In-class Practice 11: Context-Free Grammars

For the alphabet $\{0, 1\}$, give a CFG for each language:

1. All strings where the 0s and 1s alternate.

2. All palindromes where the number of 0's is a multiple of 4.

3. All strings where the difference between the number of 0s and the number of 1s is odd.