

## Dataset

## 1 Why

We want language to talk about a list of elements from a set.

## 2 Definition

A dataset is a finite sequence of elements from a set. We say that the data set is in the set. We refer to the length of the sequence as the **size** of the data set and we refer to an element of the sequence as a **record** of the data set.

## 2.1 Notation

Let A be a non-empty set. We usually denote sequences by  $(a_1, \ldots, a_n)$ , but for data sets we will use a superscript,  $(a^1, \ldots, a^n)$ . Often A is itself a set of sequences, and we will want to refer to the ith component of  $a^1$  by  $a_i^1$ .