In Java List and Set are similar in that they both store collections of values. In a similar fashion to arrays, lists and sets allow a programmer to store collections of values and in the case of sets and lists one does not need to know the length of the collection ahead of time as one would need to know in an array.

Sets and lists are different in a few ways and the main differences are that lists are ordered collections and they maintain their order based off insertion and maintain this order. Lists also allow for duplicates of values. Sets are considered to be unordered except in the event of a LinkedHashSet which will maintain insertion order. Sets also do not allow for duplicated values and will only allow for a single NULL value at most and a list can have unlimited NULL values.

There are a few advantages to sets and one is that they are great for storing values that do not need to be ordered. This is best used when one only cares if a value exists and doesn’t care if there are duplicated values either. Sets are very powerful for storing things like usernames as they need to be unique. It helps to reduce the need for checking duplicates as you would need to check for in a list. The disadvantage is that it cannot store duplicates at all and that when inserted values are added, they are added in random order in most cases. This can make it harder to know the index of values.

The advantages of lists are that they are ordered and can contain duplicated copies as well as they are re-sizable in length. This makes them a bit easier to search over as well since they are ordered and can be indexed a bit easier. One disadvantage is the same as the advantage and that is it can have duplicated values. This means that in a list, one has to do a bit of checking to see if there are multiple same values within the list.