

HIGHER TECHNICAL INSTITUTE

ELECTRICAL ENGINEERING DEPARTMENT

DIPLOMA PROJECT

**DEVELOPMENT OF A SIMULATING AND DEBUGGING 8085
CODE UNDER MS-DOS**

by

DEMETRIOU IOANNIS (E/888)

JUNE 1994

HIGHER TECHNICAL INSTITUTE

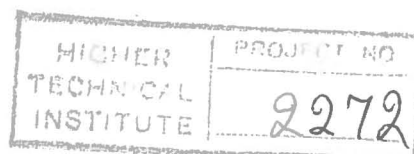
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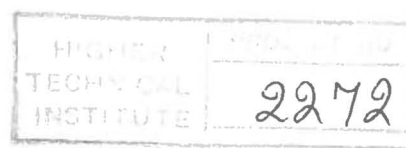
DEMETRIOU IOANNIS

PROJECT REPORT

Submitted to the Department of Electrical Engineering
of the Higher Technical Institute
Nicosia Cyprus
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for the award the diploma of
TECHNICIAN ENGINEER in ELECTRICAL ENGINEERING

Project Supervisor:
Mr Ch. Theopemptou

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SUMMARY

PROJECT TITLE: DEVELOPMENT OF A SIMULATING AND DEBUGGING
8085 CODE UNDER MS-DOS

STUDENT : DEMETRIOU IOANNIS ANDREA

SUPERVISOR : CHARALAMBOS THEOPEMPTOU

The objectives of this project are:

1. To develop the required software for testing machine code programs for the 8085.
2. To provide all the commands of a normal debugger.

Terms and Conditions:

System should be user friendly and handle operator and operating system errors gracefully.

INTRODUCTION

Programming languages that are intended to be machine independent are called high level languages (Pascal, Basic, Fortran). Programs written in such languages can be easily run on an IBM PC and also corrected. But what about low level languages? What about 8085 Assembly language? An Assembly language is specific to a specific machine and programs written in Assembly Language are not transferable from one machine to another.

For example, an 8085 Assembly program can be written on a PC (using an editor) and then assembled. The 8085 assembler searches for syntax errors and other mistakes. But it cannot tell the user whether his or her program works, whether it performs the task it was supposed to perform.

Here is where the 8085 software debugger is most needed. It offers the facility to actually run whole or step by step an 8085 assembly program, examine the registers and change the contents of each one of them, change the addresses, and generally make corrections and derive conclusions.

What can one perform with this program?

The user can execute all the debugging commands normally found in software debuggers. These debugging commands include examining the contents of all memory locations and all registers. The user can also compare memory locations, assemble mnemonics directly in the memory, enter byte values, trace a program, fill memories with certain bytes etc (See manual).

The advantages of using the IBM PC are:

- 1)the screen of the PC is used to seed a lot of information at a time and
- 2)the user can make any modifications to the program so that he brings the program to his demands.

The program is written in Pascal language (version 6.0) which is an easy programming language and easy to be modified as well.