

Lecture #5: Encodings — Sequences and Strings

What Will Happen During the Lecture

Remember... You Had Homework!

Students were asked to have worked through a set of notes before this first lecture:

- Lecture Notes — “Encodings — Sequences and Strings”

Of course, you may attend the lecture presentation if you have not worked through this material ahead of time — but it will not be repeated for you during the lecture presentation.

Solving a Problem

The lecture notes introduced encodings of finite sequences, and strings over alphabets. “Primitive recursive”, “ μ -recursive” and “ S -computable functions of strings could then be defined.

During the lecture presentation — as time permits — encodings of several other useful data structures, ideally including

- integers (including negative integers),
- arrays of natural numbers (each with a fixed positive length), and
- dynamic arrays of natural numbers (like Java's `ArrayList`),

will be considered — along with basic functions and operators on these data structures.

An incomplete set of notes is available. If you would like to get ahead then you can try to fill in these notes (solving some or all of the problem to be considered) before the lecture presentation.