Learning Report – Embedded C – Hardware + Programming + Testing

GLOBAL ENGINEERING ACADEMY

Genesis

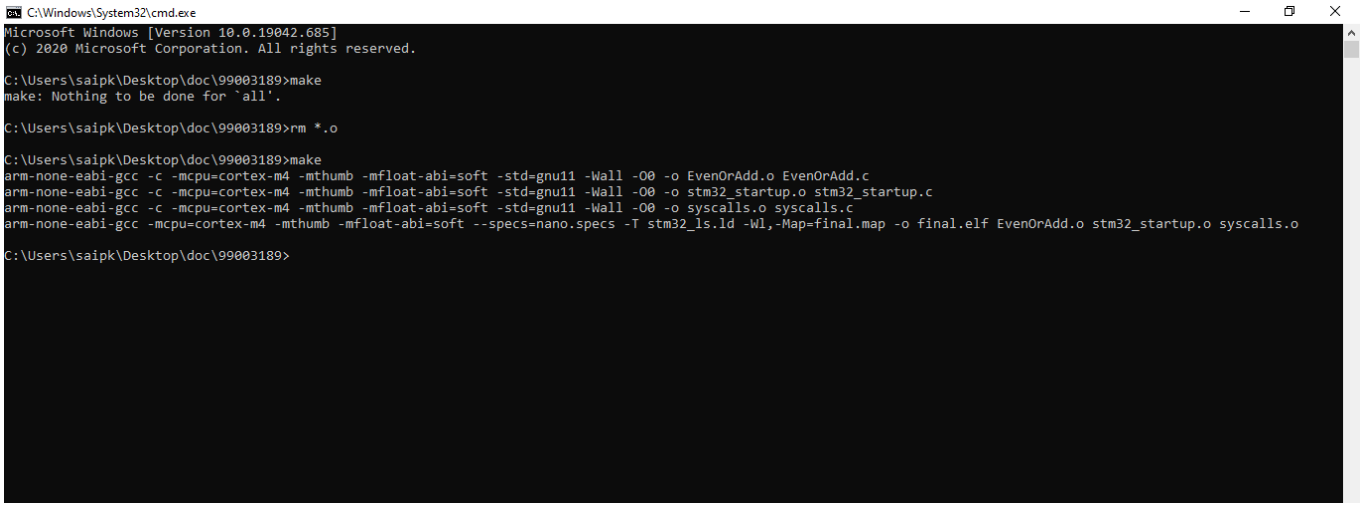
L&T Technology Services

Document History

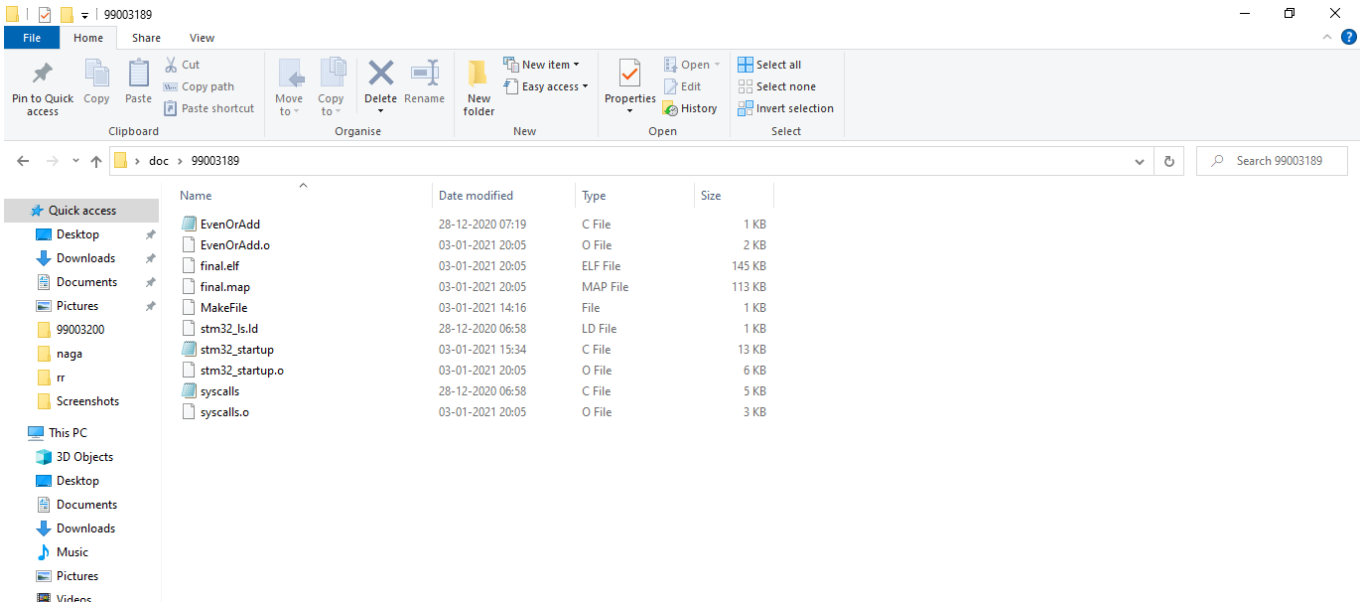
Ver.Rel. No.	Release Date	Prepared. By	Reviewed By	Approved By	Remarks/Revision Details
1.0	26-12-20	Parepalli Sai kumar		Dr. Vivek K and Bhargav N	
1.1	03-01-21	Parepalli Sai kumar		Dr. Vivek K and Bhargav N	

Contents

1 Make Execution in GIT



1.1 Files after execution of Make



1.2 Header section of main.o

```
saipk@DESKTOP-75K4IJR MINGW64 ~/Desktop/doc/99003189 (master)
$ arm-none-eabi-objdump.exe -h stm32_startup.o

stm32_startup.o:     file format elf32-littlearm

Sections:
Idx Name          Size      VMA       LMA       File off  Algn
  0 .text         00000090  00000000  00000000  00000034  2**2
                  CONTENTS, ALLOC, LOAD, RELOC, READONLY, CODE
  1 .data         00000000  00000000  00000000  000000c4  2**0
                  CONTENTS, ALLOC, LOAD, DATA
  2 .bss          00000000  00000000  00000000  000000c4  2**0
                  ALLOC
  3 .isr_vector   00000188  00000000  00000000  000000c4  2**2
                  CONTENTS, ALLOC, LOAD, RELOC, DATA
  4 .comment      0000004e  00000000  00000000  0000024c  2**0
                  CONTENTS, READONLY
  5 .ARM.attributes 0000002e  00000000  00000000  0000029a  2**0
                  CONTENTS, READONLY

saipk@DESKTOP-75K4IJR MINGW64 ~/Desktop/doc/99003189 (master)
$
```

2 Mini project

2.1 Main logic function

```
  /* USER CODE BEGIN WHILE */
  while (1)
  {
    /* USER CODE END WHILE */
      expr=HAL_GPIO_ReadPin(Sensor_Read_GPIO_Port, Sensor_Read_Pin);
      switch(expr)
      {
          case 1:
              HAL_GPIO_WritePin(Blue_Led_GPIO_Port, Blue_Led_Pin, 1);
              break;

          default:
              HAL_GPIO_WritePin(Blue_Led_GPIO_Port, Blue_Led_Pin, 0);
              break;

      }
    /* USER CODE BEGIN 3 */
      HAL_SPI_Transmit(&hspi1, &expr, 1, 100);
  }
  /* USER CODE END 3 */
}
```

2.2 GIT link:

https://github.com/99003189/EmbeddedC