

```
package root;

import java.util.*;

public class collections {

    public static void main(String[] args) {
        // Create a new collection
        Collection<String> collection = new HashSet<>();

        // Add some elements to the collection
        collection.add("apple");
        collection.add("banana");
        collection.add("cherry");

        // Verify that the collection contains the expected elements
        if (!collection.contains("apple") || !collection.contains("banana") ||
!collection.contains("cherry")) {
            System.out.println("Error: collection does not contain expected elements");
            return;
        }

        // Verify that the collection has the expected size
        if (collection.size() != 3) {
            System.out.println("Error: collection size is not as expected");
            return;
        }

        // Remove an element from the collection
        collection.remove("banana");
    }
}
```

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// Verify that the collection no longer contains the removed element
if (collection.contains("banana")) {
    System.out.println("Error: collection still contains removed element");
    return;
}

// Verify that the collection size has been updated accordingly
if (collection.size() != 2) {
    System.out.println("Error: collection size is not as expected after removal");
    return;
}

// Print a message indicating that the collection is valid
System.out.println("Collection is valid");
}
}

```

