



Training for Junior Microsoft Dynamics 365 Developers with employment

Test task

You need to implement C# method according to the following description:

To the method input you receive a:

1. start date,
2. duration in days (whole number) and
3. weekends (array of objects with the fields "start date" and "end date")

If "start date" is the same with the "end date", it means the weekend happens only on that day.

If "start date" isn't same with the "end date", it means that the whole period is a weekend.

Example.

23/04/2021 - 25/04/2021, two weekends (Saturday and Sunday) and 25th is a holiday, 3 weekends in total.

The array is sorted by the start date, periods do not intersect.

At the end the function should return the date, which is counted as a start date + duration, without weekends. Start date is the first day of the period.

Investigate and take into account all possible intersections of startdate, duration and weekend

Example 1.

Start date: 21/04/2021

Duration: 5 days

Weekends: 23/04/2021 - 25/04/2021

At the exit there should be: End date 28/04/2021

Explanation

1st day = 21.04.2021

2nd day = 22.04.2021

23.04.2021 excluded as weekend

24.04.2021 excluded as weekend

25.04.2021 excluded as weekend

3rd day = 26.04.2021

4th day = 27.04.2021

5th day = 28.04.2021

Example 2.

Start date: 21/04/2021

Duration: 5 days

Weekends 1: 23/04/2021 - 25/04/2021

Weekends 2: 29/04/2021 - 29/04/2021

At the exit there should be: End date 28/04/2021

Explanation

1st day = 21.04.2021

2nd day = 22.04.2021

23.04.2021 excluded as weekend

24.04.2021 excluded as weekend

25.04.2021 excluded as weekend

3rd day = 26.04.2021

4th day = 27.04.2021

5th day = 28.04.2021

Second weekend is not taken to account because duration ended before weekend

Implement method [Calculate](#) in class [WorkDayCalculator](#) in project **CSharpTest** delivered with test
Execute test methods to ensure you done logic correctly.

Add other tests you think are meningfull to verify all possible scenarios for function call.

*** As a sample, you are given only 3 test cases. You can think over all the exceptions that may be by analogy.**