This thesis presents a design of a generic 8-bit CPU simulator running on an IBM-PC compatible microcomputer.

The generic CPU simulator can emulate any typical 8-bit CPU by supplying specific CPU data. By using such data, the generic CPU simulator will operate as a specific CPU; and will show the results of operations through displayed areas for Registers, Flags, and Memories. Apart from emulating the functions of specific CPU, the generic CPU simulator can interpret Assembly Language of specific emulated CPU. To study or test the emulated CPU, the user writes an assembly program and submits the program for execution. The generic CPU simulator will interpret the assembly instructions and execute the instructions accordingly.