

# 08\_homework

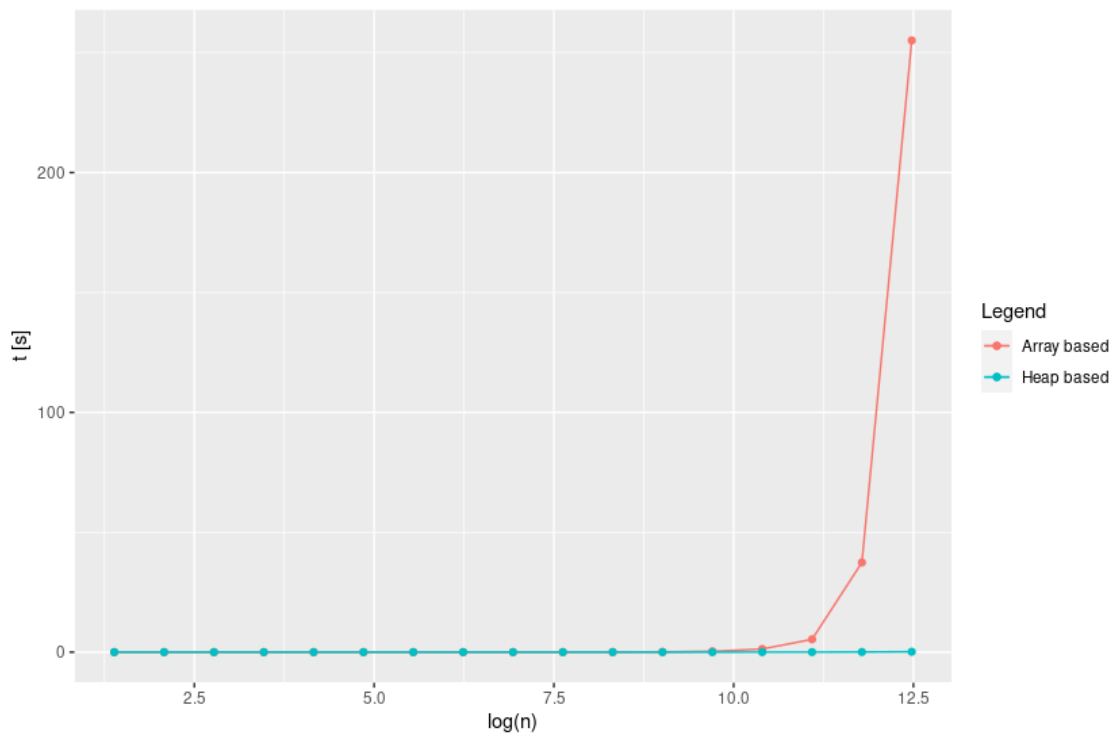
Here it can be found a brief explanation about the solution of the practical exercises and the solutions for theoretical exercises. The code can be found on `AD_weighted_graphs_array` and `AD_weighted_graphs_heap`.

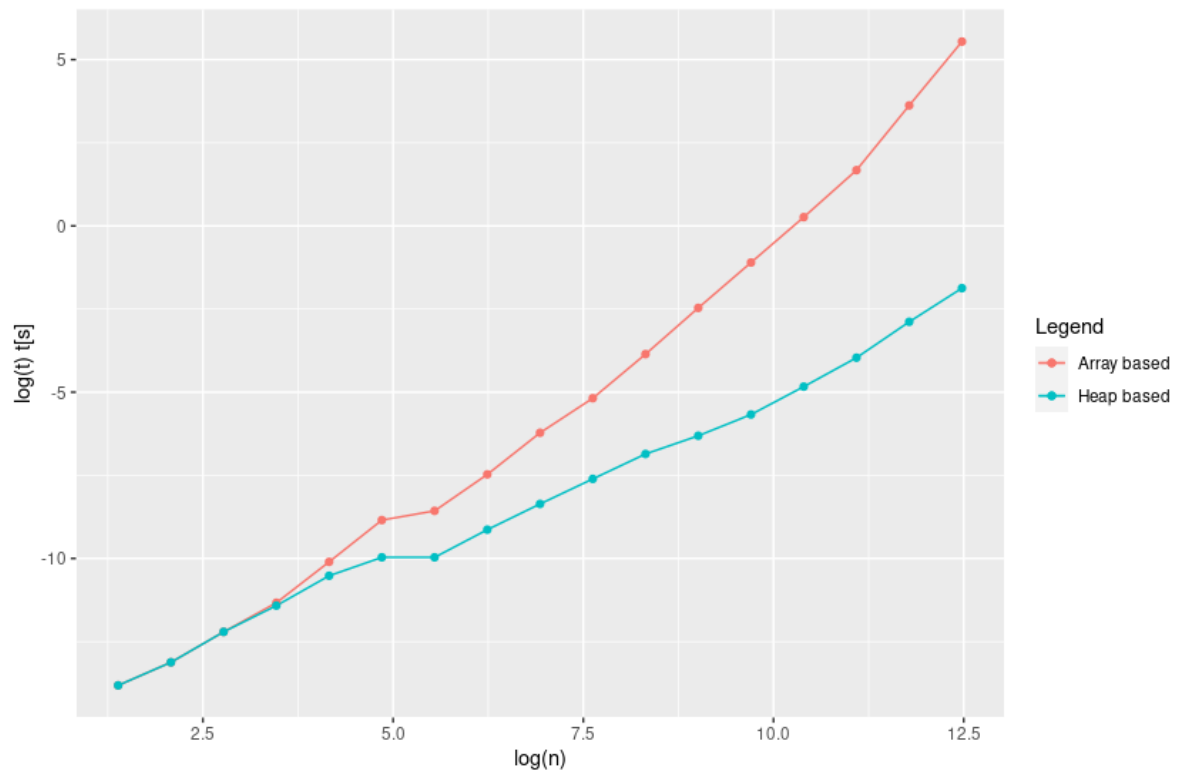
## Exercise 1 (performance test)

- Implement the array-based version of the Dijkstra's algorithm.
- Implement the binary heap-based version of the Dijkstra's algorithm by using the library `binheap` that was developed during Lesson 6, Lesson 7, and Lesson 8.
- Test the implementations on a set of instances of the problem and compare their execution times.

The two implementations has been separated into two similar repositories: `AD_weighted_graphs_array` and `AD_weighted_graphs_heap`. More details about its implementation and tests can be found into its `README.md` files.

The result of the performance test is the next:





It is clear that the improvement on the performance of heap-based version is important. In the second plot it can be also appreciated a change on the behavior respect to the red line, as one can expect.