The test case application automatically generates table of tests. (Professor said this was fine just like this via email)

```
ing valid expression tests...

(T | F) $ F
! (T & T)
(F @ T) | (T @ F)
(T $ T) & F
! F | ! T
(((((T | F) & F) | (T & (T | F))) @ (T @ T)) $ (! (T | F)))
((F $ ((T | F) & (F @ (T | F)))) | (T $ (T & F)))
(((( T $ F)) & (T @ T)) | ((F | T) & (T * T)))
((((T @ T) $ (F @ T)) | ((!T) & (T | (!T))))
((F @ T) $ (T | (F & F))) & (T & (T @ (!T)))
F @ F
                                                                                                                                        true
                                                                                                                                                                        Passed
                                                                                                                                        false
                                                                                                                                                        false
                                                                                                                                                                        Passed
3
                                                                                                                                                                        Passed
                                                                                                                                        true
                                                                                                                                                        true
4
                                                                                                                                        false
                                                                                                                                                        false
                                                                                                                                                                        Passed
                                                                                                                                        true
                                                                                                                                                        true
                                                                                                                                                                        Passed
6
                                                                                                                                        true
                                                                                                                                                        true
                                                                                                                                                                        Passed
                                                                                                                                        true
                                                                                                                                                        true
                                                                                                                                                                        Passed
8
                                                                                                                                        false
                                                                                                                                                        false
                                                                                                                                                                        Passed
                                                                                                                                        true
                                                                                                                                                                        Passed
                                                                                                                                                        true
10
                                                                                                                                        false
                                                                                                                                                        false
                                                                                                                                                                        Passed
11
                                                                                                                                        true
                                                                                                                                                        true
                                                                                                                                                                        Passed
12
        F @ T
                                                                                                                                        true
                                                                                                                                                        true
                                                                                                                                                                        Passed
        T @ T
13
                                                                                                                                        false
                                                                                                                                                        false
                                                                                                                                                                        Passed
14
                                                                                                                                        false
                                                                                                                                                        false
                                                                                                                                                                        Passed
       F $ T
F $ F
15
                                                                                                                                        true
                                                                                                                                                        true
                                                                                                                                                                        Passed
16
                                                                                                                                        false
                                                                                                                                                        false
                                                                                                                                                                        Passed
        T $ F
17
                                                                                                                                        true
                                                                                                                                                        true
                                                                                                                                                                        Passed
18
                                                                                                                                        false
                                                                                                                                                        false
                                                                                                                                                                        Passed
19
       !F
(T & F) | !(F & T)
(T | F) & !(F | T)
!(T | F) & !(F | T)
!(T | F) & !(T & F)
!(T & F) & !(T | F)
!(T & F) & !(T | F)
!(T & F) | ((T | F) & !(F & T))
!(T & F) @ !(T @ F)
!(T & F)
T | F
!(T | T)
F & T
T @ F
                                                                                                                                                                        Passed
                                                                                                                                        true
                                                                                                                                                        true
20
                                                                                                                                                                        Passed
                                                                                                                                        true
                                                                                                                                                        true
21
                                                                                                                                        false
                                                                                                                                                        false
                                                                                                                                                                        Passed
22
                                                                                                                                        true
                                                                                                                                                        true
                                                                                                                                                                        Passed
23
                                                                                                                                                                        Passed
                                                                                                                                        true
                                                                                                                                                        true
24
                                                                                                                                        true
                                                                                                                                                                        Passed
                                                                                                                                                        true
25
                                                                                                                                        true
                                                                                                                                                        true
                                                                                                                                                                        Passed
26
                                                                                                                                        true
                                                                                                                                                        true
                                                                                                                                                                        Passed
27
                                                                                                                                        true
                                                                                                                                                        true
                                                                                                                                                                        Passed
28
                                                                                                                                        true
                                                                                                                                                        true
                                                                                                                                                                        Passed
29
                                                                                                                                        true
                                                                                                                                                        true
                                                                                                                                                                        Passed
30
                                                                                                                                        false
                                                                                                                                                         false
                                                                                                                                                                        Passed
31
                                                                                                                                        false
                                                                                                                                                        false
                                                                                                                                                                        Passed
       T @ F
!(T $ T)
T | (F & T)
(T @ F) | (T & F)
!(F & T) $ (T | F)
!(T $ F)
(T | F) & (T & F)
!(F @ T)
T & (F | T)
!(T $ T)
        T @ F
32
                                                                                                                                        true
                                                                                                                                                        true
                                                                                                                                                                        Passed
33
                                                                                                                                        true
                                                                                                                                                        true
                                                                                                                                                                        Passed
34
                                                                                                                                        true
                                                                                                                                                        true
                                                                                                                                                                        Passed
35
                                                                                                                                        true
                                                                                                                                                                        Passed
                                                                                                                                                        true
36
                                                                                                                                                                        Passed
                                                                                                                                        true
                                                                                                                                                        true
37
                                                                                                                                        false
                                                                                                                                                        false
                                                                                                                                                                        Passed
38
                                                                                                                                        false
                                                                                                                                                        false
                                                                                                                                                                        Passed
39
                                                                                                                                        false
                                                                                                                                                        false
                                                                                                                                                                        Passed
40
                                                                                                                                        true
                                                                                                                                                        true
                                                                                                                                                                        Passed
41
                                                                                                                                        true
                                                                                                                                                        true
                                                                                                                                                                        Passed
        (F @ T) | (T $ F)
!(T | F)
(T & F) | (F @ T)
42
                                                                                                                                                                        Passed
                                                                                                                                        true
                                                                                                                                                        true
43
                                                                                                                                        false
                                                                                                                                                        false
                                                                                                                                                                        Passed
44
                                                                                                                                        true
                                                                                                                                                        true
                                                                                                                                                                        Passed
        !(T & T)
(T $ F) & (F @ T)
45
                                                                                                                                        false
                                                                                                                                                        false
                                                                                                                                                                        Passed
46
                                                                                                                                        true
                                                                                                                                                        true
                                                                                                                                                                        Passed
        !(F & T)
(T & F) & F @ T
47
                                                                                                                                        true
                                                                                                                                                                        Passed
                                                                                                                                                        true
48
                                                                                                                                        true
                                                                                                                                                        true
                                                                                                                                                                        Passed
49
        T & T
                                                                                                                                        true
                                                                                                                                                        true
                                                                                                                                                                        Passed
                                                                                                                                                                        Passed
50
        T & F
                                                                                                                                        false
                                                                                                                                                        false
       F & F
                                                                                                                                        false
                                                                                                                                                        false
52
       F &
                                                                                                                                        false
                                                                                                                                                        false
                                                                                                                                                                        Passed
53
                                                                                                                                        true
                                                                                                                                                        true
                                                                                                                                                                        Passed
54
                                                                                                                                                                        Passed
                                                                                                                                        true
                                                                                                                                                        true
55
                                                                                                                                        false
                                                                                                                                                        false
                                                                                                                                                                        Passed
56
                                                                                                                                                                        Passed
                                                                                                                                        true
                                                                                                                                                        true
   OUT OF 56 PASSED
```

```
Running invalid expression tests...

Correctly caught an error for: ! & T - Parse error: Missing operands - Expected the start of a new expression (T, F, '(', !, or a variable) after the operator: & ound at:

& T
 ound token: &
irror occurred while parsing:
& T
^
 Correctly caught an error for: (T |) - Parse error: Missing operands - Expected the start of a new expression (T, F, '(', !, or a variable) after the operator: )

(T |)

(**T)

(**T)
 Found token: )
Error occurred while parsing:
[T |]
 Correctly caught an error for: T = !(T & T) — Unsupported operator: =
Correctly caught an error for: - Empty expression: No operands or operators present
Correctly caught an error for: T & - Parse error: Missing operator - Expected an operator after the operand at:
 Correctly caught an error for: (T & (F |) - Parse error: Missing operands - Expected the start of a new expression (T, F, '(', !, or a variable) after the operator: )
Found at:
(T & (F |)
A
^
Found token: )
Error occurred while parsing:
(T & (F |)
^
 .
Correctly caught an error for: ( & T) — Parse error: Missing operands — Expected the start of a new expression (T, F, '(', !, or a variable) after the operator: & cound at:
( & T)
Found token: &
Error occurred while parsing:
( & T)
Correctly caught an error for: T (| F) – Parse error: Missing operator – Expected an operator after the operand at: T (| F)
Instead found: (
Error occurred while parsing:
[ (| F)
 orrectly caught an error for: (T & (T | ) F) - Parse error: Hissing operands - Expected the start of a new expression (T, F, '(', !, or a variable) after the operator: )
Found at:
(T & (T | ) F)
Found token: )
Error occurred while parsing:
(T & (T | ) F)
Correctly caught an error for: T \mid T & - Parse error: Missing operator - Expected an operator after the operand at: T \mid T & \mid T \mid T &
 instead found: the end of the expression.
Error occurred while parsing:
| | T &
 Correctly caught an error for: T \mid T F T - Parse error: Missing operator - Expected an operator after the operand at: T \mid T F T
 instead found: F
irror occurred while parsing:
i | T F T
 40 OUT OF 40 INVALID CASES PASSED
Press ENTER to exit.
```