Main.o sections

```
$ arm-none-eabi-objdump.exe -h main.o

main.o:     file format elf32-littlearm

Sections:
Idx Name          Size      VMA       LMA       File off  Algn
  0 .text         000000d0  00000000  00000000  00000034  2**2
                  CONTENTS, ALLOC, LOAD, READONLY, CODE
  1 .data         00000000  00000000  00000000  00000104  2**0
                  CONTENTS, ALLOC, LOAD, DATA
  2 .bss          00000000  00000000  00000000  00000104  2**0
                  ALLOC
  3 .debug_info   000000b3  00000000  00000000  00000104  2**0
                  CONTENTS, RELOC, READONLY, DEBUGGING
  4 .debug_abbrev 00000067  00000000  00000000  000001b7  2**0
                  CONTENTS, READONLY, DEBUGGING
  5 .debug_loc    00000038  00000000  00000000  0000021e  2**0
                  CONTENTS, READONLY, DEBUGGING
  6 .debug_aranges 00000020  00000000  00000000  00000256  2**0
                  CONTENTS, RELOC, READONLY, DEBUGGING
  7 .debug_line   00000077  00000000  00000000  00000276  2**0
                  CONTENTS, RELOC, READONLY, DEBUGGING
  8 .debug_str    000000cb  00000000  00000000  000002ed  2**0
                  CONTENTS, READONLY, DEBUGGING
  9 .comment      00000012  00000000  00000000  000003b8  2**0
                  CONTENTS, READONLY
 10 .ARM.attributes 00000033  00000000  00000000  000003ca  2**0
                  CONTENTS, READONLY
 11 .debug_frame  0000002c  00000000  00000000  00000400  2**2
                  CONTENTS, RELOC, READONLY, DEBUGGING
```

Startup.o sections

```
$ arm-none-eabi-objdump.exe -h startup.o

startup.o:     file format elf32-littlearm

Sections:
Idx Name          Size      VMA       LMA       File off  Algn
  0 .text         000000b4  00000000  00000000  00000034  2**2
                  CONTENTS, ALLOC, LOAD, RELOC, READONLY, CODE
  1 .data         00000000  00000000  00000000  000000e8  2**0
                  CONTENTS, ALLOC, LOAD, DATA
  2 .bss          00000400  00000000  00000000  000000e8  2**2
                  ALLOC
  3 .vectors      00000010  00000000  00000000  000000e8  2**2
                  CONTENTS, ALLOC, LOAD, RELOC, READONLY, DATA
  4 .debug_info   000001a7  00000000  00000000  000000f8  2**0
                  CONTENTS, RELOC, READONLY, DEBUGGING
  5 .debug_abbrev 000000dc  00000000  00000000  0000029f  2**0
                  CONTENTS, READONLY, DEBUGGING
  6 .debug_loc    00000064  00000000  00000000  0000037b  2**0
                  CONTENTS, READONLY, DEBUGGING
  7 .debug_aranges 00000020  00000000  00000000  000003df  2**0
                  CONTENTS, RELOC, READONLY, DEBUGGING
  8 .debug_line   00000066  00000000  00000000  000003ff  2**0
                  CONTENTS, RELOC, READONLY, DEBUGGING
  9 .debug_str    00000143  00000000  00000000  00000465  2**0
                  CONTENTS, READONLY, DEBUGGING
 10 .comment      00000012  00000000  00000000  000005a8  2**0
                  CONTENTS, READONLY
 11 .ARM.attributes 00000033  00000000  00000000  000005ba  2**0
                  CONTENTS, READONLY
 12 .debug_frame  0000004c  00000000  00000000  000005f0  2**2
                  CONTENTS, RELOC, READONLY, DEBUGGING
```

Symbols table of the. elf output file

```
$ arm-none-eabi-nm.exe  lab3_unit3.elf
20000400 B _E_bss
20000000 T _E_Data
08000194 T _E_text
20000000 B _S_bss
20000000 T _S_Data
080000e0 T Default_Handler
08000000 T g_P_F_Vectors
080000e0 W H_Fault_Handler
08000010 T main
080000e0 W NMI_Handler
080000ec T Reset_Handler
20000000 b Stack_Top
```

Notes:

I ran the keil project and debugged the project as illustrated in the lecture but I used the project provided on the discord because I couldn’t handle the memory mapping error appeared in my own project.