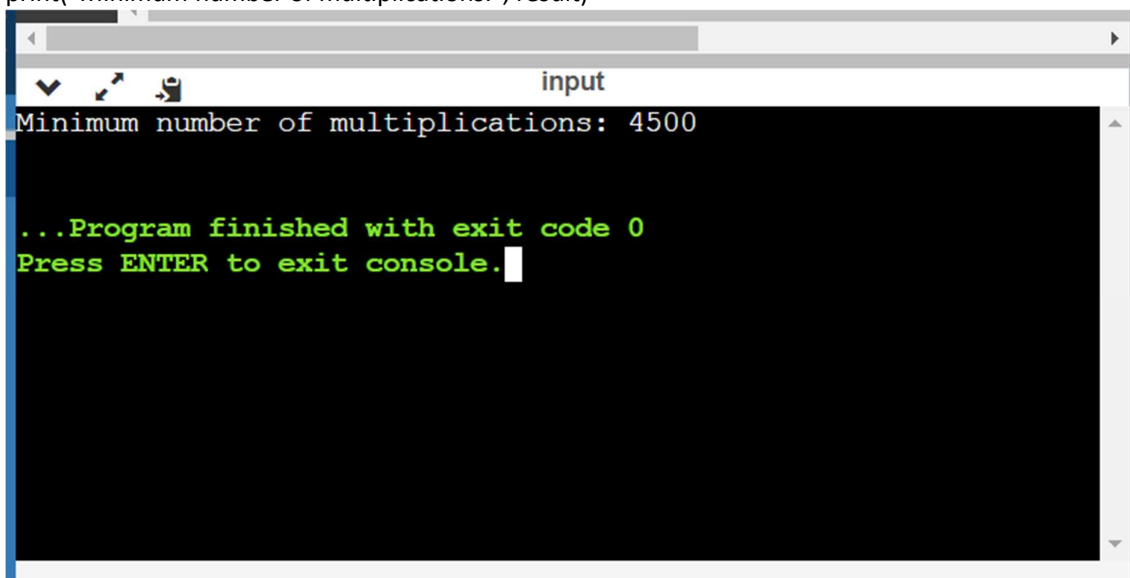


Problem – 6 : Matrix Chain Multiplication

```
def matrix_chain_multiplication(dimensions):  
    n = len(dimensions)  
    dp = [[0] * n for _ in range(n)]  
    for i in range(n):  
        dp[i][i] = 0  
    for L in range(2, n):  
        for i in range(1, n - L + 1):  
            j = i + L - 1  
            dp[i][j] = float('inf')  
            for k in range(i, j):  
                cost = dp[i][k] + dp[k+1][j] + dimensions[i-1] * dimensions[k] * dimensions[j]  
                dp[i][j] = min(dp[i][j], cost)  
    return dp[1][n-1]  
  
dimensions = [10, 30, 5, 60]  
result = matrix_chain_multiplication(dimensions)  
print("Minimum number of multiplications:", result)
```



The screenshot shows a terminal window titled "input". The output of the program is displayed in a monospaced font. The first line shows the result of the calculation: "Minimum number of multiplications: 4500". The second line, in green text, indicates the program has finished with exit code 0. The third line, also in green text, prompts the user to press ENTER to exit the console.

```
input  
Minimum number of multiplications: 4500  
...Program finished with exit code 0  
Press ENTER to exit console.
```