


디스크 컨트롤러

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References

<https://school.programmers.co.kr/learn/courses/30/lessons/42627>

References

- [1. heapq](#)
- [2. heapq + deque](#)

1. heapq

```
import heapq

def solution(jobs):
    n = len(jobs)
    heapq.heapify(jobs)

    job = heapq.heappop(jobs)
    end = result = 0
    delay = []
    while job:
        while(job[0] <= end):
            heapq.heappush(delay, [job[1], job[0]])
            if jobs:
                job = heapq.heappop(jobs)
            else:
                job = False
                break

        if delay:
            cur = heapq.heappop(delay)
```

```

        result += cur[0] + max(0, end - cur[1])
        end += cur[0]
    elif job:
        result += job[1]
        end = job[0] + job[1]
        if jobs:
            job = heapq.heappop(jobs)

    if not job:
        break

    while delay:
        cur = heapq.heappop(delay)
        result += cur[0] + max(0, end - cur[1])
        end += cur[0]

    return result // n

```

2. heapq + deque

```

import heapq
import collections

def solution(jobs):
    n = len(jobs)
    jobs = collections.deque(sorted(jobs))

    end = result = 0
    delay = []
    while jobs or delay:
        while jobs and jobs[0][0] <= end:
            heapq.heappush(delay, jobs.popleft()[::-1])

        if not delay and jobs:
            end = jobs[0][0]
        else:
            cur = heapq.heappop(delay)
            end += cur[0]
            result += end - cur[1]

    return result // n

```