

- 1) Given a list of Objects, write a method that returns a list of all strings that start with the letter 'a' (lower case) and have exactly 3 letters. TIP: Use Java 8 Lambdas and Streams API's.

```
public List<String> search(List<Person> list) { //new Person(name, age, sex)
```

```
//write the stream logic hear
```

```
}
```

```
static void q1() {
    List<Person> list = new ArrayList<>();
    list.add(new Person("abc", 1, "f"));
    list.add(new Person("ab", 1, "f"));
    list.add(new Person("acc", 1, "f"));
    list.add(new Person("abcd", 1, "f"));
    System.out.println(search(list));
}

public static List<String> search(List<Person> list) {
    List<String> res = new ArrayList<>();
    list.stream()
        .filter(person -> person.getName().startsWith("a"))
        .filter(person -> person.getName().length() == 3)
        .map(person -> person.getName())
        .forEachOrdered(res::add);
    return res;
}
```

- 2) Write a method that returns a comma separated string based on a given list of integers. Each element should be preceded by the letter 'e' if the number is even, preceded by the letter 'o' if the number is odd. For example, if the input list is (3,44), the output should be 'o3,e44'.

```
public String getString(List<Integer> list) {
```

```
//Write the stream logic hear
```

```
}
```

```
static void q2() {
    List<Integer> list = new ArrayList<>();
    list.add(3);
    list.add(44);
    System.out.println(getString(list));
}

public static String getString(List<Integer> list) {
    return list.stream()
        .map(i -> i % 2 == 0 ? "e" + i : "o" + i)
        .collect(joining(","));
}
```

- 3) Write a method that returns the average of a list of integers.

```
public Double average(List<Integer> list) {  
  
    //write the stream logic hear  
  
}
```

```
static void q3() {  
    List<Integer> list = new ArrayList<>();  
    list.add(1);  
    list.add(2);  
    System.out.println(average(list));  
}  
public static Double average(List<Integer> list) {  
    return list.stream().mapToInt(i -> i).average().getAsDouble();  
}
```

- 4) Write a method that converts all strings in a list to their upper case.

```
public List<String> upperCase(List<String> list) {  
  
    //write the stream logic hear  
  
}
```

```
static void q4() {  
    List<String> list = new ArrayList<>();  
    list.add("a");  
    list.add("bb");  
    System.out.println(upperCase(list));  
}  
public static List<String> upperCase(List<String> list) {  
    return  
    list.stream().map(String::toUpperCase).collect(Collectors.toList());  
}
```