

**Definition 4.1** A  $D$ -ary source code  $\mathcal{C}$  for a source random variable  $X$  is a mapping from  $\mathcal{X}$  to  $\mathcal{D}^*$ , the set of all finite length sequences of symbols taken from a  $D$ -ary code alphabet.

**Definition 4.2** A code  $\mathcal{C}$  is uniquely decodable if for any finite source sequence, the sequence of code symbols corresponding to this source sequence is different from the sequence of code symbols corresponding to any other (finite) source sequence.