

## Homework 1 of CSC 220 Algorithms, Fall 2020

given September 13, 2020, due September 30

In this your first project you write a function

```
int common(int A[], int B[], int m, int n)
```

that takes two arrays `A[]` and `B[]` of integers, of length `m` and `n`, and reports the number of common elements, not counting multiplicities. So `[1,3,1,4,6]` and `[4,4,2,5,1,5,1,1]` have just two common elements.

There are many ways to do this, for this homework you are asked to use this algorithm: you sort the two arrays separately, with mergesort, for which you obtain an auxiliary array with `malloc`. Then you proceed through both arrays, as in merging, identify common elements. Once you found a common element, you skip in both arrays all repetitions of this element.

Include in your homework your name, the date, and the class, in a comment line. Submit your homework, with the homework number and the class in the subject line, by e-mail to `phjmbrass@gmail.com`. Do not share code with other students.