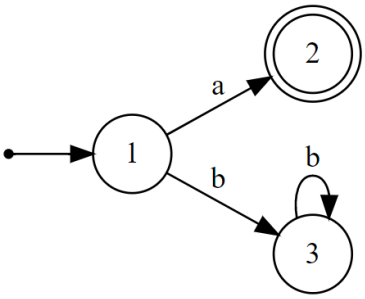
Assignment 4 Finite language

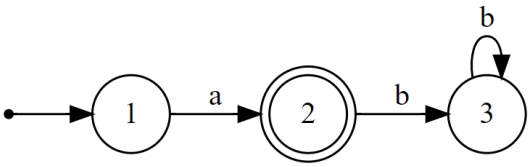
Extend your program such that it indicates if the number of generated words is finite or not. If it is finite, list the words as well.

An automaton (either DFA or NDFA) has finite language if it does not contains cycles that can lead to a final state.

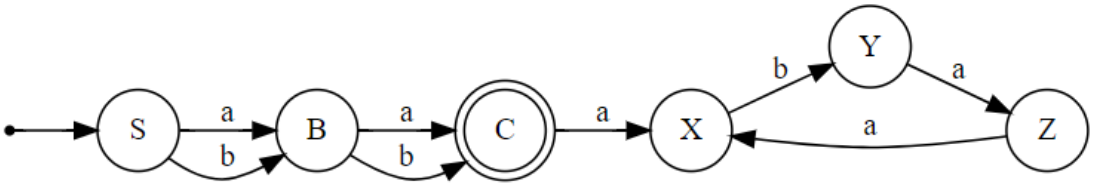
Example of finite language automatons:



Automaton 1



Automaton 2



Automaton 3

Although in the automatons above there are cycles, the cycles never lead to a final state; hence, these automatons have in fact finite languages:

Automaton 1: a

Automaton 2: a

Automaton 3: aa, bb, ab, ba

In your software application you need to identify finite language automatons, and if they satisfy the condition of having finite language, then you must state the language (show all the accepted words in the UI).

[see next page for more examples]

More examples of finite langue automatons: