**Compiler Construction Lab CS - 471L**

**Lab Manual – Week 4**

**Implement Lexical Analyzer**

**Objective:** To implement complete Lexical Analyzer for a subset of Langauge provided by instructor in Lab.  
  
**Instructions:**

This is a group submission of this mini project.

Maximum 2 members in a group are allowed.   
Each group is assigned a specific language.

Task 1: Manually remove Left recursion and Left Factoring from Language grammar. (submit in classroom using pen and paper.)

Task 2: implementation of Lexical Analyzer in any language of your choice ( preferably C++). ( submit it on google classroom)

**Submission:**

The complete implementation of Lexical Analyzer is required. All these components must be implemented for **state based approach** for a general formal language by students in the lab.

* Approach Followed or not.
* File Handling (input will be a file containing source code of the given subset of language assigned)
* Double Buffering with multithreading used
* Token recognitions /Specifications
* Input/ output (output stream of tokens in a file)
* Code clarity and comments
* Language subset conventions followed.

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| --- | --- | --- |
| Group member 1 | Group Member 2 | Subset of Language assigned |
| 119 | 137 | Decaf |
| 131 | 148 | Pascal |
| 134 | 149 | Decaf |
| R-199 | R-214 | MicroJava |
| 115 |  | Pascal |
| 143 | 153 | Pascal |
| 130 | 124 | Decaf |
| 150 | 155 | Microjava |

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| 151 | 112 | Pascal |
| 117 | 139 | Decaf |
| 113 | 136 | Decaf |
| 133 |  | Microjava |
| 120 | 128 | Pascal |
| 132 | 138 | Microjava |
| 116 | 118 | Decaf |
| 160 | 159 | MicroJava |
| 135 | 144 | Pascal |
| 114 | 125 | Microjava |
| 141 | 142 | Microjav |
| 147 | 156 | Decaf |
| 140 |  | Decaf |
| 146 |  | Microjava |
| 152 | 154 | Pascal |
| 157 | 122 | Pascal |
|  | 129 | Decaf |
| R-150 | 145 | Microjava |

111