This is a personal project.

The goal of the project is to generate a program that is executed on Linux, developed using C Language (gcc compiler).

**Deliverables**

* Source Code
* Design Document
* Test Plan
* Autodocumented Source Code

**Rather than define only requirements, I decided also to specify features for the program to be released.**

**Features and Requirements (Revision 1.0 - You may get updates during the next weeks)**

* REQ1. The program shall be called dissasemble
* REQ2. The program shall be executed on Linux at least (If you can port the program to Windows, there will be an additional 5/100 points in your term grade)
* REQ3. The program shall focus on Intel Architecture (x86 - no ARM)
* REQ4. The program shall focus on 32 bits or 64 bits
* REQ5. The program shall manage a range of files from 1k to 100 mb (size)
* REQ6. The program shall be invoked from command line with the next options
* REQ7. The program shall be capable for disassemble multiple headers of a program file (ELF)
* REQ8. The program shall be tested and achieve a 80% of basic code coverage
* REQ9. The program shall not show security issues

**Features**

* F1. Open binary files and show the binary content
* F2. Identify ELF headers and print content
* F3. Pretty printing of ELF headers
* F4. Enable option for printing or not ELF Headers
* F5. Disassemble General purpose instructions
* F6. Disassemble x87 FPU instructions
* F7. Disassemble x87 FPU and SIMD state management instructions
* F8. Disassemble Intel MMX technology instructions
* F9. Disassemble SSE extensions instructions
* F10. Disassemble SSE2 extensions instructions
* F11. Disassemble SSE3 extensions instructions
* F12. Disassemble SSSE3 extensions instructions
* F13. Disassemble SSE4 extensions instructions
* F14. Disassemble AESNI and PCLMULQDQ instructions
* F15. Disassemble Intel AVX extensions instructions
* F16. Disassemble F16C, RDRAND, FS/GS base access instructions
* F17. Disassemble System instructions instructions
* F18. Disassemble IA-32e mode: 64-bit mode instructions instructions
* F19. Disassemble VMX instructions instructions
* F20. Disassemble SMX instructions instructions

**Reference**:

* ELF [<http://en.wikipedia.org/wiki/Executable_and_Linkable_Format>]
* <http://ref.x86asm.net/>

**Tools that you can use for support**

* GDB
* SVN - Subversion
* DoxyGEN
* GCov

Expected Deliveries

Recommended Progress

WW35 - Linux environment, first GCC program. Debug using GDB. Feature and 2

WW36 - Feature 3, 4, 5, and 6.

WW37 - Feature 7, 8, 9, 10, and 11

WW38 –m Feature 12, 13, 14, 15, and 16

WW39 – Feature 17, 18, 19, and 20

WW40 – Improvements

WW41 – Demos – October 4th