Introduction

The purpose of this assessment is to obtain further insight into your problem solving, design, and coding skills.
There is no right or wrong answer, but it will give you an opportunity to demonstrate what approaches and design techniques you prefer and why.

You do not have to complete all of the tasks but it is recommended to do so if possible.

Your solution should be:

- Correct, and valid (proof it is valid and can work)
- Maintainable and easy to read and understand. We will look at how do you express logic and how do you design API. (to make it better)
- Extensible (easy to extend holiday algorithm). (to make it better)
- Considering performance if we need faster calculation between two very far dates what would be the solution / optimization?

The solution should be handed in as a github or bitbucket repository that can be cloned and inspected.

TASK: Design and Coding - Weekdays between two dates

Using Kotlin we need to calculate business days between two dates considering multiple factors.
The solution should be an application which consumes an async local service which provides all the calculations. Main business logic should also be testable.

We are looking to calculate the number of weekdays between two dates. Assume weekdays are Monday to Friday. The returned count should not include from date or to date.

Examples:
- Thu 7/8/2014 to Mon 11/8/2014 should return 1
- Wed 13/8/2014 to Thu 21/8/2014 should return 5

Public holidays are a little bit more complex than a simple fixed list of dates, basically three types of holidays:

1. Always on the same day even if it is a weekend (like Anzac Day 25 April every year).
2. On the same day as far as it is not a weekend (like New Year 1st of every year unless it is a weekend, then the holiday would be next Monday).
3. Certain occurrence on a certain day in a month (like Queen's Birthday on the second Monday in June every year).

Cater to these types of holidays and cover all Australian holidays in NSW.