In this research the question "Which data structure has the shortest duration on given actions" has been put central. We have used 4 data structures to get the answer to this question. To get the best insight in this question with 4 data structures we had chosen to take data structures which differ a lot from each other, namely:

- Lists

- Balanced trees

- Hash tables

- Min-max heaps

The list and hash table are both straight forward data structures, but there are multiple implementations possible for balanced trees and min-max heaps. For the balanced tree we had chosen to use the AVL tree because it is similar to the red-black tree, but known to be faster on lookups. The min-max heap implementation we have used in our experiments is the interval heap. Our initial idea was to use the original min-max heap implementation but after implementing this algorithm it turned out that it did not work according to what was described in the paper we found. Therefore the decision was made to use the interval heap since the complexity for the individual actions are the same as with the min-max heap. All the actions used in our research will be described in the next section.

Part of the research was performing statistics on the results gained from the experiments. The focus laid at the average and the standard deviation of the performed actions on special cases. Because the same tests were performed multiple times we have chosen for both the average and the standard deviation to gain a good insight in the overall results retrieved from the experiments.