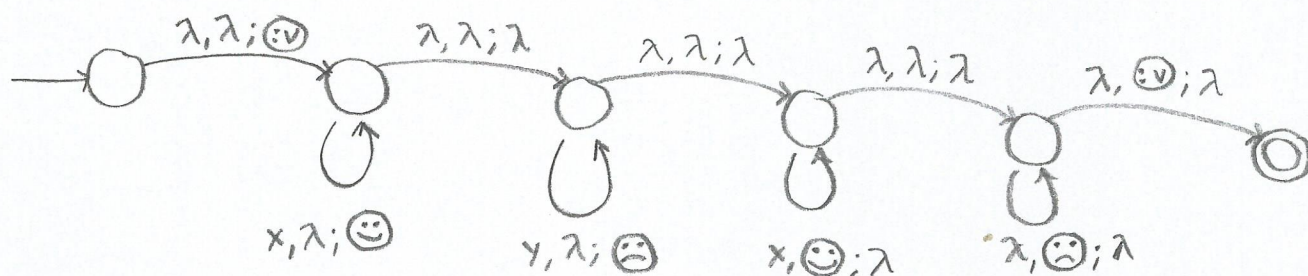
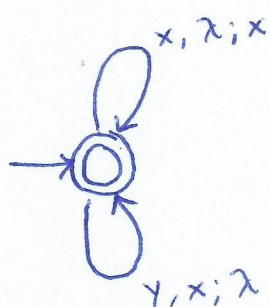


1.- Design a pushdown automaton M such that $L(M) = \{x^n y^m x^n : n, m \in \mathbb{N}\}$



2.- What language is accepted by the pushdown automaton whose transition diagram is shown below?



$$L(M) = \{x^n y^m : n \geq m \in \mathbb{N}\}$$

3.- Modify the transition diagram in exercise 2 so that the associated pushdown automaton will accept the same set of strings but will do so with its stack empty.

