

Embedded C
Lab 1 (GDB/Makefile)
Lab 2(Startup.s/Startup.c)

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1 GDB Paired with QEMU

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Windows PowerShell
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PS C:\D\Personal\Skills\Embedded Systems\Embedded Systems - Learn in Depth\Repositories\Embedded-Systems-Learn-in-Depth\Labs\01-Embedded C\Lab 1> qemu-system-arm -M versatilepb -m 128M -nographic -s -S lab1.bin
WARNING: Image format was not specified for 'lab1.bin' and probing guessed raw.
       Automatically detecting the format is dangerous for raw images, write
       operations on block 0 will be restricted.
       Specify the 'raw' format explicitly to remove the restrictions.
|
```

```
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PS C:\D\Personal\Skills\Embedded Systems\Embedded Systems - Learn in Depth\Repositories\Embedded-Systems-Learn-in-Depth\Labs\01-Embedded C\Lab 1> arm-none-eabi-gdb.exe
C:\msys64\mingw64\bin\arm-none-eabi-gdb.exe: warning: Couldn't determine a path for the index cache directory.
GNU gdb (GNU Tools for Arm Embedded Processors 8-2018-q4-major) 8.2.50.20181213-gi
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License GPLv3+: GNU GPL version 3 or later <http://gnu.org/licenses/gpl.html>
This is free software: you are free to change and redistribute it.
There is NO WARRANTY, to the extent permitted by law.
Type "show copying" and "show warranty" for details.
This GDB was configured as "--host=i686-w64-mingw32 --target=arm-none-eabi".
Type "show configuration" for configuration details.
For bug reporting instructions, please see:
<http://www.gnu.org/software/gdb/bugs/>.
Find the GDB manual and other documentation resources online at:
<http://www.gnu.org/software/gdb/documentation/>.

For help, type "help".
Type "apropos word" to search for commands related to "word".
(gdb) file lab1.elf
Reading symbols from lab1.elf...
(gdb)
```

Figure 1.1: Using **arm-none-eabi-gdb** and reading symbols from the lab1.elf file and starting qemu frozen at start and with an open port to gdb at localhost:1234