Day 8 of Java: Exploring Java Collections Framework

Hey there, fellow Java enthusiasts! Today, we're going to explore the Java Collections Framework, which provides a set of classes and interfaces for storing and manipulating collections of data.

What is Java Collections Framework?

The Java Collections Framework is a set of classes and interfaces that provide a way to store and manipulate collections of data. It includes classes such as ArrayList, LinkedList, HashSet, and TreeSet, among others.

Types of Collections

In Java, we have several types of collections, including:

- List: An ordered collection of elements, such as ArrayList and LinkedList.
- Set: An unordered collection of unique elements, such as HashSet and TreeSet.
- Map: A collection of key-value pairs, such as HashMap and TreeMap.

Examples

Here are some examples of using Java collections:

- ArrayList:

```
ArrayList<String> list = new ArrayList<>();
list.add("Apple");
list.add("Banana");
list.add("Cherry");
System.out.println(list);
```

- HashSet:

```
HashSet<String> set = new HashSet<>();
set.add("Apple");
set.add("Banana");
set.add("Cherry");
System.out.println(set);
```

- HashMap:

```
HashMap<String, Integer> map = new HashMap<>();
map.put("Apple", 1);
map.put("Banana", 2);
map.put("Cherry", 3);
System.out.println(map);
```

Challenges

Write a program that uses an ArrayList to store a list of strings and prints the list. Write a program that uses a HashSet to store a set of unique strings and prints the set. Write a program that uses a HashMap to store a map of key-value pairs and prints the map.

Code

You can find the code for today's challenges in the Day8 folder of this repository.

Join the Conversation

How was your experience with Java collections today? Did you encounter any challenges or have any questions? Share your thoughts in the comments below!