Nicholas Carmello

Input:

```
{
int a
while (a==3){

print(a)

}}$
```

Output

```
A9 00 8D 1f 00 A2 03 EC 1f 00 D0 12 AC 1f 00 A2 01 FF A9 00 8D FF 00 A2 01 EC FF 00 D0
e7 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 66 61 6c 73 65 00 74 72 75 65 00
```

SvegOutput:
Nothing

Input:

```
{
int a
while (a!=3){

print(a)

}}$
```

Output:

```
9 00 8D 26 00 A2 03 EC 26 00 D0 7 A2 01 EC FF 00 D0 12 AC 26 00 A2 01 FF A9 00 8D FF
00 A2 01 EC FF 00 D0 e0 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
```

00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 66 61 6c 73 65 00 74 72 75 65 00

SvegOutput:

0 repeated

Input:

```
{
print((1==1))
print((1!=1))
print((true==true))
print((false==false))
print(("hello world" == "hello world"))
}$
```

Output:

A0 FB A2 02 FF A9 00 8D FF 00 A0 F5 A2 02 FF A9 00 8D FF 00 A0 Fb A2 02 FF A9 00 8D FF
00 A0 Fb A2 02 FF A9 00 8D FF 00 A0 FB A2 02 FF A9 00 8D FF 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 66 61 6c 73 65 00 74 72 75 65 00

Sveg output:

Truefalsetruetruetrue

Input:

```
{
int a
a = 3
if(a == 3){
print(a)
}
print(a)
}$
```

Output:

```
A9 00 8D 28 00 A9 03 8D 28 00 A2 03 EC 28 00 D0 b AC 28 00 A2 01 FF A9 00 8D FF 00 AC
28 00 A2 01 FF A9 00 8D FF 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 66 61 6c 73 65 00 74 72 75 65 00
```

SvegOutput:

```
33
```

Input:

```
{
int a
a = 3
if(a != 3){
print(a)
}
print(a)
}$
```

Output:
A9 00 8D 2f 00 A9 03 8D 2f 00 A2 03 EC 2f 00 D0 7 A2 01 EC FF 00 D0 b AC 2f 00 A2 01 FF A9 00 8D FF 00 AC 2f 00 A2 01 FF A9 00 8D FF 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 66 61 6c 73 65 00 74 72 75 65 00

SvegOutput:
3

Input:

```
/* This statement shows that addition
- checking and printing are both valid
- options that can be performed. Credit: Tien
- Result: 666addition checkfalse*/
{
int a
while (a != 3) {
print(1 + 2 + 3)
a = 1 + a
}
if (1+1+1+1+1 == 2+3) {
print("addition check")
}
if (1+5+3 != 8) {
print(false)
}
} $
```

Output:
A9 00 8D 6a 00 A2 03 EC 6a 00 D0 7 A2 01 EC FF 00 D0 19 A0 6 A2 01 FF A9 00 8D FF 00 A9 1 6D 6a 00 8D 6a 00 A2 01 EC FF 00 D0 d9 A9 5 8D FF 00 A2 5 EC FF 00 A9 00 8D FF 00 D0 a A0 e6 A2 02 FF A9 00 8D FF 00 A9 9 8D FF 00 A2 8 EC FF 00 A9 00 8D FF 00 D0 7 A2 01 EC FF 00 D0 a A0 F5 A2 02 FF A9 00 8D FF 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 61 64 64 69 74 69 6f 6e 20 63 68 65 63 6b 00 66 61 6c 73 65 00 74 72 75 65 00

SvegOutput:
666addition checkfalse
Input:

```
{
int a
a = 1
if("a" == "a") {
a = 2
print("a now is two")
}
if(a != 1) {
a = 3
print(" a now is three")
}
if(a == 1) {
a = 3
print("this does not print")
}
while true {
print(" this will always be true hahahahahahaha")
}

if false {
print("this")
}
} $
```

Output:

A9 00 8D 7e 00 A9 01 8D 7e 00 AE f7 00 EC f7 00 D0 f A9 02 8D 7e 00 A0 e8 A2 02 FF A9 00 8D FF 00 A2 01 EC 7e 00 D0 7 A2 01 EC FF 00 D0 f A9 03 8D 7e 00 A0 d8 A2 02 FF A9 00 8D FF 00 A2 01 EC 7e 00 D0 f A9 03 8D 7e 00 A0 c4 A2 02 FF A9 00 8D FF 00 A2 00 EC FF 00 D0 11 A0 9b A2 02 FF A9 00 8D FF 00 A2 01 EC FF 00 D0 e8 A2 01 EC FF 00 D0 a A0 96 A2 02 FF A9 00 8D FF 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 74 68 69 73 00 20 74 68 69 73 20 77 69 6c 6c 20 61 6c 77 61 79 73 20 62 65 20 74 72 75 65 20 68 61 68 61 68 61 68 61 68 61 68 61 68 61 00 74 68 69 73 20 64 6f 65 73 20 6e 6f 74 20 70 72 69 6e 74 00 20 61 20 6e 6f 77 20 69 73 20 74 68 72 65 65 00 61 20 6e 6f 77 20 69 73 20 74 77 6f 00 66 61 6c 73 65 00 74 72 75 65 00

SvegOutput:
print("a now is two")

print("a now is three")

Infinite loop now

Input:

```
/*
Demonstrates compiler's ability to generate code that properly handles variable addition
Credit: Tien
*/
{
int a
a = 1
int b
b = 1
b = 1 + a
while (2 + a != 3 + b) {
a = 1 + a
print("int a is ")
print(a)
print(" ")
}
print("int b is ")
print(b)
}$
```

Output:
A9 00 8D 89 00 A9 01 8D 89 00 A9 00 8D 8a 00 A9 01 8D 8a 00 A9 1 6D 89 00 8D 8a 00 A9 2 6D 89 00 8D FF 00 A9 3 6D 8a 00 8D 00 00 AE 00 00 EC FF 00 A9 00 8D FF 00 A9 00 8D 00 00 D0 7 A2 01 EC FF 00 D0 2e A9 1 6D 89 00 8D 89 00 A0 eb A2 02 FF A9 00 8D FF 00 AC 89 00 A2 01 FF A9 00 8D FF 00 A0 e9 A2 02 FF A9 00 8D FF 00 A2 01 EC FF 00 D0 a9 A0 df A2 02 FF A9 00 8D FF 00 AC 8a 00 A2 01 FF A9 00 8D FF 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 69 6e 74 20 62 20 69 73 20 00 20 00 69 6e 74 20 61 20 69 73 20 00 66 61 6c 73 65 00 74 72 75 65 00

SvegOutput:
Int a 2 Int a is 3 int b is 2

Input:

```
{
if(1==1){
if(1+1 == 1){
print(2)
}
print(5)
}
}
```

Output:

A2 00 EC FF 00 D0 25 A9 2 8D FF 00 A2 1 EC FF 00 A9 00 8D FF 00 D0 a A0 2 A2 01 FF A9 00 8D FF 00 A0 5 A2 01 FF A9 00 8D FF 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 66 61 6c 73 65 00 74 72 75 65 00

Input:

```
/* This test case demonstrates boolean
 - printing and different scope repetitive
 - variable names.
 - Result: inta true 5 */
{
   int a
   boolean b
   {
      string c
      a = 5
      b = true
      c = "inta"
      print(c)
   }
   string c
   c = " "
   print(c)
   print(b)
   print(" ")
   print(a)
```

}$

Output:
A9 00 8D 50 00 A9 05 8D 50 00 A9 FB 8D 51 00 A9 ec 8D 52 00 AC 52 00 A2 02 FF A9 00 8D FF 00 A9 ea 8D 53 00 AC 53 00 A2 02 FF A9 00 8D FF 00 AC 51 00 A2 02 FF A9 00 8D FF 00 A0 e8 A2 02 FF A9 00 8D FF 00 AC 50 00 A2 01 FF A9 00 8D FF 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 20 00 20 00 69 6e 74 61 00 72 75 65 00 66 61 6c 73 65 00 74 72 75 65 00

SvegOs:
Inta true 5