Problem FC-7 (3 parts) — Compound Logical Predicates

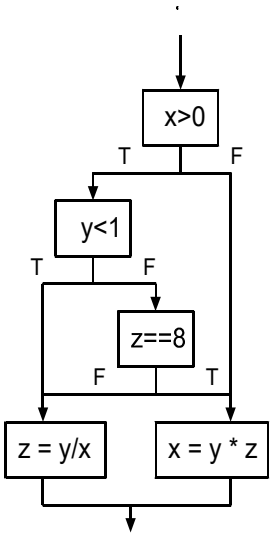
Part A: Turn this compound predicate if-then-else statement into the equivalent nested if-then-else statement which does not use compound predicates (i.e., do not use the `&&` and `||` operators).

```
if (!((a == 9) || (b>0)) && (c!=8))
         z = 9;
      else
         z = 17;
```

Part B: Write a single C statement that corresponds to the following MIPS code. Assume $1 holds A, $2 holds B, $3 holds C, and $4 holds D. *Do not use an if-then-else.*

```
            bne $3, $0, Set
            bne $1, $0, Reset
            beq $2, $0, Reset
      Set:  addi $4, $0, 1
            j Continue
    Reset:  addi $4, $0, 0
Continue:   ...
```

Part C: Write the C code fragment that corresponds to this control flow graph. Where possible, compress nested if-then-else constructs into a flat if-then-else using compound logical predicates.



Equivalent C code fragment: