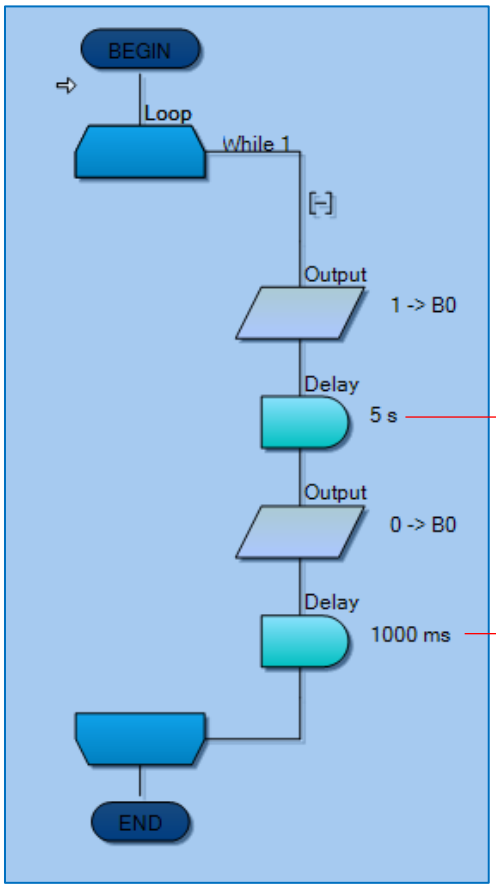
Flowchart: FlowCode 8




real measured time: = ~38 sec. why ?

real measured time: = ~7 sec. why ?

```
//*****************************************************************************
//**
//**  Source name:   D:\FC8App\FC8_T45_01.fcfx
//**  Title:
//**  Description:
//**  Device:        AVR.ATTINY.ATTINY45
//**
//**  Generated by:  Flowcode v8.2.2.15
//**  Date:          Friday, August 13, 2021 14:18:40
//**  Users:         1
//**
//**  https://www.matrixtsl.com
//**
//*****************************************************************************


#define MX_AVR

#define MX_CAL_AVR

#define MX_CLK_SPEED 8000000

#define FCP_NULL Unconnected_Port

#define MX_USI
```

```
#include <stdlib.h>
#include <stdio.h>
#include <math.h>
#include <avr\io.h>
#include <avr\interrupt.h>
#include <avr\eeprom.h>
#include <avr\wdt.h>

//Configuration Start
//Configuration End

/*=====================================================================
===*\
  Use :Include the type definitions
\*=====================================================================
===*/
#include "C:\ProgramData\MatrixTSL\FlowcodeV8\CAL\internals.c"




/*=====================================================================
===*\
  Use :panel
      :Variable declarations
      :Macro function declarations
\*=====================================================================
===*/
#define FCV_FALSE (0)
#define FCV_TRUE (1)


/*=====================================================================
===*\
  Use :ASCII6
      :Variable declarations
      :Macro function declarations
\*=====================================================================
===*/
#define FCVsz_00fb10_ASCII6__FLOATFIXEDLIST 1
#define FCVsz_00fb10_ASCII6__INTLIST 60
#define FCVsz_00fb10_ASCII6__FLOATLIST 1
#define FCVsz_00fb10_ASCII6__INTFIXEDLIST 1
#define FCD_00fb10_ASCII6__INTLIST(ix)
pgm_read_byte(&(FCD_00fb10_ASCII6__INTLIST_LUT[ix]))
ROMARRAY_(MX_UINT8) FCD_00fb10_ASCII6__INTLIST_LUT ROMARRAY_E =
{
// Property added elements
  127, 4, 4, 120, 0, 0, 0, 125, 0, 0, 64, 128, 132, 125, 0, 127, 16,
 40, 68, 0, 0, 0, 127, 64, 0, 124, 4, 24, 4, 120, 124, 4, 4,
```

```
 120, 0, 56, 68, 68, 68, 56, 252, 68, 68, 68, 56, 56, 68, 68, 68,
 252, 68, 120, 68, 4, 8, 8, 84, 84, 84, 32
// Dynamically added elements

};

MX_UINT16 FCD_00fb10_ASCII6__GetLUTCount();

/*====================================================================
===*\
   Use :ASCII7
       :Variable declarations
       :Macro function declarations
\*====================================================================
===*/
#define FCVsz_00fbf_ASCII7__FLOATFIXEDLIST 1
#define FCVsz_00fbf_ASCII7__INTLIST 55
#define FCVsz_00fbf_ASCII7__FLOATLIST 1
#define FCVsz_00fbf_ASCII7__INTFIXEDLIST 1
#define FCD_00fbf_ASCII7__INTLIST(ix)
pgm_read_byte(&(FCD_00fbf_ASCII7__INTLIST_LUT[ix]))
ROMARRAY_(MX_UINT8) FCD_00fbf_ASCII7__INTLIST_LUT ROMARRAY_E =
{
// Property added elements
  4, 62, 68, 36, 0, 60, 64, 32, 124, 0, 28, 32, 64, 32, 28, 60, 96,
 48, 96, 60, 108, 16, 16, 108, 0, 156, 160, 96, 60, 0, 100, 84, 84,
 76, 0, 8, 62, 65, 65, 0, 0, 0, 127, 0, 0, 0, 65, 65, 62,
 8, 2, 1, 2, 1, 0
// Dynamically added elements

};

MX_UINT16 FCD_00fbf_ASCII7__GetLUTCount();

/*====================================================================
===*\
   Use :ASCII5
       :Variable declarations
       :Macro function declarations
\*====================================================================
===*/
#define FCVsz_00fbe_ASCII5__FLOATFIXEDLIST 1
#define FCVsz_00fbe_ASCII5__INTLIST 60
#define FCVsz_00fbe_ASCII5__FLOATLIST 1
#define FCVsz_00fbe_ASCII5__INTFIXEDLIST 1
#define FCD_00fbe_ASCII5__INTLIST(ix)
pgm_read_byte(&(FCD_00fbe_ASCII5__INTLIST_LUT[ix]))
ROMARRAY_(MX_UINT8) FCD_00fbe_ASCII5__INTLIST_LUT ROMARRAY_E =
{
// Property added elements
  2, 4, 8, 16, 32, 0, 65, 65, 127, 0, 4, 2, 1, 2, 4, 128, 128,
 128, 128, 128, 0, 3, 7, 0, 0, 32, 84, 84, 84, 120, 127, 68, 68,
```

```
 68, 56, 56, 68, 68, 68, 40, 56, 68, 68, 68, 127, 56, 84, 84, 84,
 24, 8, 126, 9, 9, 0, 24, 164, 164, 164, 124
// Dynamically added elements

};

MX_UINT16 FCD_00fbe_ASCII5__GetLUTCount();

/*====================================================================
===*\
   Use :ASCII4
       :Variable declarations
       :Macro function declarations
\*====================================================================
===*/
#define FCVsz_00fbd_ASCII4__FLOATFIXEDLIST 1
#define FCVsz_00fbd_ASCII4__INTLIST 60
#define FCVsz_00fbd_ASCII4__FLOATLIST 1
#define FCVsz_00fbd_ASCII4__INTFIXEDLIST 1
#define FCD_00fbd_ASCII4__INTLIST(ix)
pgm_read_byte(&(FCD_00fbd_ASCII4__INTLIST_LUT[ix]))
ROMARRAY_(MX_UINT8) FCD_00fbd_ASCII4__INTLIST_LUT ROMARRAY_E =
{
// Property added elements
  127, 9, 9, 9, 6, 62, 65, 81, 33, 94, 127, 9, 9, 25, 102, 38, 73,
 73, 73, 50, 1, 1, 127, 1, 1, 63, 64, 64, 64, 63, 31, 32, 64,
 32, 31, 63, 64, 60, 64, 63, 99, 20, 8, 20, 99, 7, 8, 112, 8,
 7, 113, 73, 69, 67, 0, 0, 127, 65, 65, 0
// Dynamically added elements

};

MX_UINT16 FCD_00fbd_ASCII4__GetLUTCount();

/*====================================================================
===*\
   Use :ASCII3
       :Variable declarations
       :Macro function declarations
\*====================================================================
===*/
#define FCVsz_00fbc_ASCII3__FLOATFIXEDLIST 1
#define FCVsz_00fbc_ASCII3__INTLIST 60
#define FCVsz_00fbc_ASCII3__FLOATLIST 1
#define FCVsz_00fbc_ASCII3__INTFIXEDLIST 1
#define FCD_00fbc_ASCII3__INTLIST(ix)
pgm_read_byte(&(FCD_00fbc_ASCII3__INTLIST_LUT[ix]))
ROMARRAY_(MX_UINT8) FCD_00fbc_ASCII3__INTLIST_LUT ROMARRAY_E =
{
// Property added elements
  127, 65, 65, 65, 62, 127, 73, 73, 73, 65, 127, 9, 9, 9, 1, 62, 65,
 73, 73, 122, 127, 8, 8, 8, 127, 0, 65, 127, 65, 0, 48, 64, 64,
```

```
 64, 63, 127, 8, 20, 34, 65, 127, 64, 64, 64, 64, 127, 2, 4, 2,
 127, 127, 2, 4, 8, 127, 62, 65, 65, 65, 62
// Dynamically added elements

};

MX_UINT16 FCD_00fbc_ASCII3__GetLUTCount();

/*====================================================================
===*\
   Use :ASCII2
       :Variable declarations
       :Macro function declarations
\*====================================================================
===*/
#define FCVsz_00fbb_ASCII2__FLOATFIXEDLIST 1
#define FCVsz_00fbb_ASCII2__INTLIST 60
#define FCVsz_00fbb_ASCII2__FLOATLIST 1
#define FCVsz_00fbb_ASCII2__INTFIXEDLIST 1
#define FCD_00fbb_ASCII2__INTLIST(ix)
pgm_read_byte(&(FCD_00fbb_ASCII2__INTLIST_LUT[ix]))
ROMARRAY_(MX_UINT8) FCD_00fbb_ASCII2__INTLIST_LUT ROMARRAY_E =
{
// Property added elements
  54, 73, 73, 73, 54, 6, 73, 73, 41, 30, 0, 108, 108, 0, 0, 0, 236,
 108, 0, 0, 8, 20, 34, 65, 0, 36, 36, 36, 36, 36, 0, 65, 34,
 20, 8, 2, 1, 89, 9, 6, 62, 65, 93, 85, 30, 126, 9, 9, 9,
 126, 127, 73, 73, 73, 54, 62, 65, 65, 65, 34
// Dynamically added elements

};

MX_UINT16 FCD_00fbb_ASCII2__GetLUTCount();

/*====================================================================
===*\
   Use :ASCII1
       :Variable declarations
       :Macro function declarations
\*====================================================================
===*/
#define FCVsz_00fba_ASCII1__FLOATFIXEDLIST 1
#define FCVsz_00fba_ASCII1__INTLIST 60
#define FCVsz_00fba_ASCII1__FLOATLIST 1
#define FCVsz_00fba_ASCII1__INTFIXEDLIST 1
#define FCD_00fba_ASCII1__INTLIST(ix)
pgm_read_byte(&(FCD_00fba_ASCII1__INTLIST_LUT[ix]))
ROMARRAY_(MX_UINT8) FCD_00fba_ASCII1__INTLIST_LUT ROMARRAY_E =
{
// Property added elements
  0, 224, 96, 0, 0, 8, 8, 8, 8, 8, 0, 96, 96, 0, 0, 32, 16,
 8, 4, 2, 62, 81, 73, 69, 62, 0, 66, 127, 64, 0, 98, 81, 73,
```

```
 73, 70, 34, 73, 73, 73, 54, 24, 20, 18, 127, 16, 47, 73, 73, 73,
 49, 60, 74, 73, 73, 48, 1, 113, 9, 5, 3
// Dynamically added elements

};

MX_UINT16 FCD_00fba_ASCII1__GetLUTCount();

/*=====================================================================
===*\
   Use :ASCII0
       :Variable declarations
       :Macro function declarations
\*=====================================================================
===*/
#define FCVsz_00fb9_ASCII0__FLOATFIXEDLIST 1
#define FCVsz_00fb9_ASCII0__INTLIST 60
#define FCVsz_00fb9_ASCII0__FLOATLIST 1
#define FCVsz_00fb9_ASCII0__INTFIXEDLIST 1
#define FCD_00fb9_ASCII0__INTLIST(ix)
pgm_read_byte(&(FCD_00fb9_ASCII0__INTLIST_LUT[ix]))
ROMARRAY_(MX_UINT8) FCD_00fb9_ASCII0__INTLIST_LUT ROMARRAY_E =
{
// Property added elements
  0, 0, 0, 0, 0, 0, 6, 95, 6, 0, 7, 3, 0, 7, 3, 36, 126,
 36, 126, 36, 36, 43, 106, 18, 0, 99, 19, 8, 100, 99, 54, 73, 86,
 32, 80, 0, 7, 3, 0, 0, 0, 62, 65, 0, 0, 0, 65, 62, 0,
 0, 8, 62, 28, 62, 8, 8, 8, 62, 8, 8
// Dynamically added elements

};

MX_UINT16 FCD_00fb9_ASCII0__GetLUTCount();

/*=====================================================================
===*\
   Use :ASCII7
       :Variable declarations
       :Macro function declarations
\*=====================================================================
===*/
#define FCVsz_00fb8_ASCII7__FLOATFIXEDLIST 1
#define FCVsz_00fb8_ASCII7__INTLIST 55
#define FCVsz_00fb8_ASCII7__FLOATLIST 1
#define FCVsz_00fb8_ASCII7__INTFIXEDLIST 1
#define FCD_00fb8_ASCII7__INTLIST(ix)
pgm_read_byte(&(FCD_00fb8_ASCII7__INTLIST_LUT[ix]))
ROMARRAY_(MX_UINT8) FCD_00fb8_ASCII7__INTLIST_LUT ROMARRAY_E =
{
// Property added elements
  4, 62, 68, 36, 0, 60, 64, 32, 124, 0, 28, 32, 64, 32, 28, 60, 96,
 48, 96, 60, 108, 16, 16, 108, 0, 156, 160, 96, 60, 0, 100, 84, 84,
```

```
 76, 0, 8, 62, 65, 65, 0, 0, 0, 127, 0, 0, 0, 65, 65, 62,
 8, 2, 1, 2, 1, 0
// Dynamically added elements

};

MX_UINT16 FCD_00fb8_ASCII7__GetLUTCount();

/*=====================================================================
===*\
   Use :ASCII6
       :Variable declarations
       :Macro function declarations
\*=====================================================================
===*/
#define FCVsz_00fb7_ASCII6__FLOATFIXEDLIST 1
#define FCVsz_00fb7_ASCII6__INTLIST 60
#define FCVsz_00fb7_ASCII6__FLOATLIST 1
#define FCVsz_00fb7_ASCII6__INTFIXEDLIST 1
#define FCD_00fb7_ASCII6__INTLIST(ix)
pgm_read_byte(&(FCD_00fb7_ASCII6__INTLIST_LUT[ix]))
ROMARRAY_(MX_UINT8) FCD_00fb7_ASCII6__INTLIST_LUT ROMARRAY_E =
{
// Property added elements
  127, 4, 4, 120, 0, 0, 0, 125, 0, 0, 64, 128, 132, 125, 0, 127, 16,
 40, 68, 0, 0, 0, 127, 64, 0, 124, 4, 24, 4, 120, 124, 4, 4,
 120, 0, 56, 68, 68, 68, 56, 252, 68, 68, 68, 56, 56, 68, 68, 68,
 252, 68, 120, 68, 4, 8, 8, 84, 84, 84, 32
// Dynamically added elements

};

MX_UINT16 FCD_00fb7_ASCII6__GetLUTCount();

/*=====================================================================
===*\
   Use :ASCII5
       :Variable declarations
       :Macro function declarations
\*=====================================================================
===*/
#define FCVsz_00fb6_ASCII5__FLOATFIXEDLIST 1
#define FCVsz_00fb6_ASCII5__INTLIST 60
#define FCVsz_00fb6_ASCII5__FLOATLIST 1
#define FCVsz_00fb6_ASCII5__INTFIXEDLIST 1
#define FCD_00fb6_ASCII5__INTLIST(ix)
pgm_read_byte(&(FCD_00fb6_ASCII5__INTLIST_LUT[ix]))
ROMARRAY_(MX_UINT8) FCD_00fb6_ASCII5__INTLIST_LUT ROMARRAY_E =
{
// Property added elements
  2, 4, 8, 16, 32, 0, 65, 65, 127, 0, 4, 2, 1, 2, 4, 128, 128,
 128, 128, 128, 0, 3, 7, 0, 0, 32, 84, 84, 84, 120, 127, 68, 68,
```

```
 68, 56, 56, 68, 68, 68, 40, 56, 68, 68, 68, 127, 56, 84, 84, 84,
 24, 8, 126, 9, 9, 0, 24, 164, 164, 164, 124
// Dynamically added elements

};

MX_UINT16 FCD_00fb6_ASCII5__GetLUTCount();

/*====================================================================
===*\
   Use :ASCII4
       :Variable declarations
       :Macro function declarations
\*====================================================================
===*/
#define FCVsz_00fb5_ASCII4__FLOATFIXEDLIST 1
#define FCVsz_00fb5_ASCII4__INTLIST 60
#define FCVsz_00fb5_ASCII4__FLOATLIST 1
#define FCVsz_00fb5_ASCII4__INTFIXEDLIST 1
#define FCD_00fb5_ASCII4__INTLIST(ix)
pgm_read_byte(&(FCD_00fb5_ASCII4__INTLIST_LUT[ix]))
ROMARRAY_(MX_UINT8) FCD_00fb5_ASCII4__INTLIST_LUT ROMARRAY_E =
{
// Property added elements
  127, 9, 9, 9, 6, 62, 65, 81, 33, 94, 127, 9, 9, 25, 102, 38, 73,
 73, 73, 50, 1, 1, 127, 1, 1, 63, 64, 64, 64, 63, 31, 32, 64,
 32, 31, 63, 64, 60, 64, 63, 99, 20, 8, 20, 99, 7, 8, 112, 8,
 7, 113, 73, 69, 67, 0, 0, 127, 65, 65, 0
// Dynamically added elements

};

MX_UINT16 FCD_00fb5_ASCII4__GetLUTCount();

/*====================================================================
===*\
   Use :ASCII3
       :Variable declarations
       :Macro function declarations
\*====================================================================
===*/
#define FCVsz_00fb4_ASCII3__FLOATFIXEDLIST 1
#define FCVsz_00fb4_ASCII3__INTLIST 60
#define FCVsz_00fb4_ASCII3__FLOATLIST 1
#define FCVsz_00fb4_ASCII3__INTFIXEDLIST 1
#define FCD_00fb4_ASCII3__INTLIST(ix)
pgm_read_byte(&(FCD_00fb4_ASCII3__INTLIST_LUT[ix]))
ROMARRAY_(MX_UINT8) FCD_00fb4_ASCII3__INTLIST_LUT ROMARRAY_E =
{
// Property added elements
  127, 65, 65, 65, 62, 127, 73, 73, 73, 65, 127, 9, 9, 9, 1, 62, 65,
 73, 73, 122, 127, 8, 8, 8, 127, 0, 65, 127, 65, 0, 48, 64, 64,
```

```
 64, 63, 127, 8, 20, 34, 65, 127, 64, 64, 64, 64, 127, 2, 4, 2,
 127, 127, 2, 4, 8, 127, 62, 65, 65, 65, 62
// Dynamically added elements

};

MX_UINT16 FCD_00fb4_ASCII3__GetLUTCount();

/*====================================================================
===*\
   Use :ASCII2
       :Variable declarations
       :Macro function declarations
\*====================================================================
===*/
#define FCVsz_00fb3_ASCII2__FLOATFIXEDLIST 1
#define FCVsz_00fb3_ASCII2__INTLIST 60
#define FCVsz_00fb3_ASCII2__FLOATLIST 1
#define FCVsz_00fb3_ASCII2__INTFIXEDLIST 1
#define FCD_00fb3_ASCII2__INTLIST(ix)
pgm_read_byte(&(FCD_00fb3_ASCII2__INTLIST_LUT[ix]))
ROMARRAY_(MX_UINT8) FCD_00fb3_ASCII2__INTLIST_LUT ROMARRAY_E =
{
// Property added elements
  54, 73, 73, 73, 54, 6, 73, 73, 41, 30, 0, 108, 108, 0, 0, 0, 236,
 108, 0, 0, 8, 20, 34, 65, 0, 36, 36, 36, 36, 36, 0, 65, 34,
 20, 8, 2, 1, 89, 9, 6, 62, 65, 93, 85, 30, 126, 9, 9, 9,
 126, 127, 73, 73, 73, 54, 62, 65, 65, 65, 34
// Dynamically added elements

};

MX_UINT16 FCD_00fb3_ASCII2__GetLUTCount();

/*====================================================================
===*\
   Use :ASCII1
       :Variable declarations
       :Macro function declarations
\*====================================================================
===*/
#define FCVsz_00fb2_ASCII1__FLOATFIXEDLIST 1
#define FCVsz_00fb2_ASCII1__INTLIST 60
#define FCVsz_00fb2_ASCII1__FLOATLIST 1
#define FCVsz_00fb2_ASCII1__INTFIXEDLIST 1
#define FCD_00fb2_ASCII1__INTLIST(ix)
pgm_read_byte(&(FCD_00fb2_ASCII1__INTLIST_LUT[ix]))
ROMARRAY_(MX_UINT8) FCD_00fb2_ASCII1__INTLIST_LUT ROMARRAY_E =
{
// Property added elements
  0, 224, 96, 0, 0, 8, 8, 8, 8, 8, 0, 96, 96, 0, 0, 32, 16,
 8, 4, 2, 62, 81, 73, 69, 62, 0, 66, 127, 64, 0, 98, 81, 73,
```

```
 73, 70, 34, 73, 73, 73, 54, 24, 20, 18, 127, 16, 47, 73, 73, 73,
 49, 60, 74, 73, 73, 48, 1, 113, 9, 5, 3
// Dynamically added elements

};

MX_UINT16 FCD_00fb2_ASCII1__GetLUTCount();

/*=====================================================================
===*\
   Use :ASCII0
      :Variable declarations
      :Macro function declarations
\*=====================================================================
===*/
#define FCVsz_00fb1_ASCII0__FLOATFIXEDLIST 1
#define FCVsz_00fb1_ASCII0__INTLIST 60
#define FCVsz_00fb1_ASCII0__FLOATLIST 1
#define FCVsz_00fb1_ASCII0__INTFIXEDLIST 1
#define FCD_00fb1_ASCII0__INTLIST(ix)
pgm_read_byte(&(FCD_00fb1_ASCII0__INTLIST_LUT[ix]))
ROMARRAY_(MX_UINT8) FCD_00fb1_ASCII0__INTLIST_LUT ROMARRAY_E =
{
// Property added elements
  0, 0, 0, 0, 0, 0, 6, 95, 6, 0, 7, 3, 0, 7, 3, 36, 126,
 36, 126, 36, 36, 43, 106, 18, 0, 99, 19, 8, 100, 99, 54, 73, 86,
 32, 80, 0, 7, 3, 0, 0, 0, 62, 65, 0, 0, 0, 65, 62, 0,
 0, 8, 62, 28, 62, 8, 8, 8, 62, 8, 8
// Dynamically added elements

};

MX_UINT16 FCD_00fb1_ASCII0__GetLUTCount();

/*=====================================================================
===*\
   Use :component_label1
      :Variable declarations
      :Macro function declarations
\*=====================================================================
===*/

/*=====================================================================
===*\
   Use :led_base
      :Variable declarations
      :Macro function declarations
\*=====================================================================
===*/
void FCD_03d98_led_base__TurnOn();
void FCD_03d98_led_base__TurnOff();
```

```
/*=====================================================================
===*\
  Use :led_plcc0
      :Variable declarations
      :Macro function declarations
\*=====================================================================
===*/
#define FCD_06ab8_led_plcc0__TurnOn FCD_03d98_led_base__TurnOn
#define FCD_06ab8_led_plcc0__TurnOff FCD_03d98_led_base__TurnOff

/*=====================================================================
===*\
  Use :component_label1
      :Variable declarations
      :Macro function declarations
\*=====================================================================
===*/

/*=====================================================================
===*\
  Use :led_base
      :Variable declarations
      :Macro function declarations
\*=====================================================================
===*/
void FCD_03d97_led_base__TurnOn();
void FCD_03d97_led_base__TurnOff();

/*=====================================================================
===*\
  Use :led_plcc1
      :Variable declarations
      :Macro function declarations
\*=====================================================================
===*/
#define FCD_06ab7_led_plcc1__TurnOn FCD_03d97_led_base__TurnOn
#define FCD_06ab7_led_plcc1__TurnOff FCD_03d97_led_base__TurnOff

/*=====================================================================
===*\
  Use :component_label1
      :Variable declarations
      :Macro function declarations
\*=====================================================================
===*/

/*=====================================================================
===*\
  Use :led_base
      :Variable declarations
      :Macro function declarations
```

```
\*==========================================================================
===*/
void FCD_03d96_led_base__TurnOn();
void FCD_03d96_led_base__TurnOff();

/*==========================================================================
===*\
  Use :led_plcc2
     :Variable declarations
     :Macro function declarations
\*==========================================================================
===*/
#define FCD_06ab6_led_plcc2__TurnOn FCD_03d96_led_base__TurnOn
#define FCD_06ab6_led_plcc2__TurnOff FCD_03d96_led_base__TurnOff

/*==========================================================================
===*\
  Use :component_label1
     :Variable declarations
     :Macro function declarations
\*==========================================================================
===*/

/*==========================================================================
===*\
  Use :led_base
     :Variable declarations
     :Macro function declarations
\*==========================================================================
===*/
void FCD_03d95_led_base__TurnOn();
void FCD_03d95_led_base__TurnOff();

/*==========================================================================
===*\
  Use :led_plcc3
     :Variable declarations
     :Macro function declarations
\*==========================================================================
===*/
#define FCD_06ab5_led_plcc3__TurnOn FCD_03d95_led_base__TurnOn
#define FCD_06ab5_led_plcc3__TurnOff FCD_03d95_led_base__TurnOff

/*==========================================================================
===*\
  Use :component_label1
     :Variable declarations
     :Macro function declarations
\*==========================================================================
===*/
```

```
/*=====================================================================
===*\
  Use :led_base
      :Variable declarations
      :Macro function declarations
\*=====================================================================
===*/
void FCD_03d94_led_base__TurnOn();
void FCD_03d94_led_base__TurnOff();

/*=====================================================================
===*\
  Use :led_plcc4
      :Variable declarations
      :Macro function declarations
\*=====================================================================
===*/
#define FCD_06ab4_led_plcc4__TurnOn FCD_03d94_led_base__TurnOn
#define FCD_06ab4_led_plcc4__TurnOff FCD_03d94_led_base__TurnOff

/*=====================================================================
===*\
  Use :component_label1
      :Variable declarations
      :Macro function declarations
\*=====================================================================
===*/

/*=====================================================================
===*\
  Use :led_base
      :Variable declarations
      :Macro function declarations
\*=====================================================================
===*/
void FCD_03d93_led_base__TurnOn();
void FCD_03d93_led_base__TurnOff();

/*=====================================================================
===*\
  Use :led_plcc5
      :Variable declarations
      :Macro function declarations
\*=====================================================================
===*/
#define FCD_06ab3_led_plcc5__TurnOn FCD_03d93_led_base__TurnOn
#define FCD_06ab3_led_plcc5__TurnOff FCD_03d93_led_base__TurnOff

/*=====================================================================
===*\
  Use :component_label1
      :Variable declarations
```

```
      :Macro function declarations
\*=================================================================
===*/

/*=================================================================
===*\
  Use :led_base
      :Variable declarations
      :Macro function declarations
\*=================================================================
===*/
void FCD_03d92_led_base__TurnOn();
void FCD_03d92_led_base__TurnOff();

/*=================================================================
===*\
  Use :led_plcc6
      :Variable declarations
      :Macro function declarations
\*=================================================================
===*/
#define FCD_06ab2_led_plcc6__TurnOn FCD_03d92_led_base__TurnOn
#define FCD_06ab2_led_plcc6__TurnOff FCD_03d92_led_base__TurnOff

/*=================================================================
===*\
  Use :component_label1
      :Variable declarations
      :Macro function declarations
\*=================================================================
===*/

/*=================================================================
===*\
  Use :led_base
      :Variable declarations
      :Macro function declarations
\*=================================================================
===*/
void FCD_03d91_led_base__TurnOn();
void FCD_03d91_led_base__TurnOff();

/*=================================================================
===*\
  Use :led_plcc7
      :Variable declarations
      :Macro function declarations
\*=================================================================
===*/
#define FCD_06ab1_led_plcc7__TurnOn FCD_03d91_led_base__TurnOn
#define FCD_06ab1_led_plcc7__TurnOff FCD_03d91_led_base__TurnOff
```

```
/*=============================================================================
===*\
  Use :Include the chip adaption layer
\*=============================================================================
===*/
#include "C:\ProgramData\MatrixTSL\FlowcodeV8\CAL\includes.c"


/*=============================================================================
===*\
  Use :ASCII6
      :Macro implementations
\*=============================================================================
===*/
/*=-----------------------------------------------------------------------=*\
  Use :Gets the number of individual data entries stored in the LUT.
      :
      :Returns : MX_UINT16
\*=-----------------------------------------------------------------------=*/
MX_UINT16 FCD_00fb10_ASCII6__GetLUTCount()
{
   //Local variable definitions
   MX_UINT16 FCR_RETVAL;


   // .Return = NumVals
   FCR_RETVAL = 60;

   return (FCR_RETVAL);

}


/*=============================================================================
===*\
  Use :ASCII7
      :Macro implementations
\*=============================================================================
===*/
/*=-----------------------------------------------------------------------=*\
  Use :Gets the number of individual data entries stored in the LUT.
      :
      :Returns : MX_UINT16
\*=-----------------------------------------------------------------------=*/
MX_UINT16 FCD_00fbf_ASCII7__GetLUTCount()
{
   //Local variable definitions
   MX_UINT16 FCR_RETVAL;


   // .Return = NumVals
   FCR_RETVAL = 55;
```

```
    return (FCR_RETVAL);

}


/*=====================================================================
===*\
   Use :ASCII5
       :Macro implementations
\*=====================================================================
===*/
/*=---------------------------------------------------------------=*\
   Use :Gets the number of individual data entries stored in the LUT.
       :
       :Returns : MX_UINT16
\*=---------------------------------------------------------------=*/
MX_UINT16 FCD_00fbe_ASCII5__GetLUTCount()
{
    //Local variable definitions
    MX_UINT16 FCR_RETVAL;


    // .Return = NumVals
    FCR_RETVAL = 60;

    return (FCR_RETVAL);

}


/*=====================================================================
===*\
   Use :ASCII4
       :Macro implementations
\*=====================================================================
===*/
/*=---------------------------------------------------------------=*\
   Use :Gets the number of individual data entries stored in the LUT.
       :
       :Returns : MX_UINT16
\*=---------------------------------------------------------------=*/
MX_UINT16 FCD_00fbd_ASCII4__GetLUTCount()
{
    //Local variable definitions
    MX_UINT16 FCR_RETVAL;


    // .Return = NumVals
    FCR_RETVAL = 60;

    return (FCR_RETVAL);
```

```
}


/*============================================================================
===*\
  Use :ASCII3
      :Macro implementations
\*============================================================================
===*/
/*=---------------------------------------------------------------------=*\
  Use :Gets the number of individual data entries stored in the LUT.
      :
      :Returns : MX_UINT16
\*=---------------------------------------------------------------------=*/
MX_UINT16 FCD_00fbc_ASCII3__GetLUTCount()
{
   //Local variable definitions
   MX_UINT16 FCR_RETVAL;


   // .Return = NumVals
   FCR_RETVAL = 60;

   return (FCR_RETVAL);

}


/*============================================================================
===*\
  Use :ASCII2
      :Macro implementations
\*============================================================================
===*/
/*=---------------------------------------------------------------------=*\
  Use :Gets the number of individual data entries stored in the LUT.
      :
      :Returns : MX_UINT16
\*=---------------------------------------------------------------------=*/
MX_UINT16 FCD_00fbb_ASCII2__GetLUTCount()
{
   //Local variable definitions
   MX_UINT16 FCR_RETVAL;


   // .Return = NumVals
   FCR_RETVAL = 60;

   return (FCR_RETVAL);

}
```

```
/*================================================================
===*\
  Use :ASCII1
      :Macro implementations
\*================================================================
===*/
/*=---------------------------------------------------------------=*\
  Use :Gets the number of individual data entries stored in the LUT.
      :
      :Returns : MX_UINT16
\*=---------------------------------------------------------------=*/
MX_UINT16 FCD_00fba_ASCII1__GetLUTCount()
{
   //Local variable definitions
   MX_UINT16 FCR_RETVAL;


   // .Return = NumVals
   FCR_RETVAL = 60;

   return (FCR_RETVAL);

}


/*================================================================
===*\
  Use :ASCII0
      :Macro implementations
\*================================================================
===*/
/*=---------------------------------------------------------------=*\
  Use :Gets the number of individual data entries stored in the LUT.
      :
      :Returns : MX_UINT16
\*=---------------------------------------------------------------=*/
MX_UINT16 FCD_00fb9_ASCII0__GetLUTCount()
{
   //Local variable definitions
   MX_UINT16 FCR_RETVAL;


   // .Return = NumVals
   FCR_RETVAL = 60;

   return (FCR_RETVAL);

}
```

```
/*=====================================================================
===*\
  Use :ASCII7
      :Macro implementations
\*=====================================================================
===*/
/*=---------------------------------------------------------------=*\
  Use :Gets the number of individual data entries stored in the LUT.
      :
      :Returns : MX_UINT16
\*=---------------------------------------------------------------=*/
MX_UINT16 FCD_00fb8_ASCII7__GetLUTCount()
{
   //Local variable definitions
   MX_UINT16 FCR_RETVAL;


   // .Return = NumVals
   FCR_RETVAL = 55;

   return (FCR_RETVAL);

}


/*=====================================================================
===*\
  Use :ASCII6
      :Macro implementations
\*=====================================================================
===*/
/*=---------------------------------------------------------------=*\
  Use :Gets the number of individual data entries stored in the LUT.
      :
      :Returns : MX_UINT16
\*=---------------------------------------------------------------=*/
MX_UINT16 FCD_00fb7_ASCII6__GetLUTCount()
{
   //Local variable definitions
   MX_UINT16 FCR_RETVAL;


   // .Return = NumVals
   FCR_RETVAL = 60;

   return (FCR_RETVAL);

}


/*=====================================================================
===*\
```

```
   Use :ASCII5
      :Macro implementations
\*=============================================================================
===*/
/*=-----------------------------------------------------------------------=*\
   Use :Gets the number of individual data entries stored in the LUT.
      :
      :Returns : MX_UINT16
\*=-----------------------------------------------------------------------=*/
MX_UINT16 FCD_00fb6_ASCII5__GetLUTCount()
{
   //Local variable definitions
   MX_UINT16 FCR_RETVAL;


   // .Return = NumVals
   FCR_RETVAL = 60;

   return (FCR_RETVAL);

}


/*=============================================================================
===*\
   Use :ASCII4
      :Macro implementations
\*=============================================================================
===*/
/*=-----------------------------------------------------------------------=*\
   Use :Gets the number of individual data entries stored in the LUT.
      :
      :Returns : MX_UINT16
\*=-----------------------------------------------------------------------=*/
MX_UINT16 FCD_00fb5_ASCII4__GetLUTCount()
{
   //Local variable definitions
   MX_UINT16 FCR_RETVAL;


   // .Return = NumVals
   FCR_RETVAL = 60;

   return (FCR_RETVAL);

}


/*=============================================================================
===*\
   Use :ASCII3
      :Macro implementations
```

```
\*=============================================================================*/
/*=-----------------------------------------------------------------------=*\
   Use :Gets the number of individual data entries stored in the LUT.
       :
       :Returns : MX_UINT16
\*=-----------------------------------------------------------------------=*/
MX_UINT16 FCD_00fb4_ASCII3__GetLUTCount()
{
    //Local variable definitions
    MX_UINT16 FCR_RETVAL;


    // .Return = NumVals
    FCR_RETVAL = 60;

    return (FCR_RETVAL);

}


/*=============================================================================*\
   Use :ASCII2
       :Macro implementations
\*=============================================================================*/
/*=-----------------------------------------------------------------------=*\
   Use :Gets the number of individual data entries stored in the LUT.
       :
       :Returns : MX_UINT16
\*=-----------------------------------------------------------------------=*/
MX_UINT16 FCD_00fb3_ASCII2__GetLUTCount()
{
    //Local variable definitions
    MX_UINT16 FCR_RETVAL;


    // .Return = NumVals
    FCR_RETVAL = 60;

    return (FCR_RETVAL);

}


/*=============================================================================*\
   Use :ASCII1
       :Macro implementations
\*=============================================================================*/
```

```
/*=-----------------------------------------------------------------=*\
  Use :Gets the number of individual data entries stored in the LUT.
      :
      :Returns : MX_UINT16
\*=-----------------------------------------------------------------=*/
MX_UINT16 FCD_00fb2_ASCII1__GetLUTCount()
{
   //Local variable definitions
   MX_UINT16 FCR_RETVAL;


   // .Return = NumVals
   FCR_RETVAL = 60;

   return (FCR_RETVAL);

}


/*=================================================================
===*\
  Use :ASCII0
      :Macro implementations
\*=================================================================
===*/
/*=-----------------------------------------------------------------=*\
  Use :Gets the number of individual data entries stored in the LUT.
      :
      :Returns : MX_UINT16
\*=-----------------------------------------------------------------=*/
MX_UINT16 FCD_00fb1_ASCII0__GetLUTCount()
{
   //Local variable definitions
   MX_UINT16 FCR_RETVAL;


   // .Return = NumVals
   FCR_RETVAL = 60;

   return (FCR_RETVAL);

}


/*=================================================================
===*\
  Use :component_label1
      :Macro implementations
\*=================================================================
===*/
```

```
/*=============================================================================*\
  Use :led_base
      :Macro implementations
\*=============================================================================*/
/*-----------------------------------------------------------------------=*\
  Use :Turn the LED off.
\*-----------------------------------------------------------------------=*/
void FCD_03d98_led_base__TurnOn()
{

   #if (1)

      // pin = polarity
      SET_PORT_PIN(B, 0, 1);

   // #else

   //Code has been optimised out by the pre-processor
   #endif

}

/*-----------------------------------------------------------------------=*\
  Use :Turn the LED on.
\*-----------------------------------------------------------------------=*/
void FCD_03d98_led_base__TurnOff()
{

   #if (1)

      // pin = 1 - polarity
      SET_PORT_PIN(B, 0, 1 - 1);

   // #else

   //Code has been optimised out by the pre-processor
   #endif

}


/*=============================================================================*\
  Use :led_plcc0
      :Macro implementations
\*=============================================================================*/

/*=============================================================================*\
```

```
   Use :component_label1
      :Macro implementations
\*=============================================================================
===*/

/*=============================================================================
===*\
   Use :led_base
      :Macro implementations
\*=============================================================================
===*/
/*=----------------------------------------------------------------------=*\
   Use :Turn the LED off.
\*=----------------------------------------------------------------------=*/
void FCD_03d97_led_base__TurnOn()
{

   #if (1)

      // pin = polarity
      SET_PORT_PIN(B, 1, 1);

   // #else

   //Code has been optimised out by the pre-processor
   #endif

}

/*=----------------------------------------------------------------------=*\
   Use :Turn the LED on.
\*=----------------------------------------------------------------------=*/
void FCD_03d97_led_base__TurnOff()
{

   #if (1)

      // pin = 1 - polarity
      SET_PORT_PIN(B, 1, 1 - 1);

   // #else

   //Code has been optimised out by the pre-processor
   #endif

}


/*=============================================================================
===*\
   Use :led_plcc1
      :Macro implementations
```

```
\*=============================================================================
===*/

/*=============================================================================
===*\
  Use :component_label1
      :Macro implementations
\*=============================================================================
===*/

/*=============================================================================
===*\
  Use :led_base
      :Macro implementations
\*=============================================================================
===*/
/*=---------------------------------------------------------------------=*\
  Use :Turn the LED off.
\*=---------------------------------------------------------------------=*/
void FCD_03d96_led_base__TurnOn()
{

   #if (1)

      // pin = polarity
      SET_PORT_PIN(B, 2, 1);

   // #else

   //Code has been optimised out by the pre-processor
   #endif

}

/*=---------------------------------------------------------------------=*\
  Use :Turn the LED on.
\*=---------------------------------------------------------------------=*/
void FCD_03d96_led_base__TurnOff()
{

   #if (1)

      // pin = 1 - polarity
      SET_PORT_PIN(B, 2, 1 - 1);

   // #else

   //Code has been optimised out by the pre-processor
   #endif

}
```

```
/*=====================================================================
===*\
  Use :led_plcc2
      :Macro implementations
\*=====================================================================
===*/

/*=====================================================================
===*\
  Use :component_label1
      :Macro implementations
\*=====================================================================
===*/

/*=====================================================================
===*\
  Use :led_base
      :Macro implementations
\*=====================================================================
===*/
/*=---------------------------------------------------------------------=*\
  Use :Turn the LED off.
\*=---------------------------------------------------------------------=*/
void FCD_03d95_led_base__TurnOn()
{

   #if (1)

      // pin = polarity
      SET_PORT_PIN(B, 3, 1);

   // #else

   //Code has been optimised out by the pre-processor
   #endif

}

/*=---------------------------------------------------------------------=*\
  Use :Turn the LED on.
\*=---------------------------------------------------------------------=*/
void FCD_03d95_led_base__TurnOff()
{

   #if (1)

      // pin = 1 - polarity
      SET_PORT_PIN(B, 3, 1 - 1);

   // #else
```

```
    //Code has been optimised out by the pre-processor
    #endif

}


/*=================================================================
===*\
  Use :led_plcc3
      :Macro implementations
\*=================================================================
===*/

/*=================================================================
===*\
  Use :component_label1
      :Macro implementations
\*=================================================================
===*/

/*=================================================================
===*\
  Use :led_base
      :Macro implementations
\*=================================================================
===*/
/*=---------------------------------------------------------------=*\
  Use :Turn the LED off.
\*=---------------------------------------------------------------=*/
void FCD_03d94_led_base__TurnOn()
{

    #if (1)

        // pin = polarity
        SET_PORT_PIN(B, 4, 1);

    // #else

    //Code has been optimised out by the pre-processor
    #endif

}

/*=---------------------------------------------------------------=*\
  Use :Turn the LED on.
\*=---------------------------------------------------------------=*/
void FCD_03d94_led_base__TurnOff()
{

    #if (1)
```

```
        // pin = 1 - polarity
        SET_PORT_PIN(B, 4, 1 - 1);

    // #else

    //Code has been optimised out by the pre-processor
    #endif

}


/*=====================================================================
===*\
  Use :led_plcc4
      :Macro implementations
\*=====================================================================
===*/

/*=====================================================================
===*\
  Use :component_label1
      :Macro implementations
\*=====================================================================
===*/

/*=====================================================================
===*\
  Use :led_base
      :Macro implementations
\*=====================================================================
===*/
/*=---------------------------------------------------------------------=*\
  Use :Turn the LED off.
\*=---------------------------------------------------------------------=*/
void FCD_03d93_led_base__TurnOn()
{

    #if (1)

        // pin = polarity
        SET_PORT_PIN(B, 5, 1);

    // #else

    //Code has been optimised out by the pre-processor
    #endif

}

/*=---------------------------------------------------------------------=*\
  Use :Turn the LED on.
\*=---------------------------------------------------------------------=*/
```

```
void FCD_03d93_led_base__TurnOff()
{

   #if (1)

      // pin = 1 - polarity
      SET_PORT_PIN(B, 5, 1 - 1);

   // #else

   //Code has been optimised out by the pre-processor
   #endif

}


/*=====================================================================
===*\
  Use :led_plcc5
      :Macro implementations
\*=====================================================================
===*/

/*=====================================================================
===*\
  Use :component_label1
      :Macro implementations
\*=====================================================================
===*/

/*=====================================================================
===*\
  Use :led_base
      :Macro implementations
\*=====================================================================
===*/
/*=---------------------------------------------------------------------=*\
  Use :Turn the LED off.
\*=---------------------------------------------------------------------=*/
void FCD_03d92_led_base__TurnOn()
{

   #if (1)

      // pin = polarity
      SET_PORT_PIN(B, 6, 1);

   // #else

   //Code has been optimised out by the pre-processor
   #endif
```

```
}

/*=---------------------------------------------------------------------=*\
  Use :Turn the LED on.
\*=---------------------------------------------------------------------=*/
void FCD_03d92_led_base__TurnOff()
{

   #if (1)

      // pin = 1 - polarity
      SET_PORT_PIN(B, 6, 1 - 1);

   // #else

   //Code has been optimised out by the pre-processor
   #endif

}


/*=====================================================================
===*\
  Use :led_plcc6
     :Macro implementations
\*=====================================================================
===*/

/*=====================================================================
===*\
  Use :component_label1
     :Macro implementations
\*=====================================================================
===*/

/*=====================================================================
===*\
  Use :led_base
     :Macro implementations
\*=====================================================================
===*/
/*=---------------------------------------------------------------------=*\
  Use :Turn the LED off.
\*=---------------------------------------------------------------------=*/
void FCD_03d91_led_base__TurnOn()
{

   #if (1)

      // pin = polarity
      SET_PORT_PIN(B, 7, 1);
```

```
    // #else

    //Code has been optimised out by the pre-processor
    #endif

}

/*=---------------------------------------------------------------------=*\
  Use :Turn the LED on.
\*=---------------------------------------------------------------------=*/
void FCD_03d91_led_base__TurnOff()
{

    #if (1)

        // pin = 1 - polarity
        SET_PORT_PIN(B, 7, 1 - 1);

    // #else

    //Code has been optimised out by the pre-processor
    #endif

}


/*=====================================================================
===*\
  Use :led_plcc7
      :Macro implementations
\*=====================================================================
===*/

/*=====================================================================
===*\
  Use :panel
      :Macro implementations
\*=====================================================================
===*/


/*=====================================================================
===*\
  Use :Main
\*=====================================================================
===*/
int main()
{
    MCUSR=0x00;
    wdt_disable();
```

```
    // Name: Loop, Type: Loop: While 1
    while (1)
    {

        // Name: Output, Type: Output: 1 -> B0
        SET_PORT_PIN(B,0,(1));

        // Name: Delay, Type: Delay: 5 s
        FCI_DELAYBYTE_S(5);

        // Name: Output, Type: Output: 0 -> B0
        SET_PORT_PIN(B,0,(0));

        // Name: Delay, Type: Delay: 1000 ms
        FCI_DELAYINT_MS(1000);


    }

    mainendloop: goto mainendloop;
}



/*=========================================================================
===*\
  Use :Interrupt
\*=========================================================================
===*/
```