Live code

Use the IDE you want, but not integrated with AI features.

- 1 Write a method with a list of strings as input that returns a list of the top N frequent words using Java.
 - Ignore case sensitivity.
 - Use the **Java streams** feature.
 - Protect your method of unexpected/illegal parameters.
 - Create unit tests using JUnit to test your method.
 - Follow Test-Driven Development (TDD).

The method signature should be as below:

```
public static List<String>
findTopNFrequentWords(List<String> words, int n)
```

Here is an example input:

```
List<String> words = Arrays.asList("Java", "Javascript",
"java", "C++", "javaScript", "Groovy", "jAvA", "abap",
"ABAP", "aBaP");
int n = 3;
```

Output for the input above will be:

```
["abap", "java", "javascript"]
```

```
"Abap" appears 3 times and "java" appears 3 times, but "abap" appears first because of the alphabetical order.
"java" appears 3 times and "javascript" appears 2 times
```

- 2 Write a Java method that reverses a given string <u>without using any built-in method for</u> <u>reversal</u>. Create unit tests.
- 3 Write a Java method to check if the given string is a **palindrome** or not. A palindrome is a string that is read the same backward or forward. Create unit tests. \bigcirc