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Parser Project Documentation

### **Chat GPT Prompts I entered:**

“How do I start programming a parser from scratch using the Racket programming language”

“what functions do I need to build a parser using Racket”

“how do I go about building a tokenizer and a lexer”

“How to write a simple parser in racket using this grammar: program -> linelist \$\$ linelist -> line linelist | epsilon line -> label stmt linetail label -> id: | epsilon linetail -> stmt+ | epsilon stmt -> id = expr; | if (boolean) stmt; | while (boolean) linelist endwhile; | read id; | write expr; | goto id; | gosub id; | return; | break; | end; boolean -> true | false | expr bool-op expr bool-op -> < | > | >= | <= | <> | = expr -> id etail | num etail | (expr) etail -> + expr | - expr | \* expr | / expr | epsilon id -> [a-zA-Z][a-zA-Z0-9]\* num -> numsign digit digit\* numsign -> + | - | epsilon”

“in the Racket language, can you explain to me what the either monad is and how to implement it”

“in my 'parse-line' function I got the following error: parse-label: unbound identifier in: parse-label”

### **Github Repositories used:**

<https://github.com/ttaxzn/ParserProject/tree/main>

<https://github.com/Joseph-Sailor-Usher/CS-441-Parser/tree/main>

### **Websites:**

<https://www.youtube.com/watch?v=IEzUFNFU880>

I also had help from some friends online with specifics such as reading in the file, understanding the Either monad, and error checking.