```
GPIO_PORTB_DATA EQU         0x400053FC

                AREA init_isr , CODE, READONLY, ALIGN=2
                THUMB
                EXTERN      stepper
                EXTERN      delay
                EXTERN      init_port_b
                EXTERN      InitSysTick
                EXPORT      __main

__main          PROC
                BL          init_port_b
                BL          InitSysTick
                CPSIE       I
                LDR         R10,=0x20000400
                MOV         R1,#0
                STRB        R1,[R10]


debnc_inp       LDR         R1,=GPIO_PORTB_DATA                 ;Debounce algorithm for pressing
                LDR         R10,[R1]                            ;wait a delay between two data
                BL          delay                               ;samples and if they are the same
                LDR         R1,=GPIO_PORTB_DATA                 ;it continues to check columns
                LDR         R9,[R1]
                CMP         R9,R10                              ;it loads the data onto R9 reg.
                BEQ         devam
                B           debnc_inp

devam           AND         R8,R9,#0x0F
                CMP         R8,#0xF
                BEQ         debnc_inp

debnc_out       LDR         R1,=GPIO_PORTB_DATA                 ;This debounce part looks for the
                LDR         R7,[R1]                             ;relase of the key
                AND         R6,R7,#0xF                          ;if it sees an input it loops until
                CMP         R6,#0xF                             ;it does not see one.
                BNE         debnc_out                           ;It also double checks with a delayed time
                BL          delay
                LDR         R1,=GPIO_PORTB_DATA
                LDR         R9,[R1]
                AND         R6,R9,#0xF
                CMP         R6,#0xF
                BNE         debnc_out

                LDR         R10,=0x20000400
                MOV         R0,#1
                CMP         R8,#0x7
                STREQ       R0,[R10]
                BEQ         cont
                MOV         R0,#2
                CMP         R8,#0xB
                STREQ       R0,[R10]
                BEQ         cont

                LDR         R10,=0x20000401
                MOV         R0,#3
                CMP         R8,#0xD
                STREQ       R0,[R10]
                BEQ         cont
                MOV         R0,#4
                CMP         R8,#0xE
                STREQ       R0,[R10]
                BEQ         cont

cont            B           debnc_inp
                ENDP
                ALIGN
                END

```