# Assignment #4

Soulimane Mammar

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## Exercise 1

Write a function
`void sort2(double* p, double* p)` that receives two pointers and sorts the
values to which they point. If you call
`sort2(&x, &y)`
then `x <= y` after the call.

## Exercise 2

Write a function
`double replace_if_greater(double* p, double x)`
that replaces the value to which `p` points with `x` if `x` is greater. Return the old
value to which `p` pointed.

## Exercise 3

Write a function that computes the average value of an array of floating-point
data:
`double average(double* a, int size)`
In the function, use a pointer variable, not an integer index, to traverse the
array elements.

## Exercise 4

Write a function that returns a pointer to the maximum value of an array of
floating-point data:
`double* maximum(double* a, int size)`
If size is 0, return `nullptr`.

## Exercise 5

Implement the strncpy function of the standard library.

# Exercise 6

Redo Exercise 1 using references (ie `void sort2(double& p double& p)`)

# Exercise 7

Write a function `index` that takes two parameters: an array of doubles and an index so we can use it as follows:
`index(a,3) = 5.0`