```c
/*
Uses the display to illustrate conversion between 8 bit binary and decimal numbers
*/



#include "Char_to_binary_header.h"

char digit=1, op, mode;

int main (void){

op=0;
mode = 'u';                                          //mode: signed or unsigned
setup_HW;
I2C_Tx_display_char(digit,mode);

set_up_PCI;
enable_pci;

sei();

while(1){
switch(op){
case 0: break;                                       //Static display
case 1: I2C_Tx_display_char(++digit,mode);break;     //Increment "digit" before calling "I2C_Tx....."
case 2: I2C_Tx_display_char(--digit, mode);break;}   //Decrement "digit" before calling "I2C_Tx....."

Timer_T0_10mS_delay_x_m(15);}}



/*****************************************************************************************************/
ISR(PCINT0_vect){                                     //sw3 interrupt service routine
if(switch_2_up)return;                                //Ignore sw3 key release
if((switch_1_down) || (switch_3_down))return;         //Ignore if sw1 or 2 are still down
if (mode == 's')
{mode = 'u'; I2C_Tx_display_char(digit,mode);return;}  //toggle display from signed to unsigned
if (mode == 'u')
{mode = 's'; I2C_Tx_display_char(digit,mode);return;}}  //and visa-versa



ISR(PCINT2_vect) {                                    //sw1 and sw3 interrupt
if(switch_2_down)return;                              //Ignore if sw3 is still down
if((switch_1_up) && (switch_3_up)){op = 0; return;}   //Both switches up

if(switch_1_down) {op = 1; return;}                   //Digits increment
if(switch_3_down) {op = 2; return;}}                  //Digits decrement




/*****************************************************************************************************/
```