```
                        AREA        main, CODE, READONLY, CODE
                        THUMB

YAZI1                   DCB "Pulse Width (ns): ",0x04
YAZI2                   DCB "Period (ns): ",0x04
YAZI3                   DCB "Duty Cycle (%): ",0x04

TIMER1_CFG              EQU 0x40031000
TIMER1_TAMR             EQU 0x40031004
TIMER1_CTL              EQU 0x4003100C
TIMER1_RIS              EQU 0x4003101C ; Timer Interrupt Status
TIMER1_ICR              EQU 0x40031024 ; Timer Interrupt Clear
TIMER1_TAILR            EQU 0x40031028 ; Timer interval
TIMER1_TAMATCHR         EQU 0x40031030
TIMER1_TAPR             EQU 0x40031038
TIMER1_TAR              EQU 0x40031048 ; Timer register

GPIO_PORTB_DATA         EQU     0x40005040  ;data address to all pins
FPIO_PORTB_IM           EQU     0x40005010
GPIO_PORTB_DIR          EQU     0x40005400
GPIO_PORTB_AFSEL        EQU     0x40005420
GPIO_PORTB_AMSEL        EQU     0x40005428
GPIO_PORTB_DEN          EQU     0x4000551C
GPIO_PORTB_PUR          EQU     0x40005510
GPIO_PORTB_PCTL         EQU     0x4000552C

SYSCTL_RCGCTIMER        EQU     0x400FE604

                        EXTERN  OutStr
                        EXTERN  convrt
                        EXPORT  dalga

dalga                   PROC
                        PUSH    {LR}

                        LDR     R12,=20000400
                        LDR     R11,=20000500
                        MOV     R10,#0

bas                     LDR     R1,=TIMER1_RIS
start                   LDR     R2,[R1]
                        CMP     R2,#0x4
                        BNE     bas
                        ADD     R10,#1
                        LDR     R1,=TIMER1_TAR
                        LDR     R2,[R1]
                        STR     R2,[R11],#4
                        LDR     R1,=GPIO_PORTB_DATA
                        LDR     R2,[R1]

                        MOV     R3,#1
                        MOV     R4,#0
                        CMP     R2,#0x10
                        STRBEQ  R3,[R12],#1
                        STRBNE  R4,[R12],#1

                        CMP     R10,#3
                        BEQ     devam

                        LDR     R1,=TIMER1_ICR
                        MOV     R2,#0x04
                        STR     R2,[R1]
                        B       bas

devam                   LDR     R12,=20000400
                        LDR     R11,=20000500
                        LDRB    R1,[R12]
                        CMP     R1,#1
                        BEQ     positive

                        LDR     R0,[R11],#4
                        LDR     R1,[R11],#4
                        LDR     R2,[R11]

                        SUB     R12,R0,R2
                        SUB     R11,R1,R2
                        MOV     R10,#100
```

```
                        MUL     R6,R11,R10
                        UDIV    R6,R6,R12
                        B       out

positive                LDR     R0,[R11],#4
                        LDR     R1,[R11],#4
                        LDR     R2,[R11]

                        SUB     R12,R0,R2
                        SUB     R11,R0,R1
                        MOV     R10,#100
                        MUL     R6,R11,R10
                        UDIV    R6,R6,R12

out                     MOV     R0,#625
                        MOV     R1,#10
                        MUL     R12,R0
                        UDIV    R12,R1
                        MUL     R11,R0
                        UDIV    R11,R1

                        LDR     R5,=YAZI1
                        BL      OutStr
                        LDR     R5,=20000400
                        MOV     R4,R12
                        BL      convrt

                        LDR     R5,=YAZI2
                        BL      OutStr
                        LDR     R5,=20000400
                        MOV     R4,R11
                        BL      convrt

                        LDR     R5,=YAZI3
                        BL      OutStr
                        LDR     R5,=20000400
                        MOV     R4,R6
                        BL      convrt



                        POP     {LR}
                        BX      LR
                        ENDP
                        ALIGN
                        END
```