

WGSL Bug

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Code

```
1 @group(0)
2 @binding(0)
3 var<storage, read_write> flow: array<u32, 2>;
4
5 @compute
6 @workgroup_size(1)
7 fn main() {
8     var LOOP_COUNTER: u32 = 0u;
9     loop {
10         (flow)[0u] += 1u;
11         if (LOOP_COUNTER >= 1u) {
12             (flow)[1u] += 1u;
13             break;
14         }
15         LOOP_COUNTER += 1u;
16     }
17 }
```

Expected output is [2, 1] after executing break statement in second iteration of loop.

Results

Vendor	GPU	Dawn Vulkan Linux	wGPU Vulkan Linux	Dawn Vulkan Windows	wGPU Vulkan Windows
Nvidia	RTX 2060 Max-Q	Timeout	ND ¹	Zeros ²	Zeros ²
Nvidia	RTX 2060 Super	Timeout	ND ¹	Zeros ²	
Nvidia	GTX 1050 Ti	Timeout	Correct	Zeros ²	Correct
Nvidia	Quadro 4000	Correct	Correct		
AMD	Ryzen 9 4900HS (iGPU)	Correct	Correct		
Intel	i7-9700K (iGPU)	Correct	Inconsistent ³		
Intel	i5-7400 (iGPU)	Correct	Correct		

¹Non Deterministic results where the first element is large and the second element is zero; produces correct result if either of the flow increments are removed.

²Output is [0, 0], presumed to be as a result of a timeout.

³Sometimes produces correct output, other times produces [0, 0] without timing out.