

**FACULTY OF INFORMATION TECHNOLOGY**

**BACHELOR OF INFORMATICS & COMPUTER SCIENCE**

**ICS 4211: Compiler Construction**

ADM : 100388

Link Lab 1 : <https://github.com/joanwarukira/Compiler-labs/tree/main>

For our simple lexical analyzer broke down our phrase into different tokens:

* Keywords

if|else|do|while|switch|case|break|continue|default|for|auto|const|int|float|double|string|void|char|char\*|bool|return|cin|cout|endl|main"

* Identifiers

[a-z]+

* Operators

"\\+|\\-|\\\*|\\/|\\>|\\<|\\=|\\++|\\==|\\--|\\&&|\\!=|\\+="

* Separators

"\\;|\\(|\\)|\\{|\\}|\\<|\\>|\\[|\\]|\\&|\\:"

* Numbers

[0-9]+

The input phrase is passed through the program which breaks down it into tokens and matches it with the role it qualifies

For the phrase, c=b\*2; our program would break it down and return the following output:

|  |  |
| --- | --- |
| **Token** | **Type** |
| c | identifier |
| = | operator |
| b | identifier |
| \* | operator |
| 2 | Number |