Day 5 - 1/26/2024

Backus-Naur Form

- Nonterminals are in angle-brackets (<>).
- The Start symbol can vary.
- Terminals are in quotes (" ").
- Arrow is replaced with ::=.
- The vertical bar is the same |.
- Epsilon (ε) is not needed.
- Spaces are ignored.
- Each production must be on a line.

BNF for US phone number:

$$< \text{phone-number} > ::= < \text{area-code} >< \text{digit7} > \mid < \text{digit7} >$$

EBNF
Extended BNF are vatiations on BNF. They typically:

- Don't use angle brackets for nonterminals.
- ::= is replaced with = or :.
- A production can use multiple lines.
- Parentheses may be used for grouping.
- Brackets [] surround optional sections.
- Braces {} surround optional and repeatable sections.

Lexical Structure
The lexical structure of a PL is how the program is broken down into lexems.