

I think the reason for sets and the keys of dictionaries to be hashable is because they both use the hashed values of the keys for their internal method of storing the elements. Because the objects are hashable, you don't need to store the actual object internally, but you can store the hashed integer value, and you can therefore make comparisons between objects using these integer values. Because you can make these comparisons, it therefore allows you to create buckets in which you can classify each object into, and therefore allows you to significantly reduce the amount of keys you need to search through when trying to see if an element exists or to get the value associated with the key. The use of the hashable characteristic of the keys of the dictionary and the elements of the set allows constant time searching and querying of values inside the dictionary or set.