

1. What are the differences between Lists, Sets, and Maps in Java?
 - a. **Lists are like an array but the length does not have to be predefined**
 - i. **It is different from Sets in that it allows duplicates and it maintains the order in which items are entered.**
 - b. **Sets are like Lists except that duplicates are not allowed. And order of entry is not maintained.**
 - c. **Maps are key value pairs**
 - i. **Values can be duplicates however the keys must be unique**

I learned this from the videos for this week.

2. List at least two different implementations for each collection (List, Set, and Map). When would you use one of the implementations over the other?
 - a. **List**
 - i. **ArrayList**
 - ii. **LinkedList**
 - iii. **Vector**
 - b. **Set**
 - i. **HashSet**
 - ii. **LinkedHashSet**
 - iii. **TreeSet**
 - c. **Map**
 - i. **HashMap**
 - ii. **LinkedHashMap**
 - iii. **TreeMap**
 - iv. **Hashtable**

3. Write a line of code that shows how you would instantiate an ArrayList of String.

List<String> wrestlers = new ArrayList<String>();

URL = from the videos

4. Write a line of code that shows how you would instantiate a HashSet of StringBuilder.

5. Write a line of code that shows how you would instantiate a HashMap of String, String.

```
HashMap<String, String> stateCapitals = new HashMap<String, String>();
```

https://www.w3schools.com/java/java_hashmap.asp

6. What is your favorite thing you learned this week?

I struggled during the week ¾ assignments because I needed to know the length of the Array ahead of time. I liked that I can now use a list.