

x86 Assembly Foundations

Information about this course

Assembly language programming
By xorpd

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Course Contents

- Basic structure of x86 architecture
- Introduction to FASM
- Assembly foundations:
 - Arithmetic
 - Branching
 - Signed operations
 - Bitwise operations
 - Memory
 - Strings
 - Subroutines and the Stack

Course Contents (Cont.)

- Becoming independent
 - Using x86 manuals
 - Debugging with WinDbg
 - Interacting with the Windows OS

Technical details

- x86 assembly language
- 32 bits protected mode
- Windows operation system
- FASM – Flat Assembler

Course Exercises

- Carefully tailored for every lecture.
- The real learning happens during the exercises.
 - Every exercise will expand your skills a little bit.
- **You must do the exercises.**
- Exercises could be downloaded for free from my website:
 - www.xorpd.net

Student Requirements

- The course is made for absolute beginners.
- Requirements:
 - Understand English.
 - Be able to add numbers.
 - **Determined to succeed.**
- No programming experience is assumed.
- If you are more experienced, bonus exercises are waiting for you in every exercises section.

System Requirements

- Windows operation system
 - Windows XP
 - Windows Vista
 - Windows 7
 - Windows 8
- Processor:
 - x86 Architecture
 - Intel
 - AMD