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Lab 4: Symbol Table

Test Cases

a) Show that if you define more than the MAX number of variables, then you error

```
dsookhoo@lap118a36:~/repos/csci4580/lab4> cat test1.txt
int var1;
int var2;
int var3;
int var4;
int var5;
dsookhoo@lap118a36:~/repos/csci4580/lab4> ./lab4 < test1.txt
Added variable: var1
    There are now 1 variables defined
Added variable: var2
    There are now 2 variables defined
Added variable: var3
    There are now 3 variables defined
Added variable: var4
    There are now 4 variables defined
Error! No more room in the symbol table!
dsookhoo@lap118a36:~/repos/csci4580/lab4> 
```

b) Show that you cannot declare a variable more than once

```
dsookhoo@lap118a36:~/repos/csci4580/lab4> ./lab4
int foo;
Added variable: foo
    There are now 1 variables defined
int foo;
Error! You can't declare a variable that already exists!
dsookhoo@lap118a36:~/repos/csci4580/lab4> 
```

c) Show that you cannot use a variable that is not defined

```
dsookhoo@lap118a36:~/repos/csci4580/lab4> ./lab4
int foo;
Added variable: foo
    There are now 1 variables defined
foo = 10
bar = 20
Error! You can't assign a value to an undefined variable!
dsookhoo@lap118a36:~/repos/csci4580/lab4> 
```

d) Show that a declared variable can be set and used (left and right hand side).

```
sook@LenovoAllOne:~/repos/csci4580/lab4$ ./lab4
int x;
Added variable: x
    There are now 1 variables defined
int y;
Added variable: y
    There are now 2 variables defined
x
the answer is 0
y
the answer is 0
x = 4
y = 5
x = y + 10
x
the answer is 15
```