

Homework Exercises Due Monday in class, or on D2L by 9am, Monday March 29th.

Exercise:

#2 In most Fortran IV implementations, all parameters were passed by reference, using access path transmission only. State both the advantages and disadvantages of this design choice.

#4 Suppose you want to write a method that prints a heading on a new output page, along with a page number that is 1 in the first activation and that increases by 1 with each subsequent activation. Can this be done without parameters and without reference to nonlocal variables in Java? Can it be done in C#?

#5 Consider the following program written in C syntax:

```
void swap(int a, int b) {
    int temp;
    temp = a;
    a = b;
    b = temp;
}
void main() {
    int value = 2, list[5] = {1, 3, 5, 7, 9};
    swap(value, list[0]);
    swap(list[0], list[1]);
    swap(value, list[value]);
}
```

For each of the following parameter-passing methods, what are all of the values of the variables `value` and `list` after each of the three calls to `swap`?

- a. Passed by value
- b. Passed by reference
- c. Passed by value-result

#7 Consider the following program written in C syntax:

```
void fun (int first, int second) {
    first += first;
    second += second;
}
void main() {
    int list[2] = {1, 3};
    fun(list[0], list[1]);
}
```

For each of the following parameter-passing methods, what are the values of the `list` array after execution?

- a. Passed by value
- b. Passed by reference
- c. Passed by value-result