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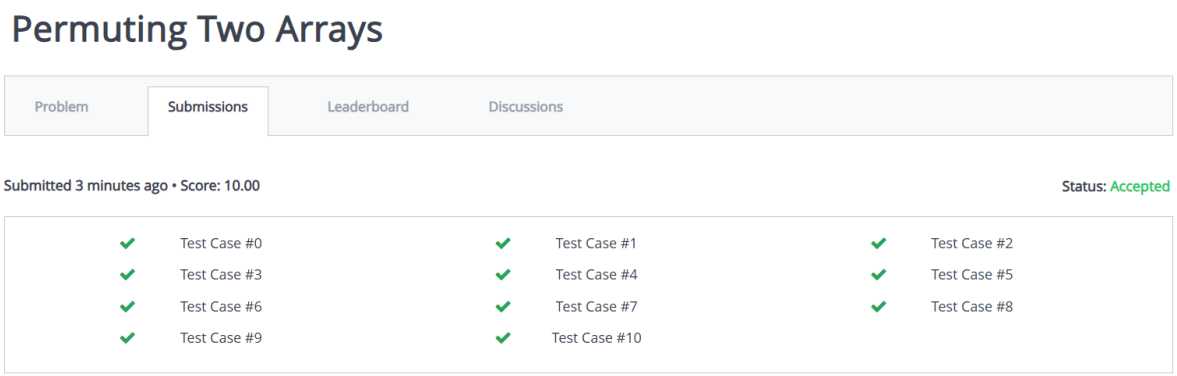
Section : 31

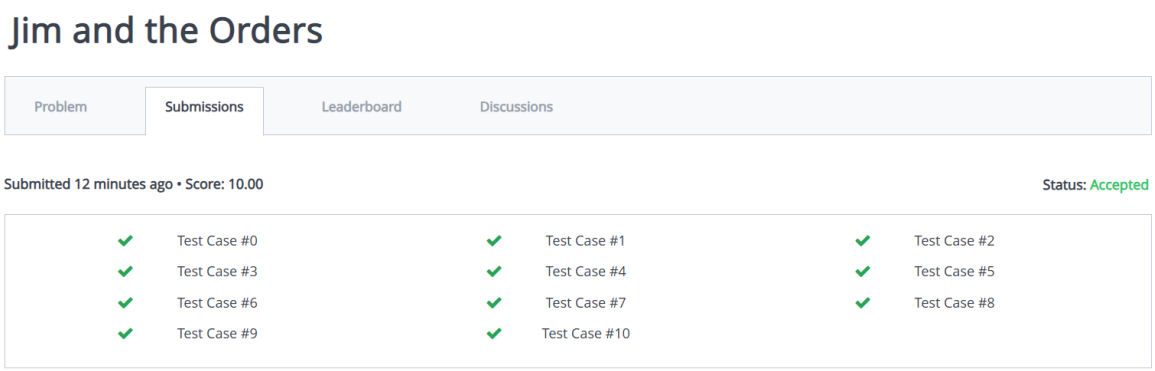
1. Permuting Two Arrays




```
import math
import os
import random
import re
import sys


def twoArrays(k, A, B):
    A.sort()
    B.sort(reverse=True)
    if any(a + b < k for (a, b) in zip(A, B)):
        return "NO"
    return "YES"
```

```
if __name__ == '__main__':
    fptr = open(os.environ['OUTPUT_PATH'], 'w')
    q = int(input().strip())
    for q_itr in range(q):
        first_multiple_input = input().rstrip().split()
        n = int(first_multiple_input[0])
        k = int(first_multiple_input[1])
        A = list(map(int, input().rstrip().split()))
        B = list(map(int, input().rstrip().split()))
        result = twoArrays(k, A, B)
        fptr.write(result + '\n')
    fptr.close()
```

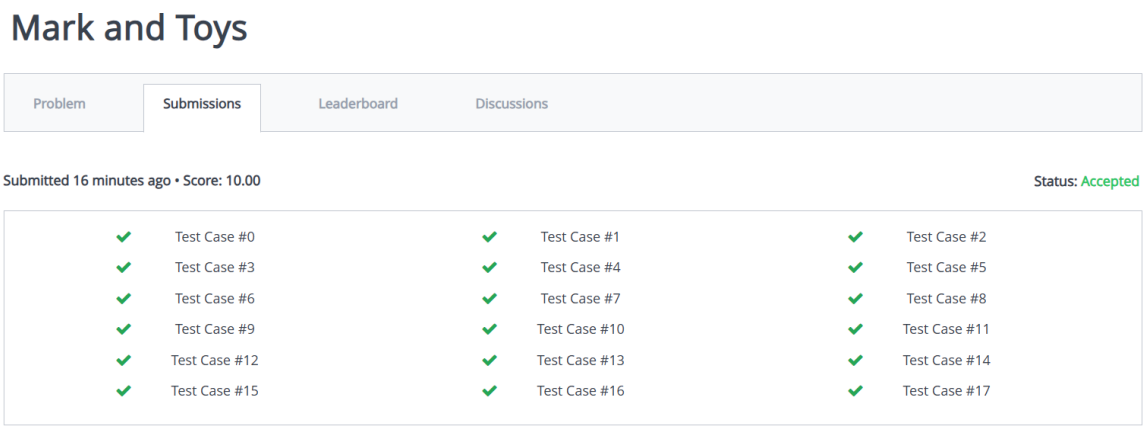
2. Jim and the Orders




```
import math
import os
import random
import re
import sys
```

```
def jimOrders(orders):
    serve_time = [sum(order) for order in orders]
    indexed = sorted(enumerate(serve_time, 1), key=lambda x: x[1])
    cust_order = [index[0] for index in indexed]

    return cust_order

if __name__ == '__main__':
    fptr = open(os.environ['OUTPUT_PATH'], 'w')

    n = int(input().strip())

    orders = []

    for _ in range(n):
        orders.append(list(map(int, input().rstrip().split())))

    result = jimOrders(orders)

    fptr.write(' '.join(map(str, result)))
    fptr.write('\n')

    fptr.close()
```

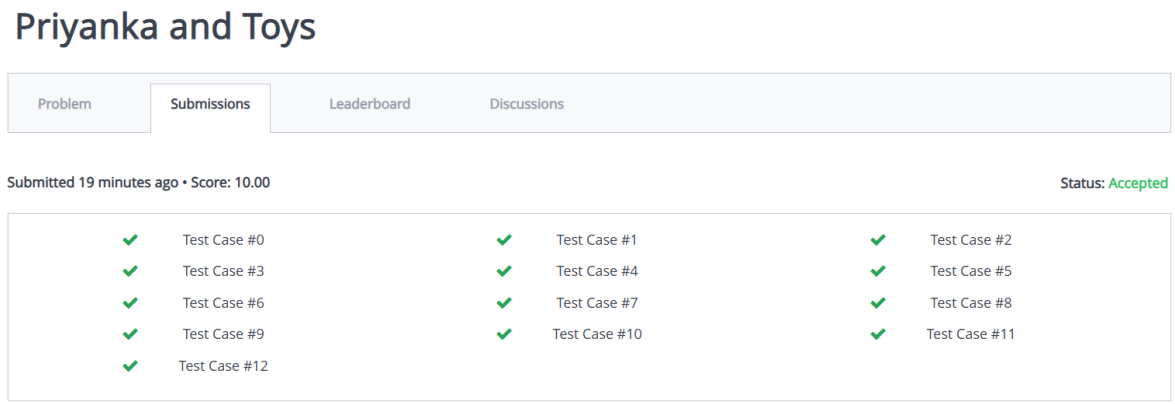
3. Mark and Toys




```
import math
import os
import random
import re
import sys


def maximumToys(rates, x):
    rates.sort()
    for i in range(len(rates)):
        if x - rates[i] >= 0:
            x -= rates[i]
        else:
            return i


if __name__ == '__main__':
    fptr = open(os.environ['OUTPUT_PATH'], 'w')
    first_multiple_input = input().rstrip().split()
    n = int(first_multiple_input[0])
    x = int(first_multiple_input[1])
```

```
    prices = list(map(int, input().rstrip().split()))
    result = maximumToys(prices, x)
    fptr.write(str(result) + '\n')
    fptr.close()
```

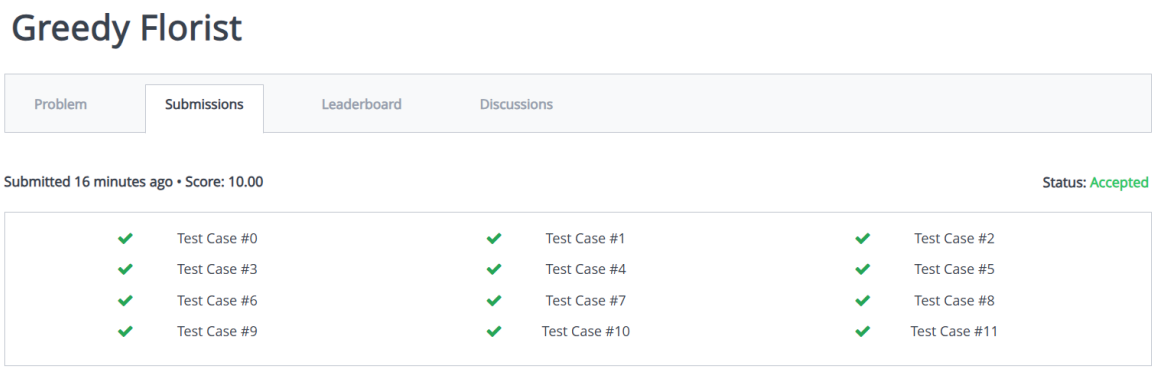
4. Priyanka and Toys




```
import math
import os
import random
import re
import sys

def toys(w):
    w.sort()
    no_of_con = 0
    i = 0
    while i < len(w):
        no_of_con += 1
        con_limit = w[i] + 4
        while i < len(w) and w[i] <= con_limit:
```

```
        i += 1
    return no_of_con

if __name__ == '__main__':
    fptr = open(os.environ['OUTPUT_PATH'], 'w')
    n = int(input().strip())
    w = list(map(int, input().rstrip().split()))
    result = toys(w)
    fptr.write(str(result) + '\n')
    fptr.close()
```

5. Greedy Florist




```
import math
import os
import random
import re
import sys

def getMinimumCost(k, c):
    n_flowers = len(c)
    c = sorted(c, reverse=True)
    price = 0
```

```
    count = 0
    for i in range(n_flowers):
        if i % k ==0 and i != 0 :
            count += 1
        price += c[i] * (count + 1)
    return price

if __name__ == '__main__':
    fptr = open(os.environ['OUTPUT_PATH'], 'w')

    nk = input().split()

    n = int(nk[0])

    k = int(nk[1])

    c = list(map(int, input().rstrip().split()))

    minimumCost = getMinimumCost(k, c)

    fptr.write(str(minimumCost) + '\n')

    fptr.close()
```