

# Façade Design Pattern Assignment

## The Pokémon Center

Written and Designed by Josh Wade for Computer Science II

The Joy family is mafia that runs a monopoly of all medical institutions in the Pokémon world – you’ve probably seen one of the family’s daughters at one such Pokémon Center. Though business booms, the don, Giovanni, has considered firing all the Chanseys and Blisseys that work in these centers and automating everything. They have come to you with open minds and wads of mafia cash, asking you to develop a program to handle the operations of the Pokémon center – withdrawing, depositing, and healing Pokémon.

You, being an expert programmer in the Pokémon world (your favorite Pokémon is probably Porygon or something nerdy like that), know that this is an excellent opportunity to implement the Façade Design Pattern. By analyzing the situation, you know that there are only seven classes you will have to make for this project:

FacadePokemonCenter.java

This file will have instances of every other class, except for TestPokemonCenter.java and Pokemon.java. It will run the operations of the center by calling the necessary methods on those instances. This is *the central concept of the Façade Design Pattern*.

HealAndPC.java

This file will contain a list of Pokémon in the trainer’s party and handle their withdrawal, deposits, and healing.

Pokemon.java

Instances of this class will be used to represent each Pokémon. The stats have been massively simplified for the purposes of this program.

TestPokemonCenter.java

This file will contain the main class used to test the program.

TrainerIDCheck.java

This file will check if a trainer’s ID is valid.

TrainerNameCheck.java

This file will check if a trainer’s name is valid.

Welcome.java

This file will welcome newcomers into the building, and remind them that the Pokémon Center’s job is to restore Pokémon to perfect health – just in case they forgot.

## (What I Anticipate to be) Frequently Asked Questions

Q: I have no idea what the Façade Design Pattern is! What do I do?

A: The Façade Design Pattern is an abstract concept that describes a method of designing a program in an object-oriented language. You have many different classes with specific jobs, and one “Façade” class acting as a central hub to access those classes; you’ve probably used it before without realizing. To learn more, please watch the [Derek Banas video](#) on the pattern.

Q: Okay, I had a look at that, and I’m still lost. Please help?

A: The comments in the given shells should explain fairly explicitly what steps you should follow to complete this assignment as expected.

Q: What do I need to turn in for this assignment?

A: Please turn in a .zip file, FacadePokemonCenter.zip, containing the entire eclipse project – bin, src, everything.

Q: How will the user put input into the program?

A: User input will be handled in TestPokemonCenter.java by directly calling the functions in FacadePokemonCenter.java.

Q: I hate this assignment, I hate Java, I hate Pokémon, and I hate you!

A: That is not a question, but I sympathize with at least two of those sentiments.

Q: Why does this design pattern only allow for one trainer, i.e. Ash Ketchum, ID 01301?

A: Well, Pokémon games only have one protagonist.

Q: My question has not been covered in this incredibly barebones excuse for problem documentation! To whom do I complain?

A: Please direct any unanswered questions to the TA who is grading this assignment. Unless stated otherwise, this is the person whose name is at the top of this document. His email is [joshwade@knights.ucf.edu](mailto:joshwade@knights.ucf.edu).