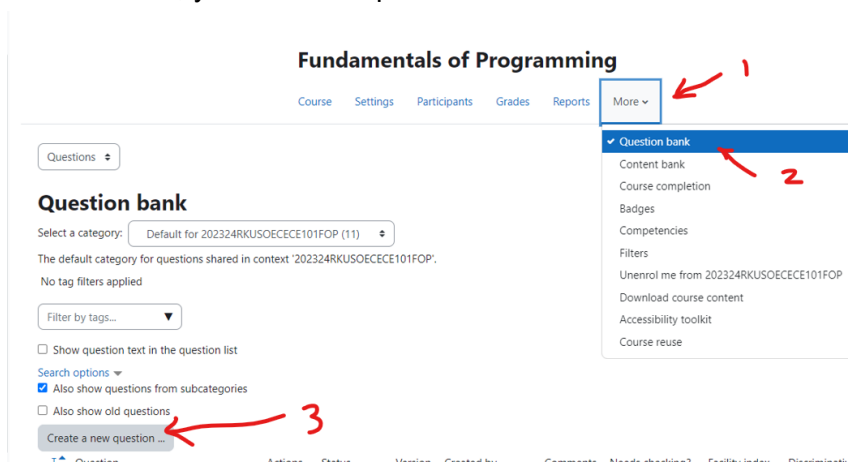


### Assumption:

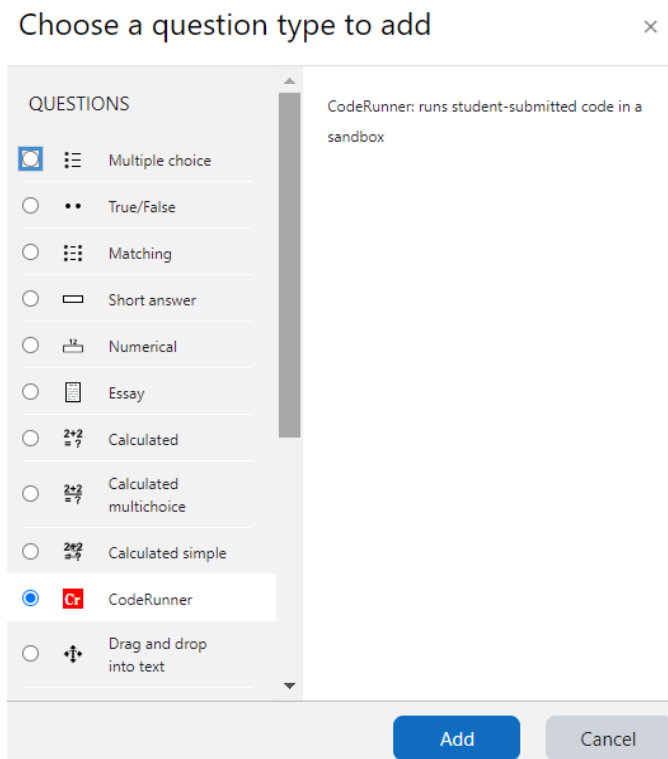
- You have a local instance of moodle server with coderunner plugin
- C programming language is used to design assessment using coderunner

### Q1: Write a C program to print "Hello World"

- Open your course on local moodle instance
- Under "more", you can find option "Question Bank" to create new question

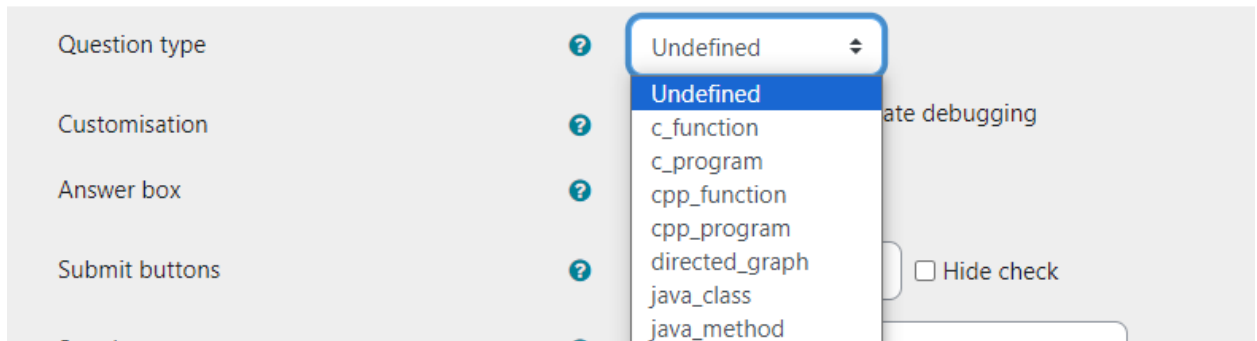


When you click on create new question, you will find the below screenshot and click on "Add" button:



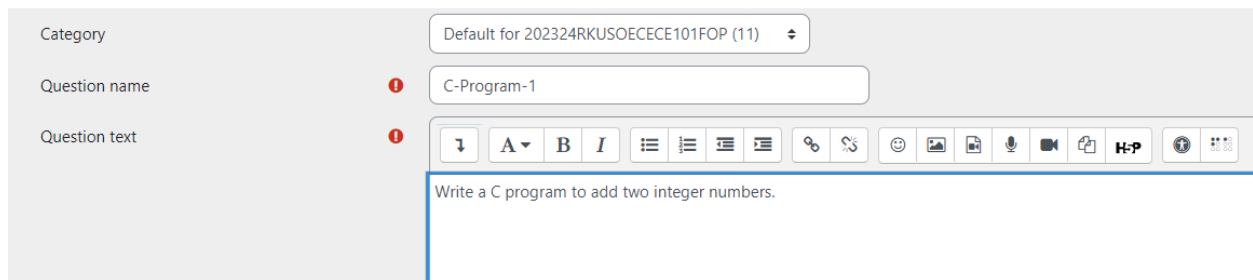
## Adding a CodeRunner question?

### CodeRunner question type

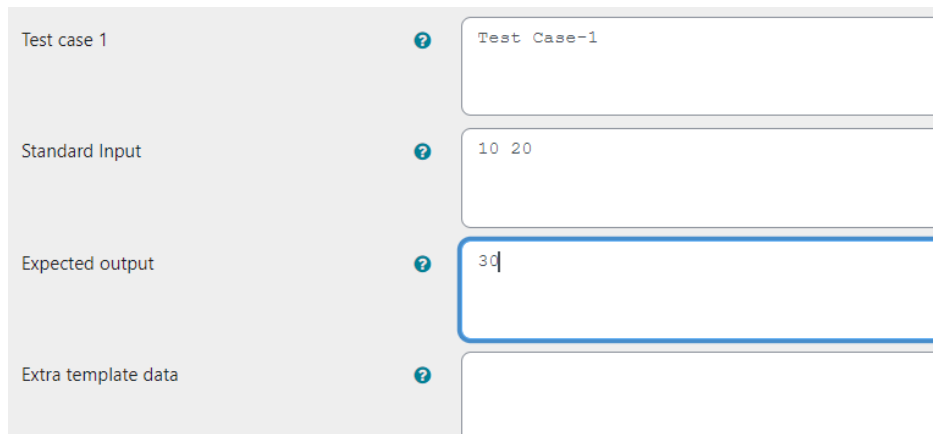


- Select "c\_program" and follow below screenshot

### General



- Expand "Test cases" and define program input and output



Test case 2

Test case-2

Standard Input

-10 10

Expected output

0

Keep all the other settings as it is and click on “Save Changes”

Now, the above code runner question is added in your question bank.

The screenshot shows the TEAL2.0 question bank interface. The main content is a table of questions with columns for Question name / ID number, Actions, Status, Version, Created by, Comments, Needs checking?, Facility index, Discriminative efficiency, Usage, Last used, and Modified by. The question 'C-Program-1' is highlighted with a red arrow. The table lists various programming questions such as 'C Program Hello World', 'C Program to sum of two integer numbers', 'Java class', 'Java class HIMANSHU', 'Java Method', 'Java Method Hello World', 'Java Program Add 2 numbers', 'Java Program Hello World', 'Python\_Addition of two numbers', 'Python\_Hello World Program', and 'python\_user define function'.

Question name / ID number	Actions	Status	Version	Created by	Comments	Needs checking?	Facility index	Discriminative efficiency	Usage	Last used	Modified by
C Program Hello World	Edit	Ready	v1	Kamlesh Patel	0	-	N/A	N/A	0	Never	Kamlesh Patel
C Program to sum of two integer numbers	Edit	Ready	v1	Kamlesh Patel	0	-	N/A	N/A	0	Never	Kamlesh Patel
C-Program-1	Edit	Ready	v1	Kamlesh Patel	0	-	N/A	N/A	0	Never	Kamlesh Patel
Java class	Edit	Ready	v1	Kamlesh Patel	0	-	N/A	N/A	0	Never	Kamlesh Patel
Java class HIMANSHU	Edit	Ready	v2	Kamlesh Patel	0	-	N/A	N/A	0	Never	Kamlesh Patel
Java Method	Edit	Ready	v2	Kamlesh Patel	0	-	N/A	N/A	0	Never	Kamlesh Patel
Java Method Hello World	Edit	Ready	v6	Kamlesh Patel	0	-	N/A	N/A	0	Never	Kamlesh Patel
Java Program Add 2 numbers	Edit	Ready	v1	Kamlesh Patel	0	-	N/A	N/A	0	Never	Kamlesh Patel
Java Program Hello World	Edit	Ready	v2	Kamlesh Patel	0	-	N/A	N/A	0	Never	Kamlesh Patel
Python_Addition of two numbers	Edit	Ready	v2	Kamlesh Patel	0	-	N/A	N/A	0	Never	Kamlesh Patel
Python_Hello World Program	Edit	Ready	v2	Kamlesh Patel	0	-	N/A	N/A	0	Never	Kamlesh Patel
python_user define function	Edit	Ready	v1	Kamlesh Patel	0	-	N/A	N/A	0	Never	Kamlesh Patel

You can preview the question as shown in below screenshot

The screenshot shows a list of questions in the question bank. The question 'C-Program-1' is selected, and the 'Edit' dropdown menu is open. The menu options are: Edit question, Duplicate, Manage tags, Preview (highlighted in blue), History, Delete, and Export as Moodle XML.

## C-Program-1 Version 1 (latest)

### Question 1

Not complete

Marked out of  
5.00

Write a C program to add two integer numbers.

Answer: (penalty regime: 10, 20, ... %)

1

Now, in black window, students have to write the C program to generate defined output and click on the “Check” button to execute and compare with all defined test cases.

## C-Program-1 Version 1 (latest)

### Question 1

Not complete

Marked out of  
5.00

Write a C program to add two integer numbers.

Answer: (penalty regime: 10, 20, ... %)

```
1 #include <stdio.h>
2
3 int main()
4 {
5     int a, b;
6     scanf("%d %d",&a,&b);
7     printf("%d\n",a+b);
8 }
```

Check

After check button, server will compile and execute with test-cases and respond.

Write a C program to add two integer numbers.

**Answer:** (penalty regime: 10, 20, ... %)

```
1 #include <stdio.h>
2
3 int main()
4 {
5     int a, b;
6     scanf("%d %d",&a,&b);
7     printf("%d\n",a+b);
8 }
```

Check

	Test	Input	Expected	Got	
✓	Test Case-1	10 20	30	30	✓
✓	Test case-2	-10 10	0	0	✓

Run using the University of Canterbury's Jobe server. This is f

Passed all tests! ✓

**Note:**

Teacher can show one of the test cases along with the question. Also, teachers can hide some of the test-case too.

**Q2: Write a C user defined function to find the highest from two integer numbers.**

- Login to your moodle instance
- Select specific course in moodle
- Select menu option More->Question Bank

- Select question bank category
- Click on "Create New Question"
- Select Question Type "c\_function"

#### CodeRunner question type

A screenshot of a dropdown menu for selecting a question type. The menu is open, showing a list of options: 'Undefined', 'c\_function', 'c\_program', 'cpp\_function', 'cpp\_program', and 'directed\_graph'. The 'c\_function' option is highlighted in blue. To the left of the menu, there are labels for 'Question type', 'Customisation', 'Answer box', and 'Submit buttons', each with a question mark icon. To the right, there is a 'Hide' checkbox.

#### General

A screenshot of the 'General' configuration form for a question. It includes a 'Category' dropdown set to 'C Programming (3)', a 'Question name' field containing 'Q4-UDF-Max out of two numbers', and a 'Question text' field with a rich text editor. The editor contains the text: 'Write a user define function to find highest number from two integer number using C programming language.' The rich text editor toolbar includes icons for bold, italic, list, link, unlink, image, video, and other formatting options.

- Fill all test cases, please refer one of the test-cases mentioned below and click on **save changes** :

#### Test cases

A screenshot of the 'Test cases' configuration form. It has three rows: 'Test case 1' with a code editor containing `printf("%d\n", max(10,20));`, 'Standard Input' with an empty text area, and 'Expected output' with a text area containing '20'. Each row has a question mark icon to its left.

Test case 2	?	<pre>printf("%d\n",max(-10, -20));</pre>
Standard Input	?	
Expected output	?	-10

- Preview your question before publish to the students and check all test-cases:

Q4-UDF-Max out of two numbers Edit Ready

With selected -

- ⚙ Edit question
- 📄 Duplicate
- 🏷 Manage tags
- 🔍 **Preview**
- 📜 History

- Now, in preview question, write your answer and click on "Check" button:



Write a user define function to find highest number from two integer number using C programming language.

For example:

Test	Result
printf("%d\n", max(10,20));	20

Answer: (penalty regime: 10, 20, ... %)

```

1 int max(int a, int b)
2 {
3     if (a>b) return a;
4     else
5     return b;
6
7 }

```

Check

- If submitted code is error-free, then the below screen will appeared with marks:

Check

	Test	Expected	Got	
✓	printf("%d\n", max(10,20));	20	20	✓
✓	printf("%d\n",max(-10, -20));	-10	-10	✓
✓	printf("%d\n",max(-10, 2));	2	2	✓

Run using the University of Canterbury's Jobe server. This is for initial testing only. Please set up your own Jobe server as soon as possible. See here.

Passed all tests! ✓

Correct

Marks for this submission: 5.00/5.00.