The Lexer is written in python and accepts an input file with a program. The Lexer is capable of parsing String, Integer, Operations, and Lexemes. The following operations are possible [=, >, <, !, ;, +, -, \*, /, !=, <=, >=] and the following standard lexemes are available ["for", "get", "printf", "if", "else"] such that basic logic and mathematical operations are possible in the language. It is possible to use [(, ), A-Z, a-z, whitespace] in the programming language. Integers may be positive or negative. String processing is possible using  $\langle \cdot \rangle$ ,  $\langle \cdot \rangle$ ,  $\langle \cdot \rangle$ ,  $\langle \cdot \rangle$ .

## **State Transition Diagram**

