1. The first prompt was to ChatGPT, where I gave it the prompt to create a parser with the given grammar. This was before the grammar was updated so, during my prompt I used the other grammar.
2. The program was not taking any input files. It did not have anything regarding reading the input files, and printing things to the output file. I had to make sure everything was printed so I can see the errors it was making by comparing it to the given readme file. I also added that there should be messages that are also outputted to make sure that the parser was doing its job correctly. These messages would also be printed to the output file, so we can keep track of where the error was occurring.
3. I got an error message within the syntax that ChatGPT provided. I gave that message to GPT and asked them to fix it.
4. After implementing the new fix to the code, I still got the same error message. It said “I've corrected the syntax error in the match function by ensuring that endif is matched correctly. Try running the updated code, and let me know if you encounter further issues!” Both times, even though it did not fix it the first time.
5. Once again I had some syntax errors related to parentheses. I did fix some of them by myself, however there was one that I was unable to fix due to the nested parentheses, I couldn’t find the right stop to put it.
6. Ran into a problem with the read input files function being implicit. Put the error into GPT and fixed the code snippet. - This was due to the fact that there was an extra closing parenthesis that was added before.
7. Once again a problem with functions being implicit and trying to fix them. Was having trouble with the writing log function.
8. I was a bit confused and fed up with the responses that ChatGPT was giving. It felt as if that the responses were just getting more and more complicated since they seem to be introducing errors into working code. I used Claude to help me write the code from here. It was a better choice in LLM, since I tested it with the code CPT produced and it was able to find the mistakes and fix them accordingly.
9. The new grammar was introduced and I had to make changes to the code once more. I asked Claude to help me completely rewrite the code, so that it would work with the new grammar.
10. Not saying that Claude was perfect, it did have some errors in the code, which my 10th prompt was for. I found it helpful when it was able to explain what the error was and what it was doing to deal with it step by step. For the error in this prompt it fixed the unbound identifier issues, improved the token recognition, added better handling and reorganized the functions to ensure proper dependency.
11. This was an error when I believe it was running file 2 or 3. It fixed the line handling , got better error reporting and improved the tokenizer.
12. The code was working but I needed it to do some specific things. I also uploaded the input files so that it had a reference as to what would be inputted into the program.
13. It was creating the output files as a .out file, in the folder it looked weird when I saw duplicate file names. That is why I gave it this prompt to make sure that files would be named like output 1 through 4 to make sure there was a differenaction between the input and output files.
14. Asked Claude to create an input file which would follow the new grammar and would be able to produce a parse tree for the file. Wanted a file where I knew that everything was correct and that my program was also able to handle files that held the correct input. I got a new input file from this and even generated an output file where the input was perfect with no errors, and it printed accepted at the end ensuring that my program worked with valid inputs as well

During the beginning of the development process, I was using the text from the assignment document to ensure that my prompts were in the valid structure. I was using ChatGPT at the beginning. It is usually the default LLM that most people use, including myself. However as I got to running the code and debugging, it seems that GPT was unable to catch its own errors, typically syntax errors. The prompts that I have in GPT are 4 or 5, but I have several other syntax errors where it was usually due to the wrong placement of parentheses. It seems that with each fix of the code, it might introduce a new error. I realized that maybe GPT was unable to break down the function and figure out the correct placement of the parentheses. And because of this I started to use other LLMs like Claude. Claude was a bit better, it didn’t produce as many syntax errors. I liked how it explained in detail what it was doing at each step, even if I didn’t want it to explain anything. I like this about Claude. I wanted to follow along with the changes to the code, and understand it. Unlike before on program 1, I realized that it would not be beneficial for me to use snippets from one LLM and copy it into working code for another LLM. Additionally, I realized since we were not given a valid input file that would test if my program was able to output in the correct format, I created my own to make sure that my program works in both the valid and invalid situations.