

Тренировочный контест — бэкенд

Задачи Постылки Сообщения

D. Лей, лей, не жалей

✓ Полное решение </> OK Python 3.12.3

^ Исходный код



```
1 from bisect import bisect_left, bisect_right
2 from collections import defaultdict
3
4
5 def build_prefixsums(f, N: int):
6     start2cost = defaultdict(int)
7     end2time = defaultdict(int)
8     start2cost[0] = 0
9     end2time[0] = 0
10
11    for i in range(N):
12        line = f.readline()
13        start, end, cost = [int(x) for x in line.split()]
14
15        start2cost[start] += cost
16        end2time[end] += end - start
17
18    s2c_keys = sorted(start2cost.keys())
19    e2t_keys = sorted(end2time.keys())
20
21    for i in range(1, len(s2c_keys)):
22        start2cost[s2c_keys[i]] += start2cost[s2c_keys[i - 1]]
23    for i in range(1, len(e2t_keys)):
24        end2time[e2t_keys[i]] += end2time[e2t_keys[i - 1]]
25
26    return start2cost, s2c_keys, end2time, e2t_keys
27
28
29 def binary_search_closest(value: int, sorted_array: list[int], left_bound: bool) -> int:
30     if left_bound:
31         return bisect_left(sorted_array, value)
32     else:
33         return bisect_right(sorted_array, value) - 1
34
35
36 def main():
37     with open("input.txt") as f:
38         N = int(f.readline())
39         start2cost, s2c_keys, end2time, e2t_keys = build_prefixsums(f, N)
40
41         # Пропускаем число запросов
42         f.readline()
43
44         for line in f:
45             start, end, type_ = [int(x) for x in line.split()]
46
47             if type_ == 1:
48                 left_index = binary_search_closest(start, s2c_keys, True)
49                 right_index = binary_search_closest(end, s2c_keys, False)
50                 print(start2cost[s2c_keys[right_index]] - start2cost[s2c_keys[left_index - 1]], end=" ")
51             else:
```

```

52     left_index = binary_search_closest(start, e2t_keys, True)
53     right_index = binary_search_closest(end, e2t_keys, False)
54     print(end2time[e2t_keys[right_index]] - end2time[e2t_keys[left_index - 1]], end=" ")
55
56
57 if __name__ == "__main__":
58     main()
59

```

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