

7.3-1.

Why do we analyze the expected running time of a randomized algorithm and not its worst-case running time?

Answer.

We introduce randomization into an algorithm so as to obtain good expected performance over all inputs, including the worst-case, the best-case and various others in between. In other words, the randomized algorithm aims to explore the average-case behavior of an algorithm. The worst-case performance is counted and factored by the running time on overall input set.

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