

# The Art of Assembly Language Programming (Short Contents)

“The Art of Assembly Language Programming” is going *hard*. In early 2003 this text will be available in published form from “No Starch Press” (<http://www.nostarchpress.com>). Please check out their website for more details.

The Art of Assembly Language .....	1
Chapter Two Volume One:Data Representation .....	1
Chapter One Foreword .....	3
Chapter Two Hello, World of Assembly Language .....	11
Chapter Three Data Representation .....	53
Chapter Four More Data Representation .....	87
Chapter Five .....	119
Chapter Five Questions, Projects, and Lab Exercises .....	119
Volume Two: .....	135
Machine Architecture .....	135
Chapter One System Organization .....	137
Chapter Two Memory Access and Organization .....	157
Chapter Three Introduction to Digital Design .....	203
Chapter Four CPU Architecture .....	234
Chapter Five Instruction Set Architecture .....	270
Chapter Six Memory Architecture .....	303
Chapter Seven The I/O Subsystem .....	327
Chapter Eight Questions, Projects, and Labs .....	355
Volume Three: .....	391
Basic Assembly Language .....	391
Chapter One Constants, Variables, and Data Types .....	393
Chapter Two Introduction to Character Strings .....	419
Chapter Three Characters and Character Sets .....	439
Chapter Four Arrays .....	463
Chapter Five Records, Unions, and Name Spaces .....	483
Chapter Six Dates and Times .....	501
Chapter Seven Files .....	517
Chapter Eight Introduction to Procedures .....	541
Chapter Nine Managing Large Programs .....	569
Chapter Ten Integer Arithmetic .....	587

Chapter Eleven Real Arithmetic .....	611
Chapter Twelve Calculation Via Table Lookups .....	647
Chapter Thirteen Questions, Projects, and Labs .....	663
Volume Four: .....	725
Intermediate Assembly Language .....	725
Chapter One Advanced High Level Control Structures .....	727
Chapter Two Low-Level Control Structures .....	751
Chapter Three Intermediate Procedures .....	805
Chapter Four Advanced Arithmetic .....	853
Chapter Five Bit Manipulation .....	909
Chapter Six The String Instructions .....	935
Chapter Seven The HLA Compile-Time Language .....	949
Chapter Eight Macros .....	969
Chapter Nine Domain Specific Embedded Languages .....	1003
Chapter Ten Classes and Objects .....	1059
Chapter Eleven The MMX Instruction Set .....	1113
Chapter Twelve Mixed Language Programming .....	1151
Chapter Thirteen Questions, Projects, and Labs .....	1195
Volume Five: .....	1277
Advanced Procedures .....	1277
Chapter One Thunks .....	1279
Chapter Two Iterators .....	1305
Chapter Three Coroutines and Generators .....	1329
Chapter Four Advanced Parameter Implementation .....	1341
Chapter Five Lexical Nesting .....	1375
Chapter Six Questions, Projects, and Labs .....	1399
Appendix A Answers to Selected Exercises .....	1405
Appendix B Console Graphic Characters .....	1407
Appendix D The 80x86 Instruction Set .....	1449
Appendix E The HLA Language Reference .....	1483
Appendix F The HLA Standard Library Reference .....	1485
Appendix G HLA Exceptions .....	1487
Appendix H HLA Compile-Time Functions .....	1493
Appendix I Installing HLA on Your System .....	1531
Appendix J Debugging HLA Programs .....	1533

Appendix K Comparing HLA and MASM ..... 1539  
Appendix L HLA Code Generation for HLL Statements ..... 1541  
Index ..... 1561

