"Frontier algorithms"

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Abstract. In this paper we present a new method to compare algorithm design strategies. As in case of frontier towns the cultures blend, the so called "frontier algorithms" are a mixture of different programming techniques like greedy, backtracking, divide and conquer, dynamic programming. In case of some of them the frontier character is hidden, so it has to be discovered. There are algorithms that combine different techniques purposively. Furthermore, determining the programming technique the algorithm is using can be a matter of point of view. The frontier algorithms represent special opportunities to highlight particular characteristics of the algorithm design strategies. According to our experience the frontier algorithms fit best to the revision classes.

Key words and phrases: teaching methods, algorithm design strategies, programming techniques, case study.

ZDM Subject Classification: B20, B50, B70, C70, P00, P50, Q00.

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