**void** **update7SEG** ( **int** index ) {

**switch** ( index ) {

**case** 0:

// Display the first 7 SEG with led\_buffer [0]

display7SEG(led\_buffer[0]);

HAL\_GPIO\_WritePin ( EN0\_GPIO\_Port , EN0\_Pin, *GPIO\_PIN\_RESET* ) ;

HAL\_GPIO\_WritePin ( EN3\_GPIO\_Port , EN3\_Pin, *GPIO\_PIN\_SET* ) ;

**break** ;

**case** 1:

// Display the second 7 SEG with led\_buffer [1]

display7SEG(led\_buffer[1]);

HAL\_GPIO\_WritePin ( EN1\_GPIO\_Port , EN1\_Pin, *GPIO\_PIN\_RESET* ) ;

HAL\_GPIO\_WritePin ( EN0\_GPIO\_Port , EN0\_Pin, *GPIO\_PIN\_SET* ) ;

**break** ;

**case** 2:

// Display the third 7 SEG with led\_buffer [2]

display7SEG(led\_buffer[2]);

HAL\_GPIO\_WritePin ( EN2\_GPIO\_Port , EN2\_Pin, *GPIO\_PIN\_RESET* ) ;

HAL\_GPIO\_WritePin ( EN1\_GPIO\_Port , EN1\_Pin, *GPIO\_PIN\_SET* ) ;

**break** ;

**case** 3:

// Display the forth 7 SEG with led\_buffer [3]

display7SEG(led\_buffer[3]);

HAL\_GPIO\_WritePin ( EN3\_GPIO\_Port , EN3\_Pin, *GPIO\_PIN\_RESET* ) ;

HAL\_GPIO\_WritePin ( EN2\_GPIO\_Port , EN2\_Pin, *GPIO\_PIN\_SET* ) ;

**break** ;

**default** :

**break** ;

}

}

**int** counter = 50;

**int** dot\_counter = 100;

**void** **HAL\_TIM\_PeriodElapsedCallback** ( TIM\_HandleTypeDef \* htim )

{

counter--;

dot\_counter--;

**if** (dot\_counter <= 0) {

dot\_counter = 100;

HAL\_GPIO\_TogglePin ( DOT\_GPIO\_Port , DOT\_Pin) ;

}

**if** (counter <= 0) {

counter = 50;

**if** (index\_led == 0) {

update7SEG(index\_led);

index\_led++;

} **else** **if** (index\_led == 1) {

update7SEG(index\_led);

index\_led++;

} **else** **if** (index\_led == 2) {

update7SEG(index\_led);

index\_led++;

} **else** **if** (index\_led == 3) {

update7SEG(index\_led);

index\_led = 0;

}

HAL\_GPIO\_TogglePin ( LED\_RED\_GPIO\_Port , LED\_RED\_Pin ) ;

}

}