Compiler's Scanner

Project 1

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Test case 1

Form1 — □ ✕

Enter your code here:

```
{ Sample program in TINY language – computes factorial}
read x; {input an integer }
if 0 < x then { don't compute if x <= 0 }
fact := 1;
repeat
fact := fact * x;
x := x - 1
until x = 0;
write fact { output factorial of x }
end
```

Token Value	Token Type
read	READ Reserved
x	Identifier
;	Separator
if	IF Reserved
0	Number
<	LessThan
x	Identifier
then	THEN Reserved
fact	Identifier
:=	Assignment
1	Number
;	Separator
repeat	REPEAT Reser...

Start   Edit   Restart

Follow test case 1
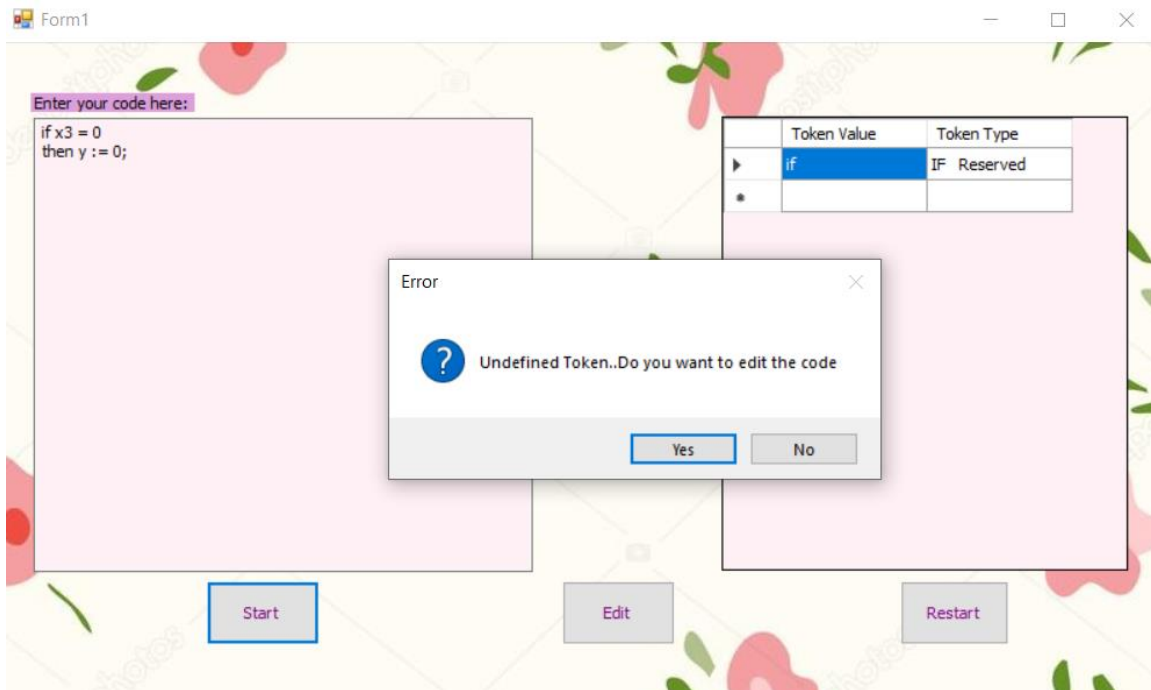
Form1 — □ ✕

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```
{ Sample program in TINY language – computes factorial}
read x; {input an integer }
if 0 < x then { don't compute if x <= 0 }
fact := 1;
repeat
fact := fact * x;
x := x - 1
until x = 0;
write fact { output factorial of x }
end
```

Token Value	Token Type
fact	Identifier
:=	Assignment
fact	Identifier
*	multi
x	Identifier
;	Separator
x	Identifier
:=	Assignment
x	Identifier
-	minus
1	Number
until	UNTIL Reserved
x	Identifier

Start   Edit   Restart

Follow test case 1

Token Value	Token Type
:=	Assignment
x	Identifier
-	minus
1	Number
until	UNTIL Reserved
x	Identifier
=	Equal
0	Number
;	Separator
write	WRITE Reserved
fact	Identifier
end	END Reserved

Test case 2:

In this test case, an error message showed up as identifier name must contain letters only (as stated in the SLIDES), by clicking No, the program will stop and no further scanning will be made, whereas by clicking Yes, you will be able to edit the code and correct the error.

Test case 3:

In this test case, it's clear that our scanner doesn't depend on spaces as a delimiter but it can separate identifiers from brackets and so on…

Test case 4:

In this test case, our scanner is not deceived by the identifier name "ifif" and didn't consider it the reserved word "IF"

	Token Value	Token Type
▶	read	READ Reserved
	ifif	Identifier
	;	Separator
	if	IF Reserved
	ifif	Identifier
	>	GreaterThan
	0	Number
	then	THEN Reserved
	write	WRITE Reserved
	(	Left Parentheses
	greater	Identifier
	)	Right Parenthese
✱		

Enter your code here:

```
read ifif;

if ifif > 0
then write (greater)
```

Start   Edit   Restart