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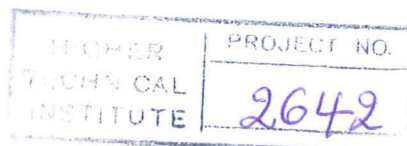
DIPLOMA PROJECT

DEVELOPMENT OF A Z80
MICROPROCESSOR EMULATOR

E/1051

ARCHONDOUS PHILIP

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SUMMARY

PROJECT TITLE: DEVELOPMENT OF A Z80
MICROPROCESSOR EMULATOR

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The aims of this project are:

- To investigate the kind of programming language to be used in developing the software emulator.
- To investigate the Zilog Z80 instruction set and its capabilities.
- To investigate the hardware of the ZX Spectrum 48K computer.
- To develop and test a Z80 software emulator and then use it to emulate the Sinclair ZX Spectrum 48K computer on the PC.

Required facilities:

- Emulation of all Z80 documented opcodes.
- Emulation of at least the Z80 undocumented opcodes that are used in ZX Spectrum programs.
- Emulation of the ZX Spectrum memory map on the PC.
- Emulation of all Z80 registers main and alternate.
- Emulator code must be as optimised as possible in order for the emulation to be efficient.

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Appendix A: Z80 instruction set.

Appendix B: Z80 instruction set summary including undocumented opcodes.

Appendix C: Spectrum circuit diagram.