

Lecture 15 - In Class Exercise

Goal: Get more familiar with grammars and manipulating their syntax.

1 BNF Grammars

Instructions: Work with your neighbors in groups of 2.

Consider the BNF grammar:

```
A ::= OB | OM | OBM
O ::= "w" | "x" | "s" | "m"
B ::= "i" | "f" | "c" | "r"
M ::= "o" | "t" | "p" | "a" | "h"
```

Answer the following questions:

1. How many nonterminal symbols are in the grammar?
2. How many terminal symbols are in the grammar?
3. Write two strings that are valid according to the BNF
4. For each of your two strings, give two valid mutants of the string
5. For each of your two strings, give two invalid mutants of the string