

## Week 4 Research 2 Topics

### Prompts

1. What are the differences between Lists, Sets, and Maps in Java?
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?
3. Write a line of code that shows how you would instantiate an ArrayList of String. Write a line of code that shows how you would instantiate a HashSet of StringBuilder. Write a line of code that shows how you would instantiate a HashMap of String, String.
4. What is your favorite thing you learned this week?

3. A.

Java.util.ArrayList;

Java.util.List;

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

B. java.util.HashSet;

StringBuilder name1 = new StringBuilder();

HashSet<String> name= new HashSet<String>(name1);

C. Map<String, String> name = new HashMap<String, String>();

Citation: [https://www.youtube.com/watch?time\\_continue=765&v=-sZJF93R5EI&feature=emb\\_title](https://www.youtube.com/watch?time_continue=765&v=-sZJF93R5EI&feature=emb_title)

5. My favorite thing I learned this week was the HashMap. It is one of the most complicated collections we have learned because it uses a linked list and an array. I like maps because they are useful for storing information and retrieving it. They also don't hold duplicate keys.

Citation: [HashMap in Java with Examples - GeeksforGeeks](#)

