PARSER Test Cases and Results

Successful SA Code Block	Log Results
{}$	Beginning Lexing Session... *Stings Treated As CharList* LEXER --> | T_OPENING_BRACE [{] on line 2... LEXER --> | T_CLOSING_BRACE [}] on line 2... LEXER --> | T_EOPS [$] on line 2... Lex Completed With 0 WARNING(S) and 0 ERROR(S)... ____ Beginning Parsing Session... PARSER --> | PASSED! Expecting [T_OPENING_BRACE] found [T_OPENING_BRACE] on line 2... PARSER --> | PASSED! λ production on line 2... PARSER --> | PASSED! Expecting [T_CLOSING_BRACE] found [T_CLOSING_BRACE] on line 2... PARSER --> | PASSED! Expecting [T_EOPS] found [T_EOPS] on line 2... Parse Completed With 0 WARNING(S) and 0 ERROR(S)... ____ Beginning Semantic Analysis Session... Semantic Analysis Completed With 0 WARNING(S) and 0 ERROR(S)... ____
{ print("there is no spoon") }$	Beginning Lexing Session... *Stings Treated As CharList* LEXER --> | T_OPENING_BRACE [{] on line 2... LEXER --> | T_PRINT [print] on line 3... LEXER --> | T_OPENING_PARENTHESIS [( ] on line 3... LEXER --> | T_QUOTE ["] on line 3... LEXER --> | T_CHAR [t] on line 3... LEXER --> | T_CHAR [h] on line 3... LEXER --> | T_CHAR [e] on line 3... LEXER --> | T_CHAR [r] on line 3... LEXER --> | T_CHAR [e] on line 3... LEXER --> | T_CHAR [ ] on line 3... LEXER --> | T_CHAR [i] on line 3... LEXER --> | T_CHAR [s] on line 3... LEXER --> | T_CHAR [ ] on line 3... LEXER --> | T_CHAR [n] on line 3... LEXER --> | T_CHAR [o] on line 3... LEXER --> | T_CHAR [ ] on line 3... LEXER --> | T_CHAR [s] on line 3...

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 LEXER --> | T_CHAR [ p ]  on line 3...
 LEXER --> | T_CHAR [ o ]  on line 3...
 LEXER --> | T_CHAR [ o ]  on line 3...
 LEXER --> | T_CHAR [ n ]  on line 3...
 LEXER --> | T_QUOTE [ " ]  on line 3...
 LEXER --> | T_CLOSING_PARENTHESIS [ ) ]  on line 3...
 LEXER --> | T_CLOSING_BRACE [ } ]  on line 4...
 LEXER --> | T_EOPS [ $ ]  on line 4...

Lex Completed With 0 WARNING(S) and 0 ERROR(S)...
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Beginning Parsing Session...

 PARSER --> | PASSED! Expecting [ T_OPENING_BRACE ] found
[ T_OPENING_BRACE ] on line 2...
 PARSER --> | PASSED! Expecting [ Statement ] found [ Statement ] on line
3...
 PARSER --> | PASSED! Expecting [ PrintStatement ] found [ T_PRINT ] on line
3...
 PARSER --> | PASSED! Expecting [ T_PRINT ] found [ T_PRINT ] on line 3...
 PARSER --> | PASSED! Expecting [ T_OPENING_PARENTHESIS ] found
[ T_OPENING_PARENTHESIS ] on line 3...
 PARSER --> | PASSED! Expecting [ Expr ] found [ StringExpr ] on line 3...
 PARSER --> | PASSED! Expecting [ T_QUOTE ] found [ T_QUOTE ] on line 3...
 PARSER --> | PASSED! Expecting [ T_CHAR ] found [ T_CHAR ] on line 3...
 PARSER --> | PASSED! Expecting [ T_CHAR ] found [ t ] on line 3...
 PARSER --> | PASSED! Expecting [ T_CHAR ] found [ T_CHAR ] on line 3...
 PARSER --> | PASSED! Expecting [ T_CHAR ] found [ h ] on line 3...
 PARSER --> | PASSED! Expecting [ T_CHAR ] found [ T_CHAR ] on line 3...
 PARSER --> | PASSED! Expecting [ T_CHAR ] found [ e ] on line 3...
 PARSER --> | PASSED! Expecting [ T_CHAR ] found [ T_CHAR ] on line 3...
 PARSER --> | PASSED! Expecting [ T_CHAR ] found [ r ] on line 3...
 PARSER --> | PASSED! Expecting [ T_CHAR ] found [ T_CHAR ] on line 3...
 PARSER --> | PASSED! Expecting [ T_CHAR ] found [ e ] on line 3...
 PARSER --> | PASSED! Expecting [ T_CHAR ] found [ T_CHAR ] on line 3...
 PARSER --> | PASSED! Expecting [ T_CHAR ] found [   ] on line 3...
 PARSER --> | PASSED! Expecting [ T_CHAR ] found [ T_CHAR ] on line 3...
 PARSER --> | PASSED! Expecting [ T_CHAR ] found [ i ] on line 3...
 PARSER --> | PASSED! Expecting [ T_CHAR ] found [ T_CHAR ] on line 3...
 PARSER --> | PASSED! Expecting [ T_CHAR ] found [ s ] on line 3...
 PARSER --> | PASSED! Expecting [ T_CHAR ] found [ T_CHAR ] on line 3...
 PARSER --> | PASSED! Expecting [ T_CHAR ] found [   ] on line 3...
 PARSER --> | PASSED! Expecting [ T_CHAR ] found [ T_CHAR ] on line 3...
 PARSER --> | PASSED! Expecting [ T_CHAR ] found [ n ] on line 3...
 PARSER --> | PASSED! Expecting [ T_CHAR ] found [ T_CHAR ] on line 3...
 PARSER --> | PASSED! Expecting [ T_CHAR ] found [ o ] on line 3...
 PARSER --> | PASSED! Expecting [ T_CHAR ] found [ T_CHAR ] on line 3...
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	PARSER --> | PASSED! Expecting [T_CHAR] found [ ] on line 3... PARSER --> | PASSED! Expecting [T_CHAR] found [T_CHAR] on line 3... PARSER --> | PASSED! Expecting [T_CHAR] found [s] on line 3... PARSER --> | PASSED! Expecting [T_CHAR] found [T_CHAR] on line 3... PARSER --> | PASSED! Expecting [T_CHAR] found [p] on line 3... PARSER --> | PASSED! Expecting [T_CHAR] found [T_CHAR] on line 3... PARSER --> | PASSED! Expecting [T_CHAR] found [o] on line 3... PARSER --> | PASSED! Expecting [T_CHAR] found [T_CHAR] on line 3... PARSER --> | PASSED! Expecting [T_CHAR] found [o] on line 3... PARSER --> | PASSED! Expecting [T_CHAR] found [T_CHAR] on line 3... PARSER --> | PASSED! Expecting [T_CHAR] found [n] on line 3... PARSER --> | PASSED! λ production on line 3... PARSER --> | PASSED! Expecting [T_QUOTE] found [T_QUOTE] on line 3... PARSER --> | PASSED! Expecting [T_CLOSING_PARENTHESIS] found [T_CLOSING_PARENTHESIS] on line 3... PARSER --> | PASSED! λ production on line 4... PARSER --> | PASSED! Expecting [T_CLOSING_BRACE] found [T_CLOSING_BRACE] on line 4... PARSER --> | PASSED! Expecting [T_EOPS] found [T_EOPS] on line 4... Parse Completed With 0 WARNING(S) and 0 ERROR(S)... ____ Beginning Semantic Analysis Session... Semantic Analysis Completed With 0 WARNING(S) and 0 ERROR(S)... ____

{
print((false == true))
print((true   != true))
print((false != false))
print((false != true))
}
	Beginning Lexing Session... *Stings Treated As CharList*
	
	LEXER --> | T_OPENING_BRACE [{] on line 1...
	LEXER --> | T_PRINT [print] on line 2...
	LEXER --> | T_OPENING_PARENTHESIS [( ] on line 2...
	LEXER --> | T_OPENING_PARENTHESIS [( ] on line 2...
	LEXER --> | T_BOOLEAN_VALUE [false] on line 2...
	LEXER --> | T_EQUALITY_OP [==] on line 2...
	LEXER --> | T_BOOLEAN_VALUE [true] on line 2...
	LEXER --> | T_CLOSING_PARENTHESIS [ )] on line 2...
	LEXER --> | T_CLOSING_PARENTHESIS [ )] on line 2...
	LEXER --> | T_PRINT [print] on line 3...
	LEXER --> | T_OPENING_PARENTHESIS [( ] on line 3...
	LEXER --> | T_OPENING_PARENTHESIS [( ] on line 3...
	LEXER --> | T_BOOLEAN_VALUE [true] on line 3...
	LEXER --> | T_INEQUALITY_OP [!=] on line 3...
	LEXER --> | T_BOOLEAN_VALUE [true] on line 3...
	LEXER --> | T_CLOSING_PARENTHESIS [ )] on line 3...
	LEXER --> | T_CLOSING_PARENTHESIS [ )] on line 3...

```
 LEXER --> | T_PRINT [ print ]  on line 4...
 LEXER --> | T_OPENING_PARENTHESIS [ ( ]  on line 4...
 LEXER --> | T_OPENING_PARENTHESIS [ ( ]  on line 4...
 LEXER --> | T_BOOLEAN_VALUE [ false ]  on line 4...
 LEXER --> | T_INEQUALITY_OP [ != ]  on line 4...
 LEXER --> | T_BOOLEAN_VALUE [ false ]  on line 4...
 LEXER --> | T_CLOSING_PARENTHESIS [ ) ]  on line 4...
 LEXER --> | T_CLOSING_PARENTHESIS [ ) ]  on line 4...
 LEXER --> | T_PRINT [ print ]  on line 5...
 LEXER --> | T_OPENING_PARENTHESIS [ ( ]  on line 5...
 LEXER --> | T_OPENING_PARENTHESIS [ ( ]  on line 5...
 LEXER --> | T_BOOLEAN_VALUE [ false ]  on line 5...
 LEXER --> | T_INEQUALITY_OP [ != ]  on line 5...
 LEXER --> | T_BOOLEAN_VALUE [ true ]  on line 5...
 LEXER --> | T_CLOSING_PARENTHESIS [ ) ]  on line 5...
 LEXER --> | T_CLOSING_PARENTHESIS [ ) ]  on line 5...
 LEXER --> | T_CLOSING_BRACE [ } ]  on line 6...
 LEXER --> | T_EOPS [ $ ]  on line 6...

Lex Completed With 0 WARNING(S) and 0 ERROR(S)...
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Beginning Parsing Session...

 PARSER --> | PASSED! Expecting [ T_OPENING_BRACE ] found
[ T_OPENING_BRACE ] on line 1...
 PARSER --> | PASSED! Expecting [ Statement ] found [ Statement ] on line
2...
 PARSER --> | PASSED! Expecting [ PrintStatement ] found [ T_PRINT ] on line
2...
 PARSER --> | PASSED! Expecting [ T_PRINT ] found [ T_PRINT ] on line 2...
 PARSER --> | PASSED! Expecting [ T_OPENING_PARENTHESIS ] found
[ T_OPENING_PARENTHESIS ] on line 2...
 PARSER --> | PASSED! Expecting [ Expr ] found [ BooleanExpr ] on line 2...
 PARSER --> | PASSED! Expecting [ T_OPENING_PARENTHESIS ] found [ ( ] on
line 2...
 PARSER --> | PASSED! Expecting [ Expr ] found [ BooleanExpr ] on line 2...
 PARSER --> | PASSED! Expecting [ T_BOOLEAN_VALUE ] found
[ T_BOOLEAN_VALUE ] on line 2...
 PARSER --> | PASSED! Expecting [ T_BOOLEAN_VALUE ] found [ false ] on
line 2...
 PARSER --> | PASSED! Expecting [ T_EQUALITY_OP ] found [ == ] on line 2...
 PARSER --> | PASSED! Expecting [ Expr ] found [ BooleanExpr ] on line 2...
 PARSER --> | PASSED! Expecting [ T_BOOLEAN_VALUE ] found
[ T_BOOLEAN_VALUE ] on line 2...
 PARSER --> | PASSED! Expecting [ T_BOOLEAN_VALUE ] found [ true ] on line
2...
```

	PARSER --> | PASSED! Expecting [T_CLOSING_PARENTHESIS] found [ )] on line 2... PARSER --> | PASSED! Expecting [T_CLOSING_PARENTHESIS] found [T_CLOSING_PARENTHESIS] on line 2... PARSER --> | PASSED! Expecting [StatementList] found [Statement] on line 3... PARSER --> | PASSED! Expecting [Statement] found [Statement] on line 3... PARSER --> | PASSED! Expecting [PrintStatement] found [T_PRINT] on line 3... PARSER --> | PASSED! Expecting [T_PRINT] found [T_PRINT] on line 3... PARSER --> | PASSED! Expecting [T_OPENING_PARENTHESIS] found [T_OPENING_PARENTHESIS] on line 3... PARSER --> | PASSED! Expecting [Expr] found [BooleanExpr] on line 3... PARSER --> | PASSED! Expecting [T_OPENING_PARENTHESIS] found [( ] on line 3... PARSER --> | PASSED! Expecting [Expr] found [BooleanExpr] on line 3... PARSER --> | PASSED! Expecting [T_BOOLEAN_VALUE] found [T_BOOLEAN_VALUE] on line 3... PARSER --> | PASSED! Expecting [T_BOOLEAN_VALUE] found [true] on line 3... PARSER --> | PASSED! Expecting [T_INEQUALITY_OP] found [!=] on line 3... PARSER --> | PASSED! Expecting [Expr] found [BooleanExpr] on line 3... PARSER --> | PASSED! Expecting [T_BOOLEAN_VALUE] found [T_BOOLEAN_VALUE] on line 3... PARSER --> | PASSED! Expecting [T_BOOLEAN_VALUE] found [true] on line 3... PARSER --> | PASSED! Expecting [T_CLOSING_PARENTHESIS] found [ )] on line 3... PARSER --> | PASSED! Expecting [T_CLOSING_PARENTHESIS] found [T_CLOSING_PARENTHESIS] on line 3... PARSER --> | PASSED! Expecting [StatementList] found [Statement] on line 4... PARSER --> | PASSED! Expecting [Statement] found [Statement] on line 4... PARSER --> | PASSED! Expecting [PrintStatement] found [T_PRINT] on line 4... PARSER --> | PASSED! Expecting [T_PRINT] found [T_PRINT] on line 4... PARSER --> | PASSED! Expecting [T_OPENING_PARENTHESIS] found [T_OPENING_PARENTHESIS] on line 4... PARSER --> | PASSED! Expecting [Expr] found [BooleanExpr] on line 4... PARSER --> | PASSED! Expecting [T_OPENING_PARENTHESIS] found [( ] on line 4... PARSER --> | PASSED! Expecting [Expr] found [BooleanExpr] on line 4... PARSER --> | PASSED! Expecting [T_BOOLEAN_VALUE] found [T_BOOLEAN_VALUE] on line 4... PARSER --> | PASSED! Expecting [T_BOOLEAN_VALUE] found [false] on line 4...

```
 PARSER --> | PASSED! Expecting [ T_INEQUALITY_OP ] found [ != ] on line 4...
 PARSER --> | PASSED! Expecting [ Expr ] found [ BooleanExpr ] on line 4...
 PARSER --> | PASSED! Expecting [ T_BOOLEAN_VALUE ] found [ T_BOOLEAN_VALUE ] on line 4...
 PARSER --> | PASSED! Expecting [ T_BOOLEAN_VALUE ] found [ false ] on line 4...
 PARSER --> | PASSED! Expecting [ T_CLOSING_PARENTHESIS ] found [ ) ] on line 4...
 PARSER --> | PASSED! Expecting [ T_CLOSING_PARENTHESIS ] found [ T_CLOSING_PARENTHESIS ] on line 4...
 PARSER --> | PASSED! Expecting [ StatementList ] found [ Statement ] on line 5...
 PARSER --> | PASSED! Expecting [ Statement ] found [ Statement ] on line 5...
 PARSER --> | PASSED! Expecting [ PrintStatement ] found [ T_PRINT ] on line 5...
 PARSER --> | PASSED! Expecting [ T_PRINT ] found [ T_PRINT ] on line 5...
 PARSER --> | PASSED! Expecting [ T_OPENING_PARENTHESIS ] found [ T_OPENING_PARENTHESIS ] on line 5...
 PARSER --> | PASSED! Expecting [ Expr ] found [ BooleanExpr ] on line 5...
 PARSER --> | PASSED! Expecting [ T_OPENING_PARENTHESIS ] found [ ( ] on line 5...
 PARSER --> | PASSED! Expecting [ Expr ] found [ BooleanExpr ] on line 5...
 PARSER --> | PASSED! Expecting [ T_BOOLEAN_VALUE ] found [ T_BOOLEAN_VALUE ] on line 5...
 PARSER --> | PASSED! Expecting [ T_BOOLEAN_VALUE ] found [ false ] on line 5...
 PARSER --> | PASSED! Expecting [ T_INEQUALITY_OP ] found [ != ] on line 5...
 PARSER --> | PASSED! Expecting [ Expr ] found [ BooleanExpr ] on line 5...
 PARSER --> | PASSED! Expecting [ T_BOOLEAN_VALUE ] found [ T_BOOLEAN_VALUE ] on line 5...
 PARSER --> | PASSED! Expecting [ T_BOOLEAN_VALUE ] found [ true ] on line 5...
 PARSER --> | PASSED! Expecting [ T_CLOSING_PARENTHESIS ] found [ ) ] on line 5...
 PARSER --> | PASSED! Expecting [ T_CLOSING_PARENTHESIS ] found [ T_CLOSING_PARENTHESIS ] on line 5...
 PARSER --> | PASSED! λ production on line 6...
 PARSER --> | PASSED! Expecting [ T_CLOSING_BRACE ] found [ T_CLOSING_BRACE ] on line 6...
 PARSER --> | PASSED! Expecting [ T_EOPS ] found [ T_EOPS ] on line 6...

Parse Completed With 0 WARNING(S) and 0 ERROR(S)...
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Beginning Semantic Analysis Session...
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PARSER Test Cases and Results

	Semantic Analysis Completed With 0 WARNING(S) and 0 ERROR(S)... ____

{
int a
int b
 	
a = 0
b = 0
 	
while (a != 3) {
print(a)
while (b != 3) {
 	
print(b)
b = 1 + b
if (b == 2) {
 	
print("there is no spoon")
}
}
 	
b = 0
a = 1 + a
}
}$
	Beginning Lexing Session... *Stings Treated As CharList*
	
	LEXER --> | T_OPENING_BRACE [{] on line 2...
	LEXER --> | T_VARIABLE_TYPE [int] on line 4...
	LEXER --> | T_ID [a] on line 4...
	LEXER --> | T_VARIABLE_TYPE [int] on line 5...
	LEXER --> | T_ID [b] on line 5...
	LEXER --> | T_ID [a] on line 7...
	LEXER --> | T_ASSIGNMENT_OP [=] on line 7...
	LEXER --> | T_DIGIT [0] on line 7...
	LEXER --> | T_ID [b] on line 8...
	LEXER --> | T_ASSIGNMENT_OP [=] on line 8...
	LEXER --> | T_DIGIT [0] on line 8...
	LEXER --> | T_WHILE [while] on line 11...
	LEXER --> | T_OPENING_PARENTHESIS [( ] on line 11...
	LEXER --> | T_ID [a] on line 11...
	LEXER --> | T_INEQUALITY_OP [!=] on line 11...
	LEXER --> | T_DIGIT [3] on line 11...
	LEXER --> | T_CLOSING_PARENTHESIS [ )] on line 11...
	LEXER --> | T_OPENING_BRACE [{] on line 11...
	LEXER --> | T_PRINT [print] on line 12...
	LEXER --> | T_OPENING_PARENTHESIS [( ] on line 12...
	LEXER --> | T_ID [a] on line 12...
	LEXER --> | T_CLOSING_PARENTHESIS [ )] on line 12...
	LEXER --> | T_WHILE [while] on line 13...
	LEXER --> | T_OPENING_PARENTHESIS [( ] on line 13...
	LEXER --> | T_ID [b] on line 13...
	LEXER --> | T_INEQUALITY_OP [!=] on line 13...
	LEXER --> | T_DIGIT [3] on line 13...
	LEXER --> | T_CLOSING_PARENTHESIS [ )] on line 13...
	LEXER --> | T_OPENING_BRACE [{] on line 13...
	LEXER --> | T_PRINT [print] on line 14...
	LEXER --> | T_OPENING_PARENTHESIS [( ] on line 14...
	LEXER --> | T_ID [b] on line 14...
	LEXER --> | T_CLOSING_PARENTHESIS [ )] on line 14...
	LEXER --> | T_ID [b] on line 15...
	LEXER --> | T_ASSIGNMENT_OP [=] on line 15...
	LEXER --> | T_DIGIT [1] on line 15...
	LEXER --> | T_ADDITION_OP [+] on line 15...
	LEXER --> | T_ID [b] on line 15...
	LEXER --> | T_IF [if] on line 16...
	LEXER --> | T_OPENING_PARENTHESIS [( ] on line 16...
	LEXER --> | T_ID [b] on line 16...
	LEXER --> | T_EQUALITY_OP [==] on line 16...
	LEXER --> | T_DIGIT [2] on line 16...

```
 LEXER --> | T_CLOSING_PARENTHESIS [ ) ]  on line 16...
 LEXER --> | T_OPENING_BRACE [ { ]  on line 16...
 LEXER --> | T_PRINT [ print ]  on line 18...
 LEXER --> | T_OPENING_PARENTHESIS [ ( ]  on line 18...
 LEXER --> | T_QUOTE [ " ]  on line 18...
 LEXER --> | T_CHAR [ t ]  on line 18...
 LEXER --> | T_CHAR [ h ]  on line 18...
 LEXER --> | T_CHAR [ e ]  on line 18...
 LEXER --> | T_CHAR [ r ]  on line 18...
 LEXER --> | T_CHAR [ e ]  on line 18...
 LEXER --> | T_CHAR [   ]  on line 18...
 LEXER --> | T_CHAR [ i ]  on line 18...
 LEXER --> | T_CHAR [ s ]  on line 18...
 LEXER --> | T_CHAR [   ]  on line 18...
 LEXER --> | T_CHAR [ n ]  on line 18...
 LEXER --> | T_CHAR [ o ]  on line 18...
 LEXER --> | T_CHAR [   ]  on line 18...
 LEXER --> | T_CHAR [ s ]  on line 18...
 LEXER --> | T_CHAR [ p ]  on line 18...
 LEXER --> | T_CHAR [ o ]  on line 18...
 LEXER --> | T_CHAR [ o ]  on line 18...
 LEXER --> | T_CHAR [ n ]  on line 18...
 LEXER --> | T_QUOTE [ " ]  on line 18...
 LEXER --> | T_CLOSING_PARENTHESIS [ ) ]  on line 18...
 LEXER --> | T_CLOSING_BRACE [ } ]  on line 19...
 LEXER --> | T_CLOSING_BRACE [ } ]  on line 20...
 LEXER --> | T_ID [ b ]  on line 22...
 LEXER --> | T_ASSIGNMENT_OP [ = ]  on line 22...
 LEXER --> | T_DIGIT [ 0 ]  on line 22...
 LEXER --> | T_ID [ a ]  on line 23...
 LEXER --> | T_ASSIGNMENT_OP [ = ]  on line 23...
 LEXER --> | T_DIGIT [ 1 ]  on line 23...
 LEXER --> | T_ADDITION_OP [ + ]  on line 23...
 LEXER --> | T_ID [ a ]  on line 23...
 LEXER --> | T_CLOSING_BRACE [ } ]  on line 24...
 LEXER --> | T_CLOSING_BRACE [ } ]  on line 25...
 LEXER --> | T_EOPS [ $ ]  on line 25...

Lex Completed With 0 WARNING(S) and 0 ERROR(S)...
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Beginning Parsing Session...

 PARSER --> | PASSED! Expecting [ T_OPENING_BRACE ] found
[ T_OPENING_BRACE ] on line 2...
 PARSER --> | PASSED! Expecting [ Statement ] found [ Statement ] on line
4...
```

	PARSER --> | PASSED! Expecting [VarDecl] found [T_VARIABLE_TYPE] on line 4... PARSER --> | PASSED! Expecting [T_VARIABLE_TYPE] found [T_VARIABLE_TYPE] on line 4... PARSER --> | PASSED! Expecting [T_VARIABLE_TYPE] found [int] on line 4... PARSER --> | PASSED! Expecting [T_ID] found [T_ID] on line 4... PARSER --> | PASSED! Expecting [T_ID] found [a] on line 4... PARSER --> | PASSED! Expecting [StatementList] found [Statement] on line 5... PARSER --> | PASSED! Expecting [Statement] found [Statement] on line 5... PARSER --> | PASSED! Expecting [VarDecl] found [T_VARIABLE_TYPE] on line 5... PARSER --> | PASSED! Expecting [T_VARIABLE_TYPE] found [T_VARIABLE_TYPE] on line 5... PARSER --> | PASSED! Expecting [T_VARIABLE_TYPE] found [int] on line 5... PARSER --> | PASSED! Expecting [T_ID] found [T_ID] on line 5... PARSER --> | PASSED! Expecting [T_ID] found [b] on line 5... PARSER --> | PASSED! Expecting [StatementList] found [Statement] on line 7... PARSER --> | PASSED! Expecting [Statement] found [Statement] on line 7... PARSER --> | PASSED! Expecting [AssignmentStatement] found [T_ID] on line 7... PARSER --> | PASSED! Expecting [T_ID] found [T_ID] on line 7... PARSER --> | PASSED! Expecting [T_ID] found [a] on line 7... PARSER --> | PASSED! Expecting [T_ASSIGNMENT_OP] found [=] on line 7... PARSER --> | PASSED! Expecting [Expr] found [IntExpr] on line 7... PARSER --> | PASSED! Expecting [IntExpr] found [IntExpr] on line 7... PARSER --> | PASSED! Expecting [T_DIGIT] found [0] on line 7... PARSER --> | PASSED! Expecting [StatementList] found [Statement] on line 8... PARSER --> | PASSED! Expecting [Statement] found [Statement] on line 8... PARSER --> | PASSED! Expecting [AssignmentStatement] found [T_ID] on line 8... PARSER --> | PASSED! Expecting [T_ID] found [T_ID] on line 8... PARSER --> | PASSED! Expecting [T_ID] found [b] on line 8... PARSER --> | PASSED! Expecting [T_ASSIGNMENT_OP] found [=] on line 8... PARSER --> | PASSED! Expecting [Expr] found [IntExpr] on line 8... PARSER --> | PASSED! Expecting [IntExpr] found [IntExpr] on line 8... PARSER --> | PASSED! Expecting [T_DIGIT] found [0] on line 8... PARSER --> | PASSED! Expecting [StatementList] found [Statement] on line 11...

	PARSER --> | PASSED! Expecting [Statement] found [Statement] on line 11... PARSER --> | PASSED! Expecting [WhileStatement] found [T_WHILE] on line 11... PARSER --> | PASSED! Expecting [T_WHILE] found [while] on line 11... PARSER --> | PASSED! Expecting [T_OPENING_PARENTHESIS] found [( ] on line 11... PARSER --> | PASSED! Expecting [Expr] found [Id] on line 11... PARSER --> | PASSED! Expecting [T_ID] found [a] on line 11... PARSER --> | PASSED! Expecting [T_INEQUALITY_OP] found [!=] on line 11... PARSER --> | PASSED! Expecting [Expr] found [IntExpr] on line 11... PARSER --> | PASSED! Expecting [IntExpr] found [IntExpr] on line 11... PARSER --> | PASSED! Expecting [T_DIGIT] found [3] on line 11... PARSER --> | PASSED! Expecting [T_CLOSING_PARENTHESIS] found [ )] on line 11... PARSER --> | PASSED! Expecting [T_OPENING_BRACE] found [T_OPENING_BRACE] on line 11... PARSER --> | PASSED! Expecting [Statement] found [Statement] on line 12... PARSER --> | PASSED! Expecting [PrintStatement] found [T_PRINT] on line 12... PARSER --> | PASSED! Expecting [T_PRINT] found [T_PRINT] on line 12... PARSER --> | PASSED! Expecting [T_OPENING_PARENTHESIS] found [T_OPENING_PARENTHESIS] on line 12... PARSER --> | PASSED! Expecting [Expr] found [Id] on line 12... PARSER --> | PASSED! Expecting [T_ID] found [a] on line 12... PARSER --> | PASSED! Expecting [T_CLOSING_PARENTHESIS] found [T_CLOSING_PARENTHESIS] on line 12... PARSER --> | PASSED! Expecting [StatementList] found [Statement] on line 13... PARSER --> | PASSED! Expecting [Statement] found [Statement] on line 13... PARSER --> | PASSED! Expecting [WhileStatement] found [T_WHILE] on line 13... PARSER --> | PASSED! Expecting [T_WHILE] found [while] on line 13... PARSER --> | PASSED! Expecting [T_OPENING_PARENTHESIS] found [( ] on line 13... PARSER --> | PASSED! Expecting [Expr] found [Id] on line 13... PARSER --> | PASSED! Expecting [T_ID] found [b] on line 13... PARSER --> | PASSED! Expecting [T_INEQUALITY_OP] found [!=] on line 13... PARSER --> | PASSED! Expecting [Expr] found [IntExpr] on line 13... PARSER --> | PASSED! Expecting [IntExpr] found [IntExpr] on line 13... PARSER --> | PASSED! Expecting [T_DIGIT] found [3] on line 13... PARSER --> | PASSED! Expecting [T_CLOSING_PARENTHESIS] found [ )] on line 13...

	PARSER --> | PASSED! Expecting [T_OPENING_BRACE] found [T_OPENING_BRACE] on line 13... PARSER --> | PASSED! Expecting [Statement] found [Statement] on line 14... PARSER --> | PASSED! Expecting [PrintStatement] found [T_PRINT] on line 14... PARSER --> | PASSED! Expecting [T_PRINT] found [T_PRINT] on line 14... PARSER --> | PASSED! Expecting [T_OPENING_PARENTHESIS] found [T_OPENING_PARENTHESIS] on line 14... PARSER --> | PASSED! Expecting [Expr] found [Id] on line 14... PARSER --> | PASSED! Expecting [T_ID] found [b] on line 14... PARSER --> | PASSED! Expecting [T_CLOSING_PARENTHESIS] found [T_CLOSING_PARENTHESIS] on line 14... PARSER --> | PASSED! Expecting [StatementList] found [Statement] on line 15... PARSER --> | PASSED! Expecting [Statement] found [Statement] on line 15... PARSER --> | PASSED! Expecting [AssignmentStatement] found [T_ID] on line 15... PARSER --> | PASSED! Expecting [T_ID] found [T_ID] on line 15... PARSER --> | PASSED! Expecting [T_ID] found [b] on line 15... PARSER --> | PASSED! Expecting [T_ASSIGNMENT_OP] found [=] on line 15... PARSER --> | PASSED! Expecting [Expr] found [IntExpr] on line 15... PARSER --> | PASSED! Expecting [IntExpr] found [T_DIGIT] on line 15... PARSER --> | PASSED! Expecting [T_DIGIT] found [1] on line 15... PARSER --> | PASSED! Expecting [T_ADDITION_OP] found [+] on line 15... PARSER --> | PASSED! Expecting [Expr] found [Id] on line 15... PARSER --> | PASSED! Expecting [T_ID] found [b] on line 15... PARSER --> | PASSED! Expecting [StatementList] found [Statement] on line 16... PARSER --> | PASSED! Expecting [Statement] found [Statement] on line 16... PARSER --> | PASSED! Expecting [IfStatement] found [T_IF] on line 16... PARSER --> | PASSED! Expecting [T_IF] found [if] on line 16... PARSER --> | PASSED! Expecting [T_OPENING_PARENTHESIS] found [( ] on line 16... PARSER --> | PASSED! Expecting [Expr] found [Id] on line 16... PARSER --> | PASSED! Expecting [T_ID] found [b] on line 16... PARSER --> | PASSED! Expecting [T_EQUALITY_OP] found [==] on line 16... PARSER --> | PASSED! Expecting [Expr] found [IntExpr] on line 16... PARSER --> | PASSED! Expecting [IntExpr] found [IntExpr] on line 16... PARSER --> | PASSED! Expecting [T_DIGIT] found [2] on line 16... PARSER --> | PASSED! Expecting [T_CLOSING_PARENTHESIS] found [ )] on line 16... PARSER --> | PASSED! Expecting [T_OPENING_BRACE] found [T_OPENING_BRACE] on line 16...

	PARSER --> | PASSED! Expecting [Statement] found [Statement] on line 18... PARSER --> | PASSED! Expecting [PrintStatement] found [T_PRINT] on line 18... PARSER --> | PASSED! Expecting [T_PRINT] found [T_PRINT] on line 18... PARSER --> | PASSED! Expecting [T_OPENING_PARENTHESIS] found [T_OPENING_PARENTHESIS] on line 18... PARSER --> | PASSED! Expecting [Expr] found [StringExpr] on line 18... PARSER --> | PASSED! Expecting [T_QUOTE] found [T_QUOTE] on line 18... PARSER --> | PASSED! Expecting [T_CHAR] found [T_CHAR] on line 18... PARSER --> | PASSED! Expecting [T_CHAR] found [t] on line 18... PARSER --> | PASSED! Expecting [T_CHAR] found [T_CHAR] on line 18... PARSER --> | PASSED! Expecting [T_CHAR] found [h] on line 18... PARSER --> | PASSED! Expecting [T_CHAR] found [T_CHAR] on line 18... PARSER --> | PASSED! Expecting [T_CHAR] found [e] on line 18... PARSER --> | PASSED! Expecting [T_CHAR] found [T_CHAR] on line 18... PARSER --> | PASSED! Expecting [T_CHAR] found [r] on line 18... PARSER --> | PASSED! Expecting [T_CHAR] found [T_CHAR] on line 18... PARSER --> | PASSED! Expecting [T_CHAR] found [e] on line 18... PARSER --> | PASSED! Expecting [T_CHAR] found [T_CHAR] on line 18... PARSER --> | PASSED! Expecting [T_CHAR] found [ ] on line 18... PARSER --> | PASSED! Expecting [T_CHAR] found [T_CHAR] on line 18... PARSER --> | PASSED! Expecting [T_CHAR] found [i] on line 18... PARSER --> | PASSED! Expecting [T_CHAR] found [T_CHAR] on line 18... PARSER --> | PASSED! Expecting [T_CHAR] found [s] on line 18... PARSER --> | PASSED! Expecting [T_CHAR] found [T_CHAR] on line 18... PARSER --> | PASSED! Expecting [T_CHAR] found [ ] on line 18... PARSER --> | PASSED! Expecting [T_CHAR] found [T_CHAR] on line 18... PARSER --> | PASSED! Expecting [T_CHAR] found [n] on line 18... PARSER --> | PASSED! Expecting [T_CHAR] found [T_CHAR] on line 18... PARSER --> | PASSED! Expecting [T_CHAR] found [o] on line 18... PARSER --> | PASSED! Expecting [T_CHAR] found [T_CHAR] on line 18... PARSER --> | PASSED! Expecting [T_CHAR] found [ ] on line 18... PARSER --> | PASSED! Expecting [T_CHAR] found [T_CHAR] on line 18... PARSER --> | PASSED! Expecting [T_CHAR] found [s] on line 18... PARSER --> | PASSED! Expecting [T_CHAR] found [T_CHAR] on line 18... PARSER --> | PASSED! Expecting [T_CHAR] found [p] on line 18... PARSER --> | PASSED! Expecting [T_CHAR] found [T_CHAR] on line 18... PARSER --> | PASSED! Expecting [T_CHAR] found [o] on line 18... PARSER --> | PASSED! Expecting [T_CHAR] found [T_CHAR] on line 18... PARSER --> | PASSED! Expecting [T_CHAR] found [o] on line 18... PARSER --> | PASSED! Expecting [T_CHAR] found [T_CHAR] on line 18... PARSER --> | PASSED! Expecting [T_CHAR] found [n] on line 18... PARSER --> | PASSED! λ production on line 18... PARSER --> | PASSED! Expecting [T_QUOTE] found [T_QUOTE] on line 18... PARSER --> | PASSED! Expecting [T_CLOSING_PARENTHESIS] found [T_CLOSING_PARENTHESIS] on line 18... PARSER --> | PASSED! λ production on line 19...

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 PARSER --> | PASSED! Expecting [ T_CLOSING_BRACE ] found [ T_CLOSING_BRACE ] on line 19...
 PARSER --> | PASSED! λ production on line 20...
 PARSER --> | PASSED! Expecting [ T_CLOSING_BRACE ] found [ T_CLOSING_BRACE ] on line 20...
 PARSER --> | PASSED! Expecting [ StatementList ] found [ Statement ] on line 22...
 PARSER --> | PASSED! Expecting [ Statement ] found [ Statement ] on line 22...
 PARSER --> | PASSED! Expecting [ AssignmentStatement ] found [ T_ID ] on line 22...
 PARSER --> | PASSED! Expecting [ T_ID ] found [ T_ID ] on line 22...
 PARSER --> | PASSED! Expecting [ T_ID ] found [ b ] on line 22...
 PARSER --> | PASSED! Expecting [ T_ASSIGNMENT_OP ] found [ = ] on line 22...
 PARSER --> | PASSED! Expecting [ Expr ] found [ IntExpr ] on line 22...
 PARSER --> | PASSED! Expecting [ IntExpr ] found [ IntExpr ] on line 22...
 PARSER --> | PASSED! Expecting [ T_DIGIT ] found [ 0 ] on line 22...
 PARSER --> | PASSED! Expecting [ StatementList ] found [ Statement ] on line 23...
 PARSER --> | PASSED! Expecting [ Statement ] found [ Statement ] on line 23...
 PARSER --> | PASSED! Expecting [ AssignmentStatement ] found [ T_ID ] on line 23...
 PARSER --> | PASSED! Expecting [ T_ID ] found [ T_ID ] on line 23...
 PARSER --> | PASSED! Expecting [ T_ID ] found [ a ] on line 23...
 PARSER --> | PASSED! Expecting [ T_ASSIGNMENT_OP ] found [ = ] on line 23...
 PARSER --> | PASSED! Expecting [ Expr ] found [ IntExpr ] on line 23...
 PARSER --> | PASSED! Expecting [ IntExpr ] found [ T_DIGIT ] on line 23...
 PARSER --> | PASSED! Expecting [ T_DIGIT ] found [ 1 ] on line 23...
 PARSER --> | PASSED! Expecting [ T_ADDITION_OP ] found [ + ] on line 23...
 PARSER --> | PASSED! Expecting [ Expr ] found [ Id ] on line 23...
 PARSER --> | PASSED! Expecting [ T_ID ] found [ a ] on line 23...
 PARSER --> | PASSED! λ production on line 24...
 PARSER --> | PASSED! Expecting [ T_CLOSING_BRACE ] found [ T_CLOSING_BRACE ] on line 24...
 PARSER --> | PASSED! λ production on line 25...
 PARSER --> | PASSED! Expecting [ T_CLOSING_BRACE ] found [ T_CLOSING_BRACE ] on line 25...
 PARSER --> | PASSED! Expecting [ T_EOPS ] found [ T_EOPS ] on line 25...

Parse Completed With 0 WARNING(S) and 0 ERROR(S)...
______________________________________________________________________

Beginning Semantic Analysis Session...

 S.ANALYZE --> | PASSED! Variable [ a ] on line 7 has been declared...
 S.ANALYZE --> | PASSED! Variable [ a ] on line 7 has [ int ] type...
 S.ANALYZE --> | PASSED! Variable [ a ] on line 7 has been used...
 S.ANALYZE --> | PASSED! Variable [ a ] on line 7 has type int and is assigned the correct type: int...
 S.ANALYZE --> | PASSED! Variable [ b ] on line 8 has been declared...
 S.ANALYZE --> | PASSED! Variable [ b ] on line 8 has [ int ] type...
 S.ANALYZE --> | PASSED! Variable [ b ] on line 8 has been used...
 S.ANALYZE --> | PASSED! Variable [ b ] on line 8 has type int and is assigned the correct type: int...
 S.ANALYZE --> | PASSED! Variable [ a ] on line 11 has been declared...
 S.ANALYZE --> | PASSED! Variable [ a ] on line 11 has been used...
 S.ANALYZE --> | PASSED! Variable [ a ] on line 11 has [ int ] type...
 S.ANALYZE --> | PASSED! Variable [ a ] on line 12 has been declared...
 S.ANALYZE --> | PASSED! Variable [ a ] on line 12 has been used...
 S.ANALYZE --> | PASSED! Variable [ a ] on line 12 has [ int ] type...
 S.ANALYZE --> | PASSED! Variable [ b ] on line 13 has been declared...
 S.ANALYZE --> | PASSED! Variable [ b ] on line 13 has been used...
 S.ANALYZE --> | PASSED! Variable [ b ] on line 13 has [ int ] type...
 S.ANALYZE --> | PASSED! Variable [ b ] on line 14 has been declared...
 S.ANALYZE --> | PASSED! Variable [ b ] on line 14 has been used...
 S.ANALYZE --> | PASSED! Variable [ b ] on line 14 has [ int ] type...
 S.ANALYZE --> | PASSED! Variable [ b ] on line 15 has been declared...
 S.ANALYZE --> | PASSED! Variable [ b ] on line 15 has [ int ] type...
 S.ANALYZE --> | PASSED! Variable [ b ] on line 15 has been used...
 S.ANALYZE --> | PASSED! Variable [ b ] on line 15 has been declared...
 S.ANALYZE --> | PASSED! Variable [ b ] on line 15 has been used...
 S.ANALYZE --> | PASSED! Variable [ b ] on line 15 has [ int ] type...
 S.ANALYZE --> | PASSED! Variable [ b ] on line 15 has type int and is assigned the correct type: int...
 S.ANALYZE --> | PASSED! Variable [ b ] on line 16 has been declared...
 S.ANALYZE --> | PASSED! Variable [ b ] on line 16 has been used...
 S.ANALYZE --> | PASSED! Variable [ b ] on line 16 has [ int ] type...
 S.ANALYZE --> | PASSED! Variable [ b ] on line 22 has been declared...
 S.ANALYZE --> | PASSED! Variable [ b ] on line 22 has [ int ] type...
 S.ANALYZE --> | PASSED! Variable [ b ] on line 22 has been used...
 S.ANALYZE --> | PASSED! Variable [ b ] on line 22 has type int and is assigned the correct type: int...
 S.ANALYZE --> | PASSED! Variable [ a ] on line 23 has been declared...
 S.ANALYZE --> | PASSED! Variable [ a ] on line 23 has [ int ] type...
 S.ANALYZE --> | PASSED! Variable [ a ] on line 23 has been used...
 S.ANALYZE --> | PASSED! Variable [ a ] on line 23 has been declared...
 S.ANALYZE --> | PASSED! Variable [ a ] on line 23 has been used...
 S.ANALYZE --> | PASSED! Variable [ a ] on line 23 has [ int ] type...
 S.ANALYZE --> | PASSED! Variable [ a ] on line 23 has type int and is assigned the correct type: int...

Semantic Analysis Completed With 0 WARNING(S) and 0 ERROR(S)...
```

PARSER Test Cases and Results

Failed Lex Code Block	Log Results
{ **string a** **a = true** **}$**	Beginning Lexing Session... *Stings Treated As CharList* LEXER --> | T_OPENING_BRACE [{] on line 4... LEXER --> | T_VARIABLE_TYPE [string] on line 5... LEXER --> | T_ID [a] on line 5... LEXER --> | T_ID [a] on line 6... LEXER --> | T_ASSIGNMENT_OP [=] on line 6... LEXER --> | T_BOOLEAN_VALUE [true] on line 6... LEXER --> | T_CLOSING_BRACE [}] on line 7... LEXER --> | T_EOPS [$] on line 7... Lex Completed With 0 WARNING(S) and 0 ERROR(S)... ____ Beginning Parsing Session... PARSER --> | PASSED! Expecting [T_OPENING_BRACE] found [T_OPENING_BRACE] on line 4... PARSER --> | PASSED! Expecting [Statement] found [Statement] on line 5... PARSER --> | PASSED! Expecting [VarDecl] found [T_VARIABLE_TYPE] on line 5... PARSER --> | PASSED! Expecting [T_VARIABLE_TYPE] found [T_VARIABLE_TYPE] on line 5... PARSER --> | PASSED! Expecting [T_VARIABLE_TYPE] found [string] on line 5... PARSER --> | PASSED! Expecting [T_ID] found [T_ID] on line 5... PARSER --> | PASSED! Expecting [T_ID] found [a] on line 5... PARSER --> | PASSED! Expecting [StatementList] found [Statement] on line 6... PARSER --> | PASSED! Expecting [Statement] found [Statement] on line 6... PARSER --> | PASSED! Expecting [AssignmentStatement] found [T_ID] on line 6... PARSER --> | PASSED! Expecting [T_ID] found [T_ID] on line 6... PARSER --> | PASSED! Expecting [T_ID] found [a] on line 6... PARSER --> | PASSED! Expecting [T_ASSIGNMENT_OP] found [=] on line 6... PARSER --> | PASSED! Expecting [Expr] found [BooleanExpr] on line 6... PARSER --> | PASSED! Expecting [T_BOOLEAN_VALUE] found [T_BOOLEAN_VALUE] on line 6... PARSER --> | PASSED! Expecting [T_BOOLEAN_VALUE] found [true] on line 6... PARSER --> | PASSED! λ production on line 7...

	PARSER --> | PASSED! Expecting [T_CLOSING_BRACE] found [T_CLOSING_BRACE] on line 7... PARSER --> | PASSED! Expecting [T_EOPS] found [T_EOPS] on line 7... Parse Completed With 0 WARNING(S) and 0 ERROR(S)... Beginning Semantic Analysis Session... S.ANALYZE --> | PASSED! Variable [a] on line 6 has been declared... S.ANALYZE --> | PASSED! Variable [a] on line 6 has [string] type... S.ANALYZE --> | PASSED! Variable [a] on line 6 has been used... S.ANALYZE --> | ERROR! Variable [a] on line 6 has type string and is assigned the wrong type [boolean]... Semantic Analysis Failed With 0 WARNING(S) and 1 ERROR(S)...

{
int a
a = 1
 	
if("a" == 3) {
a = 2
}
 	
if(a != 1) {
a = 3
}
 	
if(a == 1) {
a = 3
}
}$
	Beginning Lexing Session... *Stings Treated As CharList*
	
	LEXER --> | T_OPENING_BRACE [{] on line 4...
	LEXER --> | T_VARIABLE_TYPE [int] on line 5...
	LEXER --> | T_ID [a] on line 5...
	LEXER --> | T_ID [a] on line 6...
	LEXER --> | T_ASSIGNMENT_OP [=] on line 6...
	LEXER --> | T_DIGIT [1] on line 6...
	LEXER --> | T_IF [if] on line 8...
	LEXER --> | T_OPENING_PARENTHESIS [( ] on line 8...
	LEXER --> | T_QUOTE ["] on line 8...
	LEXER --> | T_CHAR [a] on line 8...
	LEXER --> | T_QUOTE ["] on line 8...
	LEXER --> | T_EQUALITY_OP [==] on line 8...
	LEXER --> | T_DIGIT [3] on line 8...
	LEXER --> | T_CLOSING_PARENTHESIS [ )] on line 8...
	LEXER --> | T_OPENING_BRACE [{] on line 8...
	LEXER --> | T_ID [a] on line 9...
	LEXER --> | T_ASSIGNMENT_OP [=] on line 9...
	LEXER --> | T_DIGIT [2] on line 9...
	LEXER --> | T_CLOSING_BRACE [}] on line 10...
	LEXER --> | T_IF [if] on line 12...
	LEXER --> | T_OPENING_PARENTHESIS [( ] on line 12...
	LEXER --> | T_ID [a] on line 12...
	LEXER --> | T_INEQUALITY_OP [!=] on line 12...
	LEXER --> | T_DIGIT [1] on line 12...
	LEXER --> | T_CLOSING_PARENTHESIS [ )] on line 12...
	LEXER --> | T_OPENING_BRACE [{] on line 12...
	LEXER --> | T_ID [a] on line 13...
	LEXER --> | T_ASSIGNMENT_OP [=] on line 13...
	LEXER --> | T_DIGIT [3] on line 13...
	LEXER --> | T_CLOSING_BRACE [}] on line 14...

```
 LEXER --> | T_IF [ if ]  on line 16...
 LEXER --> | T_OPENING_PARENTHESIS [ ( ]  on line 16...
 LEXER --> | T_ID [ a ]  on line 16...
 LEXER --> | T_EQUALITY_OP [ == ]  on line 16...
 LEXER --> | T_DIGIT [ 1 ]  on line 16...
 LEXER --> | T_CLOSING_PARENTHESIS [ ) ]  on line 16...
 LEXER --> | T_OPENING_BRACE [ { ]  on line 16...
 LEXER --> | T_ID [ a ]  on line 17...
 LEXER --> | T_ASSIGNMENT_OP [ = ]  on line 17...
 LEXER --> | T_DIGIT [ 3 ]  on line 17...
 LEXER --> | T_CLOSING_BRACE [ } ]  on line 18...
 LEXER --> | T_CLOSING_BRACE [ } ]  on line 19...
 LEXER --> | T_EOPS [ $ ]  on line 19...

Lex Completed With 0 WARNING(S) and 0 ERROR(S)...
_______________________________________________________________

Beginning Parsing Session...

 PARSER --> | PASSED! Expecting [ T_OPENING_BRACE ] found [ T_OPENING_BRACE ] on line 4...
 PARSER --> | PASSED! Expecting [ Statement ] found [ Statement ] on line 5...
 PARSER --> | PASSED! Expecting [ VarDecl ] found [ T_VARIABLE_TYPE ] on line 5...
 PARSER --> | PASSED! Expecting [ T_VARIABLE_TYPE ] found [ T_VARIABLE_TYPE ] on line 5...
 PARSER --> | PASSED! Expecting [ T_VARIABLE_TYPE ] found [ int ] on line 5...
 PARSER --> | PASSED! Expecting [ T_ID ] found [ T_ID ] on line 5...
 PARSER --> | PASSED! Expecting [ T_ID ] found [ a ] on line 5...
 PARSER --> | PASSED! Expecting [ StatementList ] found [ Statement ] on line 6...
 PARSER --> | PASSED! Expecting [ Statement ] found [ Statement ] on line 6...
 PARSER --> | PASSED! Expecting [ AssignmentStatement ] found [ T_ID ] on line 6...
 PARSER --> | PASSED! Expecting [ T_ID ] found [ T_ID ] on line 6...
 PARSER --> | PASSED! Expecting [ T_ID ] found [ a ] on line 6...
 PARSER --> | PASSED! Expecting [ T_ASSIGNMENT_OP ] found [ = ] on line 6...
 PARSER --> | PASSED! Expecting [ Expr ] found [ IntExpr ] on line 6...
 PARSER --> | PASSED! Expecting [ IntExpr ] found [ IntExpr ] on line 6...
 PARSER --> | PASSED! Expecting [ T_DIGIT ] found [ 1 ] on line 6...
 PARSER --> | PASSED! Expecting [ StatementList ] found [ Statement ] on line 8...
 PARSER --> | PASSED! Expecting [ Statement ] found [ Statement ] on line 8...
```

	PARSER --> | PASSED! Expecting [IfStatement] found [T_IF] on line 8... PARSER --> | PASSED! Expecting [T_IF] found [if] on line 8... PARSER --> | PASSED! Expecting [T_OPENING_PARENTHESIS] found [( ] on line 8... PARSER --> | PASSED! Expecting [Expr] found [StringExpr] on line 8... PARSER --> | PASSED! Expecting [T_QUOTE] found [T_QUOTE] on line 8... PARSER --> | PASSED! Expecting [T_CHAR] found [T_CHAR] on line 8... PARSER --> | PASSED! Expecting [T_CHAR] found [a] on line 8... PARSER --> | PASSED! λ production on line 8... PARSER --> | PASSED! Expecting [T_QUOTE] found [T_QUOTE] on line 8... PARSER --> | PASSED! Expecting [T_EQUALITY_OP] found [==] on line 8... PARSER --> | PASSED! Expecting [Expr] found [IntExpr] on line 8... PARSER --> | PASSED! Expecting [IntExpr] found [IntExpr] on line 8... PARSER --> | PASSED! Expecting [T_DIGIT] found [3] on line 8... PARSER --> | PASSED! Expecting [T_CLOSING_PARENTHESIS] found [ )] on line 8... PARSER --> | PASSED! Expecting [T_OPENING_BRACE] found [T_OPENING_BRACE] on line 8... PARSER --> | PASSED! Expecting [Statement] found [Statement] on line 9... PARSER --> | PASSED! Expecting [AssignmentStatement] found [T_ID] on line 9... PARSER --> | PASSED! Expecting [T_ID] found [T_ID] on line 9... PARSER --> | PASSED! Expecting [T_ID] found [a] on line 9... PARSER --> | PASSED! Expecting [T_ASSIGNMENT_OP] found [=] on line 9... PARSER --> | PASSED! Expecting [Expr] found [IntExpr] on line 9... PARSER --> | PASSED! Expecting [IntExpr] found [IntExpr] on line 9... PARSER --> | PASSED! Expecting [T_DIGIT] found [2] on line 9... PARSER --> | PASSED! λ production on line 10... PARSER --> | PASSED! Expecting [T_CLOSING_BRACE] found [T_CLOSING_BRACE] on line 10... PARSER --> | PASSED! Expecting [StatementList] found [Statement] on line 12... PARSER --> | PASSED! Expecting [Statement] found [Statement] on line 12... PARSER --> | PASSED! Expecting [IfStatement] found [T_IF] on line 12... PARSER --> | PASSED! Expecting [T_IF] found [if] on line 12... PARSER --> | PASSED! Expecting [T_OPENING_PARENTHESIS] found [( ] on line 12... PARSER --> | PASSED! Expecting [Expr] found [Id] on line 12... PARSER --> | PASSED! Expecting [T_ID] found [a] on line 12... PARSER --> | PASSED! Expecting [T_INEQUALITY_OP] found [!=] on line 12... PARSER --> | PASSED! Expecting [Expr] found [IntExpr] on line 12... PARSER --> | PASSED! Expecting [IntExpr] found [IntExpr] on line 12... PARSER --> | PASSED! Expecting [T_DIGIT] found [1] on line 12...

	PARSER --> | PASSED! Expecting [T_CLOSING_PARENTHESIS] found [ )] on line 12... PARSER --> | PASSED! Expecting [T_OPENING_BRACE] found [T_OPENING_BRACE] on line 12... PARSER --> | PASSED! Expecting [Statement] found [Statement] on line 13... PARSER --> | PASSED! Expecting [AssignmentStatement] found [T_ID] on line 13... PARSER --> | PASSED! Expecting [T_ID] found [T_ID] on line 13... PARSER --> | PASSED! Expecting [T_ID] found [a] on line 13... PARSER --> | PASSED! Expecting [T_ASSIGNMENT_OP] found [=] on line 13... PARSER --> | PASSED! Expecting [Expr] found [IntExpr] on line 13... PARSER --> | PASSED! Expecting [IntExpr] found [IntExpr] on line 13... PARSER --> | PASSED! Expecting [T_DIGIT] found [3] on line 13... PARSER --> | PASSED! λ production on line 14... PARSER --> | PASSED! Expecting [T_CLOSING_BRACE] found [T_CLOSING_BRACE] on line 14... PARSER --> | PASSED! Expecting [StatementList] found [Statement] on line 16... PARSER --> | PASSED! Expecting [Statement] found [Statement] on line 16... PARSER --> | PASSED! Expecting [IfStatement] found [T_IF] on line 16... PARSER --> | PASSED! Expecting [T_IF] found [if] on line 16... PARSER --> | PASSED! Expecting [T_OPENING_PARENTHESIS] found [( ] on line 16... PARSER --> | PASSED! Expecting [Expr] found [Id] on line 16... PARSER --> | PASSED! Expecting [T_ID] found [a] on line 16... PARSER --> | PASSED! Expecting [T_EQUALITY_OP] found [==] on line 16... PARSER --> | PASSED! Expecting [Expr] found [IntExpr] on line 16... PARSER --> | PASSED! Expecting [IntExpr] found [IntExpr] on line 16... PARSER --> | PASSED! Expecting [T_DIGIT] found [1] on line 16... PARSER --> | PASSED! Expecting [T_CLOSING_PARENTHESIS] found [ )] on line 16... PARSER --> | PASSED! Expecting [T_OPENING_BRACE] found [T_OPENING_BRACE] on line 16... PARSER --> | PASSED! Expecting [Statement] found [Statement] on line 17... PARSER --> | PASSED! Expecting [AssignmentStatement] found [T_ID] on line 17... PARSER --> | PASSED! Expecting [T_ID] found [T_ID] on line 17... PARSER --> | PASSED! Expecting [T_ID] found [a] on line 17... PARSER --> | PASSED! Expecting [T_ASSIGNMENT_OP] found [=] on line 17... PARSER --> | PASSED! Expecting [Expr] found [IntExpr] on line 17... PARSER --> | PASSED! Expecting [IntExpr] found [IntExpr] on line 17... PARSER --> | PASSED! Expecting [T_DIGIT] found [3] on line 17... PARSER --> | PASSED! λ production on line 18...

PARSER Test Cases and Results

<table>
<tr><td></td><td>PARSER --> | PASSED! Expecting [T_CLOSING_BRACE] found [T_CLOSING_BRACE] on line 18...
PARSER --> | PASSED! λ production on line 19...
PARSER --> | PASSED! Expecting [T_CLOSING_BRACE] found [T_CLOSING_BRACE] on line 19...
PARSER --> | PASSED! Expecting [T_EOPS] found [T_EOPS] on line 19...

Parse Completed With 0 WARNING(S) and 0 ERROR(S)...
____

Beginning Semantic Analysis Session...

S.ANALYZE --> | PASSED! Variable [a] on line 6 has been declared...
S.ANALYZE --> | PASSED! Variable [a] on line 6 has [int] type...
S.ANALYZE --> | PASSED! Variable [a] on line 6 has been used...
S.ANALYZE --> | PASSED! Variable [a] on line 6 has type int and is assigned the correct type: int...
S.ANALYZE --> | ERROR! Expr on line 8 has type [string] and is compared to the wrong type [int]...

Semantic Analysis Failed With 0 WARNING(S) and 1 ERROR(S)...</td></tr>
<tr><td><b>{
int a
a = 4
a = 1 + "there"
}$</b></td><td>Beginning Lexing Session... *Stings Treated As CharList*

LEXER --> | T_OPENING_BRACE [{] on line 4...
LEXER --> | T_VARIABLE_TYPE [int] on line 5...
LEXER --> | T_ID [a] on line 5...
LEXER --> | T_ID [a] on line 6...
LEXER --> | T_ASSIGNMENT_OP [=] on line 6...
LEXER --> | T_DIGIT [4] on line 6...
LEXER --> | T_ID [a] on line 7...
LEXER --> | T_ASSIGNMENT_OP [=] on line 7...
LEXER --> | T_DIGIT [1] on line 7...
LEXER --> | T_ADDITION_OP [+] on line 7...
LEXER --> | T_QUOTE ["] on line 7...
LEXER --> | T_CHAR [t] on line 7...
LEXER --> | T_CHAR [h] on line 7...
LEXER --> | T_CHAR [e] on line 7...
LEXER --> | T_CHAR [r] on line 7...
LEXER --> | T_CHAR [e] on line 7...
LEXER --> | T_QUOTE ["] on line 7...
LEXER --> | T_CLOSING_BRACE [}] on line 8...
LEXER --> | T_EOPS [$] on line 8...

Lex Completed With 0 WARNING(S) and 0 ERROR(S)...
____

Beginning Parsing Session...</td></tr>
</table>

	PARSER --> | PASSED! Expecting [T_OPENING_BRACE] found [T_OPENING_BRACE] on line 4... PARSER --> | PASSED! Expecting [Statement] found [Statement] on line 5... PARSER --> | PASSED! Expecting [VarDecl] found [T_VARIABLE_TYPE] on line 5... PARSER --> | PASSED! Expecting [T_VARIABLE_TYPE] found [T_VARIABLE_TYPE] on line 5... PARSER --> | PASSED! Expecting [T_VARIABLE_TYPE] found [int] on line 5... PARSER --> | PASSED! Expecting [T_ID] found [T_ID] on line 5... PARSER --> | PASSED! Expecting [T_ID] found [a] on line 5... PARSER --> | PASSED! Expecting [StatementList] found [Statement] on line 6... PARSER --> | PASSED! Expecting [Statement] found [Statement] on line 6... PARSER --> | PASSED! Expecting [AssignmentStatement] found [T_ID] on line 6... PARSER --> | PASSED! Expecting [T_ID] found [T_ID] on line 6... PARSER --> | PASSED! Expecting [T_ID] found [a] on line 6... PARSER --> | PASSED! Expecting [T_ASSIGNMENT_OP] found [=] on line 6... PARSER --> | PASSED! Expecting [Expr] found [IntExpr] on line 6... PARSER --> | PASSED! Expecting [IntExpr] found [IntExpr] on line 6... PARSER --> | PASSED! Expecting [T_DIGIT] found [4] on line 6... PARSER --> | PASSED! Expecting [StatementList] found [Statement] on line 7... PARSER --> | PASSED! Expecting [Statement] found [Statement] on line 7... PARSER --> | PASSED! Expecting [AssignmentStatement] found [T_ID] on line 7... PARSER --> | PASSED! Expecting [T_ID] found [T_ID] on line 7... PARSER --> | PASSED! Expecting [T_ID] found [a] on line 7... PARSER --> | PASSED! Expecting [T_ASSIGNMENT_OP] found [=] on line 7... PARSER --> | PASSED! Expecting [Expr] found [IntExpr] on line 7... PARSER --> | PASSED! Expecting [IntExpr] found [T_DIGIT] on line 7... PARSER --> | PASSED! Expecting [T_DIGIT] found [1] on line 7... PARSER --> | PASSED! Expecting [T_ADDITION_OP] found [+] on line 7... PARSER --> | PASSED! Expecting [Expr] found [StringExpr] on line 7... PARSER --> | PASSED! Expecting [T_QUOTE] found [T_QUOTE] on line 7... PARSER --> | PASSED! Expecting [T_CHAR] found [T_CHAR] on line 7... PARSER --> | PASSED! Expecting [T_CHAR] found [t] on line 7... PARSER --> | PASSED! Expecting [T_CHAR] found [T_CHAR] on line 7... PARSER --> | PASSED! Expecting [T_CHAR] found [h] on line 7... PARSER --> | PASSED! Expecting [T_CHAR] found [T_CHAR] on line 7... PARSER --> | PASSED! Expecting [T_CHAR] found [e] on line 7... PARSER --> | PASSED! Expecting [T_CHAR] found [T_CHAR] on line 7...

	PARSER --> | PASSED! Expecting [T_CHAR] found [r] on line 7... PARSER --> | PASSED! Expecting [T_CHAR] found [T_CHAR] on line 7... PARSER --> | PASSED! Expecting [T_CHAR] found [e] on line 7... PARSER --> | PASSED! λ production on line 7... PARSER --> | PASSED! Expecting [T_QUOTE] found [T_QUOTE] on line 7... PARSER --> | PASSED! λ production on line 8... PARSER --> | PASSED! Expecting [T_CLOSING_BRACE] found [T_CLOSING_BRACE] on line 8... PARSER --> | PASSED! Expecting [T_EOPS] found [T_EOPS] on line 8... Parse Completed With 0 WARNING(S) and 0 ERROR(S)... ____ Beginning Semantic Analysis Session... S.ANALYZE --> | PASSED! Variable [a] on line 6 has been declared... S.ANALYZE --> | PASSED! Variable [a] on line 6 has [int] type... S.ANALYZE --> | PASSED! Variable [a] on line 6 has been used... S.ANALYZE --> | PASSED! Variable [a] on line 6 has type int and is assigned the correct type: int... S.ANALYZE --> | PASSED! Variable [a] on line 7 has been declared... S.ANALYZE --> | PASSED! Variable [a] on line 7 has [int] type... S.ANALYZE --> | PASSED! Variable [a] on line 7 has been used... S.ANALYZE --> | ERROR! Expr on line 7 has type [int] and is added the wrong type [string]... Semantic Analysis Failed With 0 WARNING(S) and 1 ERROR(S)...
{ **int a** **a = 9** **boolean a** **}$**	Beginning Lexing Session... *Stings Treated As CharList* LEXER --> | T_OPENING_BRACE [{] on line 4... LEXER --> | T_VARIABLE_TYPE [int] on line 5... LEXER --> | T_ID [a] on line 5... LEXER --> | T_ID [a] on line 6... LEXER --> | T_ASSIGNMENT_OP [=] on line 6... LEXER --> | T_DIGIT [9] on line 6... LEXER --> | T_VARIABLE_TYPE [boolean] on line 7... LEXER --> | T_ID [a] on line 7... LEXER --> | T_CLOSING_BRACE [}] on line 8... LEXER --> | T_EOPS [$] on line 8... Lex Completed With 0 WARNING(S) and 0 ERROR(S)... ____ Beginning Parsing Session... PARSER --> | PASSED! Expecting [T_OPENING_BRACE] found [T_OPENING_BRACE] on line 4...

```
 PARSER --> | PASSED! Expecting [ Statement ] found [ Statement ] on line 5...
 PARSER --> | PASSED! Expecting [ VarDecl ] found [ T_VARIABLE_TYPE ] on line 5...
 PARSER --> | PASSED! Expecting [ T_VARIABLE_TYPE ] found [ T_VARIABLE_TYPE ] on line 5...
 PARSER --> | PASSED! Expecting [ T_VARIABLE_TYPE ] found [ int ] on line 5...
 PARSER --> | PASSED! Expecting [ T_ID ] found [ T_ID ] on line 5...
 PARSER --> | PASSED! Expecting [ T_ID ] found [ a ] on line 5...
 PARSER --> | PASSED! Expecting [ StatementList ] found [ Statement ] on line 6...
 PARSER --> | PASSED! Expecting [ Statement ] found [ Statement ] on line 6...
 PARSER --> | PASSED! Expecting [ AssignmentStatement ] found [ T_ID ] on line 6...
 PARSER --> | PASSED! Expecting [ T_ID ] found [ T_ID ] on line 6...
 PARSER --> | PASSED! Expecting [ T_ID ] found [ a ] on line 6...
 PARSER --> | PASSED! Expecting [ T_ASSIGNMENT_OP ] found [ = ] on line 6...
 PARSER --> | PASSED! Expecting [ Expr ] found [ IntExpr ] on line 6...
 PARSER --> | PASSED! Expecting [ IntExpr ] found [ IntExpr ] on line 6...
 PARSER --> | PASSED! Expecting [ T_DIGIT ] found [ 9 ] on line 6...
 PARSER --> | PASSED! Expecting [ StatementList ] found [ Statement ] on line 7...
 PARSER --> | PASSED! Expecting [ Statement ] found [ Statement ] on line 7...
 PARSER --> | PASSED! Expecting [ VarDecl ] found [ T_VARIABLE_TYPE ] on line 7...
 PARSER --> | PASSED! Expecting [ T_VARIABLE_TYPE ] found [ T_VARIABLE_TYPE ] on line 7...
 PARSER --> | PASSED! Expecting [ T_VARIABLE_TYPE ] found [ boolean ] on line 7...
 PARSER --> | PASSED! Expecting [ T_ID ] found [ T_ID ] on line 7...
 PARSER --> | PASSED! Expecting [ T_ID ] found [ a ] on line 7...
 PARSER --> | PASSED! λ production on line 8...
 PARSER --> | PASSED! Expecting [ T_CLOSING_BRACE ] found [ T_CLOSING_BRACE ] on line 8...
 PARSER --> | PASSED! Expecting [ T_EOPS ] found [ T_EOPS ] on line 8...

Parse Completed With 0 WARNING(S) and 0 ERROR(S)...
____________________________________________________________________

Beginning Semantic Analysis Session...

 S.ANALYZE --> | PASSED! Variable [ a ] on line 6 has been declared...
 S.ANALYZE --> | PASSED! Variable [ a ] on line 6 has [ int ] type...
 S.ANALYZE --> | PASSED! Variable [ a ] on line 6 has been used...
```

	S.ANALYZE --> | PASSED! Variable [a] on line 6 has type int and is assigned the correct type: int... S.ANALYZE --> | ERROR! Variable [a] on line 7 has already been declared in current scope... Semantic Analysis Failed With 0 WARNING(S) and 1 ERROR(S)...

**{
int a
a = 0
string z
z = "bond"
while (a != 9) {
if (a != 5) {
print("bond")
}
{
a = 1 + a
string b
b = "james bond"
print(b)
}
}
{/*Holy Hell This is Disgusting*/}
boolean c
c = true
boolean d
d = (true == (true == false))
d = (a == b)
d = (1 == a)
d = (1 != 1)
d = ("string" == 1)
d = (a != "string")
d = ("string" != "string")
if (d == true) {
int c
c = 1 + d
if (c == 1) {
print("ugh")
}
}
while ("string" == a) {
while (1 == true) {**
	Beginning Lexing Session... *Stings Treated As CharList*
	
	LEXER --> | T_OPENING_BRACE [{] on line 1...
	LEXER --> | T_VARIABLE_TYPE [int] on line 2...
	LEXER --> | T_ID [a] on line 2...
	LEXER --> | T_ID [a] on line 3...
	LEXER --> | T_ASSIGNMENT_OP [=] on line 3...
	LEXER --> | T_DIGIT [0] on line 3...
	LEXER --> | T_VARIABLE_TYPE [string] on line 4...
	LEXER --> | T_ID [z] on line 4...
	LEXER --> | T_ID [z] on line 5...
	LEXER --> | T_ASSIGNMENT_OP [=] on line 5...
	LEXER --> | T_QUOTE ["] on line 5...
	LEXER --> | T_CHAR [b] on line 5...
	LEXER --> | T_CHAR [o] on line 5...
	LEXER --> | T_CHAR [n] on line 5...
	LEXER --> | T_CHAR [d] on line 5...
	LEXER --> | T_QUOTE ["] on line 5...
	LEXER --> | T_WHILE [while] on line 6...
	LEXER --> | T_OPENING_PARENTHESIS [( ] on line 6...
	LEXER --> | T_ID [a] on line 6...
	LEXER --> | T_INEQUALITY_OP [!=] on line 6...
	LEXER --> | T_DIGIT [9] on line 6...
	LEXER --> | T_CLOSING_PARENTHESIS [ )] on line 6...
	LEXER --> | T_OPENING_BRACE [{] on line 6...
	LEXER --> | T_IF [if] on line 7...
	LEXER --> | T_OPENING_PARENTHESIS [( ] on line 7...
	LEXER --> | T_ID [a] on line 7...
	LEXER --> | T_INEQUALITY_OP [!=] on line 7...
	LEXER --> | T_DIGIT [5] on line 7...
	LEXER --> | T_CLOSING_PARENTHESIS [ )] on line 7...
	LEXER --> | T_OPENING_BRACE [{] on line 7...
	LEXER --> | T_PRINT [print] on line 8...
	LEXER --> | T_OPENING_PARENTHESIS [( ] on line 8...
	LEXER --> | T_QUOTE ["] on line 8...
	LEXER --> | T_CHAR [b] on line 8...
	LEXER --> | T_CHAR [o] on line 8...
	LEXER --> | T_CHAR [n] on line 8...
	LEXER --> | T_CHAR [d] on line 8...
	LEXER --> | T_QUOTE ["] on line 8...
	LEXER --> | T_CLOSING_PARENTHESIS [ )] on line 8...
	LEXER --> | T_CLOSING_BRACE [}] on line 9...

PARSER Test Cases and Results

a = 1 + "string"	LEXER --> | T_OPENING_BRACE [{] on line 10...
}	LEXER --> | T_ID [a] on line 11...
}	LEXER --> | T_ASSIGNMENT_OP [=] on line 11...
}$	LEXER --> | T_DIGIT [1] on line 11...
	LEXER --> | T_ADDITION_OP [+] on line 11...
	LEXER --> | T_ID [a] on line 11...
	LEXER --> | T_VARIABLE_TYPE [string] on line 12...
	LEXER --> | T_ID [b] on line 12...
	LEXER --> | T_ID [b] on line 13...
	LEXER --> | T_ASSIGNMENT_OP [=] on line 13...
	LEXER --> | T_QUOTE ["] on line 13...
	LEXER --> | T_CHAR [j] on line 13...
	LEXER --> | T_CHAR [a] on line 13...
	LEXER --> | T_CHAR [m] on line 13...
	LEXER --> | T_CHAR [e] on line 13...
	LEXER --> | T_CHAR [s] on line 13...
	LEXER --> | T_CHAR [ ] on line 13...
	LEXER --> | T_CHAR [b] on line 13...
	LEXER --> | T_CHAR [o] on line 13...
	LEXER --> | T_CHAR [n] on line 13...
	LEXER --> | T_CHAR [d] on line 13...
	LEXER --> | T_QUOTE ["] on line 13...
	LEXER --> | T_PRINT [print] on line 14...
	LEXER --> | T_OPENING_PARENTHESIS [( ] on line 14...
	LEXER --> | T_ID [b] on line 14...
	LEXER --> | T_CLOSING_PARENTHESIS [ )] on line 14...
	LEXER --> | T_CLOSING_BRACE [}] on line 15...
	LEXER --> | T_CLOSING_BRACE [}] on line 16...
	LEXER --> | T_OPENING_BRACE [{] on line 17...
	LEXER --> | T_CLOSING_BRACE [}] on line 17...
	LEXER --> | T_VARIABLE_TYPE [boolean] on line 18...
	LEXER --> | T_ID [c] on line 18...
	LEXER --> | T_ID [c] on line 19...
	LEXER --> | T_ASSIGNMENT_OP [=] on line 19...
	LEXER --> | T_BOOLEAN_VALUE [true] on line 19...
	LEXER --> | T_VARIABLE_TYPE [boolean] on line 20...
	LEXER --> | T_ID [d] on line 20...
	LEXER --> | T_ID [d] on line 21...
	LEXER --> | T_ASSIGNMENT_OP [=] on line 21...
	LEXER --> | T_OPENING_PARENTHESIS [( ] on line 21...
	LEXER --> | T_BOOLEAN_VALUE [true] on line 21...
	LEXER --> | T_EQUALITY_OP [==] on line 21...
	LEXER --> | T_OPENING_PARENTHESIS [( ] on line 21...
	LEXER --> | T_BOOLEAN_VALUE [true] on line 21...
	LEXER --> | T_EQUALITY_OP [==] on line 21...
	LEXER --> | T_BOOLEAN_VALUE [false] on line 21...
	LEXER --> | T_CLOSING_PARENTHESIS [ )] on line 21...
	LEXER --> | T_CLOSING_PARENTHESIS [ )] on line 21...

```
LEXER --> | T_ID [ d ]  on line 22...
LEXER --> | T_ASSIGNMENT_OP [ = ]  on line 22...
LEXER --> | T_OPENING_PARENTHESIS [ ( ]  on line 22...
LEXER --> | T_ID [ a ]  on line 22...
LEXER --> | T_EQUALITY_OP [ == ]  on line 22...
LEXER --> | T_ID [ b ]  on line 22...
LEXER --> | T_CLOSING_PARENTHESIS [ ) ]  on line 22...
LEXER --> | T_ID [ d ]  on line 23...
LEXER --> | T_ASSIGNMENT_OP [ = ]  on line 23...
LEXER --> | T_OPENING_PARENTHESIS [ ( ]  on line 23...
LEXER --> | T_DIGIT [ 1 ]  on line 23...
LEXER --> | T_EQUALITY_OP [ == ]  on line 23...
LEXER --> | T_ID [ a ]  on line 23...
LEXER --> | T_CLOSING_PARENTHESIS [ ) ]  on line 23...
LEXER --> | T_ID [ d ]  on line 24...
LEXER --> | T_ASSIGNMENT_OP [ = ]  on line 24...
LEXER --> | T_OPENING_PARENTHESIS [ ( ]  on line 24...
LEXER --> | T_DIGIT [ 1 ]  on line 24...
LEXER --> | T_INEQUALITY_OP [ != ]  on line 24...
LEXER --> | T_DIGIT [ 1 ]  on line 24...
LEXER --> | T_CLOSING_PARENTHESIS [ ) ]  on line 24...
LEXER --> | T_ID [ d ]  on line 25...
LEXER --> | T_ASSIGNMENT_OP [ = ]  on line 25...
LEXER --> | T_OPENING_PARENTHESIS [ ( ]  on line 25...
LEXER --> | T_QUOTE [ " ]  on line 25...
LEXER --> | T_CHAR [ s ]  on line 25...
LEXER --> | T_CHAR [ t ]  on line 25...
LEXER --> | T_CHAR [ r ]  on line 25...
LEXER --> | T_CHAR [ i ]  on line 25...
LEXER --> | T_CHAR [ n ]  on line 25...
LEXER --> | T_CHAR [ g ]  on line 25...
LEXER --> | T_QUOTE [ " ]  on line 25...
LEXER --> | T_EQUALITY_OP [ == ]  on line 25...
LEXER --> | T_DIGIT [ 1 ]  on line 25...
LEXER --> | T_CLOSING_PARENTHESIS [ ) ]  on line 25...
LEXER --> | T_ID [ d ]  on line 26...
LEXER --> | T_ASSIGNMENT_OP [ = ]  on line 26...
LEXER --> | T_OPENING_PARENTHESIS [ ( ]  on line 26...
LEXER --> | T_ID [ a ]  on line 26...
LEXER --> | T_INEQUALITY_OP [ != ]  on line 26...
LEXER --> | T_QUOTE [ " ]  on line 26...
LEXER --> | T_CHAR [ s ]  on line 26...
LEXER --> | T_CHAR [ t ]  on line 26...
LEXER --> | T_CHAR [ r ]  on line 26...
LEXER --> | T_CHAR [ i ]  on line 26...
LEXER --> | T_CHAR [ n ]  on line 26...
LEXER --> | T_CHAR [ g ]  on line 26...
LEXER --> | T_QUOTE [ " ]  on line 26...
LEXER --> | T_CLOSING_PARENTHESIS [ ) ]  on line 26...
LEXER --> | T_ID [ d ]  on line 27...
LEXER --> | T_ASSIGNMENT_OP [ = ]  on line 27...
LEXER --> | T_OPENING_PARENTHESIS [ ( ]  on line 27...
LEXER --> | T_QUOTE [ " ]  on line 27...
LEXER --> | T_CHAR [ s ]  on line 27...
LEXER --> | T_CHAR [ t ]  on line 27...
LEXER --> | T_CHAR [ r ]  on line 27...
LEXER --> | T_CHAR [ i ]  on line 27...
LEXER --> | T_CHAR [ n ]  on line 27...
LEXER --> | T_CHAR [ g ]  on line 27...
LEXER --> | T_QUOTE [ " ]  on line 27...
LEXER --> | T_INEQUALITY_OP [ != ]  on line 27...
LEXER --> | T_QUOTE [ " ]  on line 27...
LEXER --> | T_CHAR [ s ]  on line 27...
LEXER --> | T_CHAR [ t ]  on line 27...
LEXER --> | T_CHAR [ r ]  on line 27...
LEXER --> | T_CHAR [ i ]  on line 27...
LEXER --> | T_CHAR [ n ]  on line 27...
LEXER --> | T_CHAR [ g ]  on line 27...
LEXER --> | T_QUOTE [ " ]  on line 27...
LEXER --> | T_CLOSING_PARENTHESIS [ ) ]  on line 27...
LEXER --> | T_IF [ if ]  on line 28...
LEXER --> | T_OPENING_PARENTHESIS [ ( ]  on line 28...
LEXER --> | T_ID [ d ]  on line 28...
LEXER --> | T_EQUALITY_OP [ == ]  on line 28...
LEXER --> | T_BOOLEAN_VALUE [ true ]  on line 28...
LEXER --> | T_CLOSING_PARENTHESIS [ ) ]  on line 28...
LEXER --> | T_OPENING_BRACE [ { ]  on line 28...
LEXER --> | T_VARIABLE_TYPE [ int ]  on line 29...
LEXER --> | T_ID [ c ]  on line 29...
LEXER --> | T_ID [ c ]  on line 30...
LEXER --> | T_ASSIGNMENT_OP [ = ]  on line 30...
LEXER --> | T_DIGIT [ 1 ]  on line 30...
LEXER --> | T_ADDITION_OP [ + ]  on line 30...
LEXER --> | T_ID [ d ]  on line 30...
LEXER --> | T_IF [ if ]  on line 31...
LEXER --> | T_OPENING_PARENTHESIS [ ( ]  on line 31...
LEXER --> | T_ID [ c ]  on line 31...
LEXER --> | T_EQUALITY_OP [ == ]  on line 31...
LEXER --> | T_DIGIT [ 1 ]  on line 31...
LEXER --> | T_CLOSING_PARENTHESIS [ ) ]  on line 31...
LEXER --> | T_OPENING_BRACE [ { ]  on line 31...
LEXER --> | T_PRINT [ print ]  on line 32...
LEXER --> | T_OPENING_PARENTHESIS [ ( ]  on line 32...
LEXER --> | T_QUOTE [ " ]  on line 32...
LEXER --> | T_CHAR [ u ]  on line 32...
LEXER --> | T_CHAR [ g ]  on line 32...
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	LEXER --> | T_CHAR [h] on line 32... LEXER --> | T_QUOTE ["] on line 32... LEXER --> | T_CLOSING_PARENTHESIS [ )] on line 32... LEXER --> | T_CLOSING_BRACE [}] on line 33... LEXER --> | T_CLOSING_BRACE [}] on line 34... LEXER --> | T_WHILE [while] on line 35... LEXER --> | T_OPENING_PARENTHESIS [( ] on line 35... LEXER --> | T_QUOTE ["] on line 35... LEXER --> | T_CHAR [s] on line 35... LEXER --> | T_CHAR [t] on line 35... LEXER --> | T_CHAR [r] on line 35... LEXER --> | T_CHAR [i] on line 35... LEXER --> | T_CHAR [n] on line 35... LEXER --> | T_CHAR [g] on line 35... LEXER --> | T_QUOTE ["] on line 35... LEXER --> | T_EQUALITY_OP [==] on line 35... LEXER --> | T_ID [a] on line 35... LEXER --> | T_CLOSING_PARENTHESIS [ )] on line 35... LEXER --> | T_OPENING_BRACE [{] on line 35... LEXER --> | T_WHILE [while] on line 36... LEXER --> | T_OPENING_PARENTHESIS [( ] on line 36... LEXER --> | T_DIGIT [1] on line 36... LEXER --> | T_EQUALITY_OP [==] on line 36... LEXER --> | T_BOOLEAN_VALUE [true] on line 36... LEXER --> | T_CLOSING_PARENTHESIS [ )] on line 36... LEXER --> | T_OPENING_BRACE [{] on line 36... LEXER --> | T_ID [a] on line 37... LEXER --> | T_ASSIGNMENT_OP [=] on line 37... LEXER --> | T_DIGIT [1] on line 37... LEXER --> | T_ADDITION_OP [+] on line 37... LEXER --> | T_QUOTE ["] on line 37... LEXER --> | T_CHAR [s] on line 37... LEXER --> | T_CHAR [t] on line 37... LEXER --> | T_CHAR [r] on line 37... LEXER --> | T_CHAR [i] on line 37... LEXER --> | T_CHAR [n] on line 37... LEXER --> | T_CHAR [g] on line 37... LEXER --> | T_QUOTE ["] on line 37... LEXER --> | T_CLOSING_BRACE [}] on line 38... LEXER --> | T_CLOSING_BRACE [}] on line 39... LEXER --> | T_CLOSING_BRACE [}] on line 40... LEXER --> | T_EOPS [$] on line 40... Lex Completed With 0 WARNING(S) and 0 ERROR(S)... ____ Beginning Parsing Session...

	PARSER --> | PASSED! Expecting [T_OPENING_BRACE] found [T_OPENING_BRACE] on line 1... PARSER --> | PASSED! Expecting [Statement] found [Statement] on line 2... PARSER --> | PASSED! Expecting [VarDecl] found [T_VARIABLE_TYPE] on line 2... PARSER --> | PASSED! Expecting [T_VARIABLE_TYPE] found [T_VARIABLE_TYPE] on line 2... PARSER --> | PASSED! Expecting [T_VARIABLE_TYPE] found [int] on line 2... PARSER --> | PASSED! Expecting [T_ID] found [T_ID] on line 2... PARSER --> | PASSED! Expecting [T_ID] found [a] on line 2... PARSER --> | PASSED! Expecting [StatementList] found [Statement] on line 3... PARSER --> | PASSED! Expecting [Statement] found [Statement] on line 3... PARSER --> | PASSED! Expecting [AssignmentStatement] found [T_ID] on line 3... PARSER --> | PASSED! Expecting [T_ID] found [T_ID] on line 3... PARSER --> | PASSED! Expecting [T_ID] found [a] on line 3... PARSER --> | PASSED! Expecting [T_ASSIGNMENT_OP] found [=] on line 3... PARSER --> | PASSED! Expecting [Expr] found [IntExpr] on line 3... PARSER --> | PASSED! Expecting [IntExpr] found [IntExpr] on line 3... PARSER --> | PASSED! Expecting [T_DIGIT] found [0] on line 3... PARSER --> | PASSED! Expecting [StatementList] found [Statement] on line 4... PARSER --> | PASSED! Expecting [Statement] found [Statement] on line 4... PARSER --> | PASSED! Expecting [VarDecl] found [T_VARIABLE_TYPE] on line 4... PARSER --> | PASSED! Expecting [T_VARIABLE_TYPE] found [T_VARIABLE_TYPE] on line 4... PARSER --> | PASSED! Expecting [T_VARIABLE_TYPE] found [string] on line 4... PARSER --> | PASSED! Expecting [T_ID] found [T_ID] on line 4... PARSER --> | PASSED! Expecting [T_ID] found [z] on line 4... PARSER --> | PASSED! Expecting [StatementList] found [Statement] on line 5... PARSER --> | PASSED! Expecting [Statement] found [Statement] on line 5... PARSER --> | PASSED! Expecting [AssignmentStatement] found [T_ID] on line 5... PARSER --> | PASSED! Expecting [T_ID] found [T_ID] on line 5... PARSER --> | PASSED! Expecting [T_ID] found [z] on line 5... PARSER --> | PASSED! Expecting [T_ASSIGNMENT_OP] found [=] on line 5... PARSER --> | PASSED! Expecting [Expr] found [StringExpr] on line 5...

<table>
<tr><td></td><td>PARSER --> | PASSED! Expecting [T_QUOTE] found [T_QUOTE] on line 5...
PARSER --> | PASSED! Expecting [T_CHAR] found [T_CHAR] on line 5...
PARSER --> | PASSED! Expecting [T_CHAR] found [b] on line 5...
PARSER --> | PASSED! Expecting [T_CHAR] found [T_CHAR] on line 5...
PARSER --> | PASSED! Expecting [T_CHAR] found [o] on line 5...
PARSER --> | PASSED! Expecting [T_CHAR] found [T_CHAR] on line 5...
PARSER --> | PASSED! Expecting [T_CHAR] found [n] on line 5...
PARSER --> | PASSED! Expecting [T_CHAR] found [T_CHAR] on line 5...
PARSER --> | PASSED! Expecting [T_CHAR] found [d] on line 5...
PARSER --> | PASSED! λ production on line 5...
PARSER --> | PASSED! Expecting [T_QUOTE] found [T_QUOTE] on line 5...
PARSER --> | PASSED! Expecting [StatementList] found [Statement] on line 6...
PARSER --> | PASSED! Expecting [Statement] found [Statement] on line 6...
PARSER --> | PASSED! Expecting [WhileStatement] found [T_WHILE] on line 6...
PARSER --> | PASSED! Expecting [T_WHILE] found [while] on line 6...
PARSER --> | PASSED! Expecting [T_OPENING_PARENTHESIS] found [( ] on line 6...
PARSER --> | PASSED! Expecting [Expr] found [Id] on line 6...
PARSER --> | PASSED! Expecting [T_ID] found [a] on line 6...
PARSER --> | PASSED! Expecting [T_INEQUALITY_OP] found [!=] on line 6...
PARSER --> | PASSED! Expecting [Expr] found [IntExpr] on line 6...
PARSER --> | PASSED! Expecting [IntExpr] found [IntExpr] on line 6...
PARSER --> | PASSED! Expecting [T_DIGIT] found [9] on line 6...
PARSER --> | PASSED! Expecting [T_CLOSING_PARENTHESIS] found [ )] on line 6...
PARSER --> | PASSED! Expecting [T_OPENING_BRACE] found [T_OPENING_BRACE] on line 6...
PARSER --> | PASSED! Expecting [Statement] found [Statement] on line 7...
PARSER --> | PASSED! Expecting [IfStatement] found [T_IF] on line 7...
PARSER --> | PASSED! Expecting [T_IF] found [if] on line 7...
PARSER --> | PASSED! Expecting [T_OPENING_PARENTHESIS] found [( ] on line 7...
PARSER --> | PASSED! Expecting [Expr] found [Id] on line 7...
PARSER --> | PASSED! Expecting [T_ID] found [a] on line 7...
PARSER --> | PASSED! Expecting [T_INEQUALITY_OP] found [!=] on line 7...
PARSER --> | PASSED! Expecting [Expr] found [IntExpr] on line 7...
PARSER --> | PASSED! Expecting [IntExpr] found [IntExpr] on line 7...
PARSER --> | PASSED! Expecting [T_DIGIT] found [5] on line 7...
PARSER --> | PASSED! Expecting [T_CLOSING_PARENTHESIS] found [ )] on line 7...
PARSER --> | PASSED! Expecting [T_OPENING_BRACE] found [T_OPENING_BRACE] on line 7...
PARSER --> | PASSED! Expecting [Statement] found [Statement] on line 8...</td></tr>
</table>

	PARSER --> | PASSED! Expecting [PrintStatement] found [T_PRINT] on line 8... PARSER --> | PASSED! Expecting [T_PRINT] found [T_PRINT] on line 8... PARSER --> | PASSED! Expecting [T_OPENING_PARENTHESIS] found [T_OPENING_PARENTHESIS] on line 8... PARSER --> | PASSED! Expecting [Expr] found [StringExpr] on line 8... PARSER --> | PASSED! Expecting [T_QUOTE] found [T_QUOTE] on line 8... PARSER --> | PASSED! Expecting [T_CHAR] found [T_CHAR] on line 8... PARSER --> | PASSED! Expecting [T_CHAR] found [b] on line 8... PARSER --> | PASSED! Expecting [T_CHAR] found [T_CHAR] on line 8... PARSER --> | PASSED! Expecting [T_CHAR] found [o] on line 8... PARSER --> | PASSED! Expecting [T_CHAR] found [T_CHAR] on line 8... PARSER --> | PASSED! Expecting [T_CHAR] found [n] on line 8... PARSER --> | PASSED! Expecting [T_CHAR] found [T_CHAR] on line 8... PARSER --> | PASSED! Expecting [T_CHAR] found [d] on line 8... PARSER --> | PASSED! λ production on line 8... PARSER --> | PASSED! Expecting [T_QUOTE] found [T_QUOTE] on line 8... PARSER --> | PASSED! Expecting [T_CLOSING_PARENTHESIS] found [T_CLOSING_PARENTHESIS] on line 8... PARSER --> | PASSED! λ production on line 9... PARSER --> | PASSED! Expecting [T_CLOSING_BRACE] found [T_CLOSING_BRACE] on line 9... PARSER --> | PASSED! Expecting [StatementList] found [Statement] on line 10... PARSER --> | PASSED! Expecting [Statement] found [Statement] on line 10... PARSER --> | PASSED! Expecting [T_OPENING_BRACE] found [T_OPENING_BRACE] on line 10... PARSER --> | PASSED! Expecting [T_OPENING_BRACE] found [T_OPENING_BRACE] on line 10... PARSER --> | PASSED! Expecting [Statement] found [Statement] on line 11... PARSER --> | PASSED! Expecting [AssignmentStatement] found [T_ID] on line 11... PARSER --> | PASSED! Expecting [T_ID] found [T_ID] on line 11... PARSER --> | PASSED! Expecting [T_ID] found [a] on line 11... PARSER --> | PASSED! Expecting [T_ASSIGNMENT_OP] found [=] on line 11... PARSER --> | PASSED! Expecting [Expr] found [IntExpr] on line 11... PARSER --> | PASSED! Expecting [IntExpr] found [T_DIGIT] on line 11... PARSER --> | PASSED! Expecting [T_DIGIT] found [1] on line 11... PARSER --> | PASSED! Expecting [T_ADDITION_OP] found [+] on line 11... PARSER --> | PASSED! Expecting [Expr] found [Id] on line 11... PARSER --> | PASSED! Expecting [T_ID] found [a] on line 11... PARSER --> | PASSED! Expecting [StatementList] found [Statement] on line 12... PARSER --> | PASSED! Expecting [Statement] found [Statement] on line 12...

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 PARSER --> | PASSED! Expecting [ VarDecl ] found [ T_VARIABLE_TYPE ] on line 12...
 PARSER --> | PASSED! Expecting [ T_VARIABLE_TYPE ] found [ T_VARIABLE_TYPE ] on line 12...
 PARSER --> | PASSED! Expecting [ T_VARIABLE_TYPE ] found [ string ] on line 12...
 PARSER --> | PASSED! Expecting [ T_ID ] found [ T_ID ] on line 12...
 PARSER --> | PASSED! Expecting [ T_ID ] found [ b ] on line 12...
 PARSER --> | PASSED! Expecting [ StatementList ] found [ Statement ] on line 13...
 PARSER --> | PASSED! Expecting [ Statement ] found [ Statement ] on line 13...
 PARSER --> | PASSED! Expecting [ AssignmentStatement ] found [ T_ID ] on line 13...
 PARSER --> | PASSED! Expecting [ T_ID ] found [ T_ID ] on line 13...
 PARSER --> | PASSED! Expecting [ T_ID ] found [ b ] on line 13...
 PARSER --> | PASSED! Expecting [ T_ASSIGNMENT_OP ] found [ = ] on line 13...
 PARSER --> | PASSED! Expecting [ Expr ] found [ StringExpr ] on line 13...
 PARSER --> | PASSED! Expecting [ T_QUOTE ] found [ T_QUOTE ] on line 13...
 PARSER --> | PASSED! Expecting [ T_CHAR ] found [ T_CHAR ] on line 13...
 PARSER --> | PASSED! Expecting [ T_CHAR ] found [ j ] on line 13...
 PARSER --> | PASSED! Expecting [ T_CHAR ] found [ T_CHAR ] on line 13...
 PARSER --> | PASSED! Expecting [ T_CHAR ] found [ a ] on line 13...
 PARSER --> | PASSED! Expecting [ T_CHAR ] found [ T_CHAR ] on line 13...
 PARSER --> | PASSED! Expecting [ T_CHAR ] found [ m ] on line 13...
 PARSER --> | PASSED! Expecting [ T_CHAR ] found [ T_CHAR ] on line 13...
 PARSER --> | PASSED! Expecting [ T_CHAR ] found [ e ] on line 13...
 PARSER --> | PASSED! Expecting [ T_CHAR ] found [ T_CHAR ] on line 13...
 PARSER --> | PASSED! Expecting [ T_CHAR ] found [ s ] on line 13...
 PARSER --> | PASSED! Expecting [ T_CHAR ] found [ T_CHAR ] on line 13...
 PARSER --> | PASSED! Expecting [ T_CHAR ] found [   ] on line 13...
 PARSER --> | PASSED! Expecting [ T_CHAR ] found [ T_CHAR ] on line 13...
 PARSER --> | PASSED! Expecting [ T_CHAR ] found [ b ] on line 13...
 PARSER --> | PASSED! Expecting [ T_CHAR ] found [ T_CHAR ] on line 13...
 PARSER --> | PASSED! Expecting [ T_CHAR ] found [ o ] on line 13...
 PARSER --> | PASSED! Expecting [ T_CHAR ] found [ T_CHAR ] on line 13...
 PARSER --> | PASSED! Expecting [ T_CHAR ] found [ n ] on line 13...
 PARSER --> | PASSED! Expecting [ T_CHAR ] found [ T_CHAR ] on line 13...
 PARSER --> | PASSED! Expecting [ T_CHAR ] found [ d ] on line 13...
 PARSER --> | PASSED! λ production on line 13...
 PARSER --> | PASSED! Expecting [ T_QUOTE ] found [ T_QUOTE ] on line 13...
 PARSER --> | PASSED! Expecting [ StatementList ] found [ Statement ] on line 14...
 PARSER --> | PASSED! Expecting [ Statement ] found [ Statement ] on line 14...
 PARSER --> | PASSED! Expecting [ PrintStatement ] found [ T_PRINT ] on line 14...
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	PARSER --> | PASSED! Expecting [T_PRINT] found [T_PRINT] on line 14... PARSER --> | PASSED! Expecting [T_OPENING_PARENTHESIS] found [T_OPENING_PARENTHESIS] on line 14... PARSER --> | PASSED! Expecting [Expr] found [Id] on line 14... PARSER --> | PASSED! Expecting [T_ID] found [b] on line 14... PARSER --> | PASSED! Expecting [T_CLOSING_PARENTHESIS] found [T_CLOSING_PARENTHESIS] on line 14... PARSER --> | PASSED! λ production on line 15... PARSER --> | PASSED! Expecting [T_CLOSING_BRACE] found [T_CLOSING_BRACE] on line 15... PARSER --> | PASSED! λ production on line 16... PARSER --> | PASSED! Expecting [T_CLOSING_BRACE] found [T_CLOSING_BRACE] on line 16... PARSER --> | PASSED! Expecting [StatementList] found [Statement] on line 17... PARSER --> | PASSED! Expecting [Statement] found [Statement] on line 17... PARSER --> | PASSED! Expecting [T_OPENING_BRACE] found [T_OPENING_BRACE] on line 17... PARSER --> | PASSED! Expecting [T_OPENING_BRACE] found [T_OPENING_BRACE] on line 17... PARSER --> | PASSED! λ production on line 17... PARSER --> | PASSED! Expecting [T_CLOSING_BRACE] found [T_CLOSING_BRACE] on line 17... PARSER --> | PASSED! Expecting [StatementList] found [Statement] on line 18... PARSER --> | PASSED! Expecting [Statement] found [Statement] on line 18... PARSER --> | PASSED! Expecting [VarDecl] found [T_VARIABLE_TYPE] on line 18... PARSER --> | PASSED! Expecting [T_VARIABLE_TYPE] found [T_VARIABLE_TYPE] on line 18... PARSER --> | PASSED! Expecting [T_VARIABLE_TYPE] found [boolean] on line 18... PARSER --> | PASSED! Expecting [T_ID] found [T_ID] on line 18... PARSER --> | PASSED! Expecting [T_ID] found [c] on line 18... PARSER --> | PASSED! Expecting [StatementList] found [Statement] on line 19... PARSER --> | PASSED! Expecting [Statement] found [Statement] on line 19... PARSER --> | PASSED! Expecting [AssignmentStatement] found [T_ID] on line 19... PARSER --> | PASSED! Expecting [T_ID] found [T_ID] on line 19... PARSER --> | PASSED! Expecting [T_ID] found [c] on line 19... PARSER --> | PASSED! Expecting [T_ASSIGNMENT_OP] found [=] on line 19... PARSER --> | PASSED! Expecting [Expr] found [BooleanExpr] on line 19...

	PARSER --> | PASSED! Expecting [T_BOOLEAN_VALUE] found [T_BOOLEAN_VALUE] on line 19... PARSER --> | PASSED! Expecting [T_BOOLEAN_VALUE] found [true] on line 19... PARSER --> | PASSED! Expecting [StatementList] found [Statement] on line 20... PARSER --> | PASSED! Expecting [Statement] found [Statement] on line 20... PARSER --> | PASSED! Expecting [VarDecl] found [T_VARIABLE_TYPE] on line 20... PARSER --> | PASSED! Expecting [T_VARIABLE_TYPE] found [T_VARIABLE_TYPE] on line 20... PARSER --> | PASSED! Expecting [T_VARIABLE_TYPE] found [boolean] on line 20... PARSER --> | PASSED! Expecting [T_ID] found [T_ID] on line 20... PARSER --> | PASSED! Expecting [T_ID] found [d] on line 20... PARSER --> | PASSED! Expecting [StatementList] found [Statement] on line 21... PARSER --> | PASSED! Expecting [Statement] found [Statement] on line 21... PARSER --> | PASSED! Expecting [AssignmentStatement] found [T_ID] on line 21... PARSER --> | PASSED! Expecting [T_ID] found [T_ID] on line 21... PARSER --> | PASSED! Expecting [T_ID] found [d] on line 21... PARSER --> | PASSED! Expecting [T_ASSIGNMENT_OP] found [=] on line 21... PARSER --> | PASSED! Expecting [Expr] found [BooleanExpr] on line 21... PARSER --> | PASSED! Expecting [T_OPENING_PARENTHESIS] found [( ] on line 21... PARSER --> | PASSED! Expecting [Expr] found [BooleanExpr] on line 21... PARSER --> | PASSED! Expecting [T_BOOLEAN_VALUE] found [T_BOOLEAN_VALUE] on line 21... PARSER --> | PASSED! Expecting [T_BOOLEAN_VALUE] found [true] on line 21... PARSER --> | PASSED! Expecting [T_EQUALITY_OP] found [==] on line 21... PARSER --> | PASSED! Expecting [Expr] found [BooleanExpr] on line 21... PARSER --> | PASSED! Expecting [T_OPENING_PARENTHESIS] found [( ] on line 21... PARSER --> | PASSED! Expecting [Expr] found [BooleanExpr] on line 21... PARSER --> | PASSED! Expecting [T_BOOLEAN_VALUE] found [T_BOOLEAN_VALUE] on line 21... PARSER --> | PASSED! Expecting [T_BOOLEAN_VALUE] found [true] on line 21... PARSER --> | PASSED! Expecting [T_EQUALITY_OP] found [==] on line 21... PARSER --> | PASSED! Expecting [Expr] found [BooleanExpr] on line 21... PARSER --> | PASSED! Expecting [T_BOOLEAN_VALUE] found [T_BOOLEAN_VALUE] on line 21...

	PARSER --> | PASSED! Expecting [T_BOOLEAN_VALUE] found [false] on line 21... PARSER --> | PASSED! Expecting [T_CLOSING_PARENTHESIS] found [ )] on line 21... PARSER --> | PASSED! Expecting [T_CLOSING_PARENTHESIS] found [ )] on line 21... PARSER --> | PASSED! Expecting [StatementList] found [Statement] on line 22... PARSER --> | PASSED! Expecting [Statement] found [Statement] on line 22... PARSER --> | PASSED! Expecting [AssignmentStatement] found [T_ID] on line 22... PARSER --> | PASSED! Expecting [T_ID] found [T_ID] on line 22... PARSER --> | PASSED! Expecting [T_ID] found [d] on line 22... PARSER --> | PASSED! Expecting [T_ASSIGNMENT_OP] found [=] on line 22... PARSER --> | PASSED! Expecting [Expr] found [BooleanExpr] on line 22... PARSER --> | PASSED! Expecting [T_OPENING_PARENTHESIS] found [( ] on line 22... PARSER --> | PASSED! Expecting [Expr] found [Id] on line 22... PARSER --> | PASSED! Expecting [T_ID] found [a] on line 22... PARSER --> | PASSED! Expecting [T_EQUALITY_OP] found [==] on line 22... PARSER --> | PASSED! Expecting [Expr] found [Id] on line 22... PARSER --> | PASSED! Expecting [T_ID] found [b] on line 22... PARSER --> | PASSED! Expecting [T_CLOSING_PARENTHESIS] found [ )] on line 22... PARSER --> | PASSED! Expecting [StatementList] found [Statement] on line 23... PARSER --> | PASSED! Expecting [Statement] found [Statement] on line 23... PARSER --> | PASSED! Expecting [AssignmentStatement] found [T_ID] on line 23... PARSER --> | PASSED! Expecting [T_ID] found [T_ID] on line 23... PARSER --> | PASSED! Expecting [T_ID] found [d] on line 23... PARSER --> | PASSED! Expecting [T_ASSIGNMENT_OP] found [=] on line 23... PARSER --> | PASSED! Expecting [Expr] found [BooleanExpr] on line 23... PARSER --> | PASSED! Expecting [T_OPENING_PARENTHESIS] found [( ] on line 23... PARSER --> | PASSED! Expecting [Expr] found [IntExpr] on line 23... PARSER --> | PASSED! Expecting [IntExpr] found [IntExpr] on line 23... PARSER --> | PASSED! Expecting [T_DIGIT] found [1] on line 23... PARSER --> | PASSED! Expecting [T_EQUALITY_OP] found [==] on line 23... PARSER --> | PASSED! Expecting [Expr] found [Id] on line 23... PARSER --> | PASSED! Expecting [T_ID] found [a] on line 23... PARSER --> | PASSED! Expecting [T_CLOSING_PARENTHESIS] found [ )] on line 23...

	PARSER --> | PASSED! Expecting [StatementList] found [Statement] on line 24... PARSER --> | PASSED! Expecting [Statement] found [Statement] on line 24... PARSER --> | PASSED! Expecting [AssignmentStatement] found [T_ID] on line 24... PARSER --> | PASSED! Expecting [T_ID] found [T_ID] on line 24... PARSER --> | PASSED! Expecting [T_ID] found [d] on line 24... PARSER --> | PASSED! Expecting [T_ASSIGNMENT_OP] found [=] on line 24... PARSER --> | PASSED! Expecting [Expr] found [BooleanExpr] on line 24... PARSER --> | PASSED! Expecting [T_OPENING_PARENTHESIS] found [( ] on line 24... PARSER --> | PASSED! Expecting [Expr] found [IntExpr] on line 24... PARSER --> | PASSED! Expecting [IntExpr] found [IntExpr] on line 24... PARSER --> | PASSED! Expecting [T_DIGIT] found [1] on line 24... PARSER --> | PASSED! Expecting [T_INEQUALITY_OP] found [!=] on line 24... PARSER --> | PASSED! Expecting [Expr] found [IntExpr] on line 24... PARSER --> | PASSED! Expecting [IntExpr] found [IntExpr] on line 24... PARSER --> | PASSED! Expecting [T_DIGIT] found [1] on line 24... PARSER --> | PASSED! Expecting [T_CLOSING_PARENTHESIS] found [ )] on line 24... PARSER --> | PASSED! Expecting [StatementList] found [Statement] on line 25... PARSER --> | PASSED! Expecting [Statement] found [Statement] on line 25... PARSER --> | PASSED! Expecting [AssignmentStatement] found [T_ID] on line 25... PARSER --> | PASSED! Expecting [T_ID] found [T_ID] on line 25... PARSER --> | PASSED! Expecting [T_ID] found [d] on line 25... PARSER --> | PASSED! Expecting [T_ASSIGNMENT_OP] found [=] on line 25... PARSER --> | PASSED! Expecting [Expr] found [BooleanExpr] on line 25... PARSER --> | PASSED! Expecting [T_OPENING_PARENTHESIS] found [( ] on line 25... PARSER --> | PASSED! Expecting [Expr] found [StringExpr] on line 25... PARSER --> | PASSED! Expecting [T_QUOTE] found [T_QUOTE] on line 25... PARSER --> | PASSED! Expecting [T_CHAR] found [T_CHAR] on line 25... PARSER --> | PASSED! Expecting [T_CHAR] found [s] on line 25... PARSER --> | PASSED! Expecting [T_CHAR] found [T_CHAR] on line 25... PARSER --> | PASSED! Expecting [T_CHAR] found [t] on line 25... PARSER --> | PASSED! Expecting [T_CHAR] found [T_CHAR] on line 25... PARSER --> | PASSED! Expecting [T_CHAR] found [r] on line 25... PARSER --> | PASSED! Expecting [T_CHAR] found [T_CHAR] on line 25... PARSER --> | PASSED! Expecting [T_CHAR] found [i] on line 25... PARSER --> | PASSED! Expecting [T_CHAR] found [T_CHAR] on line 25... PARSER --> | PASSED! Expecting [T_CHAR] found [n] on line 25...

	PARSER --> | PASSED! Expecting [T_CHAR] found [T_CHAR] on line 25... PARSER --> | PASSED! Expecting [T_CHAR] found [g] on line 25... PARSER --> | PASSED! λ production on line 25... PARSER --> | PASSED! Expecting [T_QUOTE] found [T_QUOTE] on line 25... PARSER --> | PASSED! Expecting [T_EQUALITY_OP] found [==] on line 25... PARSER --> | PASSED! Expecting [Expr] found [IntExpr] on line 25... PARSER --> | PASSED! Expecting [IntExpr] found [IntExpr] on line 25... PARSER --> | PASSED! Expecting [T_DIGIT] found [1] on line 25... PARSER --> | PASSED! Expecting [T_CLOSING_PARENTHESIS] found [ )] on line 25... PARSER --> | PASSED! Expecting [StatementList] found [Statement] on line 26... PARSER --> | PASSED! Expecting [Statement] found [Statement] on line 26... PARSER --> | PASSED! Expecting [AssignmentStatement] found [T_ID] on line 26... PARSER --> | PASSED! Expecting [T_ID] found [T_ID] on line 26... PARSER --> | PASSED! Expecting [T_ID] found [d] on line 26... PARSER --> | PASSED! Expecting [T_ASSIGNMENT_OP] found [=] on line 26... PARSER --> | PASSED! Expecting [Expr] found [BooleanExpr] on line 26... PARSER --> | PASSED! Expecting [T_OPENING_PARENTHESIS] found [( ] on line 26... PARSER --> | PASSED! Expecting [Expr] found [Id] on line 26... PARSER --> | PASSED! Expecting [T_ID] found [a] on line 26... PARSER --> | PASSED! Expecting [T_INEQUALITY_OP] found [!=] on line 26... PARSER --> | PASSED! Expecting [Expr] found [StringExpr] on line 26... PARSER --> | PASSED! Expecting [T_QUOTE] found [T_QUOTE] on line 26... PARSER --> | PASSED! Expecting [T_CHAR] found [T_CHAR] on line 26... PARSER --> | PASSED! Expecting [T_CHAR] found [s] on line 26... PARSER --> | PASSED! Expecting [T_CHAR] found [T_CHAR] on line 26... PARSER --> | PASSED! Expecting [T_CHAR] found [t] on line 26... PARSER --> | PASSED! Expecting [T_CHAR] found [T_CHAR] on line 26... PARSER --> | PASSED! Expecting [T_CHAR] found [r] on line 26... PARSER --> | PASSED! Expecting [T_CHAR] found [T_CHAR] on line 26... PARSER --> | PASSED! Expecting [T_CHAR] found [i] on line 26... PARSER --> | PASSED! Expecting [T_CHAR] found [T_CHAR] on line 26... PARSER --> | PASSED! Expecting [T_CHAR] found [n] on line 26... PARSER --> | PASSED! Expecting [T_CHAR] found [T_CHAR] on line 26... PARSER --> | PASSED! Expecting [T_CHAR] found [g] on line 26... PARSER --> | PASSED! λ production on line 26... PARSER --> | PASSED! Expecting [T_QUOTE] found [T_QUOTE] on line 26... PARSER --> | PASSED! Expecting [T_CLOSING_PARENTHESIS] found [ )] on line 26... PARSER --> | PASSED! Expecting [StatementList] found [Statement] on line 27...

	PARSER --> | PASSED! Expecting [Statement] found [Statement] on line 27... PARSER --> | PASSED! Expecting [AssignmentStatement] found [T_ID] on line 27... PARSER --> | PASSED! Expecting [T_ID] found [T_ID] on line 27... PARSER --> | PASSED! Expecting [T_ID] found [d] on line 27... PARSER --> | PASSED! Expecting [T_ASSIGNMENT_OP] found [=] on line 27... PARSER --> | PASSED! Expecting [Expr] found [BooleanExpr] on line 27... PARSER --> | PASSED! Expecting [T_OPENING_PARENTHESIS] found [( ] on line 27... PARSER --> | PASSED! Expecting [Expr] found [StringExpr] on line 27... PARSER --> | PASSED! Expecting [T_QUOTE] found [T_QUOTE] on line 27... PARSER --> | PASSED! Expecting [T_CHAR] found [T_CHAR] on line 27... PARSER --> | PASSED! Expecting [T_CHAR] found [s] on line 27... PARSER --> | PASSED! Expecting [T_CHAR] found [T_CHAR] on line 27... PARSER --> | PASSED! Expecting [T_CHAR] found [t] on line 27... PARSER --> | PASSED! Expecting [T_CHAR] found [T_CHAR] on line 27... PARSER --> | PASSED! Expecting [T_CHAR] found [r] on line 27... PARSER --> | PASSED! Expecting [T_CHAR] found [T_CHAR] on line 27... PARSER --> | PASSED! Expecting [T_CHAR] found [i] on line 27... PARSER --> | PASSED! Expecting [T_CHAR] found [T_CHAR] on line 27... PARSER --> | PASSED! Expecting [T_CHAR] found [n] on line 27... PARSER --> | PASSED! Expecting [T_CHAR] found [T_CHAR] on line 27... PARSER --> | PASSED! Expecting [T_CHAR] found [g] on line 27... PARSER --> | PASSED! λ production on line 27... PARSER --> | PASSED! Expecting [T_QUOTE] found [T_QUOTE] on line 27... PARSER --> | PASSED! Expecting [T_INEQUALITY_OP] found [!=] on line 27... PARSER --> | PASSED! Expecting [Expr] found [StringExpr] on line 27... PARSER --> | PASSED! Expecting [T_QUOTE] found [T_QUOTE] on line 27... PARSER --> | PASSED! Expecting [T_CHAR] found [T_CHAR] on line 27... PARSER --> | PASSED! Expecting [T_CHAR] found [s] on line 27... PARSER --> | PASSED! Expecting [T_CHAR] found [T_CHAR] on line 27... PARSER --> | PASSED! Expecting [T_CHAR] found [t] on line 27... PARSER --> | PASSED! Expecting [T_CHAR] found [T_CHAR] on line 27... PARSER --> | PASSED! Expecting [T_CHAR] found [r] on line 27... PARSER --> | PASSED! Expecting [T_CHAR] found [T_CHAR] on line 27... PARSER --> | PASSED! Expecting [T_CHAR] found [i] on line 27... PARSER --> | PASSED! Expecting [T_CHAR] found [T_CHAR] on line 27... PARSER --> | PASSED! Expecting [T_CHAR] found [n] on line 27... PARSER --> | PASSED! Expecting [T_CHAR] found [T_CHAR] on line 27... PARSER --> | PASSED! Expecting [T_CHAR] found [g] on line 27... PARSER --> | PASSED! λ production on line 27... PARSER --> | PASSED! Expecting [T_QUOTE] found [T_QUOTE] on line 27... PARSER --> | PASSED! Expecting [T_CLOSING_PARENTHESIS] found [ )] on line 27...

	PARSER --> | PASSED! Expecting [StatementList] found [Statement] on line 28... PARSER --> | PASSED! Expecting [Statement] found [Statement] on line 28... PARSER --> | PASSED! Expecting [IfStatement] found [T_IF] on line 28... PARSER --> | PASSED! Expecting [T_IF] found [if] on line 28... PARSER --> | PASSED! Expecting [T_OPENING_PARENTHESIS] found [( ] on line 28... PARSER --> | PASSED! Expecting [Expr] found [Id] on line 28... PARSER --> | PASSED! Expecting [T_ID] found [d] on line 28... PARSER --> | PASSED! Expecting [T_EQUALITY_OP] found [==] on line 28... PARSER --> | PASSED! Expecting [Expr] found [BooleanExpr] on line 28... PARSER --> | PASSED! Expecting [T_BOOLEAN_VALUE] found [T_BOOLEAN_VALUE] on line 28... PARSER --> | PASSED! Expecting [T_BOOLEAN_VALUE] found [true] on line 28... PARSER --> | PASSED! Expecting [T_CLOSING_PARENTHESIS] found [ )] on line 28... PARSER --> | PASSED! Expecting [T_OPENING_BRACE] found [T_OPENING_BRACE] on line 28... PARSER --> | PASSED! Expecting [Statement] found [Statement] on line 29... PARSER --> | PASSED! Expecting [VarDecl] found [T_VARIABLE_TYPE] on line 29... PARSER --> | PASSED! Expecting [T_VARIABLE_TYPE] found [T_VARIABLE_TYPE] on line 29... PARSER --> | PASSED! Expecting [T_VARIABLE_TYPE] found [int] on line 29... PARSER --> | PASSED! Expecting [T_ID] found [T_ID] on line 29... PARSER --> | PASSED! Expecting [T_ID] found [c] on line 29... PARSER --> | PASSED! Expecting [StatementList] found [Statement] on line 30... PARSER --> | PASSED! Expecting [Statement] found [Statement] on line 30... PARSER --> | PASSED! Expecting [AssignmentStatement] found [T_ID] on line 30... PARSER --> | PASSED! Expecting [T_ID] found [T_ID] on line 30... PARSER --> | PASSED! Expecting [T_ID] found [c] on line 30... PARSER --> | PASSED! Expecting [T_ASSIGNMENT_OP] found [=] on line 30... PARSER --> | PASSED! Expecting [Expr] found [IntExpr] on line 30... PARSER --> | PASSED! Expecting [IntExpr] found [T_DIGIT] on line 30... PARSER --> | PASSED! Expecting [T_DIGIT] found [1] on line 30... PARSER --> | PASSED! Expecting [T_ADDITION_OP] found [+] on line 30... PARSER --> | PASSED! Expecting [Expr] found [Id] on line 30... PARSER --> | PASSED! Expecting [T_ID] found [d] on line 30... PARSER --> | PASSED! Expecting [StatementList] found [Statement] on line 31...

	PARSER --> | PASSED! Expecting [Statement] found [Statement] on line 31... PARSER --> | PASSED! Expecting [IfStatement] found [T_IF] on line 31... PARSER --> | PASSED! Expecting [T_IF] found [if] on line 31... PARSER --> | PASSED! Expecting [T_OPENING_PARENTHESIS] found [( ] on line 31... PARSER --> | PASSED! Expecting [Expr] found [Id] on line 31... PARSER --> | PASSED! Expecting [T_ID] found [c] on line 31... PARSER --> | PASSED! Expecting [T_EQUALITY_OP] found [==] on line 31... PARSER --> | PASSED! Expecting [Expr] found [IntExpr] on line 31... PARSER --> | PASSED! Expecting [IntExpr] found [IntExpr] on line 31... PARSER --> | PASSED! Expecting [T_DIGIT] found [1] on line 31... PARSER --> | PASSED! Expecting [T_CLOSING_PARENTHESIS] found [ )] on line 31... PARSER --> | PASSED! Expecting [T_OPENING_BRACE] found [T_OPENING_BRACE] on line 31... PARSER --> | PASSED! Expecting [Statement] found [Statement] on line 32... PARSER --> | PASSED! Expecting [PrintStatement] found [T_PRINT] on line 32... PARSER --> | PASSED! Expecting [T_PRINT] found [T_PRINT] on line 32... PARSER --> | PASSED! Expecting [T_OPENING_PARENTHESIS] found [T_OPENING_PARENTHESIS] on line 32... PARSER --> | PASSED! Expecting [Expr] found [StringExpr] on line 32... PARSER --> | PASSED! Expecting [T_QUOTE] found [T_QUOTE] on line 32... PARSER --> | PASSED! Expecting [T_CHAR] found [T_CHAR] on line 32... PARSER --> | PASSED! Expecting [T_CHAR] found [u] on line 32... PARSER --> | PASSED! Expecting [T_CHAR] found [T_CHAR] on line 32... PARSER --> | PASSED! Expecting [T_CHAR] found [g] on line 32... PARSER --> | PASSED! Expecting [T_CHAR] found [T_CHAR] on line 32... PARSER --> | PASSED! Expecting [T_CHAR] found [h] on line 32... PARSER --> | PASSED! λ production on line 32... PARSER --> | PASSED! Expecting [T_QUOTE] found [T_QUOTE] on line 32... PARSER --> | PASSED! Expecting [T_CLOSING_PARENTHESIS] found [T_CLOSING_PARENTHESIS] on line 32... PARSER --> | PASSED! λ production on line 33... PARSER --> | PASSED! Expecting [T_CLOSING_BRACE] found [T_CLOSING_BRACE] on line 33... PARSER --> | PASSED! λ production on line 34... PARSER --> | PASSED! Expecting [T_CLOSING_BRACE] found [T_CLOSING_BRACE] on line 34... PARSER --> | PASSED! Expecting [StatementList] found [Statement] on line 35... PARSER --> | PASSED! Expecting [Statement] found [Statement] on line 35... PARSER --> | PASSED! Expecting [WhileStatement] found [T_WHILE] on line 35... PARSER --> | PASSED! Expecting [T_WHILE] found [while] on line 35...

	PARSER --> | PASSED! Expecting [T_OPENING_PARENTHESIS] found [( ] on line 35... PARSER --> | PASSED! Expecting [Expr] found [StringExpr] on line 35... PARSER --> | PASSED! Expecting [T_QUOTE] found [T_QUOTE] on line 35... PARSER --> | PASSED! Expecting [T_CHAR] found [T_CHAR] on line 35... PARSER --> | PASSED! Expecting [T_CHAR] found [s] on line 35... PARSER --> | PASSED! Expecting [T_CHAR] found [T_CHAR] on line 35... PARSER --> | PASSED! Expecting [T_CHAR] found [t] on line 35... PARSER --> | PASSED! Expecting [T_CHAR] found [T_CHAR] on line 35... PARSER --> | PASSED! Expecting [T_CHAR] found [r] on line 35... PARSER --> | PASSED! Expecting [T_CHAR] found [T_CHAR] on line 35... PARSER --> | PASSED! Expecting [T_CHAR] found [i] on line 35... PARSER --> | PASSED! Expecting [T_CHAR] found [T_CHAR] on line 35... PARSER --> | PASSED! Expecting [T_CHAR] found [n] on line 35... PARSER --> | PASSED! Expecting [T_CHAR] found [T_CHAR] on line 35... PARSER --> | PASSED! Expecting [T_CHAR] found [g] on line 35... PARSER --> | PASSED! λ production on line 35... PARSER --> | PASSED! Expecting [T_QUOTE] found [T_QUOTE] on line 35... PARSER --> | PASSED! Expecting [T_EQUALITY_OP] found [==] on line 35... PARSER --> | PASSED! Expecting [Expr] found [Id] on line 35... PARSER --> | PASSED! Expecting [T_ID] found [a] on line 35... PARSER --> | PASSED! Expecting [T_CLOSING_PARENTHESIS] found [ )] on line 35... PARSER --> | PASSED! Expecting [T_OPENING_BRACE] found [T_OPENING_BRACE] on line 35... PARSER --> | PASSED! Expecting [Statement] found [Statement] on line 36... PARSER --> | PASSED! Expecting [WhileStatement] found [T_WHILE] on line 36... PARSER --> | PASSED! Expecting [T_WHILE] found [while] on line 36... PARSER --> | PASSED! Expecting [T_OPENING_PARENTHESIS] found [( ] on line 36... PARSER --> | PASSED! Expecting [Expr] found [IntExpr] on line 36... PARSER --> | PASSED! Expecting [IntExpr] found [IntExpr] on line 36... PARSER --> | PASSED! Expecting [T_DIGIT] found [1] on line 36... PARSER --> | PASSED! Expecting [T_EQUALITY_OP] found [==] on line 36... PARSER --> | PASSED! Expecting [Expr] found [BooleanExpr] on line 36... PARSER --> | PASSED! Expecting [T_BOOLEAN_VALUE] found [T_BOOLEAN_VALUE] on line 36... PARSER --> | PASSED! Expecting [T_BOOLEAN_VALUE] found [true] on line 36... PARSER --> | PASSED! Expecting [T_CLOSING_PARENTHESIS] found [ )] on line 36... PARSER --> | PASSED! Expecting [T_OPENING_BRACE] found [T_OPENING_BRACE] on line 36... PARSER --> | PASSED! Expecting [Statement] found [Statement] on line 37...

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 PARSER --> | PASSED! Expecting [ AssignmentStatement ] found [ T_ID ] on line 37...
 PARSER --> | PASSED! Expecting [ T_ID ] found [ T_ID ] on line 37...
 PARSER --> | PASSED! Expecting [ T_ID ] found [ a ] on line 37...
 PARSER --> | PASSED! Expecting [ T_ASSIGNMENT_OP ] found [ = ] on line 37...
 PARSER --> | PASSED! Expecting [ Expr ] found [ IntExpr ] on line 37...
 PARSER --> | PASSED! Expecting [ IntExpr ] found [ T_DIGIT ] on line 37...
 PARSER --> | PASSED! Expecting [ T_DIGIT ] found [ 1 ] on line 37...
 PARSER --> | PASSED! Expecting [ T_ADDITION_OP ] found [ + ] on line 37...
 PARSER --> | PASSED! Expecting [ Expr ] found [ StringExpr ] on line 37...
 PARSER --> | PASSED! Expecting [ T_QUOTE ] found [ T_QUOTE ] on line 37...
 PARSER --> | PASSED! Expecting [ T_CHAR ] found [ T_CHAR ] on line 37...
 PARSER --> | PASSED! Expecting [ T_CHAR ] found [ s ] on line 37...
 PARSER --> | PASSED! Expecting [ T_CHAR ] found [ T_CHAR ] on line 37...
 PARSER --> | PASSED! Expecting [ T_CHAR ] found [ t ] on line 37...
 PARSER --> | PASSED! Expecting [ T_CHAR ] found [ T_CHAR ] on line 37...
 PARSER --> | PASSED! Expecting [ T_CHAR ] found [ r ] on line 37...
 PARSER --> | PASSED! Expecting [ T_CHAR ] found [ T_CHAR ] on line 37...
 PARSER --> | PASSED! Expecting [ T_CHAR ] found [ i ] on line 37...
 PARSER --> | PASSED! Expecting [ T_CHAR ] found [ T_CHAR ] on line 37...
 PARSER --> | PASSED! Expecting [ T_CHAR ] found [ n ] on line 37...
 PARSER --> | PASSED! Expecting [ T_CHAR ] found [ T_CHAR ] on line 37...
 PARSER --> | PASSED! Expecting [ T_CHAR ] found [ g ] on line 37...
 PARSER --> | PASSED! λ production on line 37...
 PARSER --> | PASSED! Expecting [ T_QUOTE ] found [ T_QUOTE ] on line 37...
 PARSER --> | PASSED! λ production on line 38...
 PARSER --> | PASSED! Expecting [ T_CLOSING_BRACE ] found [ T_CLOSING_BRACE ] on line 38...
 PARSER --> | PASSED! λ production on line 39...
 PARSER --> | PASSED! Expecting [ T_CLOSING_BRACE ] found [ T_CLOSING_BRACE ] on line 39...
 PARSER --> | PASSED! λ production on line 40...
 PARSER --> | PASSED! Expecting [ T_CLOSING_BRACE ] found [ T_CLOSING_BRACE ] on line 40...
 PARSER --> | PASSED! Expecting [ T_EOPS ] found [ T_EOPS ] on line 40...

Parse Completed With 0 WARNING(S) and 0 ERROR(S)...
______________________________________________________________

Beginning Semantic Analysis Session...

 S.ANALYZE --> | PASSED! Variable [ a ] on line 3 has been declared...
 S.ANALYZE --> | PASSED! Variable [ a ] on line 3 has [ int ] type...
 S.ANALYZE --> | PASSED! Variable [ a ] on line 3 has been used...
 S.ANALYZE --> | PASSED! Variable [ a ] on line 3 has type int and is assigned the correct type: int...
 S.ANALYZE --> | PASSED! Variable [ z ] on line 5 has been declared...
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	S.ANALYZE --> | PASSED! Variable [z] on line 5 has [string] type... S.ANALYZE --> | PASSED! Variable [z] on line 5 has been used... S.ANALYZE --> | PASSED! Variable [z] on line 5 has type string and is assigned the correct type: string... S.ANALYZE --> | PASSED! Variable [a] on line 6 has been declared... S.ANALYZE --> | PASSED! Variable [a] on line 6 has been used... S.ANALYZE --> | PASSED! Variable [a] on line 6 has [int] type... S.ANALYZE --> | PASSED! Variable [a] on line 7 has been declared... S.ANALYZE --> | PASSED! Variable [a] on line 7 has been used... S.ANALYZE --> | PASSED! Variable [a] on line 7 has [int] type... S.ANALYZE --> | PASSED! Variable [a] on line 11 has been declared... S.ANALYZE --> | PASSED! Variable [a] on line 11 has [int] type... S.ANALYZE --> | PASSED! Variable [a] on line 11 has been used... S.ANALYZE --> | PASSED! Variable [a] on line 11 has been declared... S.ANALYZE --> | PASSED! Variable [a] on line 11 has been used... S.ANALYZE --> | PASSED! Variable [a] on line 11 has [int] type... S.ANALYZE --> | PASSED! Variable [a] on line 11 has type int and is assigned the correct type: int... S.ANALYZE --> | PASSED! Variable [b] on line 13 has been declared... S.ANALYZE --> | PASSED! Variable [b] on line 13 has [string] type... S.ANALYZE --> | PASSED! Variable [b] on line 13 has been used... S.ANALYZE --> | PASSED! Variable [b] on line 13 has type string and is assigned the correct type: string... S.ANALYZE --> | PASSED! Variable [b] on line 14 has been declared... S.ANALYZE --> | PASSED! Variable [b] on line 14 has been used... S.ANALYZE --> | PASSED! Variable [b] on line 14 has [string] type... S.ANALYZE --> | PASSED! Variable [c] on line 19 has been declared... S.ANALYZE --> | PASSED! Variable [c] on line 19 has [boolean] type... S.ANALYZE --> | PASSED! Variable [c] on line 19 has been used... S.ANALYZE --> | PASSED! Variable [c] on line 19 has type boolean and is assigned the correct type: boolean... S.ANALYZE --> | PASSED! Variable [d] on line 21 has been declared... S.ANALYZE --> | PASSED! Variable [d] on line 21 has [boolean] type... S.ANALYZE --> | PASSED! Variable [d] on line 21 has been used... S.ANALYZE --> | PASSED! Variable [d] on line 21 has type boolean and is assigned the correct type: boolean... S.ANALYZE --> | PASSED! Variable [d] on line 22 has been declared... S.ANALYZE --> | PASSED! Variable [d] on line 22 has [boolean] type... S.ANALYZE --> | PASSED! Variable [d] on line 22 has been used... S.ANALYZE --> | PASSED! Variable [a] on line 22 has been declared... S.ANALYZE --> | PASSED! Variable [a] on line 22 has been used... S.ANALYZE --> | PASSED! Variable [a] on line 22 has [int] type... S.ANALYZE --> | ERROR! Variable [b] on line 22 is used before it is declared... Semantic Analysis Failed With 0 WARNING(S) and 1 ERROR(S)...