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1      AREA                main, CODE, READONLY, CODE
2      THUMB
3
4      YAZI1                DCB "Pulse Width (ns): ",0x04
5      YAZI2                DCB "Period (ns): ",0x04
6      YAZI3                DCB "Duty Cycle (%): ",0x04
7
8      TIMER1_CFG           EQU 0x40031000
9      TIMER1_TAMR          EQU 0x40031004
10     TIMER1_CTL           EQU 0x4003100C
11     TIMER1_RIS           EQU 0x4003101C ; Timer Interrupt Status
12     TIMER1_ICR           EQU 0x40031024 ; Timer Interrupt Clear
13     TIMER1_TAILR         EQU 0x40031028 ; Timer interval
14     TIMER1_TAMATCHR      EQU 0x40031030
15     TIMER1_TAPR          EQU 0x40031038
16     TIMER1_TAR           EQU 0x40031048 ; Timer register
17
18     GPIO_PORTB_DATA      EQU 0x40005040 ;data address to all pins
19     FPIO_PORTB_IM        EQU 0x40005010
20     GPIO_PORTB_DIR       EQU 0x40005400
21     GPIO_PORTB_AFSEL     EQU 0x40005420
22     GPIO_PORTB_AMSEL     EQU 0x40005428
23     GPIO_PORTB_DEN       EQU 0x4000551C
24     GPIO_PORTB_PUR       EQU 0x40005510
25     GPIO_PORTB_PCTL      EQU 0x4000552C
26
27     SYSCTL_RCGCTIMER    EQU 0x400FE604
28
29     EXTERN OutStr
30     EXTERN convrt
31     EXPORT dalga
32
33     dalga                PROC
34     PUSH {LR}
35
36     LDR R12,=20000400
37     LDR R11,=20000500
38     MOV R10,#0
39
40     bas                  LDR R1,=TIMER1_RIS
41     start                LDR R2,[R1]
42                         CMP R2,#0x4
43                         BNE bas
44                         ADD R10,#1
45                         LDR R1,=TIMER1_TAR
46                         LDR R2,[R1]
47                         STR R2,[R11],#4
48                         LDR R1,=GPIO_PORTB_DATA
49                         LDR R2,[R1]
50
51                         MOV R3,#1
52                         MOV R4,#0
53                         CMP R2,#0x10
54                         STRBEQ R3,[R12],#1
55                         STRBNE R4,[R12],#1
56
57                         CMP R10,#3
58                         BEQ devam
59
60                         LDR R1,=TIMER1_ICR
61                         MOV R2,#0x04
62                         STR R2,[R1]
63                         B bas
64
65     devam                LDR R12,=20000400
66                         LDR R11,=20000500
67                         LDRB R1,[R12]
68                         CMP R1,#1
69                         BEQ positive
70
71                         LDR R0,[R11],#4
72                         LDR R1,[R11],#4
73                         LDR R2,[R11]
74
75                         SUB R12,R0,R2
76                         SUB R11,R1,R2
77                         MOV R10,#100

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78      MUL      R6,R11,R10
79      UDIV     R6,R6,R12
80      B        out
81
82      positive  LDR      R0,[R11],#4
83                LDR      R1,[R11],#4
84                LDR      R2,[R11]
85
86                SUB      R12,R0,R2
87                SUB      R11,R0,R1
88                MOV      R10,#100
89                MUL      R6,R11,R10
90                UDIV     R6,R6,R12
91
92      out      MOV      R0,#625
93                MOV      R1,#10
94                MUL      R12,R0
95                UDIV     R12,R1
96                MUL      R11,R0
97                UDIV     R11,R1
98
99                LDR      R5,=YAZI1
100               BL        OutStr
101               LDR      R5,=20000400
102               MOV      R4,R12
103               BL        convrt
104
105               LDR      R5,=YAZI2
106               BL        OutStr
107               LDR      R5,=20000400
108               MOV      R4,R11
109               BL        convrt
110
111               LDR      R5,=YAZI3
112               BL        OutStr
113               LDR      R5,=20000400
114               MOV      R4,R6
115               BL        convrt
116
117
118
119               POP      {LR}
120               BX        LR
121               ENDP
122               ALIGN
123               END
```