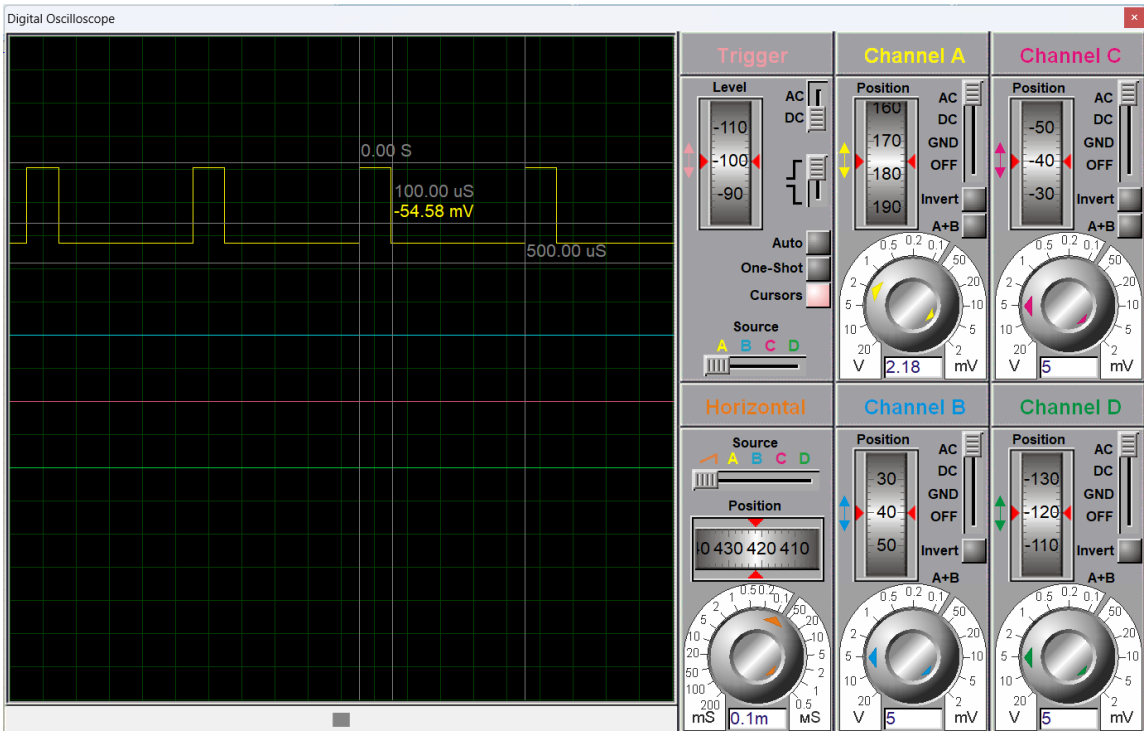
TASK PROGRAM

PROGRAM:-

```
#define _XTAL_FREQ 6000000  //intialize the clock frequency
void init(void);    //function declaration
void pwmchange(void);   //function declaration
    unsigned char lsb20,msb20; //intialize variable
    unsigned char lsb60,msb60; //intialize variable
    unsigned char lsb90,msb90; //intialize variable
    void main() {
        init(); //call init function
        while(1) //while loop
            pwmchange(); //call the pwmchge
    }
    void init() //init function
    {
        TRISC&=~0x04; //portc rc2/ccp1 pen set as output
        CCP1CON=0x0F; //to enter to pwm mode
        T2CON|=0x06; //timer 2 turn on and set pre scaler as 16
        PR2=0x2F;   //period will set as 0010 1111
        lsb20=0x02; //store the calculated lsb value to lsb 20
        msb20=0x09; //store the calculate msb value to msb 20
        lsb60=0x00; //store the calculated lsb value to lsb 60
        msb60=0x1C; //store the calculate msb value to msb 60
        lsb90=0x01; //store the calculated lsb value to lsb 90
        msb90=0x2A; //store the calculate msb value to msb 90
    }
    void pwmchange() //pwmchange function
    {
    CCPR1L=msb20;    //the msb value will be set to the CCPR1L
    CCP1CON=(CCP1CON&=~0x30|lsb20); //clear the ccp1con 5th and 4th bit and store lsb20 data
    __delay_ms(3000); //delay
    CCPR1L=msb60; //the msb value will be set to the CCPR1L
    CCP1CON=(CCP1CON&=~0x30|lsb60); //clear the ccp1con 5th and 4th bit and store lsb60 data
    __delay_ms(3000); //delay
    CCPR1L=msb90; //the msb value will be set to the CCPR1L
    CCP1CON=(CCP1CON&=~0x30|lsb90); //clear the ccp1con 5th and 4th bit and store lsb90 data
    __delay_ms(3000); //delay
    }
```

OUTPUT:-

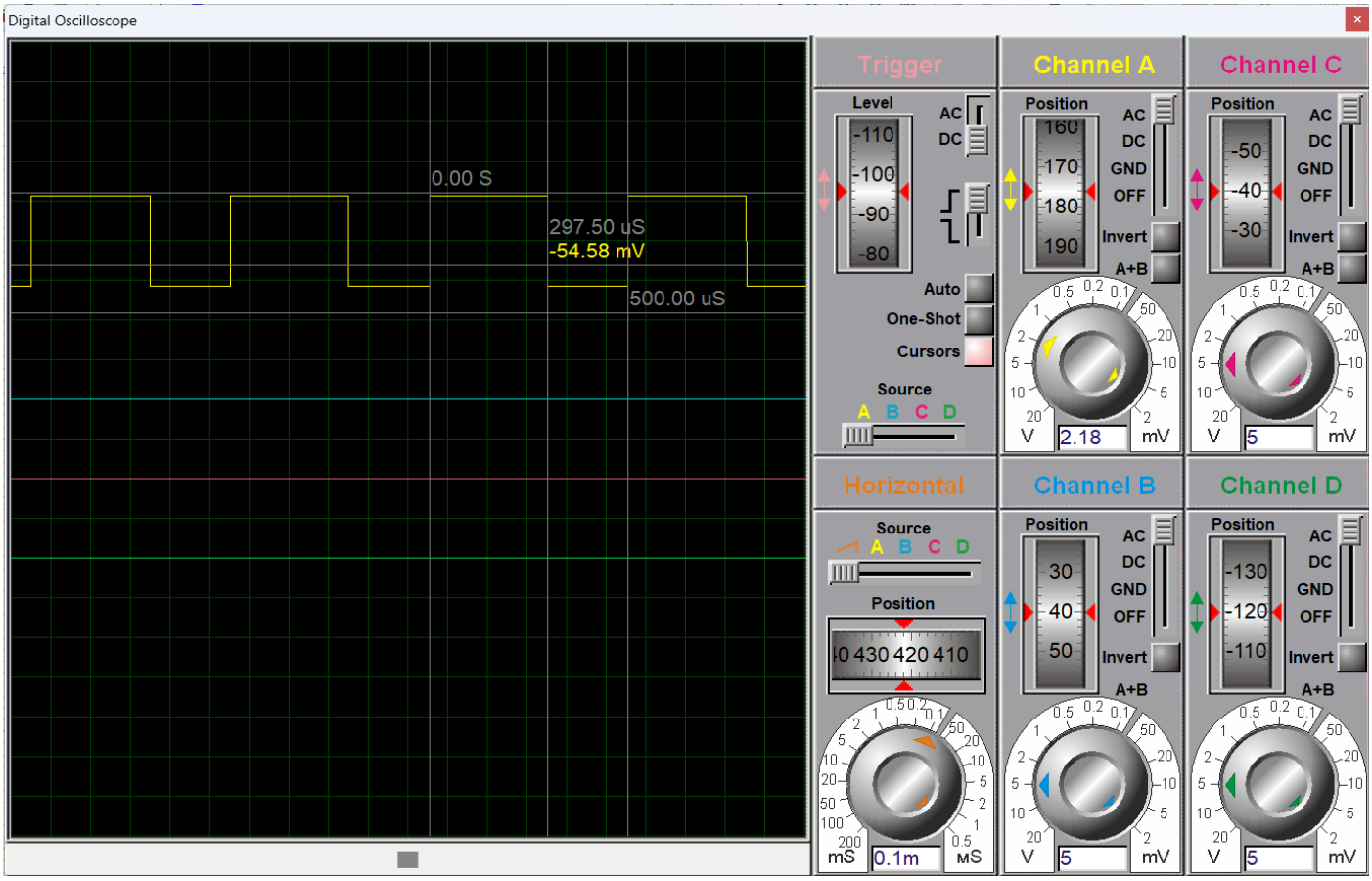
DUTY CYCLE 20%:-



PWM-PULSE WITH MODULATION

TASK PROGRAM

DUTY SYCLE 60%:-



DUTY CYCLE 90%:-