1. Write a method which will remove any given character from a String?

```
package demo;

public class RemoveSpecific {
    String s = "Hello, ilakkiya";
    char remove = ',';

    public void m1() {
     System.out.println("Original string: "+s);
        String s1 = Character.toString(remove);
        String input = s.replaceAll(s1, "");
        System.out.println("Result: " + input);
    }

    public static void main(String[] args) {
        RemoveSpecific r = new RemoveSpecific();
        r.m1();
    }
}
```

Output:

```
Original string: Hello, ilakkiya
Result: Hello ilakkiya
```

2. How to count the occurrence of a given character in a String?

```
package demo;

public class Numberofoccure{
static String input = "Hello, ilakkiya";
static char target = 'l';

public static void m1() {
int count = 0;
for (int i = 0; i < input.length(); i++) {
if (input.charAt(i) == target) {
count++;
}
}
System.out.println("The character '" + target + "' occurs " + count
+ " times in the string.");
}

public static void main(String[] args) {
m1();
}
}
Output:
```

```
The character 'l' occurs 3 times in the string.
```

3. Write a program to find the longest word in a given sentence.

```
package demo;
import java.util.Scanner;
public class WordCount {

    Scanner s = new Scanner(System.in);

    public void m1() {
            System.out.println("Enter a sentence:");
            String input =s.nextLine();
            String[] words = input.split("\\s+");
       String longestWord = "";
       for (String word : words) {
           if (word.length() > longestWord.length()) {
              longestWord = word;
           }
       }
       System.out.println(longestWord);
```

```
        }
        public static void main(String[] args) {
        WordCount w =new WordCount();
        w.m1();

        }

    }
    Output:
```

```
Enter a sentence:
Final keyword cannot be overriden.
overriden.
```

4. How to calculate the number of vowels and consonants in a string?

```
    package demo;

    public class VowelCal {
        char vowel[]=
    {'a','b','c','d','e','f','g','h','i','j','k','l','m','n','o','p','q','r','s','t',
                    'u','v','w','x','y','z'};
        int l=vowel.length;
        int vcount=0,ccount=0;
        public void m1() {
                for(int i=0;i<l;++i) {
                        if(vowel[i]=='a' || vowel[i]=='e' || vowel[i]=='i' ||
    vowel[i]=='o'|| vowel[i]=='u') {
                                ++vcount;
                        }else {
                                ++ccount;
                        }
                }
                System.out.println("Vowel count: "+ vcount);
                System.out.println("Consonant count: "+ccount);
        }

        public static void main(String[] args) {
                VowelCal v = new VowelCal();
                v.m1();

        }

    }
```

Output:

```
Vowel count: 5
Consonant count: 21
```

5. In an array 1-100 multiple numbers are duplicates, how do you find it?

```
package demo;
import java.util.*;
public class Numbers {
      int n[]= {2,3,2,2,32,1,3,7,7,8,98,32,32,32,31,32};
      int l=n.length;
      public void m1() {
       HashSet<Integer> seen = new HashSet<>();
          HashSet<Integer> duplicates = new HashSet<>();

          for (int num : n) {
              if (!seen.add(num)) {
                  duplicates.add(num);
              }
          }
          System.out.println("Duplicate elements: "+duplicates);
      }
    public static void main(String[] args) {
            Numbers n = new Numbers();
```

```
                n.m1();
        }

    }
```

Output:

```
Duplicate elements: [32, 2, 3, 7]
```