

Known Non- Context Free Languages

Here is a sampling of languages that are known Context Free, as discussed in class.

$$\{ ww \mid w \in \{a, b\}^* \}$$

$$\{ a^n b^n c^n \}$$

$$\{ a^i b^j c^k d^l \mid i, j, k, l \geq 0, i=k \text{ \& } j=l \}$$

$$\{ w \in \{0, 1\}^+ \mid w, \text{ interpreted as a binary number, is a prime number} \}$$

$$\{ 1^n \mid n \text{ is a prime number} \}$$

As well as variations on these languages where the only difference is substituting different alphabet symbols that do not change the nature of the language.