ASSEMBLY PROGRAMMING TUTORIAL

Assembly language is a low-level programming language for a computer or other programmable device specific to a particular computer architecture in contrast to most high-level programming languages, which are generally portable across multiple systems. Assembly language is converted into executable machine code by a utility program referred to as an assembler like NASM, MASM, etc.

AUDIENCE

This tutorial has been designed for those who want to learn the basics of assembly programming from scratch. This tutorial will give you enough understanding on assembly programming from where you can take yourself to higher levels of expertise.

PREREQUISITES

Before proceeding with this tutorial, you should have a basic understanding of Computer Programming terminologies. A basic understanding of any of the programming languages will help you in understanding the Assembly programming concepts and move fast on the learning track.

COMPILE/EXECUTE ASSEMBLY PROGRAMS

For most of the examples given in this tutorial you will find **Try it** option, so just make use of it and enjoy your learning.

Try following example using **Try it** option available at the top right corner of the below sample code box:

```
section .text
    global _start   ;must be declared for linker (ld)
_start:             ;tells linker entry point
    mov edx,len     ;message length
    mov ecx,msg     ;message to write
    mov ebx,1       ;file descriptor (stdout)
    mov eax,4       ;system call number (sys_write)
    int 0x80        ;call kernel

    mov eax,1       ;system call number (sys_exit)
    int 0x80        ;call kernel

section .data
msg db 'Hello, world!', 0xa  ;our dear string
len equ $ - msg     ;length of our dear string
```