

Design and Analysis of Algorithms

Graphs 3.2.4

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Once created, how long does it take to check if an edge exists?

It takes $O(1)$, constant, time to check if an edge exists because you just have to look up the nodes in the arrays and it is constant time to find the index of an array.

Once created, how long does it take to add an edge?

It takes $O(1)$ time to create an edge because you just have to look up the index of the arrays and change the value, $O(1)$