Exercise 1.1

Serialization vs externalization

SKILLS:

After this exercise you get the ability to persist objects by means of serialization and externalization.

GOALS AND OBJECTIVES:

The goal is to become familiar with the practical implementation of persisting data using serialization and externalization, and their comparison.

WORK STEPS:

- Create a class describing a person (first and last name, birthday, age).
- Serialize object of this type to a file.
- Check if you can deserialize the object.
- Save the same object using externalization to file, providing your own read and write methods.
- Which code fragment do you need to change?
- Deexternalize the object.
- Compare size of both files

Exercise 1.2

Efficient file access

SKILLS:

After completing this exercise, you get the ability to effectively read data from streams.

GOALS AND OBJECTIVES:

The goal is the practical implementation and comparison in terms of performance of different ways to read data from streams.

WORK STEPS:

- Write a program, that creates a large file with binary data (several hundred MB big). Every run should generate new data.
- Using the generated file test the performance of different file read methods:
  - buffered read
  - using NIO library (buffers and channels)
  - memory mapped files
- Write an appropriate benchmark:
  - try to make it as generic as possible to reuse it in other exercises