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1  #ifndef F_CPU
2  #define F_CPU 16000000UL
3  #endif
4  #include <avr/io.h>
5  #include <util/delay.h>
6  #include <avr/interrupt.h>
7  #include <stdlib.h>
8  #include <string.h>
9  #include <stdbool.h>
10 #include <stdint.h>
11
12 #include "nrf24.h"
13
14 void initIO();
15
16 int main(void)
17 {
18     initIO();
19     nrf24_initRF_SAFE(MAIN_BOARD, RECEIVE); // CONNECTION TO MAIN BOARD : GENERAL RF CHANNEL 112
20
21     while (1)
22     {
23         if(nrf24_dataReady())
24         {
25
26             nrf24_getData(command_buffer);
27             CommandStatus status = DecomposeMessageFromBuffer();
28             if (status==SUCCESSFUL_DECOMPOSITION) { HandleAvailableCommand(); }
29         }
30
31         if (nrf24_checkAvailability()==false) { nrf24_initRF_SAFE(MAIN_BOARD, RECEIVE); }
32     }
33 }
34
35
36 void initIO(){
37     /*
38     Input/Output pin initialization
39     1 : OUTPUT | 0 : INPUT | 0b76543210 Bit order
40     ATTACHMENTS
41     NURSE SIGN : PB0 | OUTPUT
42     GREEN LED : PB1 | OUTPUT (SWAPPED IN PCB)
43     RED LED : PB2 | OUTPUT
44     STEP MOTOR A (CURTAIN)
45     TERMINAL NO.1 : PD0 | OUTPUT
46     TERMINAL NO.2 : PD1 | OUTPUT
47     TERMINAL NO.3 : PD2 | OUTPUT
48     TERMINAL NO.4 : PD3 | OUTPUT
49     STEP MOTOR B (STRETCHER)
50     TERMINAL NO.1 : PD4 | OUTPUT

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```
51         TERMINAL NO.2 : PD5           | OUTPUT
52         TERMINAL NO.3 : PD6           | OUTPUT
53         TERMINAL NO.4 : PD7           | OUTPUT
54     nRF24L01
55         CE    : PC0                   | OUTPUT
56         CSN   : PC1                   | OUTPUT
57         MISO  : PD0 (MSPIM MISO ATMEGA) | INPUT
58         MOSI  : PD1 (MSPIM MOSI ATMEGA) | OUTPUT
59         SCK   : PD4 (MSPIM XCK)        | OUTPUT
60     */
61     DDRD = 0b11111111;
62     DDRB = 0b00101111;
63     DDRC = 0b11011111;
64 }
65
66
67
68
69
70
```