



### Why

We want to associate the elements of some finite set with bit strings.

### Definition

Let  $X$  be a set with  $|X| = n$ . Let  $x : \{1, 2, \dots, n\} \rightarrow X$  be an ordering of  $X$ . The *digital symbol* associated with  $x_i \in X$  is the digital integer associated with the natural number  $i$ .

In this context  $X$  is called sometimes called an *alphabet* or *symbol set*.



