**while** (1)

{

**if**(**BSP\_PB\_GetState**(*BUTTON\_KEY*) == 1) {

**for** (**int** k = 0; k < 6; ){

**if**(k == 0){

decimalcounter();

k++;

} **else** **if**(k == 1){

leftone();

decimalcounter();

k++;

} **else** **if**(k == 2){

lefttwo();

decimalcounter();

k++;

} **else** **if**(k == 3){

leftthree();

decimalcounter();

k++;

} **else** **if**(k == 4){

leftfour();

decimalcounter();

k++;

} **else** **if**(k ==5){

leftfive();

decimalcounter();

k++;

} **else**{

k = 0;

}

}

}

**if**(**HAL\_GPIO\_ReadPin**(GPIOB, GPIO\_PIN\_4) == 0) {

**for**(**int** i = 0; i < 64; i++){

**int** remain = 0;

**int** x = 0;

x = i / 32;

remain = i % 32;

**if**( x ==1 ){

**HAL\_GPIO\_WritePin**(GPIOF, GPIO\_PIN\_8, *GPIO\_PIN\_SET*); // 1.

} **else**{

**HAL\_GPIO\_WritePin**(GPIOF, GPIO\_PIN\_8, *GPIO\_PIN\_RESET*);

}

x = remain / 16;

remain = remain % 16;

**if**( x ==1 ){

**HAL\_GPIO\_WritePin**(GPIOF, GPIO\_PIN\_9, *GPIO\_PIN\_SET*); // 2.

} **else**{

**HAL\_GPIO\_WritePin**(GPIOF, GPIO\_PIN\_9, *GPIO\_PIN\_RESET*);

}

x = remain / 8;

remain = remain % 8;

**if**( x ==1 ){

**HAL\_GPIO\_WritePin**(GPIOF, GPIO\_PIN\_10, *GPIO\_PIN\_SET*); // 3.

} **else**{

**HAL\_GPIO\_WritePin**(GPIOF, GPIO\_PIN\_10, *GPIO\_PIN\_RESET*);

}

x = remain / 4;

remain = remain % 4;

**if**( x ==1 ){

**HAL\_GPIO\_WritePin**(GPIOA, GPIO\_PIN\_0, *GPIO\_PIN\_SET*); // 4.

} **else**{

**HAL\_GPIO\_WritePin**(GPIOA, GPIO\_PIN\_0, *GPIO\_PIN\_RESET*);

}

x = remain / 2;

remain = remain % 2;

**if**( x ==1 ){

**HAL\_GPIO\_WritePin**(GPIOF, GPIO\_PIN\_7, *GPIO\_PIN\_SET*); //5.

} **else**{

**HAL\_GPIO\_WritePin**(GPIOF, GPIO\_PIN\_7, *GPIO\_PIN\_RESET*);

}

x = remain / 1;

remain = remain % 1;

**if**( x ==1 ){

**HAL\_GPIO\_WritePin**(GPIOF, GPIO\_PIN\_6, *GPIO\_PIN\_SET*); //6.

} **else**{

**HAL\_GPIO\_WritePin**(GPIOF, GPIO\_PIN\_6, *GPIO\_PIN\_RESET*);

}

**HAL\_Delay**(500);

**HAL\_GPIO\_WritePin**(GPIOF, GPIO\_PIN\_8, *GPIO\_PIN\_RESET*);

**HAL\_GPIO\_WritePin**(GPIOF, GPIO\_PIN\_9, *GPIO\_PIN\_RESET*);

**HAL\_GPIO\_WritePin**(GPIOF, GPIO\_PIN\_10, *GPIO\_PIN\_RESET*);

**HAL\_GPIO\_WritePin**(GPIOA, GPIO\_PIN\_0, *GPIO\_PIN\_RESET*);

**HAL\_GPIO\_WritePin**(GPIOF, GPIO\_PIN\_7, *GPIO\_PIN\_RESET*);

**HAL\_GPIO\_WritePin**(GPIOF, GPIO\_PIN\_6, *GPIO\_PIN\_RESET*);

}

}

//if x == 4 -> lefut

**if**(**HAL\_GPIO\_ReadPin**(GPIOC, GPIO\_PIN\_7) == 0) {

//when the not integrated button pressed all leds fleshes from outside to the middle

**HAL\_GPIO\_WritePin**(GPIOF, GPIO\_PIN\_8, *GPIO\_PIN\_SET*); // 1.

**HAL\_GPIO\_WritePin**(GPIOF, GPIO\_PIN\_6, *GPIO\_PIN\_SET*); //6.

**HAL\_Delay**(300);

**HAL\_GPIO\_WritePin**(GPIOF, GPIO\_PIN\_8, *GPIO\_PIN\_RESET*);

**HAL\_GPIO\_WritePin**(GPIOF, GPIO\_PIN\_6, *GPIO\_PIN\_RESET*);

**HAL\_Delay**(300);

**HAL\_GPIO\_WritePin**(GPIOF, GPIO\_PIN\_9, *GPIO\_PIN\_SET*); // 2.

**HAL\_GPIO\_WritePin**(GPIOF, GPIO\_PIN\_7, *GPIO\_PIN\_SET*); //5.

**HAL\_Delay**(300);

**HAL\_GPIO\_WritePin**(GPIOF, GPIO\_PIN\_7, *GPIO\_PIN\_RESET*);

**HAL\_GPIO\_WritePin**(GPIOF, GPIO\_PIN\_9, *GPIO\_PIN\_RESET*);

**HAL\_Delay**(300);

**HAL\_GPIO\_WritePin**(GPIOA, GPIO\_PIN\_0, *GPIO\_PIN\_SET*); // 4.

**HAL\_GPIO\_WritePin**(GPIOF, GPIO\_PIN\_10, *GPIO\_PIN\_SET*); // 3.

**HAL\_Delay**(300);

**HAL\_GPIO\_WritePin**(GPIOA, GPIO\_PIN\_0, *GPIO\_PIN\_RESET*);

**HAL\_GPIO\_WritePin**(GPIOF, GPIO\_PIN\_10, *GPIO\_PIN\_RESET*);

**HAL\_Delay**(300);

}

**if**(**HAL\_GPIO\_ReadPin**(GPIOC, GPIO\_PIN\_6) == 0) {

//when the not integrated button2 pressed all leds fleshes

**HAL\_GPIO\_WritePin**(GPIOF, GPIO\_PIN\_8, *GPIO\_PIN\_SET*); // 1.

**HAL\_GPIO\_WritePin**(GPIOF, GPIO\_PIN\_6, *GPIO\_PIN\_SET*); //6.

**HAL\_GPIO\_WritePin**(GPIOF, GPIO\_PIN\_9, *GPIO\_PIN\_SET*); // 2.

**HAL\_GPIO\_WritePin**(GPIOF, GPIO\_PIN\_7, *GPIO\_PIN\_SET*); //5.

**HAL\_GPIO\_WritePin**(GPIOF, GPIO\_PIN\_10, *GPIO\_PIN\_SET*); // 3.

**HAL\_GPIO\_WritePin**(GPIOA, GPIO\_PIN\_0, *GPIO\_PIN\_SET*); // 4.

} **else** {

**HAL\_GPIO\_WritePin**(GPIOF, GPIO\_PIN\_8, *GPIO\_PIN\_RESET*);

**HAL\_GPIO\_WritePin**(GPIOF, GPIO\_PIN\_6, *GPIO\_PIN\_RESET*);

**HAL\_GPIO\_WritePin**(GPIOF, GPIO\_PIN\_9, *GPIO\_PIN\_RESET*);

**HAL\_GPIO\_WritePin**(GPIOF, GPIO\_PIN\_7, *GPIO\_PIN\_RESET*);

**HAL\_GPIO\_WritePin**(GPIOF, GPIO\_PIN\_10, *GPIO\_PIN\_RESET*);

**HAL\_GPIO\_WritePin**(GPIOA, GPIO\_PIN\_0, *GPIO\_PIN\_RESET*);

}

**if**(**HAL\_GPIO\_ReadPin**(GPIOG, GPIO\_PIN\_6) == 0) {

//when the not integrated button3 pressed all leds fleshes in a row

**HAL\_GPIO\_WritePin**(GPIOF, GPIO\_PIN\_8, *GPIO\_PIN\_SET*); // 1.

**HAL\_Delay**(100);

**HAL\_GPIO\_WritePin**(GPIOF, GPIO\_PIN\_8, *GPIO\_PIN\_RESET*);

**HAL\_Delay**(100);

**HAL\_GPIO\_WritePin**(GPIOF, GPIO\_PIN\_9, *GPIO\_PIN\_SET*); // 2.

**HAL\_Delay**(100);

**HAL\_GPIO\_WritePin**(GPIOF, GPIO\_PIN\_9, *GPIO\_PIN\_RESET*);

**HAL\_Delay**(100);

**HAL\_GPIO\_WritePin**(GPIOF, GPIO\_PIN\_10, *GPIO\_PIN\_SET*); // 3.

**HAL\_Delay**(100);

**HAL\_GPIO\_WritePin**(GPIOF, GPIO\_PIN\_10, *GPIO\_PIN\_RESET*);

**HAL\_Delay**(100);

**HAL\_GPIO\_WritePin**(GPIOA, GPIO\_PIN\_0, *GPIO\_PIN\_SET*); // 4.

**HAL\_Delay**(100);

**HAL\_GPIO\_WritePin**(GPIOA, GPIO\_PIN\_0, *GPIO\_PIN\_RESET*);

**HAL\_Delay**(100);

**HAL\_GPIO\_WritePin**(GPIOF, GPIO\_PIN\_7, *GPIO\_PIN\_SET*); //5.

**HAL\_Delay**(100);

**HAL\_GPIO\_WritePin**(GPIOF, GPIO\_PIN\_7, *GPIO\_PIN\_RESET*);

**HAL\_Delay**(100);

**HAL\_GPIO\_WritePin**(GPIOF, GPIO\_PIN\_6, *GPIO\_PIN\_SET*); //6.

**HAL\_Delay**(100);

**HAL\_GPIO\_WritePin**(GPIOF, GPIO\_PIN\_6, *GPIO\_PIN\_RESET*);

**HAL\_Delay**(100);

// backwards

**HAL\_GPIO\_WritePin**(GPIOF, GPIO\_PIN\_6, *GPIO\_PIN\_SET*);

**HAL\_Delay**(100);

**HAL\_GPIO\_WritePin**(GPIOF, GPIO\_PIN\_6, *GPIO\_PIN\_RESET*);

**HAL\_Delay**(100);

**HAL\_GPIO\_WritePin**(GPIOF, GPIO\_PIN\_7, *GPIO\_PIN\_SET*);

**HAL\_Delay**(100);

**HAL\_GPIO\_WritePin**(GPIOF, GPIO\_PIN\_7, *GPIO\_PIN\_RESET*);

**HAL\_Delay**(100);

**HAL\_GPIO\_WritePin**(GPIOA, GPIO\_PIN\_0, *GPIO\_PIN\_SET*);

**HAL\_Delay**(100);

**HAL\_GPIO\_WritePin**(GPIOA, GPIO\_PIN\_0, *GPIO\_PIN\_RESET*);

**HAL\_Delay**(100);

**HAL\_GPIO\_WritePin**(GPIOF, GPIO\_PIN\_10, *GPIO\_PIN\_SET*);

**HAL\_Delay**(100);

**HAL\_GPIO\_WritePin**(GPIOF, GPIO\_PIN\_10, *GPIO\_PIN\_RESET*);

**HAL\_Delay**(100);

**HAL\_GPIO\_WritePin**(GPIOF, GPIO\_PIN\_9, *GPIO\_PIN\_SET*);

**HAL\_Delay**(100);

**HAL\_GPIO\_WritePin**(GPIOF, GPIO\_PIN\_9, *GPIO\_PIN\_RESET*);

**HAL\_Delay**(100);

**HAL\_GPIO\_WritePin**(GPIOF, GPIO\_PIN\_8, *GPIO\_PIN\_SET*);

**HAL\_Delay**(100);

**HAL\_GPIO\_WritePin**(GPIOF, GPIO\_PIN\_8, *GPIO\_PIN\_RESET*);

**HAL\_Delay**(100);

}

//**TODO**: Flash the led with 200 ms period time

//BSP\_LED\_On(LED\_GREEN);

//HAL\_Delay(200);

//BSP\_LED\_Off(LED\_GREEN); when u use toogle dont need on and of functions

//BSP\_LED\_Toggle(LED\_GREEN);

//HAL\_Delay(200);

}

}