[3/18] Express the machine code given in question 2(c) using pseudocode of a high level language.

Memory Address	Instruction
A0	2003
A1	2105
A2	2201
A3	5002
A4	B1A6
A5	5002
A6	5002
A7	C000

$X \leftarrow 3$

$Y \leftarrow 5$

$Z \leftarrow 1$

$X = X + Z$

if $(X = Y)$ **then** $X = X + Z$

$X = X + Z$

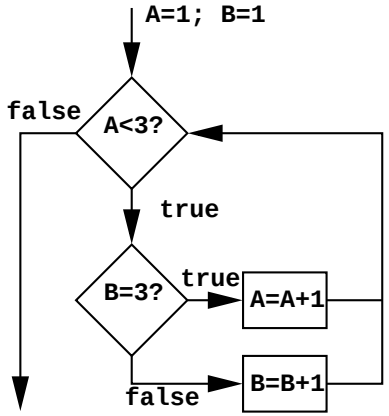
[3/23] Write a pseudocode function that computes the factorial of an integer n (i.e. $n!$). Your procedure should compute the factorial in an iterative way (as opposed to a recursive way). The function should have one parameter, n, and return $n!$.


```
int Fact (int n)
{
 if (n = 0 || n = 1) then return 1;
 else return n * Fact(n-1);
}
```

This solution is incorrect - Why?

```
int Fact (int n)
{
 i ← 1
 answer ← 1
 while ( i ≤ n)
       {
        answer ← answer * i;
        i ← i + 1;
       }
 return answer;
}
```


[3 marks] Express the following flow chart as pseudocode.




```
A ← 1
B ← 1
while (A < 3) do
(
 if (B=3) then A ← A+1
          else  B ← B+1
)
```