

COMPILER CONSTRUCTION LAB TERMINAL

NAME:

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FA20-BCS-026

CLASS:

BCS-7B

SUBMITTED TO:

SIR BILAL HAIDER

DATE:

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SEMANTIC ANALYZER:

• QUESTION NO 03:

Input with output

• ANSWER:

Process of Input execution:

1. The execution starts with the creation of Tokens from the source code (input) provided by the user.
2. Then these tokens pass through the three rules that are defined earlier to check whether it follows the rules or not.
3. Then if the tokens matched then it gives OK message otherwise it tells what the error is and what is expected to overcome the error.

INPUT WITH OUTPUT:

```
int var1 = 10;
int var2 = 20;
int var3 = var1 + 20;
int add = var1 + var2;
int sub = var1 - var2;
int mul = var1 * var2;
int div = var2 / var1;
if(x >= 10) { y = 10; }
if(x >= 20 && y != 10 ) { y = 20;}
```

Form1

int var1 = 10;

int var2 = 20;

int var3 = var1 + 20;

int add = var1 + var2;

int sub = var1 - var2;

int mul = var1 * var2;

int div = var2 / var1;

if(x >= 10) { y = 10; }

if(x >= 20 && y != 10) { y = 20;}

Sementic Analysis

int, identifier	Ok Rule 1
var1, variable	Ok Rule 1
=, symbol	Ok Rule 1
10, number	Ok Rule 1
;, symbol	Ok Rule 1
int, identifier	Ok Rule 1
var2, variable	Ok Rule 1
=, symbol	Ok Rule 1
20, number	Ok Rule 3
;, symbol	Ok Rule 3
int, identifier	
var3, variable	
=, symbol	
var1, variable	
+, symbol	
20, number	
;, symbol	
int, identifier	
add, variable	
=, symbol	
var1, variable	
+, symbol	
var2, variable	
;, symbol	
int, identifier	

2ND INPUT WITH OUTPUT:

int var1 = 10;

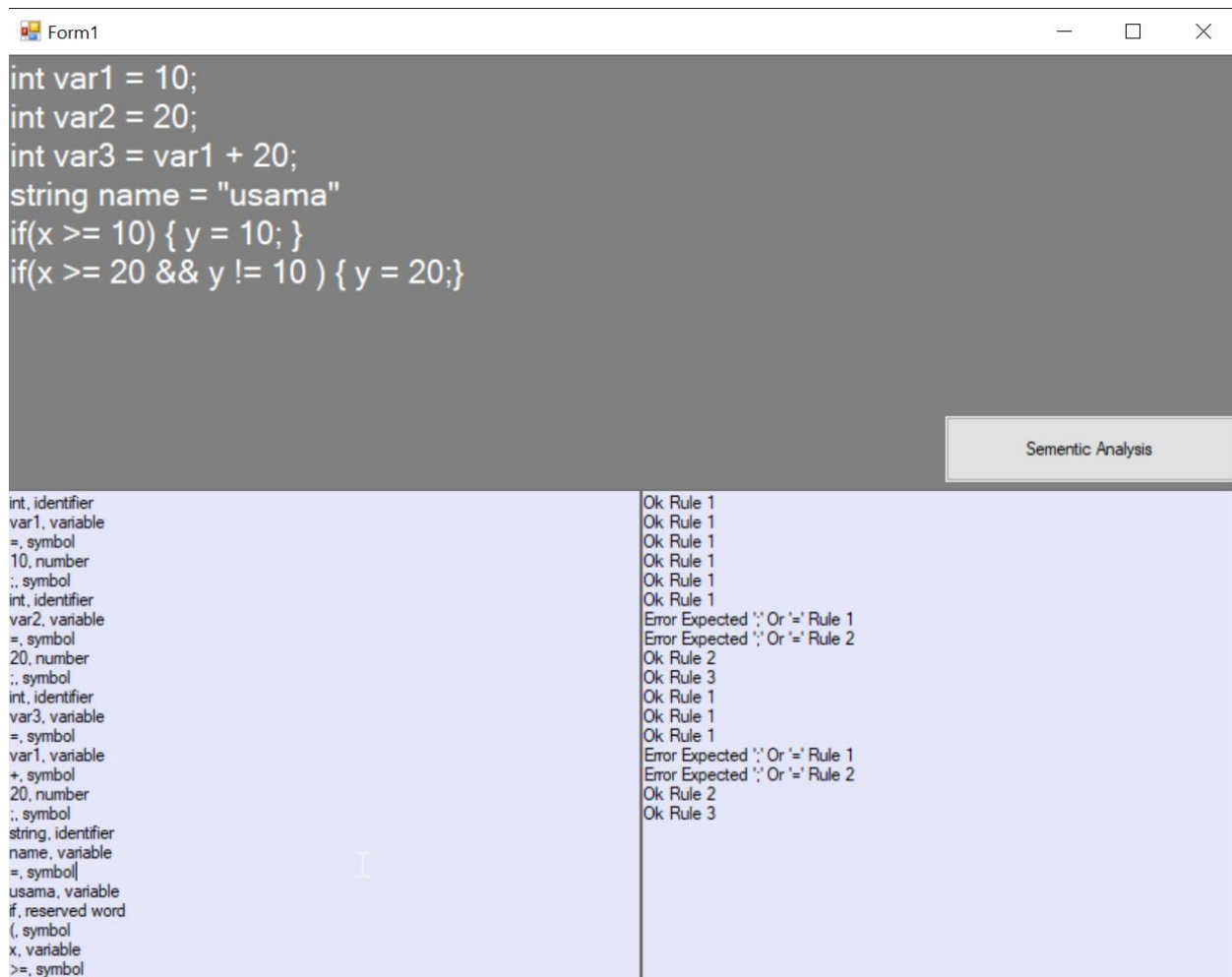
int var2 = 20;

int var3 = var1 + 20;

string name = "usama"

if(x >= 10) { y = 10; }

if(x >= 20 && y != 10) { y = 20;}



The error shows in right side window is missing semicolon (symbol) that violates the rule that are defined earlier.

LEXICAL ANALYZER:

QUESTION NO 03:

Working of project with output

ANSWER:

Process of Input execution:

1. The execution starts with the creation of Tokens from the source code (input) provided by the user.
2. Then these tokens pass through the functions that tells which lexeme belongs to which TokenName

