Compiler Construction

Project (Phase-1)   (Section All) Fall (2022)

Submission Before: 5:00PM - 10-11-2021

UCP-Compiler:

In lexical following token types required to be implemented.

		Detail	Example
1	Identifiers	Start from _ or Letter and contains at least one "_". Other rules for ID will remain same.	_rate2, _rate_, rat1e2 …etc
2	Numbers	[+-]?(D+)(\.D+)?, and exponent numbers.	3.43433E+13,
3	Operators	!=, <>, =:= , ==, *, +, /,-, >>,<<, ++, =+, &&, ||, =>, =<, %, :, :: , --	
4	Punctuations	[,{,< , >,},]	
5	Keyword	loop, agar, magar, asm, else, new, this, auto, enum, operator, throw, bool , explicit, private, true, break, export, protected , try, case, extern, public, typedef, catch, false, register, typeid, char, float, typename, class, for, return, union, const, friend, short, unsigned goto, signed, using, continue, if, sizeof, virtual, default, inline, static, void, delete, int, volatile, do, long, struct, double, mutable, switch, while, namespace	

Assignment Description:

For this assignment, you have to implement a **lexical analyzer**, also called a scanner. This assignment includes following parts:

	PARTS	Output	Marks	Deadline
1	Generate FA for each regular expression	Document	25	7 Nov
2	Code - Table Driven Approach	Source Code Files	100	10 Nov

Note: (Late will be penalty of deduction of 25% of total marks per day)
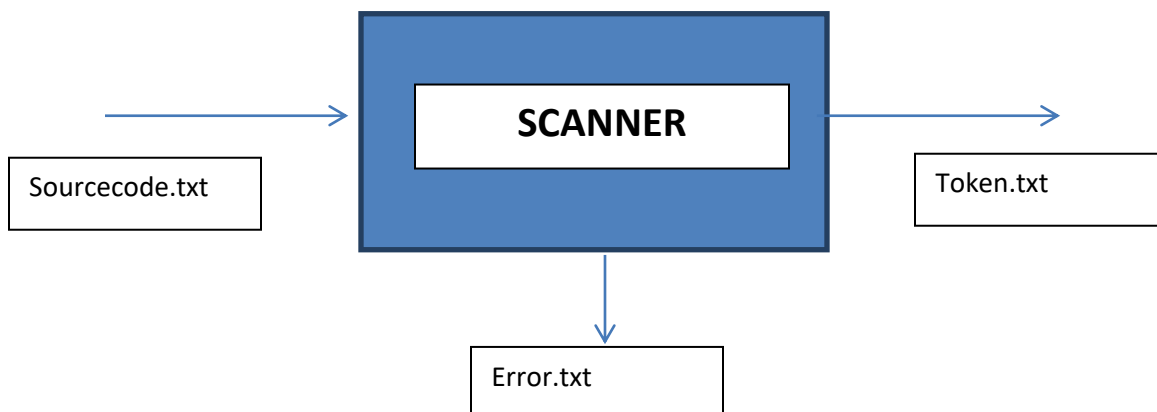
Tools:

Language (For Development):   C++

Note: Student cannot use built-in data structure. Student can use his own data structure Hash Table, Linked List which he/she developed in data structure course. In this case student has to show me the code before using it.

Evaluating Criteria:

1. Source code should reflect the detail given in documents (other parts).
2. A text file with valid source code will be input of the scanner and Token file will be output of the scanner tool.
3. All points discussed in the class related to scanner implementation should reflect in the assignment.
4. Application should not do which is not supposed to do.

5. In case of invalid source code tool must generate error list.

GOOD LUCK