



Extension for Visual Studio Code Tutorial

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## Introduction

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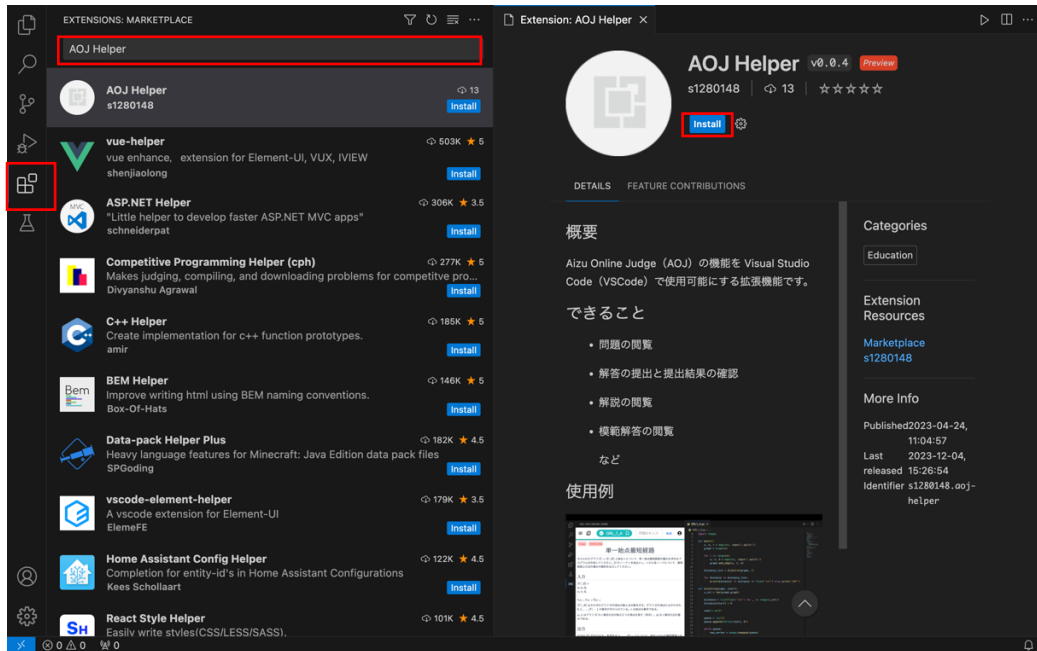
This tutorial explains how to use the Aizu Online Judge (AOJ) extension for Visual Studio Code (VSCode). Please note that the user interface and functionality may change in preparation for future releases.


With this extension, the following functions of AOJ can be used from VSCode.

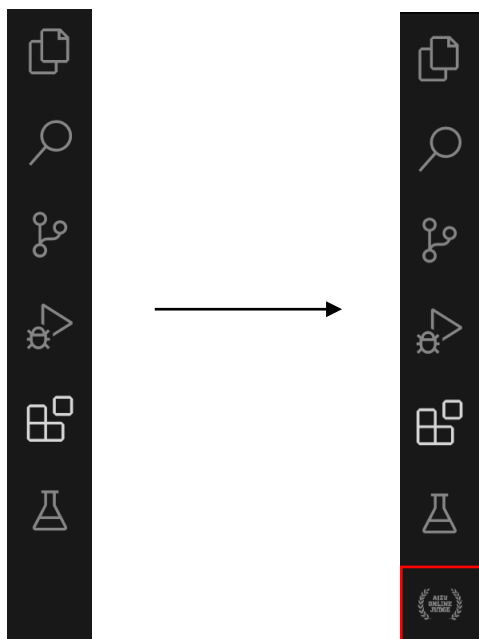
- Search problem
- View problem description
- Submit program and review judgment result
- View submission record
- View model answer
- Others

# Install

Open the "Extensions" view of VSCode, search for "AOJ Helper" and install it.



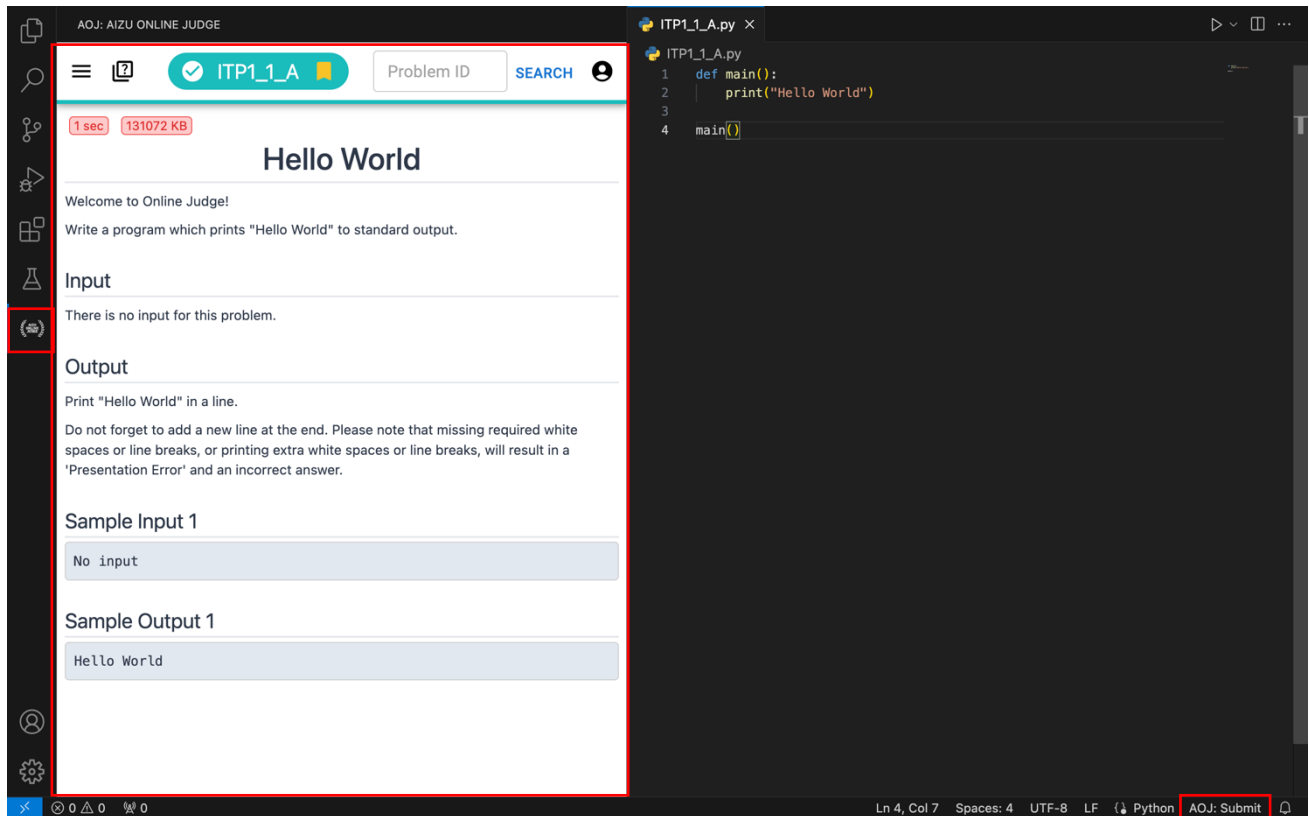
After installation is complete, an  icon will be added to the activity bar (the bar on the left side of the screen)



## Basic

Click the  icon on the activity bar to display the AOJ view on the left side of the screen.

Also, the Submit button appears in the lower right corner of the screen.

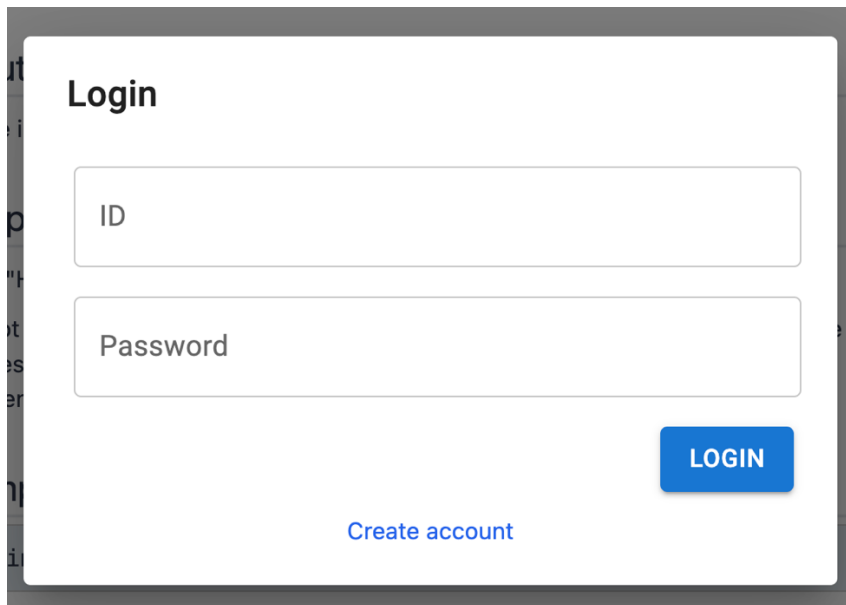


## Account Registration & Login

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To use the extension, you need to log in to AOJ.

A pop-up will appear when login is required.

A screenshot of a login pop-up window. The window has a white background and a dark gray border. At the top left, the word "Login" is written in bold black text. Below it are two input fields: the first is labeled "ID" and the second is labeled "Password". To the right of the "Password" field is a blue button with the word "LOGIN" in white capital letters. Below the "ID" and "Password" fields, centered, is a blue link that says "Create account".

**Login**

ID

Password

[Create account](#)


**LOGIN**

If you do not have an account, please create an AOJ account from "Create account".

If you have an account, please enter your ID and password to login.

## Environment Setting

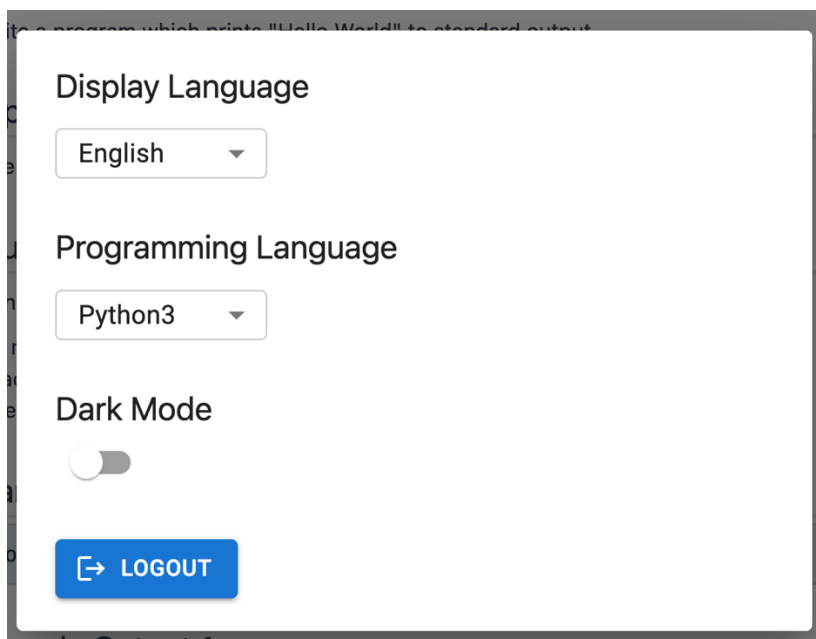
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Clicking on the  icon opens the environment setting screen.




On the environment setting screen, you can

- Change display language (Japanese / English)
- Change programming language
- Toggle between themes (light mode / dark mode)
- Log out



## Select Problem

Click on the  icon to open the problem list screen.



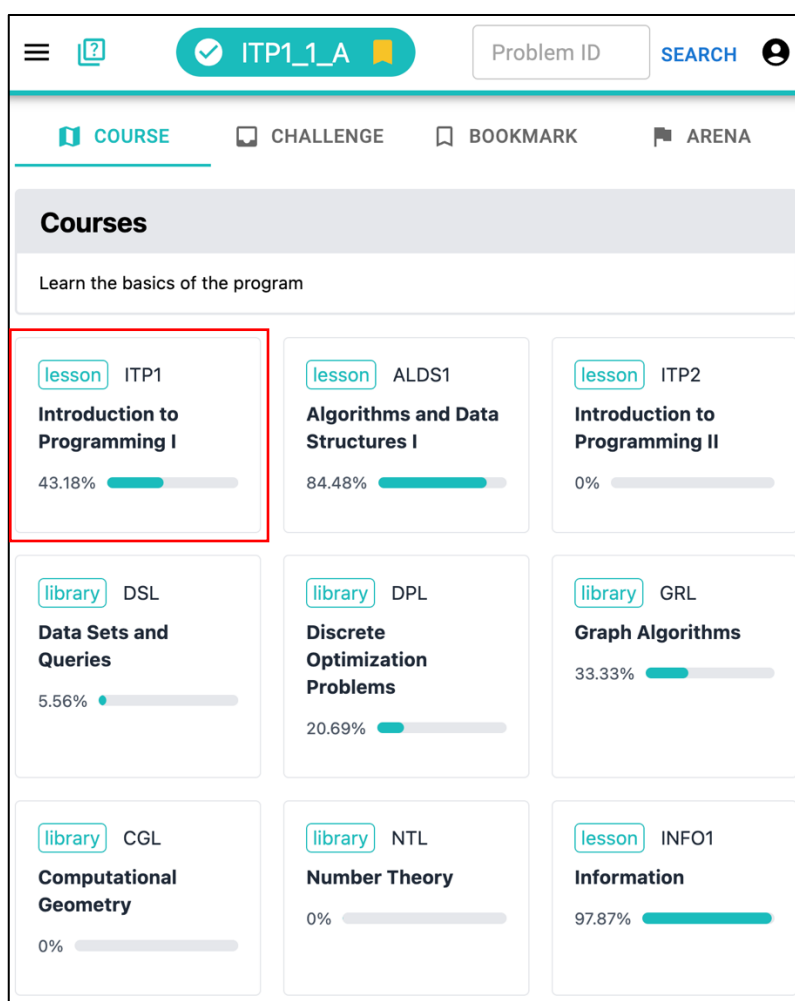
On the Problem List screen, you can search for problems in each of the "Course", "Challenge", "Bookmark" and "Arena" categories.

As an example, select "Course" problems.

Each course is represented by a card.

The progress bar on each card indicates the progress of that course.

Open "Introduction to Programming I".





The course consists of several topics.



You can check the progress of each topic from the progress bar of each topic.



Open "ITP1\_1\_B: X Cubic".

The screenshot shows a web interface for a programming course. At the top, there is a navigation bar with a menu icon, a help icon, a status bar showing 'ITP1\_1\_A' with a checkmark and a bookmark icon, a search bar labeled 'Problem ID' with a 'SEARCH' button, and a user profile icon. Below the navigation bar, there are four tabs: 'COURSE' (active), 'CHALLENGE', 'BOOKMARK', and 'ARENA'. The main content area is titled 'Introduction to Programming I' with a subtitle 'Acquire fundamental elements of programming languages'. It shows a progress bar at 43.18%. Below this, there is a list of topics. The first topic is 'ITP1\_1 Getting Started' with a progress bar at 100%. The second topic is 'ITP1\_1\_A : Hello World' with a checkmark icon. The third topic, 'ITP1\_1\_B : X Cubic', is highlighted with a red border and has a checkmark icon. The fourth topic is 'ITP1\_1\_C : Rectangle' with a checkmark icon. The fifth topic is 'ITP1\_1\_D : Watch' with a checkmark icon. The sixth topic is 'ITP1\_2 Branch on Condition' with a progress bar at 100%.

Topic	Progress
ITP1_1 Getting Started	100%
ITP1_1_A : Hello World	Completed
ITP1_1_B : X Cubic	Completed
ITP1_1_C : Rectangle	Completed
ITP1_1_D : Watch	Completed
ITP1_2 Branch on Condition	100%


The problem description screen for the selected problem is displayed.



 ITP1\_1\_B 

Problem ID

SEARCH



1 sec 131072 KB

## X Cubic

Write a program which calculates the cube of a given integer  $x$ .

### Input

An integer  $x$  is given in a line.

### Output

Print the cube of  $x$  in a line.

### Constraints

- $1 \leq x \leq 100$

### Sample Input 1

2

### Sample Output 1

8

### Sample Input 2

3

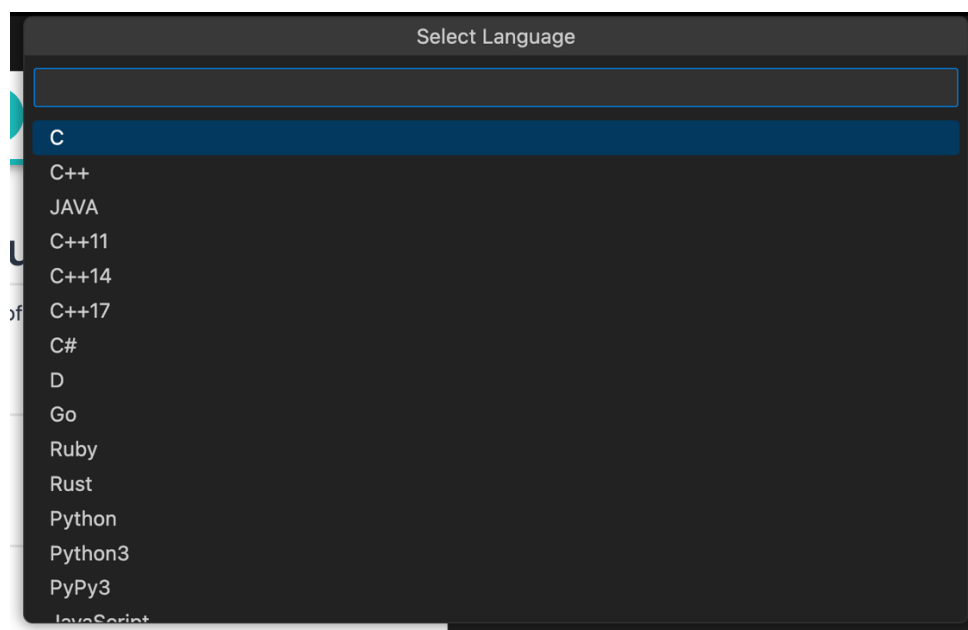
## Submit to AOJ

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The Submit button submits the contents of the currently displayed text editor to the currently displayed problem.

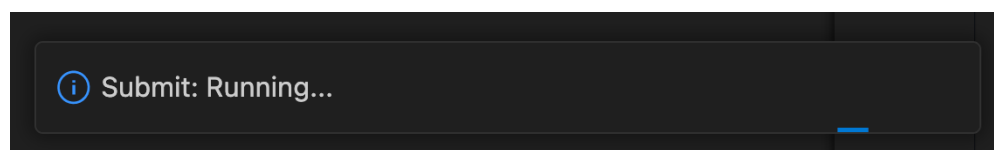


Click the Submit button to display the language selection menu.

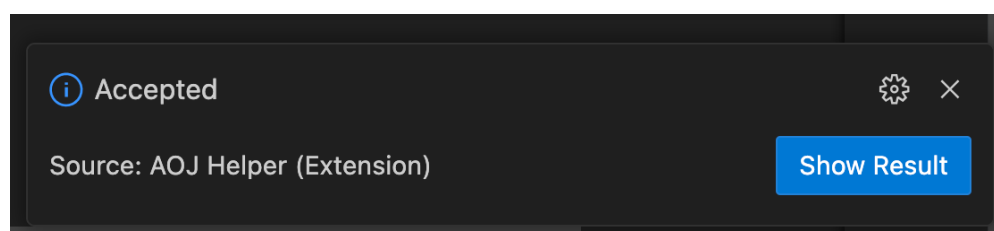


Once the submission language is selected, the program is submitted.

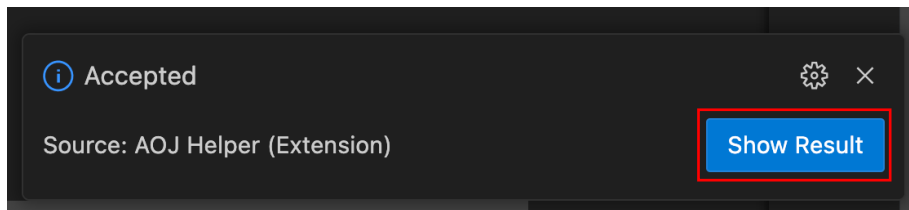
After submission, a message is displayed while the judgment is being made.



When the decision is complete, a message with the judgment result is displayed.



By clicking on the "Show Result" button, the view displays the judge's details.



Result : **AC**

Submitted Sent to Judge Build Run Resource Limit Check Result Check Presentation Check

Language	Time	Memory	Code Size
Python3	0.00 sec	9 KB	57 B

Case	Status	Time	Memory	Input	Output	Case Name
# 1	<b>AC</b>	0.00 sec	8216 KB	2 B	2 B	test1
# 2	<b>AC</b>	0.00 sec	8060 KB	2 B	3 B	test2
# 3	<b>AC</b>	0.00 sec	8216 KB	3 B	7 B	test3
# 4	<b>AC</b>	0.00 sec	8140 KB	4 B	8 B	test4

Judge returns one of the following statuses.

<b>AC</b>	<b>Accepted</b>
<b>WA</b>	<b>Wrong Answer</b> <ul style="list-style-type: none"><li>• Output was different from the output expected by the judge data.</li></ul>
<b>PE</b>	<b>Presentation Error</b> <ul style="list-style-type: none"><li>• Extra white space or line breaks, or no required white space or line breaks</li></ul>
<b>CE</b>	<b>Compile Error</b> <ul style="list-style-type: none"><li>• Failed to compile the submitted program.</li></ul>
<b>TLE</b>	<b>Time Limit Exceeded</b> <ul style="list-style-type: none"><li>• The program did not finish within the time limit specified in the problem</li></ul>
<b>MLE</b>	<b>Memory Limit Exceeded</b> <ul style="list-style-type: none"><li>• Used more memory than specified in the problem</li></ul>
<b>OLE</b>	<b>Output Limit Exceeded</b> <ul style="list-style-type: none"><li>• The output size exceeds the limit.</li></ul>
<b>RE</b>	<b>Runtime Error</b> <ul style="list-style-type: none"><li>• An error occurred during the execution of the submitted program.</li></ul>

## Submit to Arena

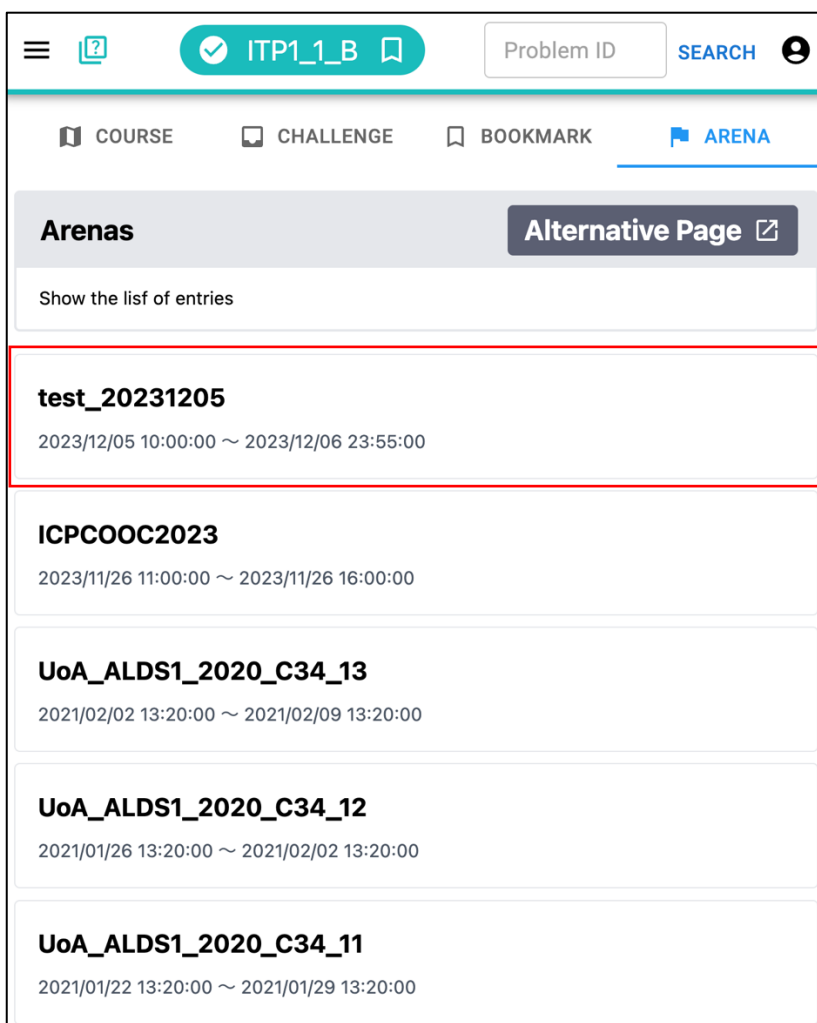
You can submit a problem to the Arena by selecting the "Arena" problem from the Problem List screen.

Click on the  icon to open the problem list screen.



When you open the "Arena" tab, you can see a list of the arenas in which you have entered, in descending order of entry time.

Select "test\_20231205."



The check mark displayed here indicates whether the corresponding problem has already been solved correctly in the arena.

Select "ITP1\_1\_A : Hello World".

☰

📖

✔ ITP1\_1\_B

🔍

Problem ID

SEARCH

👤

📖 COURSE

📑 CHALLENGE

🔖 BOOKMARK

🚩 ARENA

test\_20231205

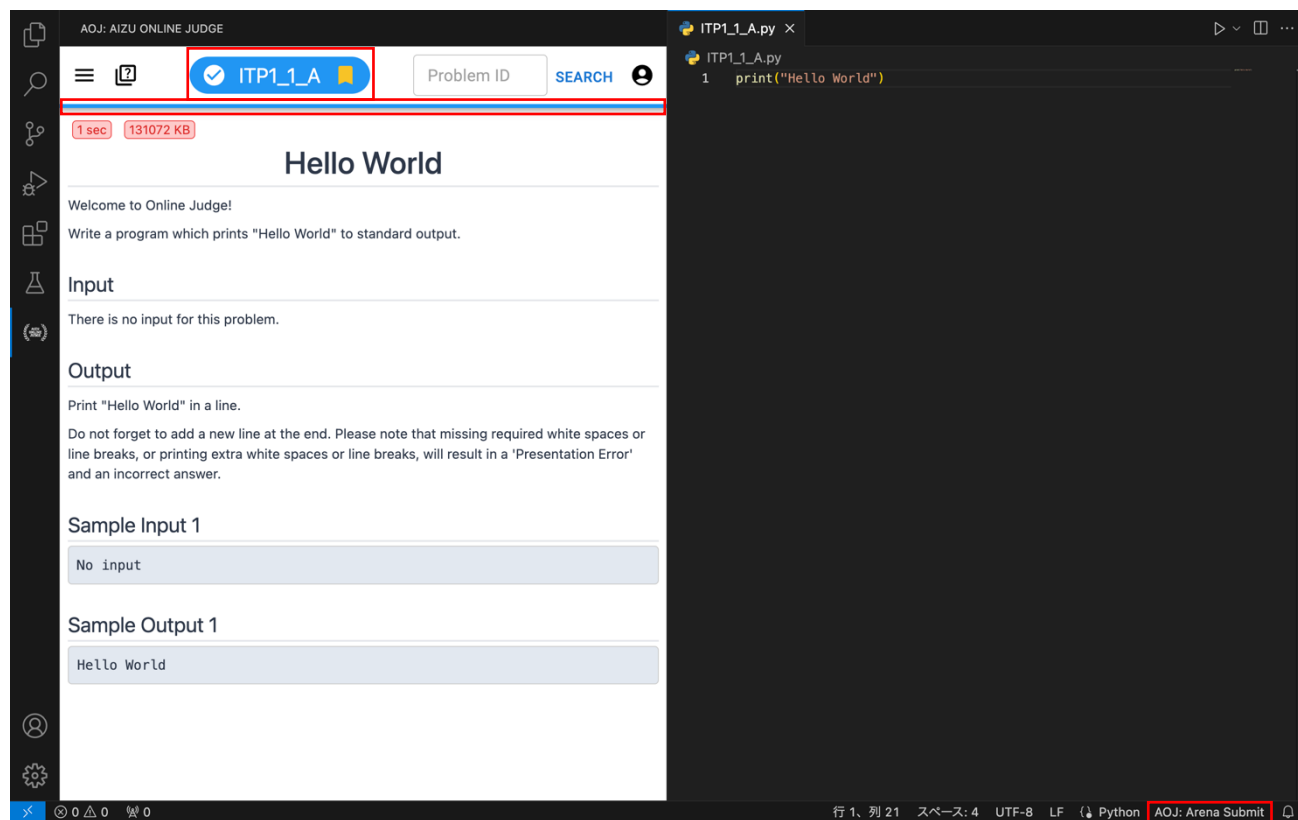
☒ ITP1\_1\_A : Hello World

☐ GRL\_1\_A : Single Source Shortest Path

The problem description screen for the selected problem is displayed.

At this point, the theme color turns blue and the submit button changes to the arena submit button.


When you submit in this state, the submission is made to the selected arena.

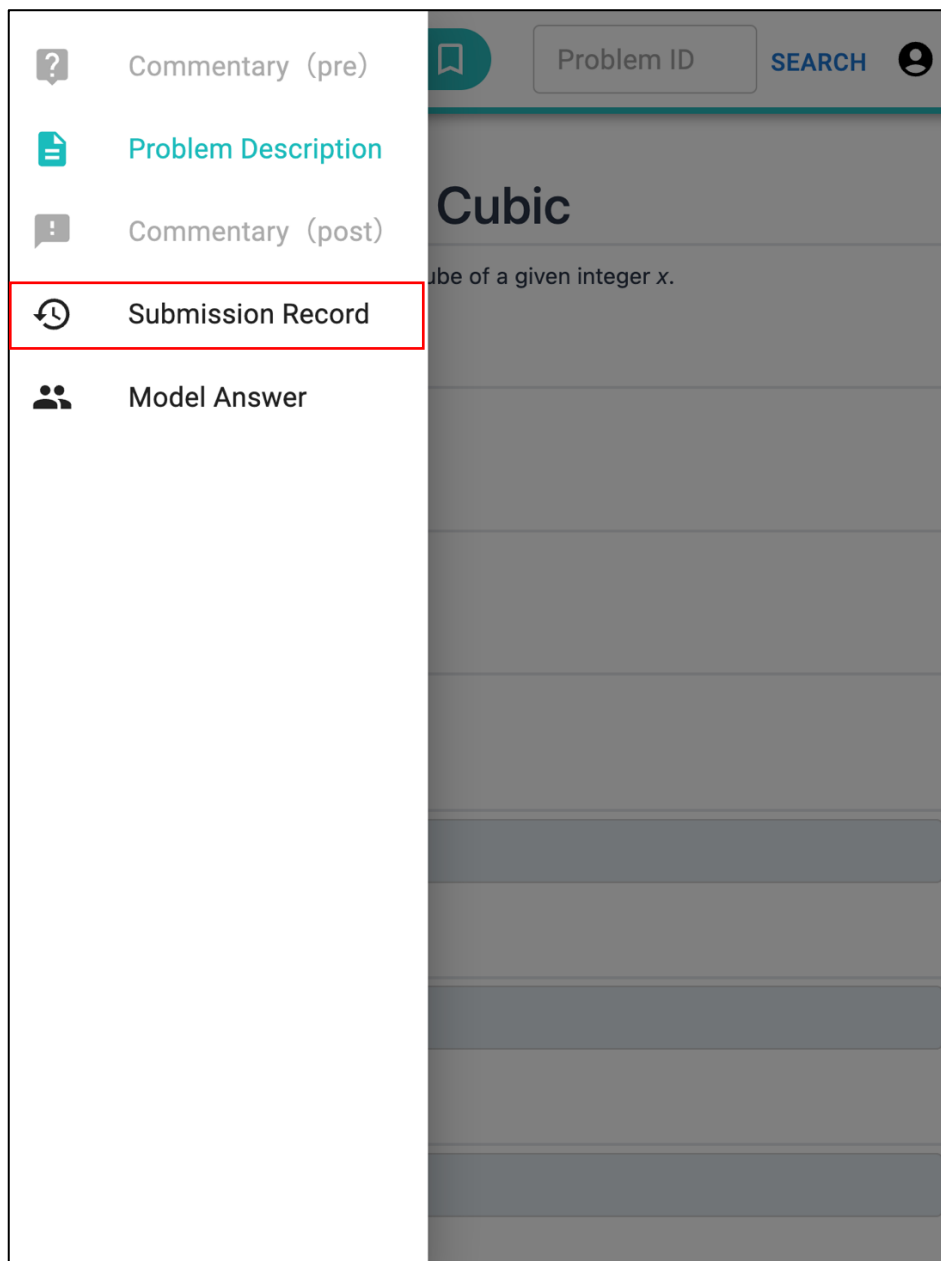
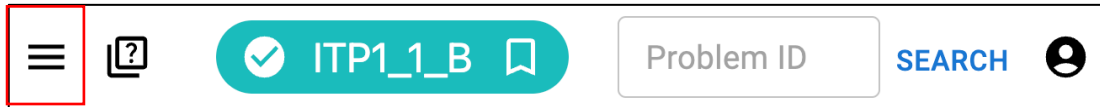




## View past submission records

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Click on the  icon to open the menu to view the "Submission Record".




↓

☰	🔍	<div> <div>✓</div> <div>ITP1_1_B</div> <div>🔖</div> </div>	<input type="text" value="Problem ID"/>	<a href="#">SEARCH</a>	👤
Judge ID	Status	Language	Date		
8578311	AC	Python3	2023/12/04 23:06:49		
8577853	AC	Python3	2023/12/04 19:50:18		
8577754	AC	Python3	2023/12/04 18:51:23		
7968898	AC	Python3	2023/06/20 16:10:33		
7968891	RE	Python3	2023/06/20 16:10:12		
7956589	AC	Python3	2023/06/17 14:32:08		
7932735	AC	Python3	2023/06/15 14:34:32		
7708007	AC	Python3	2023/04/23 23:22:07		
7706366	AC	Python3	2023/04/23 15:05:28		
7704138	AC	Python3	2023/04/22 19:37:49		
				<div> <div>&lt;</div> <div>1</div> <div>2</div> <div>&gt;</div> </div>	

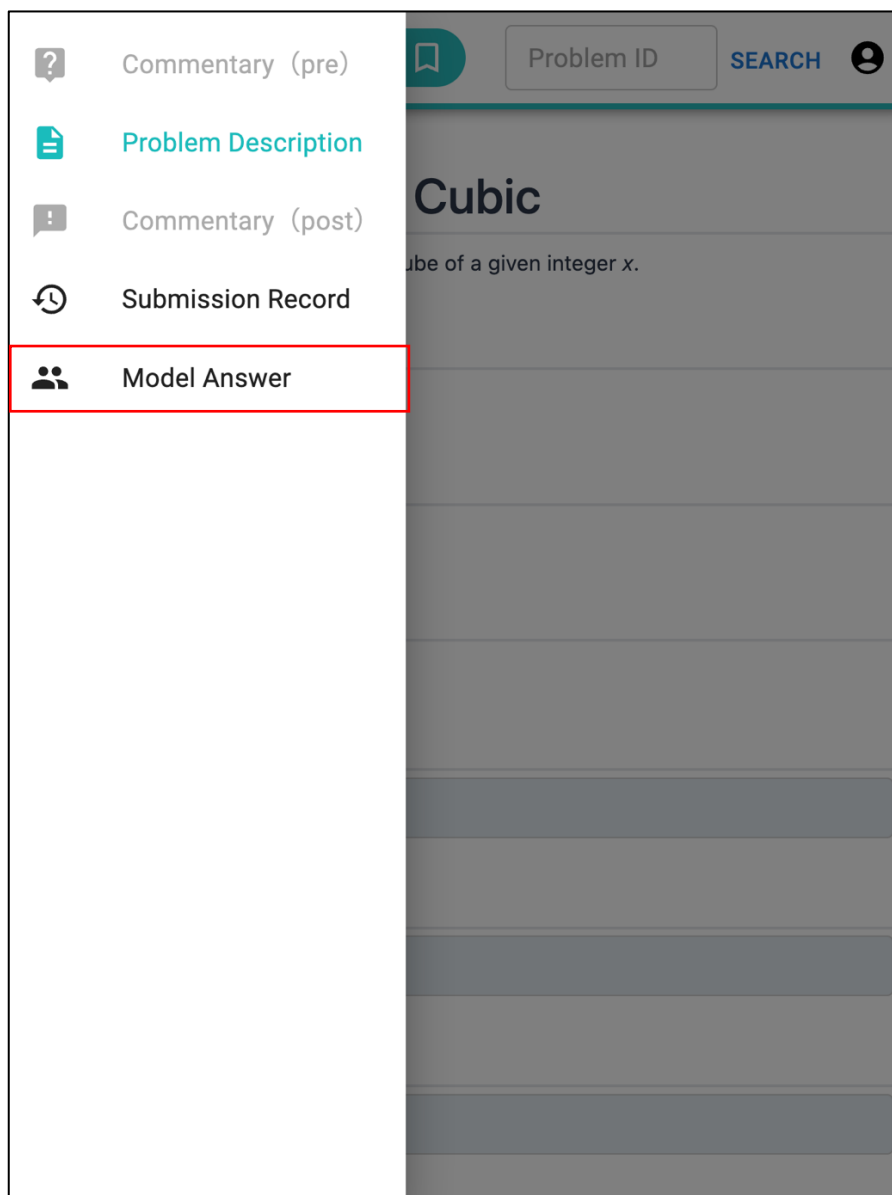
Click on a specific submission record from the list to view its code.

## View model answers

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Click on the  icon to open the menu to view the "Model Answer".

You can view codes answered by other users.





Policy	Judge ID	Status	Author	Rating	Language	Time	Code size
	3096864	AC	naoto172	4911.48	Python3	0.02 sec	37 B
	2988713	AC	bal4u	2666.96	Python3	0.02 sec	66 B
	3095326	AC	beet	2137.73	Python3	0.02 sec	27 B
	2233933	AC	namonakiaccount	1832.95	Python3	0.02 sec	23 B
	2098221	AC	kmcyuma	1620.21	Python3	0.03 sec	27 B
	3214280	AC	jakenu0x5e	1514.02	Python3	0.02 sec	21 B
	5346312	AC	E869120	1426.8	Python3	0.02 sec	28 B
	1816495	AC	square1001	1426.13	Python3	0.02 sec	22 B
	8527525	AC	vjudge4	1082.43	Python3	0 sec	35 B
	8497741	AC	vjudge3	1056.93	Python3	0 sec	26 B

<

1

2

3

4

5

...

1836

>

Answers are listed in descending order based on each user's rating. As with the submission record, you can click on a model answer from the list to view its code. Click on the "Diff" button to compare your code with the model answer code.

The screenshot displays the AOJ Online Judge interface. On the left, a panel shows the problem details for 'ITP1\_1\_B' with Judge ID 3096864 and author naoto172. The code area contains the following Python code:

```
1 number = int(input())
2 print(number**3)
3
```

At the bottom of this panel, there are three buttons: 'Diff' (highlighted with a red box), 'Copy', and 'Close'. Below the code area is a table with columns: Policy, Judge ID, Status, Author, Rating, Language, Time, and Code.


On the right, a code comparison tool is open, titled 'Comparison with model answer'. It shows two versions of the code side-by-side:

```
1- def main():
2-     x = int(input())
3-     print(x ** 3)
4-
5- main()

1+ number = int(input())
2+ print(number**3)
```

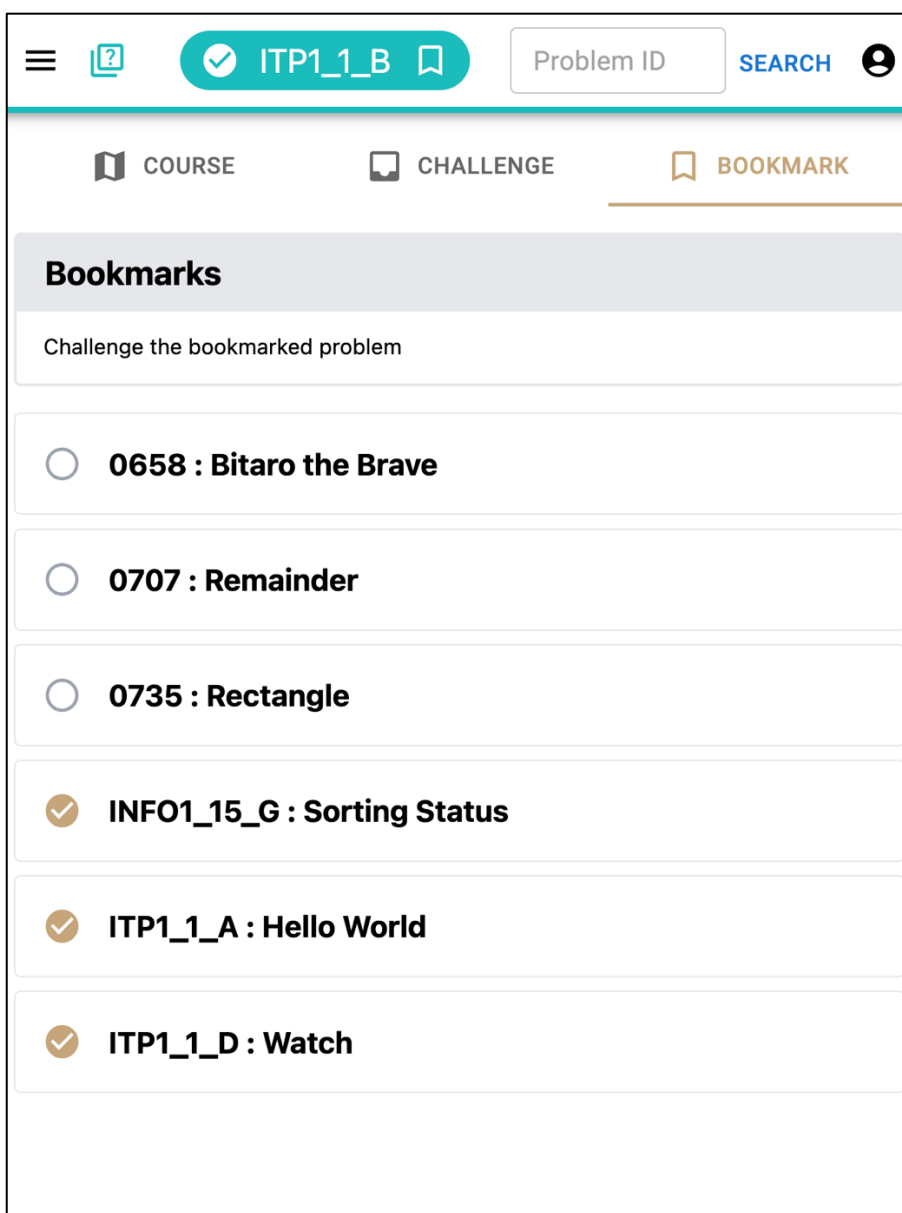
The bottom status bar indicates 'Ln 1, Col 1 Spaces: 4 Plain Text AOJ: Submit'.

## Bookmark

By clicking on the  button, you can bookmark the current problem.



Bookmarked problems can be viewed from the Problem List screen.



## Search Problem

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You can open a question by entering its problem ID in the Problem Search form.

The problem ID is the ID assigned to each problem, as shown in the header.



ITP1\_1\_B



[SEARCH](#)

## Contact Us

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This system is currently under development. Please contact **m5271033@u-aizu.ac.jp** to report bugs, suggestions, and requests.