The organization of the project implementation is up to you.

It is best to prepare a large file with randomly generated numbers and before each sorting (except for tests for sorted data) read from it the appropriate number of data to be sorted (this will vary to get points on the graph for values on the ox axis from 0 to about a million).

The way the data is written to the file can be formatted or binary -- that's up to you, but the program should be able to read from a ‘data’ file in which consecutive numbers are separated by spaces or a transition to a new line -- reading format %d.

Program functionality:

1 - read n (array size)

2 - declaration of an n-element array

3 - read by format (%d) n numbers from a file named ‘data’

4 - call sorting functions

5 - output a sorted array

Points 3 - 5 must be implementable for each algorithm -- it can be a menu of choices with repeatable calculations for all sorting functions or rigidly 6 calls.