

```
1  GPIO_PORTB_DATA      EQU      0x400053FC    ;data address to all pins
2  GPIO_PORTB_DIR       EQU      0x40005400
3  GPIO_PORTB_AFSEL     EQU      0x40005420
4  GPIO_PORTB_AMSEL     EQU      0x40005428
5  GPIO_PORTB_DEN       EQU      0x4000551C
6  GPIO_PORTB_PUR       EQU      0x40005510
7  IOB                  EQU      0xF0
8  PUB                  EQU      0x0F
9
10 SYSCTL_RCGCGPIO      EQU      0x400FE608
11
12
13          AREA          main, READONLY, CODE
14          THUMB
15          EXPORT        init_port_b ; Make available
16
17 init_port_b PROC
18     LDR      R1, =SYSCTL_RCGCGPIO
19     LDR      R0, [R1]
20     ORR      R0, #0x02
21     STR      R0, [R1]
22
23     NOP
24     NOP
25     NOP                                ;Stabilize clock
26
27     LDR      R1, =GPIO_PORTB_DIR
28     LDR      R0, [R1]
29     BIC      R0, #0xFF                ; INPUTS
30     ORR      R0, #IOB                ; s1 pb3          d1
31     STR      R0, [R1]                ; s2 pb2          d2 pb6
32                                     ; s3 pb1          d3 pb5
33     LDR      R1, =GPIO_PORTB_AFSEL   ; s4 pb0          d4 pb4
34     LDR      R0, [R1]
35     BIC      R0, #0xFF
36     STR      R0, [R1]
37
38     LDR      R1, =GPIO_PORTB_DEN
39     LDR      R0, [R1]
40     MOV      R0, #0xFF
41     STR      R0, [R1]
42
43     LDR      R1, =GPIO_PORTB_AMSEL   ;PORTB initilization part
44     LDR      R0, [R1]
45     BIC      R0, #0xFF
46     STR      R0, [R1]
47
48     LDR      R1, =GPIO_PORTB_PUR
49     MOV      R0, #PUB
50     STR      R0, [R1]
51
52     BX      LR
53     ENDP
54     ALIGN
55     END
```