Assignment 6

Claim 1. *The following (Algorithm 1) is a linearizable, obstruction-free implementation of a multi-writer snapshot object. Here R is a multi-writer register and S is an array of m multi-writer registers. Explain why the object is not non-blocking.*

Algorithm 1 Operations for the multi-writer snapshot object.

```
1: UPDATE(j, v) by process p_i:
2: R ← WRITE(i)
3: S[j] ← WRITE(v)
4: return
5:
6: SCAN by processor p_i:
7: do
8:     R ← WRITE(i)
9:     c ← COLLECT(S)
10: while READ(R) = i
11: return c
```

Proof. □