

## 88. Coin Change Problem

AIM: To solve the coin change problem by Greedy Technique

PROGRAM:

```
def coin_change(coins, amount):  
    dp = [float('inf')] * (amount + 1)  
    dp[0] = 0  
    for coin in coins:  
        for i in range(coin, amount + 1):  
            dp[i] = min(dp[i], dp[i - coin] + 1)  
    return dp[amount] if dp[amount] != float('inf') else -1  
coins = [1, 2, 5]  
amount = 11  
print(coin_change(coins, amount))
```

OUTPUT:  the change for 11 is : 3

TIME COMPLEXITY:  $O(n \log n)$