Fundamentals of Computing

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Abstract

These are notes for the course CS-172 I first taught in the Fall 1986 at UC Berkeley and subsequently at Boston University. The goal was to introduce students to basic concepts of Theory of Computation and to provoke their interest in further study. Model-dependent effects were systematically ignored. Concrete computational problems were considered only as illustrations of general principles.

The notes are skeletal: they do have (terse) proofs, but exercises, references, intuitive comments, examples are missing or inadequate. The notes can be used for designing a course or by students who want to refresh the known material or are bright and have access to an instructor for questions.
Each subsection takes about a week of the course. Versions of these notes appeared in [Levin 91].

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Contents

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