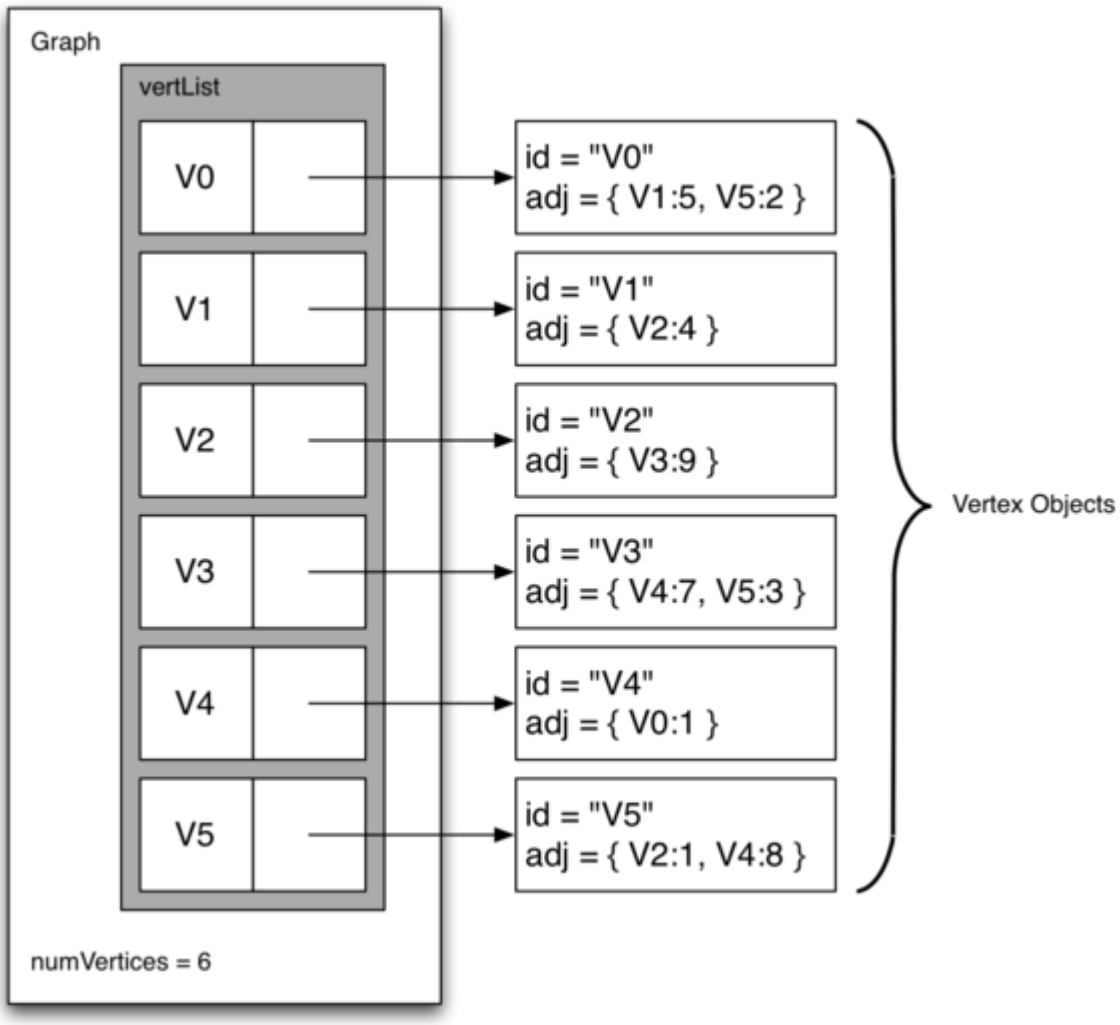
Adjacency List

A more space-efficient way to implement a sparsely connected graph is to use an adjacency list. In an adjacency list implementation we keep a master list of all the vertices in the Graph object and then each vertex object in the graph maintains a list of the other vertices that it is connected to. In our implementation of the `Vertex` class we will use a dictionary rather than a list where the dictionary keys are the vertices, and the values are the weights. The example below illustrates the adjacency list representation.



The advantage of the adjacency list implementation is that it allows us to compactly represent a sparse graph. The adjacency list also allows us to easily find all the links that are directly connected to a particular vertex.

Source: **Problem Solving and Algorithms in Python** (http://interactivepython.org/runestone/static/pythonds/index.html#) from Bradley Miller on **www.interactivepython.org** (http://interactivepython.org/runestone/static/pythonds/index.html#).