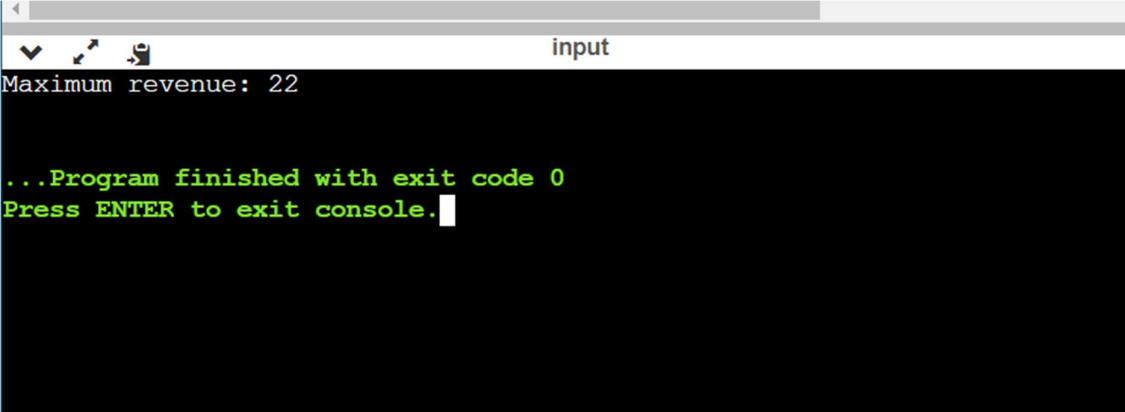**Problem – 4** Rod Cutting Problem

```python
def rod_cutting(lengths, prices, N):
    dp = [0] * (N + 1)
    for i in range(1, N + 1):
        max_revenue = 0
        for j in range(i):
            max_revenue = max(max_revenue, prices[j] + dp[i - j - 1])
        dp[i] = max_revenue

    return dp[N]
lengths = [1, 2, 3, 4, 5, 6, 7, 8]
prices = [1, 5, 8, 9, 10, 17, 17, 20]
N = 8
max_revenue = rod_cutting(lengths, prices, N)
print("Maximum revenue:", max_revenue)
```



```
                                    input
Maximum revenue: 22


...Program finished with exit code 0
Press ENTER to exit console.
```