Promineo Tech Back-End Coding Bootcamp Week 4 Research Assignent

Name: Antonio Cousin, Jr

Prompts

1. What are the differences between Lists, Sets, and Maps in Java?

   The differences between Lists, Sets, and Maps mainly lie in the way they store value and for what purpose they serve to store said data. Lists are the most generalized of the collection subsets, as it can handle duplicate values among its elements, null or otherwise. It also keeps elements ordered by its index at all times. Sets are more specific than Lists in that they don't allow for duplicate values to be stored, including null values (though it can still accept one null value element), and does not keep elements ordered by the index. This makes Sets more useful for keeping track of unique instances of elements for a collection. Maps stands out from Lists and Sets, in that it acts more like a dictionary would, where you store both a key element and a corresponding value element. Though, in that regard, Maps does take traits from both Lists and Sets in the way it handles the key elements and value elements (where Key is more akin to Sets and Value is more akin to Lists).

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

   The way you would instantiate an ArrayList of String is by creating a list. You would do this by typing into your Java IDE: List<String> listName = new ArrayList<String>(); . Once you type that out, your next step would be to import the Java utility codes for both List and ArrayList. Afterwards, you would add your values to your newly created List using the listName.add() command. This can be done manually by repeating the listName.add() command and filling in the string value between the parantheses. You can also fill in the elements of an ArrayList using a String array (String[] arrayName = {“string”, “string”, “string”};) to hold a group of String values, then import them into the list through the listName.add() command via a loop command (an example of this is as follows: for (int i = 0; i < arrayName.length; i++) { listName.add(arrayName[i]); }).

Sources

Prompts 1/2

- https://learn.promineotech.com/mod/book/view.php?id=8319&chapterid=445
- https://learn.promineotech.com/mod/book/view.php?id=8319&chapterid=446

- https://learn.promineotech.com/mod/book/view.php?id=8319&chapterid=447
- https://learn.promineotech.com/mod/book/view.php?id=8319&chapterid=448