Department: Computer and Systems Engineering, 4th year.

Compilers' Scanner Project

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Section 3

GUI

Instructions

- o Write your code in the left text box or Upload the code from a .txt file.
- o Press the See Tokens button.
- o Each time you want to try a new test case, you can just cut the code instructions from the left text box and write the new test case, then press See Tokens button.
- o Make sure you type the Reserved Words with the first litter Capitalized, which are:
    - o `If, Then, Else, End, Repeat, Until, Read, Write.`
- o Comments start with the symbol '{' and end with '}'.

Test Cases

Test case 1 → write code

Scanner

Please write your code,
or upload the code file.
– Reserved words start with a Capital Letter.

Load Code File

```
{Test Case 1}
Read x; { I'm a comment ! }
If x > 0 Then  {I'm another comment !}
fact := 1 ;
Repeat
fact := fact *x;
x := x-1
Until x=0;
Write fact {Output Factorial of x}
End
```

Restart **See Tokens**

Lexeme	Token Name
Read	ReservedWords
x	Identifier
;	SemiColon
If	ReservedWords
x	Identifier
>	GreaterThan
0	Number
Then	ReservedWords
fact	Identifier
:=	Assign
1	Number
;	SemiColon
Repeat	ReservedWords
fact	Identifier
:=	Assign

Scanner

Please write your code,
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Load Code File

```
{Test Case 1}
Read x; { I'm a comment ! }
If x > 0 Then  {I'm another comment !}
fact := 1 ;
Repeat
fact := fact *x;
x := x-1
Until x=0;
Write fact {Output Factorial of x}
End
```

Restart **See Tokens**

Lexeme	Token Name
:=	Assign
fact	Identifier
*	Times
x	Identifier
;	SemiColon
x	Identifier
:=	Assign
x	Identifier
-	Minus
1	Number
Until	ReservedWords
x	Identifier
=	Equal
0	Number
;	SemiColon

Scanner — ☐ ✕

*Please write your code,
or upload the code file.
– Reserved words start with a Capital Letter.*
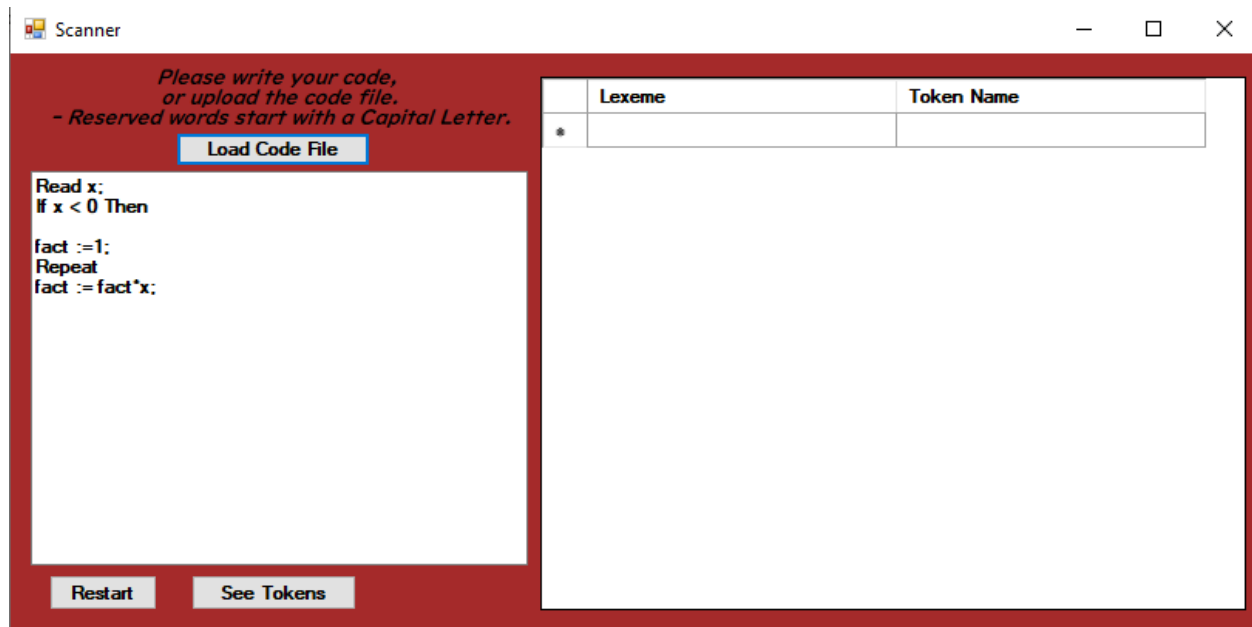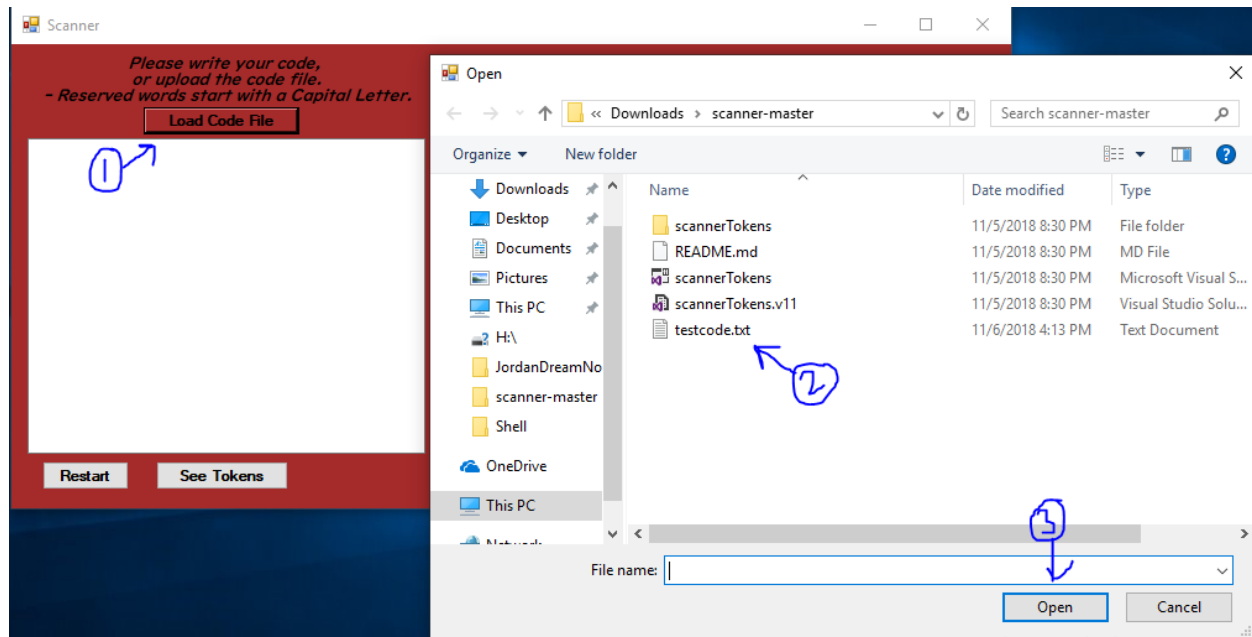
Load Code File

```
{Test Case 1}
Read x; { I'm a comment ! }
If x > 0 Then  {I'm another comment !}
fact := 1 ;
Repeat
fact := fact *x;
x := x-1
Until x=0;
Write fact {Output Factorial of x}
End
```

Restart   **See Tokens**

Lexeme	Token Name
:=	Assign
x	Identifier
-	Minus
1	Number
Until	ReservedWords
x	Identifier
=	Equal
0	Number
;	SemiColon
Write	ReservedWords
fact	Identifier
End	ReservedWords
	EndFile
*	

Test case 2 → load file

Scanner

Please write your code,
or upload the code file.
– Reserved words start with a Capital Letter.

Load Code File

```
Read x;
If x < 0 Then

fact :=1;
Repeat
fact := fact*x;
```

Restart **See Tokens**

Lexeme	Token Name
Read	ReservedWords
x	Identifier
;	SemiColon
If	ReservedWords
x	Identifier
<	LessThan
0	Number
Then	ReservedWords
fact	Identifier
:=	Assign
1	Number
;	SemiColon
Repeat	ReservedWords
fact	Identifier
:=	Assign