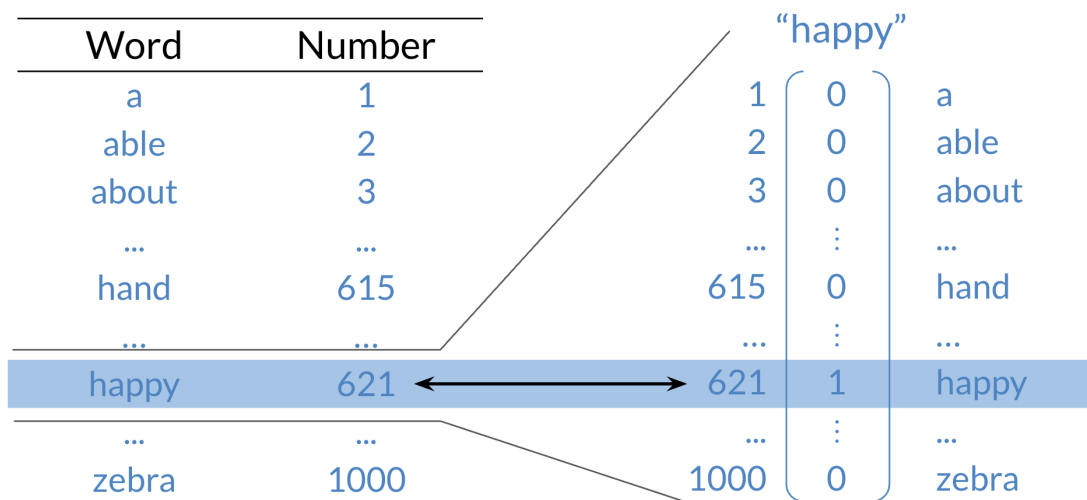


# Basic Word Representations

Basic word representations could be classified into the following:

- Integers
- One-hot vectors
- Word embeddings



To the left, you have an example where you use integers to represent a word. The issue there is that there is no reason why one word corresponds to a bigger number than another. To fix this problem we introduce one hot vectors (diagram on the right). To implement one hot vectors, you have to initialize a vector of **zeros** of dimension  $V$  and then put a 1 in the index corresponding to the word you are representing.

The **pros** of one-hot vectors: simple and require no implied ordering.

The **cons** of one-hot vectors: huge and encode no meaning.