import java.util.Arrays;  
import java.util.LinkedHashMap;  
import java.util.Map;  
import java.util.Objects;  
import java.util.function.Function;  
import java.util.stream.Collectors;  
  
public class WordFrequency {  
  
public static void main(String[] args) {  
       String s = "the cat is in the bag";  
       String[] wordArr = s.split(" ");  
       Map<String, Long> countMap = Arrays.asList(wordArr).stream().filter(Objects::nonNull).collect(Collectors.groupingBy(Function.identity(), Collectors.counting()));  
       Map<String, Long> resultMap = countMap.entrySet()  
               .stream()  
               .sorted((e1, e2) -> e2.getValue().compareTo(e1.getValue()))  
               .collect(Collectors.toMap(Map.Entry::getKey, Map.Entry::getValue, (e1, e2) -> e1, LinkedHashMap::new));  
       resultMap.forEach((k,v) -> System.out.println(v+" "+k));  
}  
  
}