

- Main.o sections

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MINGW64:/d/Courses/programming/NOW/EmbeddedSystems/Now/DIPLOMAS/KSES Diploma/5.Assignments/Unit 3 (Embedded C)/Lecture 3/Assignment 1 (make file and gdb) (master)
$ 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          00000028  00000000  00000000  00000034  2**2
    CONTENTS, ALLOC, LOAD, RELOC, READONLY, CODE
  1 .data          00000004  00000000  00000000  0000005c  2**2
    CONTENTS, ALLOC, LOAD, RELOC, DATA
  2 .bss           00000000  00000000  00000000  00000060  2**0
    ALLOC
  3 .rodata        0000001e  00000000  00000000  00000060  2**2
    CONTENTS, ALLOC, LOAD, READONLY, DATA
  4 .debug_info    000008d4  00000000  00000000  0000007e  2**0
    CONTENTS, RELOC, READONLY, DEBUGGING
  5 .debug_abbrev  000001a7  00000000  00000000  00000952  2**0
    CONTENTS, READONLY, DEBUGGING
  6 .debug_aranges 00000020  00000000  00000000  00000af9  2**0
    CONTENTS, RELOC, READONLY, DEBUGGING
  7 .debug_line    00000134  00000000  00000000  00000b19  2**0
    CONTENTS, RELOC, READONLY, DEBUGGING
  8 .debug_str     00000570  00000000  00000000  00000c4d  2**0
    CONTENTS, READONLY, DEBUGGING
  9 .comment       0000007f  00000000  00000000  000011bd  2**0
    CONTENTS, READONLY
10 .debug_frame   0000002c  00000000  00000000  0000123c  2**2
    CONTENTS, RELOC, READONLY, DEBUGGING
11 .ARM.attributes 00000032  00000000  00000000  00001268  2**0
    CONTENTS, READONLY

```

- Startup.o sections

```

MINGW64:/d/Courses/programming/NOW/EmbeddedSystems/Now/DIPLOMAS/KSES Diploma/5.Assignments/Unit 3 (Embedded C)/Lecture 3/Assignment 1 (make file and gdb) (master)
$ 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          00000010  00000000  00000000  00000034  2**2
    CONTENTS, ALLOC, LOAD, RELOC, READONLY, CODE
  1 .data          00000000  00000000  00000000  00000044  2**0
    CONTENTS, ALLOC, LOAD, DATA
  2 .bss           00000000  00000000  00000000  00000044  2**0
    ALLOC
  3 .debug_line    0000003a  00000000  00000000  00000044  2**0
    CONTENTS, RELOC, READONLY, DEBUGGING
  4 .debug_info    00000026  00000000  00000000  0000007e  2**0
    CONTENTS, RELOC, READONLY, DEBUGGING
  5 .debug_abbrev  00000014  00000000  00000000  000000a4  2**0
    CONTENTS, READONLY, DEBUGGING
  6 .debug_aranges 00000020  00000000  00000000  000000b8  2**3
    CONTENTS, RELOC, READONLY, DEBUGGING
  7 .debug_str     00000096  00000000  00000000  000000d8  2**0
    CONTENTS, READONLY, DEBUGGING
  8 .ARM.attributes 00000022  00000000  00000000  0000016e  2**0
    CONTENTS, READONLY

```

- UART.o sections

```
$ arm-none-eabi-objdump.exe -h uart.o
uart.o:      file format elf32-littlearm

Sections:
Idx Name          Size      VMA       LMA       File off  Algn
  0 .text          00000054  00000000  00000000  00000034  2**2
    CONTENTS, ALLOC, LOAD, READONLY, CODE
  1 .data          00000000  00000000  00000000  00000088  2**0
    CONTENTS, ALLOC, LOAD, DATA
  2 .bss           00000000  00000000  00000000  00000088  2**0
    ALLOC
  3 .debug_info     000000ab  00000000  00000000  00000088  2**0
    CONTENTS, RELOC, READONLY, DEBUGGING
  4 .debug_abbrev   00000067  00000000  00000000  00000133  2**0
    CONTENTS, READONLY, DEBUGGING
  5 .debug_aranges  00000020  00000000  00000000  0000019a  2**0
    CONTENTS, RELOC, READONLY, DEBUGGING
  6 .debug_line     0000004f  00000000  00000000  000001ba  2**0
    CONTENTS, RELOC, READONLY, DEBUGGING
  7 .debug_str      0000018f  00000000  00000000  00000209  2**0
    CONTENTS, READONLY, DEBUGGING
  8 .comment        0000007f  00000000  00000000  00000398  2**0
    CONTENTS, READONLY
  9 .debug_frame    00000030  00000000  00000000  00000418  2**2
    CONTENTS, RELOC, READONLY, DEBUGGING
 10 .ARM.attributes 00000032  00000000  00000000  00000448  2**0
    CONTENTS, READONLY

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MAS/KSESDiploma/5.Assignments/Unit 3 (Embedded C)/Lecture 3/Assignment 1 (make f
ile and gdb) (master)
```

- application.elf sections

```
MINGW64/d/Courses/programming/NOW/EmbeddedSystems/Now/DIPLOMAS/KSESDiploma...
abdul@Administrator MINGW64 /d/Courses/programming/NOW/EmbeddedSystems/Now/DIPLO
MAS/KSESDiploma/5.Assignments/Unit 3 (Embedded C)/Lecture 3/Assignment 1 (make f
ile and gdb) (master)
$ arm-none-eabi-objdump.exe -h application.elf
application.elf:      file format elf32-littlearm

Sections:
Idx Name          Size      VMA       LMA       File off  Algn
  0 .startup_section 00000010  00010000  00010000  00010000  2**2
    CONTENTS, ALLOC, LOAD, READONLY, CODE
  1 .text_section   0000007c  00010010  00010010  00010010  2**2
    CONTENTS, ALLOC, LOAD, READONLY, CODE
  2 .rodata         0000001e  0001008c  0001008c  0001008c  2**2
    CONTENTS, ALLOC, LOAD, READONLY, DATA
  3 .data_section   00000004  000100ac  000100ac  000100ac  2**2
    CONTENTS, ALLOC, LOAD, DATA
  4 .ARM.attributes 0000002e  00000000  00000000  000100b0  2**0
    CONTENTS, READONLY
  5 .comment        0000007e  00000000  00000000  000100de  2**0
    CONTENTS, READONLY
  6 .debug_line     000001bd  00000000  00000000  0001015c  2**0
    CONTENTS, READONLY, DEBUGGING
  7 .debug_info     000009a5  00000000  00000000  00010319  2**0
    CONTENTS, READONLY, DEBUGGING
  8 .debug_abbrev   00000222  00000000  00000000  00010cbe  2**0
    CONTENTS, READONLY, DEBUGGING
  9 .debug_aranges  00000060  00000000  00000000  00010ee0  2**3
    CONTENTS, READONLY, DEBUGGING
 10 .debug_str      0000053d  00000000  00000000  00010f40  2**0
    CONTENTS, READONLY, DEBUGGING
 11 .debug_frame    0000005c  00000000  00000000  00011480  2**2
    CONTENTS, READONLY, DEBUGGING
```

- Symbols

```
MINGW64:/d/Courses/programming/NOW/EmbeddedSystems/Now/DIPLOMAS/KSESDiplo...
abdul@Administrator MINGW64 /d/Courses/programming/NOW/EmbeddedSystems/Now/DIPLOMAS/KSESDiploMAS/KSESDiploMAS/5.Assignments/Unit 3 (Embedded C)/Lecture 3/Assignment 1 (make file and gdb) (master)
$ arm-none-eabi-nm.exe main.o
00000000 D data
00000000 T main
                U uart_send_string

abdul@Administrator MINGW64 /d/Courses/programming/NOW/EmbeddedSystems/Now/DIPLOMAS/KSESDiploMAS/5.Assignments/Unit 3 (Embedded C)/Lecture 3/Assignment 1 (make file and gdb) (master)
$ arm-none-eabi-nm.exe startup.o
                U main
00000000 T reset
                U stack_pointer
00000008 t stop

abdul@Administrator MINGW64 /d/Courses/programming/NOW/EmbeddedSystems/Now/DIPLOMAS/KSESDiploMAS/5.Assignments/Unit 3 (Embedded C)/Lecture 3/Assignment 1 (make file and gdb) (master)
$ arm-none-eabi-nm.exe uart.o
00000000 T uart_send_string

abdul@Administrator MINGW64 /d/Courses/programming/NOW/EmbeddedSystems/Now/DIPLOMAS/KSESDiploMAS/5.Assignments/Unit 3 (Embedded C)/Lecture 3/Assignment 1 (make file and gdb) (master)
$ arm-none-eabi-nm.exe application.elf
000100ac D data
00010010 T main
00010000 T reset
000110b0 D stack_pointer
00010008 t stop
00010038 T uart_send_string
```