```
/*Proj_2B1_watch_dog_timer_2
*****************************************************************/

/*SNOW STORM DISPLAY VERSION 2

In this version the random number generator is always reset to 0xFFFF
(1111 1111 1111 1111) and the EEPROM is not used.

When the WDT times out the display continues after a short pause but
always restarts from the same state (i.e. all ones).

Press sw_2 to operate the WDT.*/




#include "Proj_2B1_header_file.h"


unsigned int PRN;                                   //Global memory location used to store "pseudo random numbers"


int main (void){
setup_HW;
wdt_enable(WDTO_250MS);                             //Following a WD reset the PRN is re-initialised to 0xFFFF
config_sw1_and_sw2_for_PCI;                         //SW1 is not used
sei();

PRN = 0xFFFF;                                       //Program supplied initial value fror PRN
while(1){                                           //Infinite while loop
I2C_Tx_2_integers(PRN, (PRN<<1));                   //Display two "pseudo random numbers"
PRN = PRN_16bit_GEN (PRN);                          //Generate a new PRN using the previous value as input
Timer_T0_10mS_delay_x_m(10);                        //Pause before repeating
wdr();}}                                            //Reset the watchdog timer which avoids the possibility
                                                    //of a reset for another 250mS

ISR(PCINT2_vect)
{if (switch_2_up)return; else while(1);}            //If switch_3 is pressed put program execution on hold
                                                    //The watchdog timer will not be reset and will "time out"
```