1.coin change problem

Code:

```
def coinChange(coins,amount):
    dp = [float('inf')]*(amount + 1)
    dp[0] = 0
    for i in range(1,amount+1):
        for coin in coins:
            if i-coin>=0:
                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(coinChange(coins, amount))
```

output:

```
PS C:\Users\karth> & C:/Users/karth/AppData/Local/Programs/Python/Python312/python.exe c:/Users/karth/OneDrive/Documents/OriginLab/daa.py
3
PS C:\Users\karth>
```

Time complexity:

F(n)=o(nm)