Visma Solutions - programming task

Problem

Visma Solutions Oy is creating a tool for allocating the personnel's yearly holidays. The tool has already been promised to the employees and they are eagerly waiting for it.

Because this is not part of Visma Solutions Oy's key competence, the creation of this tool will be outsourced. This way the company can focus on creating customer value by improving their own products.

You have been hired to design and implement the first version of the tool, which should determine how many holiday days are consumed during a certain time span.

Task

Design and implement a **HolidayPlanner** class for Visma Solutions Oy. The purpose of the first version of the class is to:

- Take a time span as an input (for example 1.7.2021 - 29.7.2021) and return how many holiday days a person has to use to be able to be on holiday during that period
- Take into account national holidays which do not consume holiday days
- Take into account that Saturdays consume holiday days
- Take into account that Sundays do no consume holiday days
- Accept only time spans that fit within the current holiday period

Visma Solutions Oy has specified these additional requirements for the time span:

- The maximum length of the time span is 50 days
- The whole time span has to be within the same holiday period that begins on the 1st of April and ends on the 31st of March. For example:
    - 1.12.2021 - 2.1.2022 is a valid time span for a holiday
    - 1.3.2021 - 1.4.2021 is not a valid time span for a holiday
- The dates for the time span must be in chronological order

The implementation needs to take into account that national holidays change from year to year and in the future the usage of the class will be extended to other countries, so it must support national holidays for several countries. The first version needs to be able to handle Finnish national holidays for 2021 and 2022:

- 1.1.2021
- 6.1.2021
- 2.4.2021
- 5.4.2021
- 13.5.2021
- 25.6.2021
- 6.12.2021

- 24.12.2021
- 1.1.2022
- 6.1.2022
- 15.4.2022
- 18.4.2022
- 1.5.2022
- 26.5.2022
- 5.6.2022
- 24.6.2022
- 25.6.2022
- 6.12.2022
- 24.12.2022
- 25.12.2022
- 26.12.2022

Visma Solutions Oy's quality requirements are:

- The code must be unit testable
- The code should adhere to SOLID principles

Use about two to three hours for this task. Write a short description of how you understood the problem, what challenges you had with the implementation and what you could further improve in your implementation. If you had to make compromises, we would like to hear about them.

The programming language used for this task does not matter. Use the object oriented programming language you are most comfortable with. Return the task using GitHub or email for us to determine if it satisfies Visma Solutions Oy's requirements.

The personality test will follow in a separate email. Please contact me if you have any questions.