

Hitachi Hokudai Laboratory & Hokkaido University Programming Contest 2022: Instructions and guidelines for submission of an idea summary

Dear Contestant, thank you very much for participating and submitting your codes to the Hitachi Hokudai Laboratory & Hokkaido University Programming Contest 2022 on “Future autonomous distributed city development”. As announced on the website, prizes will be presented to all the top winners in the contest who submit summaries on their own algorithms. (The summaries must meet the requirements described in this guideline to receive the prizes.) This guideline details the format of the summary.

Eligibility:

- Participants eligible for submission of this summary are the 1st to 10th place winners of problem A and the 1st to 10th place winners of problem B after the completion of the system test as listed on the following webpage: <https://atcoder.jp/contests/hokudai-hitachi2022>

Submission Rules:

- A submission shall be submitted as a **pdf** document.
- Submissions shall contain the **screen name** of the submitter as listed in “Final ranking” on the contest webpage.

Note: Submissions without screen name cannot be identified and will be invalid.

- Eligible candidates will be invited to make a submission by email. The email will notify candidates of (i) an **email address** to send their submissions to and (ii) a **deadline** by which to submit their submission.

Note: Submissions sent to a different email address or after the submission deadline will be invalid.

- Please refrain from making multiple submissions. If it is unavoidably resubmitted due to a typographical error, the last submitted summary will be evaluated. The summaries received after the indicated deadline will not be considered.

Prizes:

- US dollar equivalent to 5,000 JPY will be presented to all candidates who submit summaries on their own algorithms. (Note that the summaries must meet the requirements described in this guideline to receive the prizes. See also the “prize presentation criteria” below.)

In this summary, please summarize what kind of ideas or strategies are used to solve the problem in an easy-to-understand manner, by focusing, for example, on optimization of worker actions, selection of acceptable jobs, submission or changes of worker schedules, or how to deal with dynamic and stochastic fluctuations in the number of processable tasks due to uncertain factors (weather changes). The summary should include the following items (1(a-b), 2(a-b), 3, and 4).

For your reference, a summary example is also available from the contest page.

Summary items:

1. Strategies / Ideas: Please describe the strategies / ideas that you think are important for getting a high score in the contest, and the algorithms that you have implemented that you find interesting, as follows.
 - a. Please explain **the contents of the strategies / ideas and algorithms**. Also, if possible, please explain the ideas that led to the strategy and the existing algorithms that you referred to.
 - b. Please explain how to implement strategies / ideas and the algorithms. You may use flowcharts, pseudocode, etc. as needed. Also, please describe **where in the source code the strategies / ideas and the algorithms are implemented** (e.g., lines 100 to 150 or function name). Additionally, please be sure to include **the submission number** of the corresponding source code.
2. Thoughts:
 - a. Please describe in free format your thoughts on the strategies / ideas and the algorithms explained in 1.
 - b. Please describe what kind of policy proposals you can think of if you apply the obtained results to an agricultural asset-sharing platform*.

*Regarding the agricultural asset-sharing platform, please also see “Background for those who are interested in the research mission behind the programming contest” on the top page of the contest (<https://atcoder.jp/contests/hokudai-hitachi2022>).
3. About the visualizer: Please suggest any improvements to the contest visualizer, if any (e.g. additional indicators, functions, layout, color settings, etc.).
4. Impressions and requests: Please write your impressions of tackling the problem or requests for the next contest. For future reference, we would appreciate it if you could also describe the balance between the length of the contest period and the amount and complexity of the problems.

Prize presentation criteria:

The contents of the summary will be confirmed by the organizers of the programming contest.

Please note that prizes may not be presented in the following cases:

- If the screen name is not written or is different from the screen name listed on the contest page "Final Ranking."
- If the summary is submitted after the deadline.
- If the summary is sent to a different email address than the indicated email address.
- If any of the items (1(a-b), 2(a-b), 3, and 4) is missing.
- If the explanation of each item is unclear or the content is extremely poor.

In addition to presenting prizes, we will invite all prize winners (all people who is eligible to receive the prize presentation) to an idea-exchange meeting held online or hybrid after the awards ceremony. The members of the idea-exchange meeting are limited to the organizers of the contest and the top-scoring contestants. Furthermore, if the organizers decide that a deeper discussion about the ideas received is necessary, they may request a lecture at the idea-exchange meeting.