

R.SARANYA
2300033443

DAA SKILL-12

Lego Blocks

```
import java.util.Scanner;

public class legoBlocks {
    private int M = 0, N = 0;
    long[] table = new long[1];
    long[] table2 = new long[1];

    public legoBlocks(int m, int n) {
        M = m;
        N = n;
        table = new long[N + 1];
        table2 = new long[N + 1];
        for (int i = 0; i <= N; i++) table2[i] = -1;
        filltable2(N);

        for (int i = 0; i <= N; i++) {
            long res = 1;
            for (int j = 0; j < M; j++) {
                res = (res * table2[i]) % 1000000007;
            }
            table2[i] = res;
        }
    }
}
```

```
    for (int i = 0; i <= N; i++) {  
        table[i] = -1;  
    }  
}
```

```
private long filltable2(int n) {  
    if (n < 0) {  
        return 0; // Added return statement for negative values of `n`  
    }  
}
```

```
    if (table2[n] == -1) {  
        if (n == 0) {  
            table2[n] = 1;  
        } else {  
            table2[n] = (filltable2(n - 1) + filltable2(n - 2) + filltable2(n - 3) +  
filltable2(n - 4)) % 1000000007;  
        }  
    }  
    return table2[n];  
}
```

```
private long evaluate() {  
    long result = helper(N);  
    return result; // Added return statement  
}
```

```

private long helper(int n) {
    if (table[n] == -1) {
        if (n == 1) {
            table[n] = 1;
        } else {
            table[n] = table2[n];
            for (int i = 1; i < n; i++) {
                table[n] = (table[n] - helper(n - i) * table2[i]) % 1000000007;
            }
            if (table[n] < 0) {
                table[n] += 1000000007;
            }
        }
    }
}
return table[n];
}

```

```

public static void main(String[] args) {
    Scanner inp = new Scanner(System.in);
    int testcases = inp.nextInt();

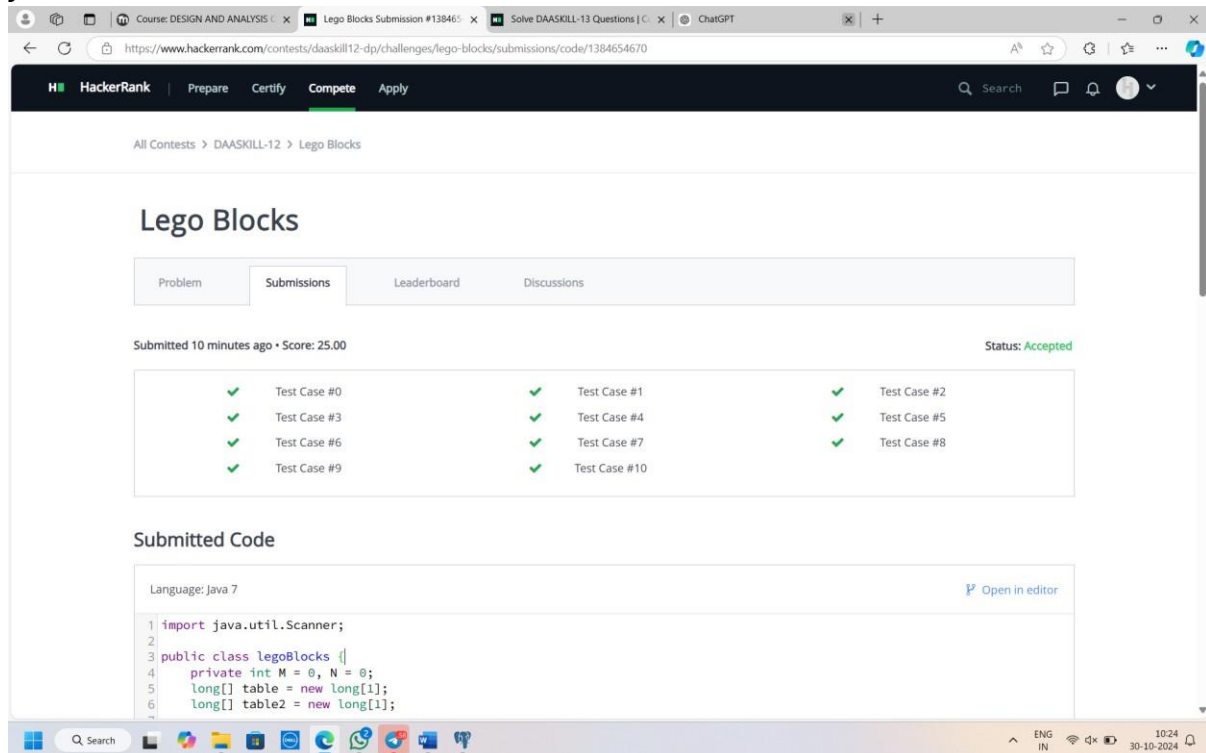
    for (int i = 0; i < testcases; i++) {
        int m = inp.nextInt();
        int n = inp.nextInt();
        legoBlocks T = new legoBlocks(m, n);
        System.out.println(T.evaluate());
    }
}

```

```

    }
    inp.close();
}
}

```



Stock Maximize

```
import java.util.Scanner;
```

```
public class Solution {
```

```
    private Scanner in;
```

```
    public Solution() {
```

```
        in = new Scanner(System.in);
```

```
    }
```

```
public void run() {  
    int testCases = in.nextInt();  
  
    for (int test = 0; test < testCases; test++) {  
        int n = in.nextInt();  
        int[] arr = new int[n];  
        int[] dp = new int[n];  
  
        // Read array values  
        for (int i = 0; i < n; i++) {  
            arr[i] = in.nextInt();  
        }  
  
        // Initialize max to the last element in arr  
        int max = arr[n - 1];  
  
        // Fill dp array from right to left with the maximum values  
        for (int i = n - 1; i >= 0; i--) {  
            max = Math.max(arr[i], max);  
            dp[i] = max;  
        }  
  
        // Calculate the sum of differences between dp[i] and arr[i]  
        long sum = 0;  
        for (int i = 0; i < n; i++) {  
            sum += (dp[i] - arr[i]);  
        }  
    }  
}
```

```
}
```

```
// Print the result for the current test case
```

```
System.out.println(sum);
```

```
}
```

```
}
```

```
public static void main(String[] args) {
```

```
    Solution solution = new Solution();
```

```
    solution.run();
```

```
}
```

```
}
```

Course: DESIGN AND ANALYSIS | Stock Maximize Submission #130 | Solve DAASKILL-13 Questions | ChatGPT

https://www.hackerrank.com/contests/daaskill12-dp/challenges/stockmax/submissions/code/1384654710

HackerRank | Prepare | Certify | **Compete** | Apply

All Contests > DAASKILL-12 > Stock Maximize

Stock Maximize

Problem | **Submissions** | Leaderboard | Discussions

Submitted 9 minutes ago • Score: 25.00 | Status: **Accepted**

✓ Test Case #0	✓ Test Case #1	✓ Test Case #2
✓ Test Case #3	✓ Test Case #4	✓ Test Case #5
✓ Test Case #6	✓ Test Case #7	✓ Test Case #8
✓ Test Case #9	✓ Test Case #10	✓ Test Case #11

Submitted Code

Language: Java 7 | [Open in editor](#)

```
1 import java.util.Scanner;
2
3 public class Solution {
4
5     private Scanner in;
6
7     public void run() {
```