

The Dining Philosophers (/problems/the-dining-philosophers/)

Submission Detail

24 / 24 test cases passed.

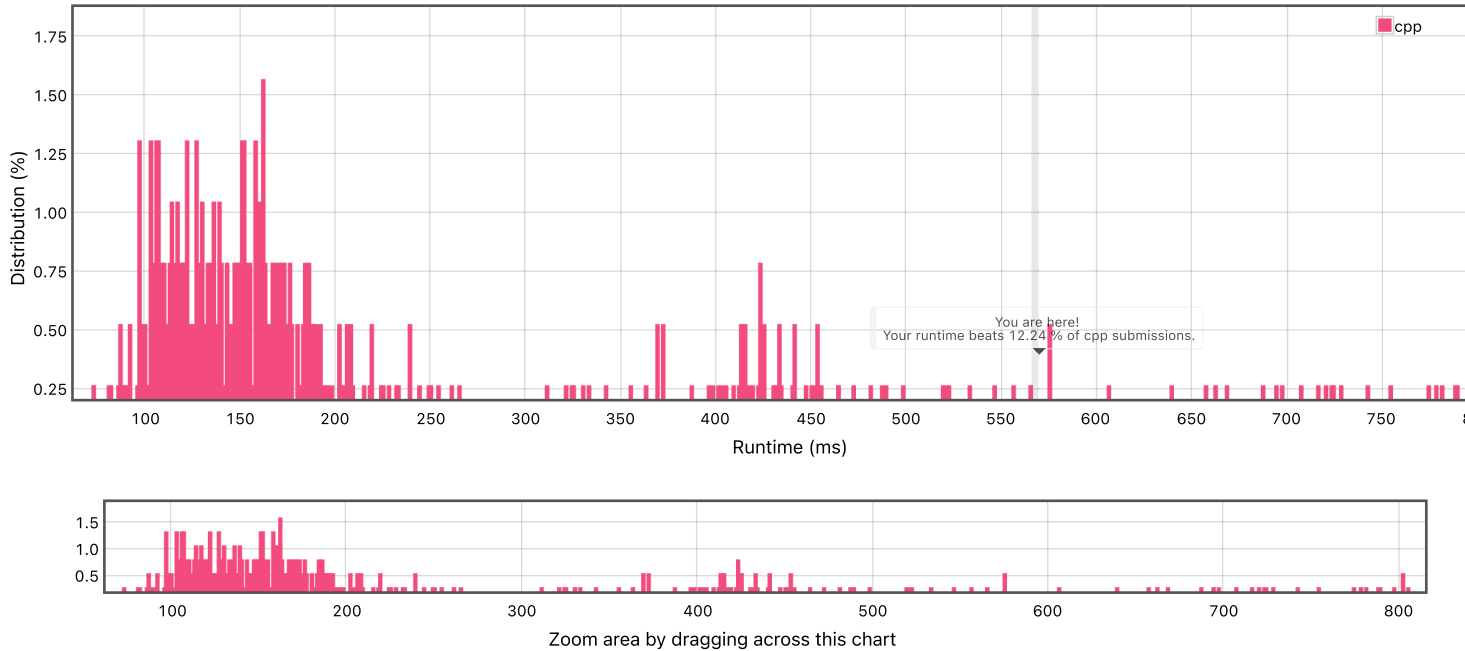
Runtime: 568 ms

Memory Usage: 10.7 MB

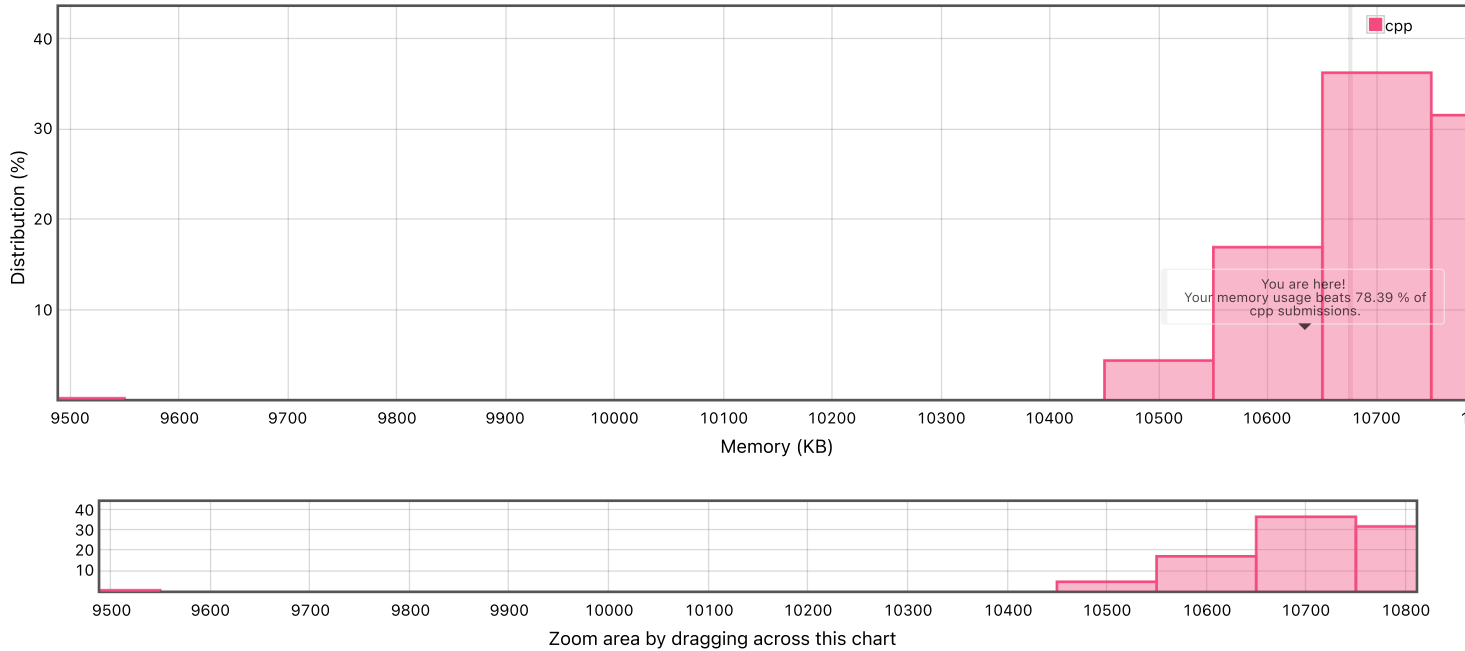
Status: Accepted

Submitted: 2 days, 2 hours ago

Accepted Solutions Runtime Distribution



Accepted Solutions Memory Distribution



Invite friends to challenge The Dining Philosophers

Submitted Code: 2 days, 2 hours ago


Language: cpp

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```
1 class DiningPhilosophers {
2     private:
3         //mutex array for managing forks
4         mutex mtx[5];
5
6         //fixed fork positions for easy recall using philosopher id
7         const int RightFork[5] = {4, 0, 1, 2, 3};
8         const int LeftFork[5] = {0, 1, 2, 3, 4};
9
10
11     public:
12     DiningPhilosophers() {
13
14     }
15
16     void wantsToEat(int philosopher, function<void()> pickLeftFork, function<void()> pickRightFork, function<void()> eat,
17         function<void()> putLeftFork, function<void()> putRightFork) {
18         //Grab both forks at the same time but only if both are available
19         //Allows only two philosophers sitting opposite to each other to pick up forks and eat at the same time
20         //Scoped lock prevents deadlocks by design and checks for
21         //both locks' availability but does not acquire them unless both are available
22         scoped_lock ForkLock(mtx[LeftFork[philosopher]], mtx[RightFork[philosopher]]);
23         //Eating ritual...
24         pickLeftFork();
25         pickRightFork();
26         eat();
27         putLeftFork();
28         putRightFork();
29         //End of scope automatically releases the fork locks
30         //because scope_lock uses RAII-style mechanism
31     }
```

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