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Q46)

Example 1:

The screenshot shows the Eclipse IDE with the 'anagrams.java' file open. The code defines a package 'Final' and imports 'java.util.ArrayList', 'java.util.Arrays', 'java.util.HashMap', 'java.util.List', 'java.util.Map', and 'java.util.Scanner'. The 'anagrams' class contains a static method 'groupanagrams' that takes a String array and returns a List of Lists. The method uses a HashMap to group anagrams by their sorted character strings. The console output shows the program execution: 'Enter the number of elements you want to store: 6', 'Enter the elements of the array:', followed by the input 'eat tea tan ate nat bat', and the final output '[[eat, tea, ate], [bat], [tan, nat]]'.

```
1 package Final;
2
3 import java.util.ArrayList;
4 import java.util.Arrays;
5 import java.util.HashMap;
6 import java.util.List;
7 import java.util.Map;
8 import java.util.Scanner;
9
10 public class anagrams {
11
12     public static List<List<String>> groupanagrams(String[] strs) {
13
14         List<List<String>> res = new ArrayList<>();
15         HashMap<String, List<String>> map = new HashMap<>();
16
17         for(int i=0; i<strs.length; i++){
18
19             char str[] = strs[i].toCharArray();
20             Arrays.sort(str);
21             String x = String.valueOf(str);
22
23             if(map.get(x) != null) {
```

Final

- anagrams
 - groupanagrams(String[]) : List<List<String>>
 - main(String[]) : void

Problems Javadoc Declaration Console

<terminated> anagrams [Java Application] C:\Users\mullapudi.sriganesh\p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_17.0.5.v20221102-0933\jre\bin\javaw.exe

Enter the number of elements you want to store: 6

Enter the elements of the array:

eat
tea
tan
ate
nat
bat

[[eat, tea, ate], [bat], [tan, nat]]

Example 2:

The screenshot shows the Eclipse IDE with the 'anagrams.java' file open. The code is identical to Example 1. The console output shows the program execution: 'Enter the number of elements you want to store: 1', 'Enter the elements of the array:', followed by the input 'a', and the final output '[[a]]'.

```
1 package Final;
2
3 import java.util.ArrayList;
4 import java.util.Arrays;
5 import java.util.HashMap;
6 import java.util.List;
7 import java.util.Map;
8 import java.util.Scanner;
9
10 public class anagrams {
11
12     public static List<List<String>> groupanagrams(String[] strs) {
13
14         List<List<String>> res = new ArrayList<>();
15         HashMap<String, List<String>> map = new HashMap<>();
16
17         for(int i=0; i<strs.length; i++){
18
19             char str[] = strs[i].toCharArray();
20             Arrays.sort(str);
21             String x = String.valueOf(str);
22
23             if(map.get(x) != null) {
```

Final

- anagrams
 - groupanagrams(String[]) : List<List<String>>
 - main(String[]) : void

Problems Javadoc Declaration Console

<terminated> anagrams [Java Application] C:\Users\mullapudi.sriganesh\p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_17.0.5.v20221102-0933\jre\bin\javaw.exe

Enter the number of elements you want to store: 1

Enter the elements of the array:

a

[[a]]

Example 3:

