**CS323 Documentation**

About 2 pages

1. **Problem Statement**

*<write the problem statement here. You can mostly get it from the*

*assignment itself>*

Our goal is to build a lexical analyzer (Lexer) utilizing Final State Machines or better known as FSMs. Our program will read the procedure lexer() which will attempt to return a token when it is necessary. The expected output of the procedure is to return a record, one field that will distinguish our tokens and another that will distinguish the “value” corresponding to the type of token it is I.E operator, integer, real, ID, …, or …. . The analyzer should be able to distinguish this utilizing the FSMs created for each instance of a token thus breaking down the input string into individual identifiers and outputting which each one will be

1. **How to use your program**

*<write detailed steps how to execute your program>*

1. **Design of your program**

*< write major components of your program. Also, data structures you are utilizing, particular algorithms you have chosen etc. >*

1. **Any Limitation**

*<All features are running according to the assignment but you limit your program due to resource limitations, such as*

*Maximum number of lines in the source code, size of the identifier, integer etc.* ***Say ‘None’ if there is no limitation****>*

1. **Any shortcomings**

*<Anything you could NOT implement although that is required by the*

*Assignment.* ***Say ‘None’ if there is no shortcoming****>*