

## **Week 4 Additional Resources for Maps**

(Make sure to view slides before)

API for Maps - <https://docs.oracle.com/javase/8/docs/api/java/util/Map.html>

Readings + Code on Maps, Hashmaps, etc. -

1. Coding methods of map and explanation
  - a. <https://www.javatpoint.com/java-map>
2. Coding methods of hashmap and explanation
  - a. [https://www.tutorialspoint.com/java/java\\_hashmap\\_class.htm](https://www.tutorialspoint.com/java/java_hashmap_class.htm)
3. Coding methods of hashmap and explanation
  - a. <https://howtodoinjava.com/java-hashmap/>
4. Explanation of function of map methods
  - a. <https://hellokoding.com/java-hashmap-tutorial-with-examples/>

Readings + Code for Implementation of Maps, Hashmaps, etc.

1. Princeton University lecture slides (many topics covered in class at more elementary level, but will help you understand what's happening conceptually)  
→ includes implementations, and methods, etc. what were discussed in class
  - a. <https://www.cs.princeton.edu/courses/archive/fall19/cos226/lectures/31ElementarySymbolTables.pdf>
  - b. Binary Search Trees (BSTs) explanation-  
<https://www.cs.princeton.edu/courses/archive/fall19/cos226/lectures/32BinarySearchTrees.pdf>
2. Great video on BSTs (linked in presentation)
  - a. <https://www.youtube.com/watch?v=P3YID7liBug>
  - b. Will help you understand runtime and logic behind algo in easier way
  - c. For ordered list implementation → need to understand how binary search works
3. BST implementation of map (more advanced)
  - a. <http://www.mathcs.emory.edu/~cheung/Courses/323/Syllabus/Trees/bin-tree-review.html>

Generics in Java - [https://www.tutorialspoint.com/java/java\\_generics.htm](https://www.tutorialspoint.com/java/java_generics.htm)