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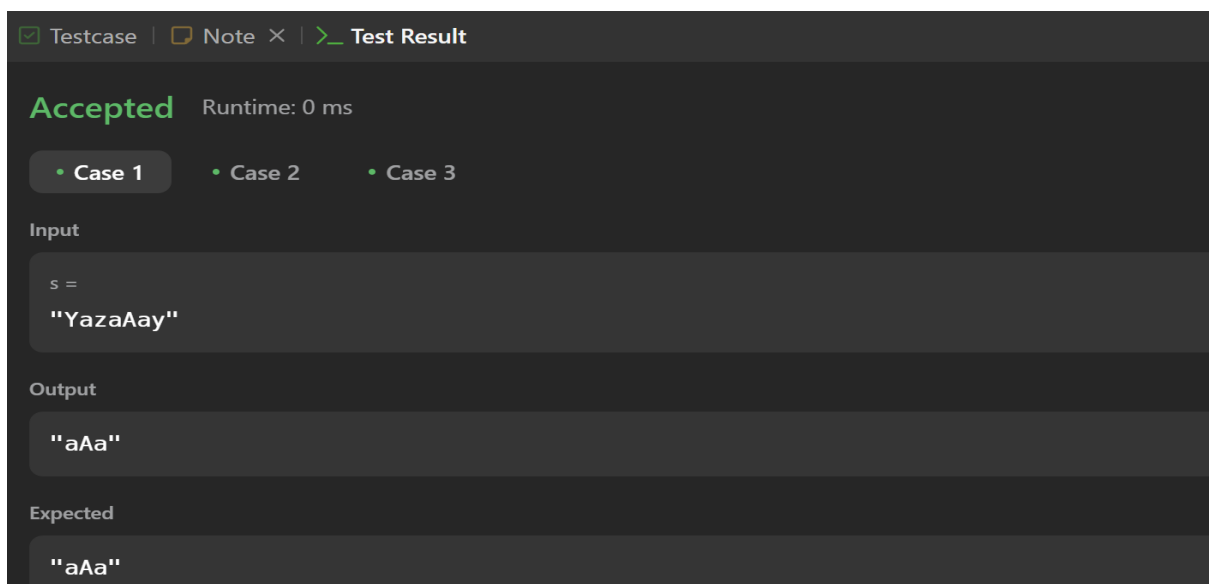
**UID: 22BCS16690**

**Class – 605 -B**

### **Q 1 Longest Nice Substring**

```
class Solution {  
    public String longestNiceSubstring(String s) {  
        Set<Character> charSet = new HashSet<>();  
        for (int i = 0; i < s.length(); i++) {  
            charSet.add(s.charAt(i));  
        }  
        for (int i = 0; i < s.length(); i++) {  
            if (charSet.contains(Character.toUpperCase(s.charAt(i))) &&  
                charSet.contains(Character.toLowerCase(s.charAt(i)))) {  
                continue;  
            }  
            String s1 = longestNiceSubstring(s.substring(0, i));  
            String s2 = longestNiceSubstring(s.substring(i+1));  
            return s1.length() >= s2.length() ? s1 : s2;  
        }  
        return s; } }
```

### **OUTPUT:**



The screenshot shows a web-based code execution environment. At the top, there are tabs for 'Testcase', 'Note', and 'Test Result'. The 'Test Result' tab is active, displaying 'Accepted' in green text and 'Runtime: 0 ms'. Below this, there are three case selection buttons: 'Case 1' (selected), 'Case 2', and 'Case 3'. The 'Input' section shows 's =' followed by the string '"YazaAay"'. The 'Output' section shows '"aAa"'. The 'Expected' section also shows '"aAa"', indicating a successful match.

## Q 2 Reverse Bits

```
public class Solution {  
    public int reverseBits(int n) {  
        int result = 0;  
        for(int i = 0; i<32; i++){  
            int lsb = n & 1;  
            int reverse = lsb <<(31-i);  
            result = result | reverse;  
            n = n >> 1;  
        }  
        return result;  
    }  
}
```

### OUTPUT:

The screenshot shows a code execution interface with a dark background. At the top, it says "Accepted" in green and "Runtime: 0 ms" in white. Below this, there are two tabs: "Case 1" and "Case 2", both with a green dot. Under the "Case 1" tab, there is an "Input" section with "n =" followed by the binary string "00000010100101000001111010011100". Below the input is an "Output" section showing "964176192 (00111001011110000010100101000000)". At the bottom, there is an "Expected" section showing the same output: "964176192 (00111001011110000010100101000000)".

## Q3 Number of 1 Bits

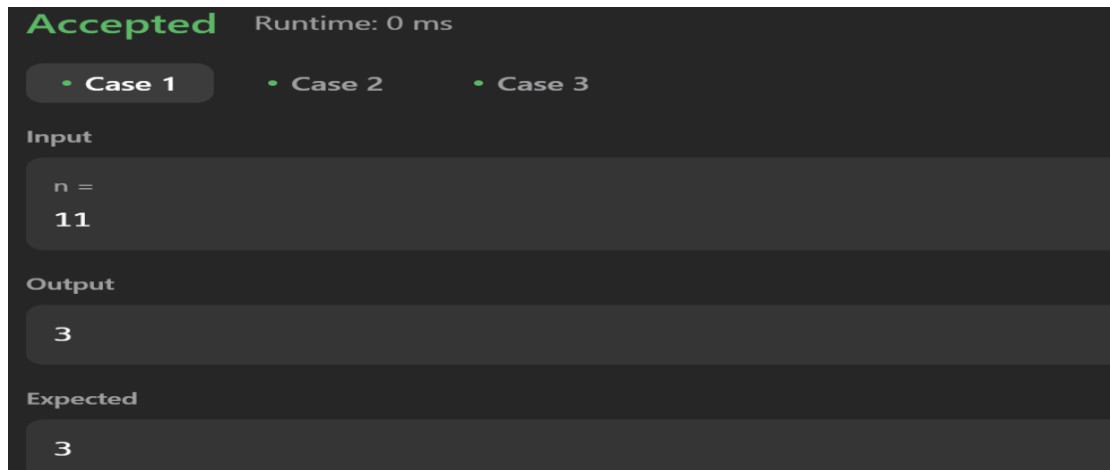
```
class Solution {  
    public int hammingWeight(int n) {  
        int count = 0;  
        while(n>0){  
            if((n & 1) != 0){  
                count++;  
            }  
        }  
    }  
}
```

```

        n = n>>1;
    }
    return count;
}
}

```

## OUTPUT:



## Q 4 Maximum Subarray

```

class Solution {
    public int maxSubArray(int[] nums) {
        int maxSum = Integer.MIN_VALUE;
        int currentSum = 0;

        for (int i = 0; i < nums.length; i++) {
            currentSum += nums[i];

            if (currentSum > maxSum) {
                maxSum = currentSum;
            }

            if (currentSum < 0) {
                currentSum = 0;
            }
        }
    }
}

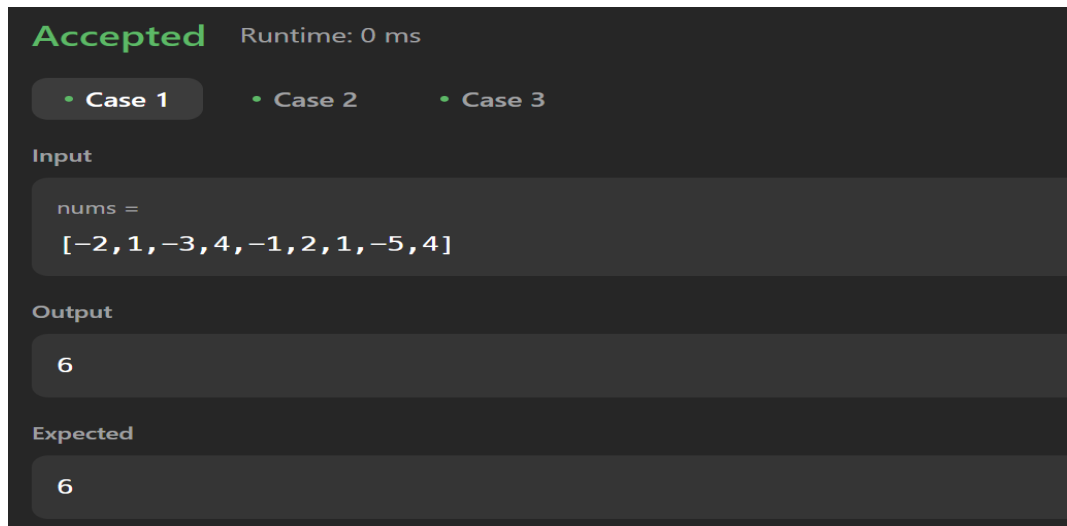
```

```

        return maxSum;
    }
}

```

## OUTPUT:



## Q 5 Search a 2D Matrix II

```

public class Solution {
    public boolean searchMatrix(int[][] matrix, int target) {
        int rows = matrix.length;
        int cols = matrix[0].length;
        int r = rows - 1;
        int c = 0;
        while (r >= 0 && c < cols) {
            if (matrix[r][c] > target) {
                r--;
            } else if (matrix[r][c] < target) {
                c++;
            } else {
                return true;
            }
        }
        return false;
    }
}

```

## OUTPUT:

**Accepted** Runtime: 0 ms

• Case 1

• Case 2

Input

matrix =  
[[1,4,7,11,15],[2,5,8,12,19],[3,6,9,16,22],[10,13,14,17,24],[18,21,23,26,30]]

target =  
5

Output

true

Expected

true

## Q 6 Super Pow

```
class Solution {  
    public int superPow(int a, int[] b) {  
        int num=0;  
        for(int i:b){  
            num=(num*10+i)%1140;  
        }  
        return binexpo(a,num,1337);  
    }  
    public int binexpo(int a, int b, int m){  
        a%=m;  
        int res=1;  
        while(b>0){  
            if((b&1)==1)  
                res=(res*a)%m;  
            a=(a*a)%m;  
            b>>=1;  
        }  
        return res;  
    }  
}
```

```
}  
}
```

## OUTPUT:

**Accepted** Runtime: 0 ms

• Case 1

• Case 2

• Case 3

Input

a =  
2

b =  
[3]

Output

8

Expected

8