

# Assignment 6

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1. Write a program that takes as input an integer  $k > 0$  and finds the  $k$ th largest number in an array. So if  $a[] = \{3, 7, 5, 9, 1, 4, 8\}$  and  $k=3$ , the program should return 7.
2. Write a program to read in a set of floating-point numbers and store them in an array,  $x[]$ , then reverse the order of the numbers in the array and finally write out the array, so that the numbers are now displayed in reserve order.

Sample **input** and **output**:

**1 15 2 16 3 17 4 18 5 19**

**The numbers in reverse order are:**

**19 5 18 4 17 3 16 2 15 1**

Note that the program should not simply write the numbers in reverse order but should modify the array so that, if, after reading in the values, we have  $x[] = \{1, 15, 2, 16, 3, 17, 4, 18, 5, 19\}$ , then the array is *modified* so that

$x[] = \{19, 5, 18, 4, 17, 3, 16, 2, 15, 1\}$

Note that to get values into an array, your program can start with a loop that reads the values from the user:

```
#define N 10
```

```
int main(void)
{
    int a[N];
    int i;
    for (i=0; i<N; i++)
        scanf("%d", &a[i]);
}
```