# Personal Information

## Lachlan O’Neill

**Student Number:** s3802024

**Nationality:** Australian

**Education:**

* Queensland Certificate of Education

**Profile:**

Hi, my name is Lachlan O'Neill, I'm 17 and I live in Queensland, more specifically, Brisbane, I work as an administrator for a disability support company on the Gold Coast. I graduated Year 12 last year. I was originally going to study a diploma of Software Development at TAFE and then continue with a Bachelor of IT with QUT afterwards, but I thought I might as well try and apply for the qualification through OUA anyway. I have Cerebral Palsy so I'm dependent on a wheelchair, it limits my capabilities somewhat, but I'm not too restricted in everyday activities. This also explains my choice in hobbies and my gamertag, “Wheelz”! Some of my hobbies include video games, Dungeons and Dragons, and reading.

# Tools

My website can be found at [wheelz108.github.io](https://wheelz108.github.io), the website is still very much a work in progress and may behave weirdly on monitors not outputting at 1080p resolution. The website details facts about myself as well as the IT project I have been working on. The repository for the website can be found at <https://github.com/Wheelz108/Wheelz108.github.io> and the repository for the actual project can be found at <https://github.com/Wheelz108/Pokemon-Group-Project>.

You’ll notice on the project repository that there are commits from people other than me. This is because I was originally working on this project with a group however the people working on the assignment with me withdrew from the course. The others in the group were non-communicative so it was decided that I would continue this project as a solo endeavour.

# Project Description

As a competitive Pokémon fan, I am frustrated with the lack of support the developers have given the community regarding producing competition ready teams. I’m consistently disappointed in the minimal progress Game Freak has made to fast track the team building process. Things like breeding for IVs and natures take hours for each Pokémon not to mention the extra effort required to get those stats plus any egg moves needed.

To be fair to Game Freak, it has made steps to make this process easier, the streamlining of EV training and mint items for specific natures come to mind. But in my opinion, this isn’t enough. If there was a way to build teams in a matter of minutes instead of a few days, I feel that it would be a huge benefit to the community.

That’s why for my IT project I have decided to develop a tool that streamlines the Pokémon team building process, allowing users to generate teams to use in their games in a manner of minutes.

# Overview

## Topic

With this project I am aiming to produce a program that allows users to generate a Pokémon team as a plain text file which can then be imported into external tools like the save editor PKHex or the battle simulator Pokémon Showdown. The program will take input from the user, letting them dictate how the Pokémon is built, down to the stats, held item, moves, etc.

With this tool I believe the barrier for entry into the competitive Pokémon scene will be lowered drastically allowing new players to quickly generate a team to use online. Afterwards if they need to tweak something, they can edit the file themselves to change whatever is needed. This leads to much faster fine-tuning of strategies and combinations.

## Motivation

My motivation for this project is very personal. As stated earlier I am very frustrated with the developers of Pokémon for making the barrier for entry into the scene so high. This annoys me because it is a big deterrent for people interested in the community. If they see what is required to even start playing competitively as a basic level than they may be discouraged and be disinterested in joining the scene. I am always very happy to see new faces in the community and I think that with this tool more people will be able to explore that interest in competitive battling.

## Landscape

The landscape for this type of tool is very new. From my research there hasn’t ever been a tool like the one I am proposing. As such it would benefit the Pokémon community greatly, introducing new faces to the competitive battling scene and with those new faces, new and unorthodox strategies, thus revitalizing the game and making the community more active.

# Detailed Description

## Aims

My aim for this project is to make getting into the competitive Pokémon battling scene as easy for newcomers as possible as well as make it easier for veterans of the scene to come up with and test new strategies and concepts. This would bring new life into the scene and make it more active, fun and thus more enticing for new players repeating the cycle and growing the scene.

To do this I’ll need to remedy the awfully long amount of time it takes to get a team up and running. People that just hop into battles with their story team will be in for a rude awakening and be discouraged from joining the scene when they learn how long it takes to make a team. Breeding for the right stats is awful and time consuming let alone getting those IVs and the right nature and moves. It’s the worst.

## Plans and Progress

The aim of this project is to create a tool that generates Pokémon teams as a plain text file in the format described below:

Species @ Item

IVs (If specified): # Stat / # Stat / # Stat

EVs: # Stat / # Stat / # Stat / # Stat

Ability: Ability Name

Shiny: (Yes/No)

(Nature Name) Nature

- Move 1

- Move 2

- Move 3

- Move 4

This format has been adopted by the Pokémon community as a quick and efficient way to share and edit teams, allowing for other people to test the team and quickly provide feedback as to what could be improved or changed to better suit the person’s playstyle or desired strategy.

In order to produce a program that accomplishes these goals I need to write a few key features:

1. I need a few classes that stores the aspects of the Pokémon (i.e. one for EVs, one for IVs and one for move sets etc.) and returns those values when needed
2. I need a class checks if the EVs and IVs are legal (IVs are limited to a minimum of 0 and a max of 31 per stat. And EVs can have a minimum of 0 and a max of 255 per stat but the total number of EVs cannot exceed 510).
3. I need a class that stores all the Pokémon’s data in one place so that it can be easily accessed.
4. I need a class that accesses the Pokémon’s data and outputs it in a text file in the correct format.

Once I get all of these done the essentials of the program will be complete and I can focus on extra things if I want. Some things that I may want to include are:

* Checking if the user spelt the Pokémon’s name correctly.
* Checking if the user spelt a move name correctly and whether the Pokémon can learn that move in game.
* Checking if the user spelt the ability name correctly and whether the Pokémon can have that ability in game.
* Checking if the user spelt the item name correctly.
* Checking if the user spelt the nature name correctly.

Basically, I would like to implement a whole lot of error checking, but I feel that this would be far outside the scope of this assignment as there are currently 890 Pokémon, 796 moves, 258 abilities and too many held items to count. As you could probably tell, implementing all of this in the time frame that I have is impossible. If I were able to get this all implemented and working properly in my own time then I would enhance UI elements like adding the appropriate Pokémon and held item sprite, the move’s typing, whether the move is physical or special, etc.

## Scope and Limits

## Tools and Technologies

## Testing

## Timeframe

## Risk