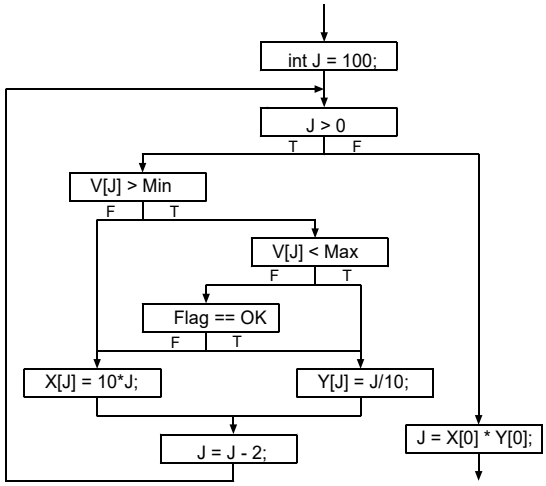
Problem FC-9 (3 parts) **Compound Logical Predicates**

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



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*.

```
          addi $4, $0, 0
          bne  $3, $0, Set
          beq  $1, $0, Continue
          beq  $2, $0, Continue
     Set: addi $4, $0, 1
Continue: …
```

Part C: Turn this nested if-then-else statement into a flat compound predicate if-then-else statement which uses only basic operators (such as == and !=) and logical && and || operators.

```
if P
   if Q
      A;
   else if R
           if S
              A;
           else B;
   else B;
else B;
```