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## 2. Prim's Algorithm:

This algorithm is considered easier to implement than Kruskal's. It also works better on graphs with more vertices than edges due to considering edges being already being connected to vertices in MST.

Kruskal's Algorithm:

Kruskal's algorithm works well on graphs whose amount of edges are close to the minimum possible. This algorithm can also bwork well in environments where edges are processed independently.

4. The making change problem does not always yield an optimal solution, especially when the coin values are not well-suited for a greedy strategy. U.S. coins have values of 1 cent, 5, 10, 25, 50, and 100 cents.

Let's say that we need to make 15 cents in change, yet only have 5 and 10 cent coins available to us. With the greedy approach, a 10 cent coin is selected which would leave the remaining change at 5 cents. From there, we pick a 5 cent coin to make the 15 cents. That's 2 coins that made the change needed.

But there is a much better way of going about this. Just take 3 5 cent coins to make the 15 cents in change and that contradicts the greedy approach's way of always producing the optimal solution.