1. Complexity Analysis of algorithms only considers the magnitude of time in function with the size of the input data. The point is to relate the variation of the algorithm processing time with the input size variation in order to predict the growth of the resources required by the algorithm as the size of input data increases. Considering arrays of different sizes (small, medium and large):

a) Implement the studied Sorting Algorithms:

i. Insertion Sort
ii. Merge-Sort
iii. Quick Sort
iv. Bubble Sort
v. Selection Sort

b) Analyse and compare the required processing times of the different Sorting Algorithms for each different sizes of input data.

c) Evaluate the efficiency and compare the temporal complexity of the different studied Sorting Algorithms. Discuss the influence of input size variation on Sorting Algorithms temporal complexity. Justify.