```c
1  /*
2   * one_MHz.c
3   *
4   * Created: 3/5/2021 9:09:18 PM
5   * Author : Judah Ben-Eliezer
6   */
7
8  #include <avr/io.h>
9
10 #define CLKCTRL_PDIV_disable 0x00
      // mask for disabling prescalar division.
11
12 int main(void)
13 {
14     PORTA_DIRSET = PIN7_bm;
         // CLK_OUT on PA7.
15     CPU_CCP = CCP_IOREG_gc;
16     CLKCTRL.MCLKCTRLA = CLKCTRL_CLKOUT_bm | CLKSEL_OSCHF_gc;
         // main clock enabled on CLKOUT, main clock set to internal high frequency
          oscillator.
17     CPU_CCP = CCP_IOREG_gc;
18     CLKCTRL.MCLKCTRLB = CLKCTRL_PDIV_disable;
         // prescalar division disabled.
19     CPU_CCP = CCP_IOREG_gc;
20     CLKCTRL.MCLKCTRLC = CLKCTRL_CFDSRC_CLKMAIN_gc | CLKCTRL_CFDEN_bm;
         // clock failure source set to main clock, clock failure detection
          enabled.
21     CPU_CCP = CCP_IOREG_gc;
22     CLKCTRL.MCLKINTCTRL = CLKCTRL_INTTYPE_INT_gc;
         // regular interrupt type.
23     CPU_CCP = CCP_IOREG_gc;
24     CLKCTRL.OSCHFCTRLA = CLKCTRL_RUNSTBY_bm | CLKCTRL_AUTOTUNE_bm;
         // run on standby enabled, autotune enabled.
25
26     while (1)
27     {
28     }
29 }
30
31
```