**Asymptotic Notations for Coin Change Problem :**

1. **Greedy Method**

The coin change problem involves making change for a given amount using the fewest number of coins. The greedy method is one approach to solve this problem. In the greedy approach, at each step, you choose the largest possible coin that is less than or equal to the remaining amount. While the greedy method works for some coin systems (like the U.S. coin system), it may not always produce the optimal solution for arbitrary coin systems.

Let's consider the greedy algorithm for the coin change problem, and express its time complexity using asymptotic notations:

**Time Complexity Analysis:**

* IsGreedyPossible function takes O(n) where n is no of denominations.
* CoinChangeGreedy takes O(n) time.
* In best Case it takes O(1) time.

1. **Dynamic Problem**

Dynamic programming is a popular approach to solving the coin change problem optimally. The dynamic programming solution involves building up a table to store the minimum number of coins needed to make change for each possible amount. The time complexity of dynamic programming algorithms for the coin change problem can be expressed using asymptotic notations.

**Time Complexity Analysis:**

* The coin change problem takes O(M\*N) time where M is the value of coins and N is no of denominations.