

I'm pretty proud of this part of my project. I managed to make a clean Parse tree with a variety of input files, and can handle and recover errors pretty well. It didn't come without a challenge though. This is probably the longest time I've spent on any coding project thus far. It really strengthened my knowledge in Python, which I knew next to nothing about before Part 1. The recursive and interdependent nature of my parsing method made it really really hard to debug. Usually, I like to code a little, run the program, debug, repeat, but because every method could call itself or other methods here, I was forced to write most of my parse class in one go. This meant it took a very long time to debug. The indentation part also took me a while. It got to the point where I just started changing something just for the sake of trying, not even knowing if it would fix the issue. It drove me crazy, but in the end I got there, and if I had to do it again, I can think of a few better, more efficient ways I could write this program, especially because I know more about Python now. My lack of experience in it is probably what caused 75% of my bugs. Working on this project helped me understand how context-free grammars determine a language's structure and how recursive descent parsers can process it. The way each method in my parser calls itself or other methods is very similar to the recursive nature of context-free grammar. Additionally, building this JSON Parser helped me understand how compilers work in the real world, and how they check for syntax errors.