

MFT Computer Science Pseudocode Statement

We currently do not use any specific programming languages in questions on the MFT Computer Science Exam. Instead, we use a simple pseudocode that we believe will be easily understood by any computer science student. See the examples below.

Example 1. Class declaration and object instantiation

```
class StudentInfo
    int studentID
    string name
end class StudentInfo

StudentInfo x ← new StudentInfo()
x.studentID ← 1234 // the value 1234 is assigned to x.studentID
x.name ← "John"
print ( x.name )
if ( x.name == "John" )
    print ( x.studentID )
end if
```

Example 2. The following procedure swaps the values of two parameters.

```
swap ( pass-by-reference int x, pass-by-reference int y )
    int temp ← x
    x ← y
    y ← temp
end swap
```

Example 3. SelectionSort

Preconditions: A is an array of integers.

The length of array A is n.

The index of array A starts at 0.

```
int[] selectionSort ( pass-by-reference int[] A, int n )
    int min .
    int j
    int i ← 0
    while ( i ≤ n - 1 )
        min ← i
        j ← i + 1
        while ( j ≤ n - 1 )
            if ( A[j] < A[min] )
                min ← j
            end if
            j ← j + 1
        end while
        if ( min ≠ i )
            swap ( A[min], A[i] )
        end if
        i ← i + 1
    end while
    return A // returns the sorted array
end selectionSort
```