

## src\main.c

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1
2 // task 1, EMB1 assignment 4
3
4 #include <stdio.h>
5 #include <avr/io.h>
6 #include <util/delay.h>
7
8 #include "usart.h"
9
10 int main(void) {
11
12     int n, guess, c=0; // initiate variables
13
14     uart_init(); // open the communication to the microcontroller
15     io_redirect(); // redirect input and output to the communication
16
17     printf("Type in a number to guess\n"); // message for user
18     scanf("%d", &n);
19
20     while(n!=guess) { // start program loop
21         printf("Guess the number\n"); // message for user
22         scanf("%d", &guess); // scan for user 1's number to be guessed
23         if(n>=1000) {
24             printf("Number is too big! Reset to restart program")
25             return 0;
26         }
27         if(n<guess) // check if number too big
28         {
29             printf("The number is too large \n"); //tell user 2 the number is too big
30         }
31         if(n>guess) //check if number too big
32         {
33             printf("The number is too small \n"); //tell user 2 the number is too small
34         }
35         c++; //increment guess counter
36     }
37     printf("You got the correct number! Number of guesses: %d",c);
38     //tell user that they guessed the number correctly, and tell them how many guesses it took
39     return 0; //end program
40 }
41
```