

## Coding Challenge Avonic

The most important skill to have in order to come work at Avonic is a solid grasp of Object Oriented Programming (OOP). For this reason, we have developed a small coding challenge to see what your level of OOP skills are.

### Description.

The assignment is to make a small console-based Pokemon Game. The goal of the game is to allow a player to select a Pokemon from a range of choices and to initiate a fighting sequence with another Pokemon. The fighting happens turn-based. Each Pokemon gets a turn to attack, until one Pokemon's health is depleted. The complexity of the game mechanics is secondary, our main interest is what you have built under the hood.

### Software Requirements

1. Main menu so the user can initiate actions.
2. List all available Pokemon and be able to choose one as your main Pokemon. Create as many Pokemon as you like, with a minimum of 5.
3. Being able to change your main Pokemon at any time.
4. Ability to initiate a fighting sequence. Before actually fighting, we pick an opposing Pokemon.
5. An overview of what happens during the fight. Who is attacking who, what are the current health stats, etc.

**NOTE:** Please push your code to a **git repository** and send us a link!

### Clean Code

There are a couple of aspects of your code that we find important. An important aspect of how we evaluate your code is going to be its level of readability. Code is mostly read by your fellow programmers and the ability to write concise yet understandable code is crucial in a team. That is why we strongly encourage you to code using the SOLID principles. For a tutorial video [click here](#). These are also the principles we will be focusing on when we look at your code. For clarities' sake, here are some highlights:

- Readability
- Separation of Concerns (SoC)
- Naming conventions
- Don't Repeat Yourself (DRY)
- Functions should only perform a single task

**NOTE:** We are not interested in an elaborate GUI. Of course, it looks nice and makes your program user friendly, but we value qualitative code much more.

Don't spend more than 5 hours on this assignment. The goal is to show off your programming skill. We don't expect you to be an expert, you're also joining us so you can learn much more as a Software Developer. If you do not manage to finish in time, hand in the challenge and we can go over the result together. At the end of the day, your thought process is what will be the deciding factor for us.

If however, you do find yourself with some extra time and motivation on your hands, you can obviously be as creative as you want to show us what you can do. An obvious start would be to add Pokemon types and have it influence the damage that a Pokemon can do to another Pokemon type or to add different attacks per Pokemon. Feel free to be as creative as you want!

If you have any questions, don't hesitate to contact us! We look forward to what you've got!