Perform a comparative analysis between the sorting algorithms of heap-sort, quick-sort, radix-sort AND selection-sort. The experiments should cover the following aspects:

* Correct implementation. Output intermediate result for the first 10 items in array for lecturer/tutor to inspect the correctness of algorithms
* Execution and results of the algorithm applied onto different array sizes (10,000, 100,000, etc.)
* Execution and results using different array patterns (sorted vs random)
* Comparison of different cases (best, average & worst)
* Different pivot selection for quick-sort (last element vs random)