Exercise: answer the following questions:

1) Provide a Context Free grammar that generates the language 00*1*.

2) List, in lexicographic order, the first five strings of {a, bb} *

3) Give a regular expression the language of which is all binary strings that start with "01" and end with "10". Make it as short as you can.

4) Draw a DFA for the language L of odd-length binary strings. You will need 2 states; don't use more. Remember to mark in the customary way the start state, the final state(s), and all transitions.

5) Write a regular expression for the language of the following NFA M1. Make it as simple as possible. Use standard abbreviations, not writing the concatenation symbol or extra parentheses.

6) Describe a PDA that accepts the following languages.

$$L = \{0^m 1^n : n \leq m\}$$