

# Coding Assignment

## Objective

The objective of this assignment is to showcase your object oriented programming skills. The result should be functional. The code should not be super complex but does need to have enough code to demonstrate a solid understanding of OOP. Composer packages (i.e. Symfony components) are allowed but not required.

## Requirements

- Use [composer](#) for autoloading and including 3rd party components you may want to use
- Use PHP 7.2+ syntax
- Must include unit tests using PHPUnit (<https://phpunit.de/getting-started/phpunit-7.html>)
- Consistent coding standards (i.e. <https://symfony.com/doc/current/contributing/code/standards.html> and <https://github.com/jupeter/clean-code-php>)
- Consider S.O.L.I.D. OOP principles (<https://github.com/jupeter/clean-code-php#solid>)
- Submit the code through a public repository on GitHub

## User Story

As a user, I want a robot to clean my 2 apartments. The first apartment has a 70 m<sup>2</sup> hard floor. The second apartment has a 60 m<sup>2</sup> carpeted floor. The robot should charge its battery itself once it runs out of energy.

I want to run a command `$ robot.php clean --floor=carpet --area=70` and I want to see the state output while it's cleaning or charging the battery. The `--floor` parameter should accept either *hard* or *carpet* to determine how the robot should behave based on the following assumptions.

## Assumptions

- The robot has a battery big enough to clean for 60 seconds in one charge.
- The robot can clean 1 m<sup>2</sup> of hard floor in 1 second.
- The robot can clean 1 m<sup>2</sup> of carpet in 2 seconds.
- The battery charge from 0 to 100% takes 30 seconds.