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## Appendix F Computer Architecture

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To fully understand the design of the I/O ports described in Sections 3.2 and 3.3 and the software presented in Section 3.5, it's necessary to have some knowledge of microcomputer architecture. This appendix defines components and outlines operations.

### F.1 Components

Figure F.1 is a block diagram of a typical microcomputer. The following sections describe the six basic components.

#### CPU

The **C**entral **P**rocessing **U**nit or microprocessor is an integrated circuit which executes programs and in doing so controls external memory and I/O circuits. In addition to +5, ground and possibly other power supply voltages, the processor has some number of data and address pins and a variety of controls.



Figure F.1. Block diagram of a typical microcomputer.

# Computer Architecture Appendix C Solutions

**Ying Liu**



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