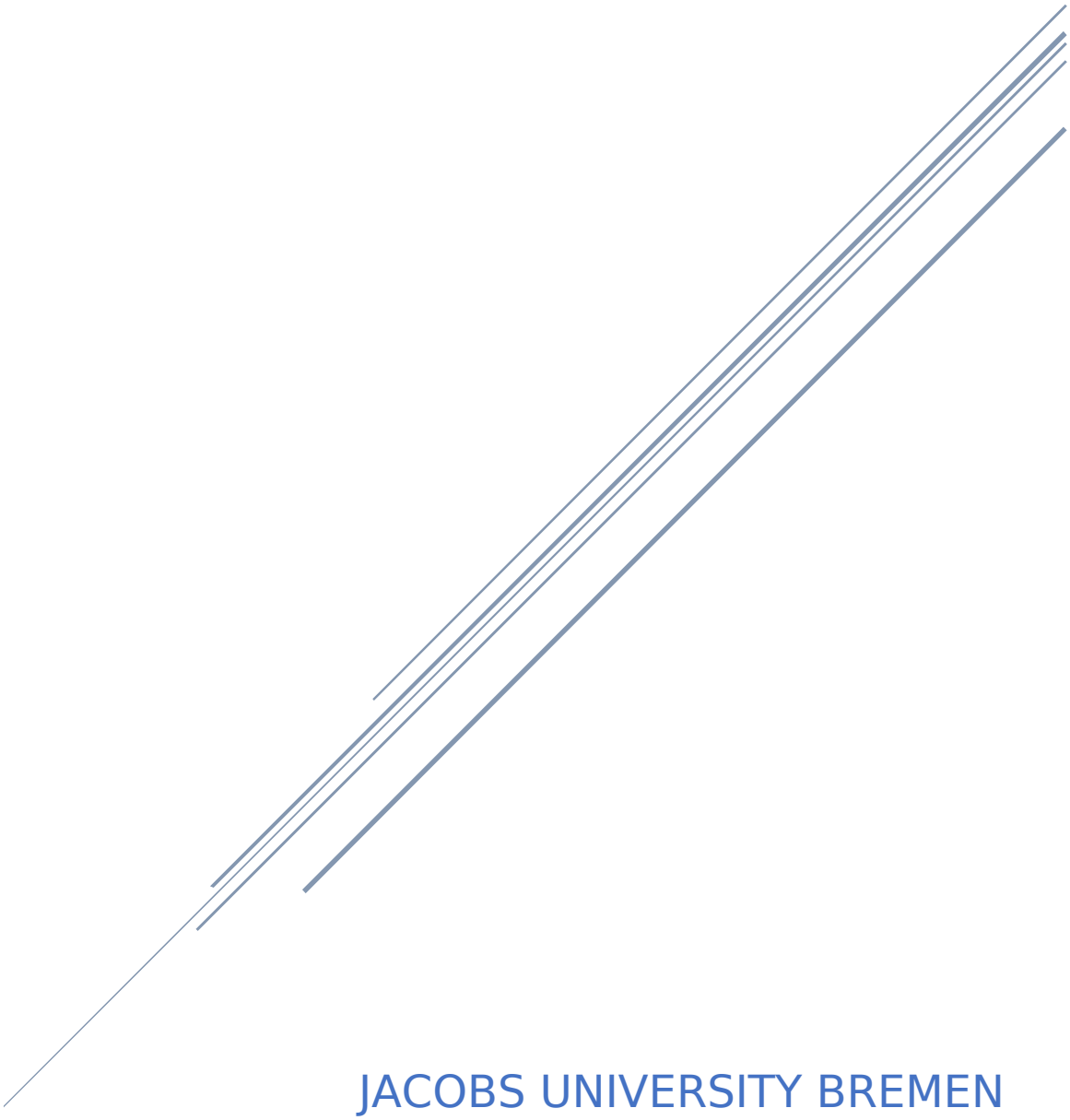
HOMEWORK 12

ALGORITHMS AND DATA STRUCTURES



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Problem 12.1 Shortest Path Algorithm

lets take the following example

FIG A

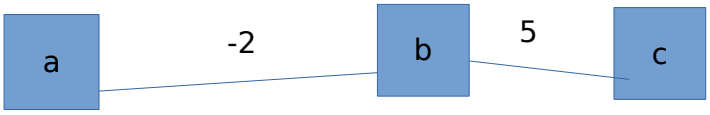
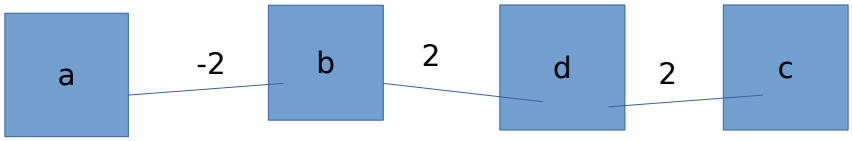


FIG B



the shortest path from a to c in this 2 examples is B if we add a constant to each edge that means that for path that are longer in number of nodes but shortest in term of weight, the weight will increased depending on the number of nodes and for paths that are short in number of nodes but with heavy weight in each edge the constant will not affect at all.

Since the problem specifies Dijkstras algorithm and not an optimization of it the algorithm is not correct.