8085 Simulator Version 1.0

Requirements: Java 6 Update 16   **Size**: 300KB   **Memory Usage:** 17 MB

Purpose:

This software has been made keeping in mind the hardship through which the students has to pass while learning the subject 8085 microprocessor. Simulator is the most needed thing for the students to understand the concept easily and faster.

8085 Simulator software supplies 8085 educators and developers with user-friendly graphical development environment for any platform (Windows, Linux, etc) with integrated simulator (emulator), assembler, disassembler and debugger for Intel 8085 8-bit microprocessor.

Features:

1. Assembler   [Mnemonics to hex code converter]
2. Disassembler   [Hex code to Mnemonic   converter]
3. Debugger
    ➢ Each register content view with its equivalent binary value
    ➢ Program Counter
    ➢ T –State Counter
    ➢ Instruction Counter
    ➢ Interrupt Signal monitoring
    ➢ Shows Memory Content along with its Memory Pointer
    ➢ Special blocks for monitoring Flag register and the usage of SIM and RIM instruction.
4. Editor
    ➢ Can load Programs written in other simulator
    ➢ Has auto-correct and auto-indent features
    ➢ Can load and save hex code
    ➢ Supports writing of comments
    ➢ Supports labeling of instructions
5. Workspace
    ➢ It parses the instruction into memory address location , mnemonics , hex code , bytes, m-cycles and T-states
    ➢ One can directly write in this workspace
    ➢ It has error checking facility
6. Memory Editor
    ➢ Can directly update data in a specified memory location
    ➢ It has 3 types of interface, user can choose from it according to his need.
7. I/O Editor
    ➢ It is necessary for peripheral interfacing.
8. Simulation
    ➢ Step by step simulation –With forward and **backward** traversal along with **Instruction highlighting, algorithm and comment generator.**
    ➢ Run all at a time – It has **3 levels of speed** : Line by line(user decided delay) , normal speed , ultimate speed
9. Number Conversion Tool – Hex code to decimal to binary dynamic converter
10. **8085 Trainer Kit –** It simulates the kit in which we work in the lab
11. Already loaded with 20 sample programs
12. Help on the mnemonics is also integrated
13. For making this software even robust users are allowed to set memory range, stop mnemonic and starting address of the program.

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Comparative Analysis:

Features	8085 simulator version 1.0 (Jubin's)	Osonsoft 8085 simulator	Vaneet 8085 simulator	Abhijit's 8085 simulator
Platform Independent	❖			
Can load program Written in other simulator	❖			
Backward Traversal Feature	❖			
8085 Trainer Kit Simulation	❖			❖ (Not completely integrated)
Comment and Algorithm generator	❖			
Autocorrect feature	❖			
Show memory content along with memory pointer	❖			
Error checking facility	❖	❖		
Less memory usage	❖	❖		
Simulation speed control	❖	❖		
Dynamic number conversion	❖			
Number Conversion Tool	❖			
Setting of memory range, stop mnemonic and starting address	❖	❖ (It has this feature but does not work)		

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