ADVANCED PROGRAMMING-II

ASSIGNMENT-07

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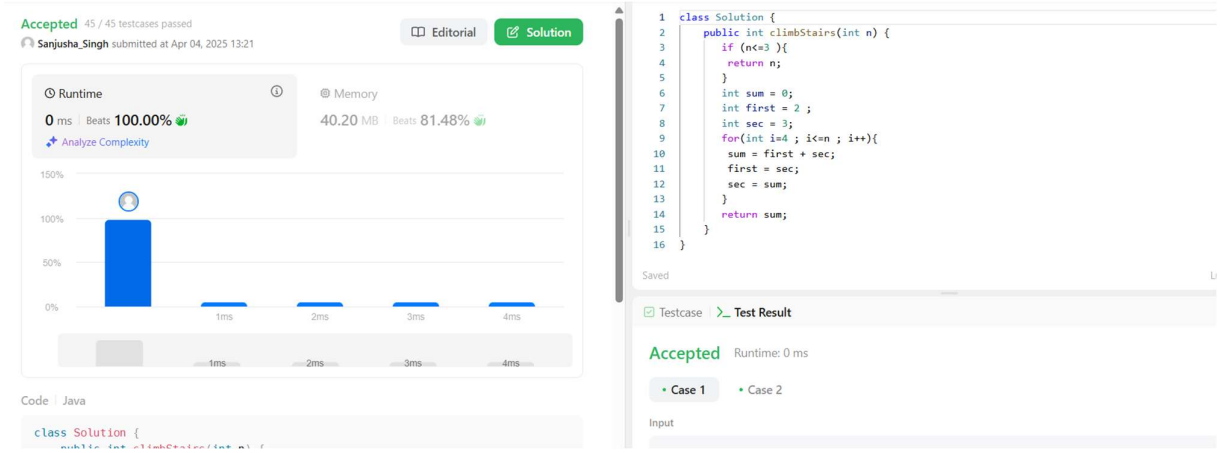
Q1 Climbing Stairs:

CODE:

```
class Solution {
  public int climbStairs(int n) {
     if (n<=3 ){
      return n;
     }
     int sum = 0;
     int first = 2 ;
     int sec = 3;
     for(int i=4 ; i<=n ; i++){
      sum = first + sec;
      first = sec;
      sec = sum;
     }
     return sum;
  }
```

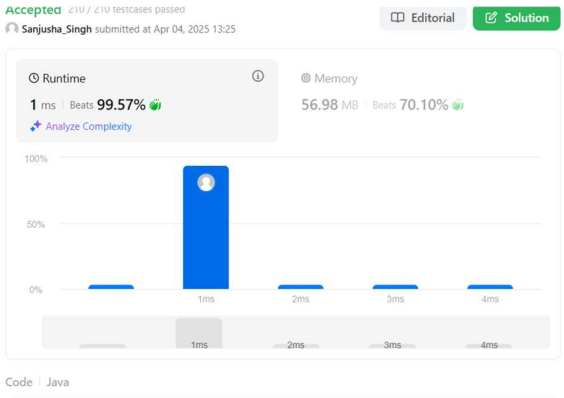


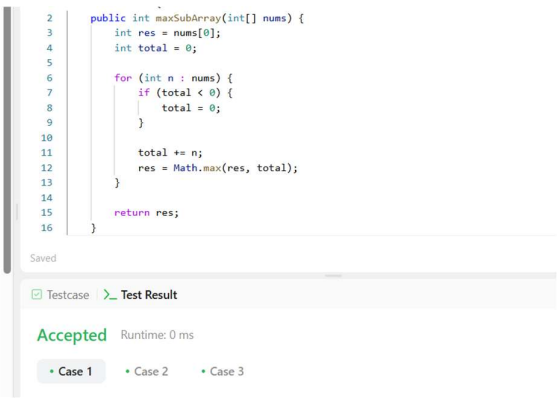
Q2 Maximum Subarray :

CODE:

```
class Solution {
    public int maxSubArray(int[] nums) {
        int res = nums[0];
        int total = 0;

        for (int n : nums) {
            if (total < 0) {
                total = 0;
            }

            total += n;
            res = Math.max(res, total);
        }

        return res;
    }
}
```

SCREENSHOT:



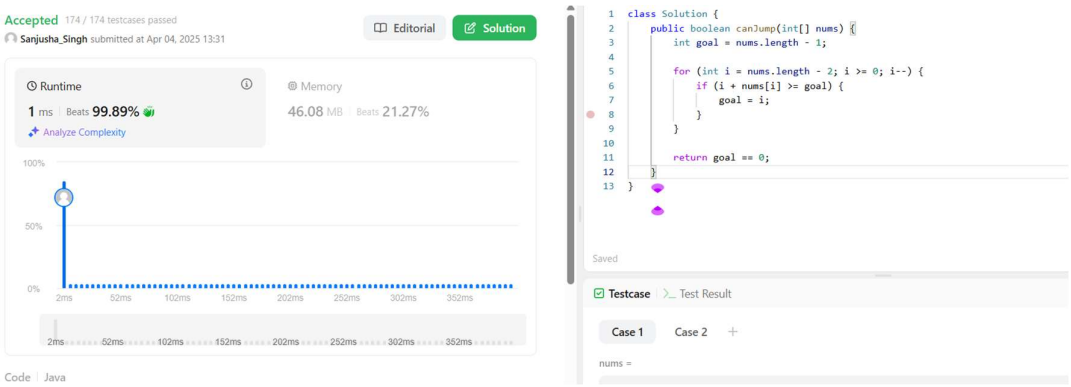


Q3 Jump Game:

CODE:

```
class Solution {
    public boolean canJump(int[] nums) {
        int goal = nums.length - 1;

        for (int i = nums.length - 2; i >= 0; i--) {
            if (i + nums[i] >= goal) {
                goal = i;
            }
        }

        return goal == 0;
    }
}
```

SCREENSHOT:

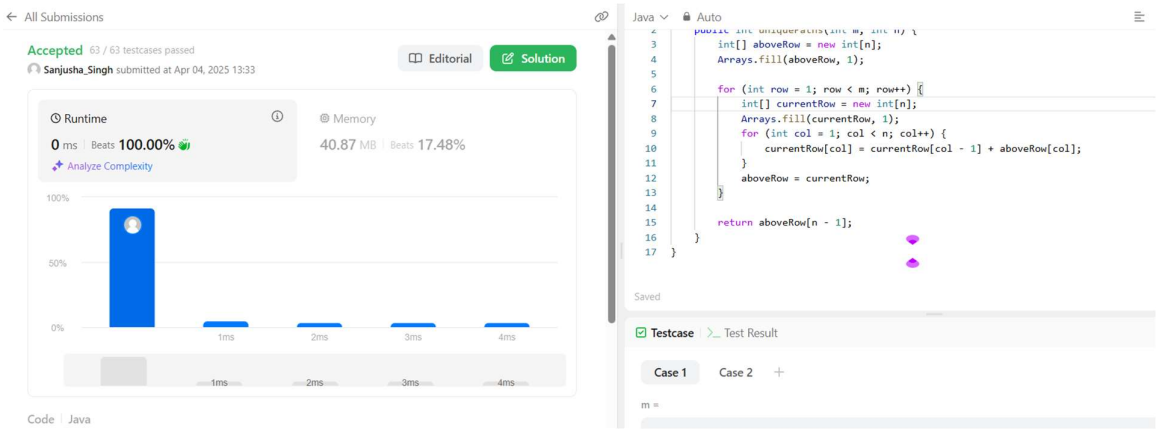


Q4.Unique Paths :

CODE:

```
class Solution {
    public int uniquePaths(int m, int n) {
        int[] aboveRow = new int[n];
        Arrays.fill(aboveRow, 1);

        for (int row = 1; row < m; row++) {
            int[] currentRow = new int[n];
            Arrays.fill(currentRow, 1);
            for (int col = 1; col < n; col++) {
                currentRow[col] = currentRow[col - 1] + aboveRow[col];
            }
            aboveRow = currentRow;
        }

        return aboveRow[n - 1];
    }
}
```

SCREENSHOT:



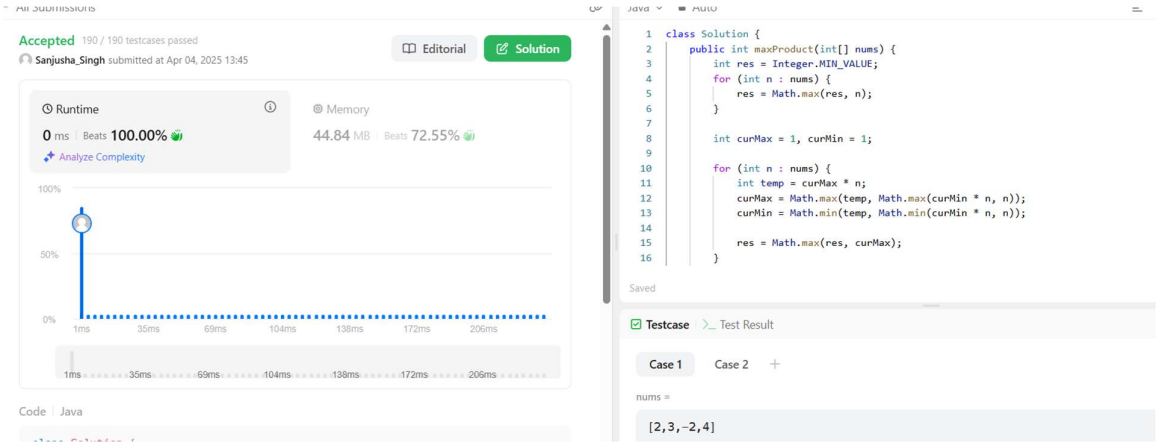
Q5 Maximum Product Subarray :

CODE:

```
class Solution {
    public int maxProduct(int[] nums) {
        int res = Integer.MIN_VALUE;
        for (int n : nums) {
            res = Math.max(res, n);
        }

        int curMax = 1, curMin = 1;

        for (int n : nums) {
            int temp = curMax * n;
            curMax = Math.max(temp, Math.max(curMin * n, n));
            curMin = Math.min(temp, Math.min(curMin * n, n));

            res = Math.max(res, curMax);
        }

        return res;
```

}

}**SCREENSHOT:**



LEETCODE PROFILE LINK: https://leetcode.com/u/Sanjusha_Singh/

GITHUB LINK: https://github.com/SanjushaSingh20