Problema motivador

Faça um programa para ler um arquivo contendo nomes de pessoas (um nome por linha), armazenando-os em uma lista. Depois, ordenar os dados dessa lista e mostra-los ordenadamente na tela. Nota: o caminho do arquivo pode ser informado "*hardcode*".

```
Maria Brown
Alex Green
Bob Grey
Anna White
Alex Black
Eduardo Rose
Willian Red
Marta Blue
Alex Brown
```

```java
package application;

import java.io.BufferedReader;
import java.io.FileReader;
import java.io.IOException;
import java.util.ArrayList;
import java.util.Collections;
import java.util.List;

public class Program {

	public static void main(String[] args) {

		List<String> list = new ArrayList<>();
		String path = "C:\\temp\\in.txt";

		try (BufferedReader br = new BufferedReader(new FileReader(path))) {

		String name = br.readLine();
		while (name != null) {
			list.add(name);
			name = br.readLine();
		}
		Collections.sort(list);
		for (String s : list) {
			System.out.println(s);
		}

		} catch (IOException e) {
			System.out.println("Error: " + e.getMessage());
		}
	}
}
```

Outro problema

Faça um programa para ler um arquivo contendo funcionários (nome e salário) no formato .csv, armazenando-os em uma lista. Depois, ordenar a lista por nome e mostrar o resultado na tela. Nota: o caminho do arquivo pode ser informado "*hardcode*".

```
Maria Brown,4300.00
Alex Green,3100.00
Bob Grey,3100.00
Anna White,3500.00
Alex Black,2450.00
Eduardo Rose,4390.00
Willian Red,2900.00
Marta Blue,6100.00
Alex Brown,5000.00
```

Interface Comparable

```
public interface Comparable<T> {
    int compareTo(T o);
}
```

```
System.out.println("maria".compareTo("alex"));
System.out.println("alex".compareTo("maria"));
System.out.println("maria".compareTo("maria"));

Output:
12
-12
0
```

https://docs.oracle.com/javase/10/docs/api/java/lang/Comparable.html

Method compareTo:

Parameters:
o - the object to be compared.

Returns:
a negative integer, zero, or a positive integer as this object is less than, equal to, or greater than the specified object.

```java
package application;

import java.io.BufferedReader;
import java.io.FileReader;
import java.io.IOException;
import java.util.ArrayList;
import java.util.Collections;
import java.util.List;

import entities.Employee;

public class Program {

	public static void main(String[] args) {

		List<Employee> list = new ArrayList<>();
		String path = "C:\\temp\\in.txt";

		try (BufferedReader br = new BufferedReader(new FileReader(path))) {

			String employeeCsv = br.readLine();
			while (employeeCsv != null) {
				String[] fields = employeeCsv.split(",");
				list.add(new Employee(fields[0], Double.parseDouble(fields[1])));
				employeeCsv = br.readLine();
			}
			Collections.sort(list);
			for (Employee emp : list) {
				System.out.println(emp.getName() + ", " + emp.getSalary());
			}

		} catch (IOException e) {
			System.out.println("Error: " + e.getMessage());
		}
	}
}
```

```java
package entities;

public class Employee implements Comparable<Employee> {

	private String name;
	private Double salary;

	public Employee(String name, Double salary) {
		this.name = name;
		this.salary = salary;
	}

	public String getName() {
		return name;
	}

	public void setName(String name) {
		this.name = name;
	}

	public Double getSalary() {
		return salary;
	}

	public void setSalary(Double salary) {
		this.salary = salary;
	}

	@Override
	public int compareTo(Employee other) {
		return name.compareTo(other.getName());
	}
}
```