

# Badkan Guide

Badkan

September 2019

## Acknowledgement

Badkan gathers all the processes to evaluate students: everything can be done from the platform. There is two types of user: student and instructor. Every user has to create an account (via email or GitHub). As an instructor, you can create courses and exercises. Currently, the website provides one template of exercise: the input/output exercise. You have to create the exercise, and the scale for each input/output. E.g: You want to create the next exercise "Multiply by 2". On this exercise, the student is asked to multiply a number by two. For this specific exercise, you can chose the input to be "2" so the expected output will be "4" and you can also chose the number of points to be "10". Once the little form is filled, **your** exercise is ready to be solved. (notice that this exercise is particularly simple).

Every registered student get access to the exercise and can solve it. The student can submit his work either via a ZIP file, or via a GitHub repository by submitting the link of the repository containing his answer. The student get an immediate feedback including his grade.

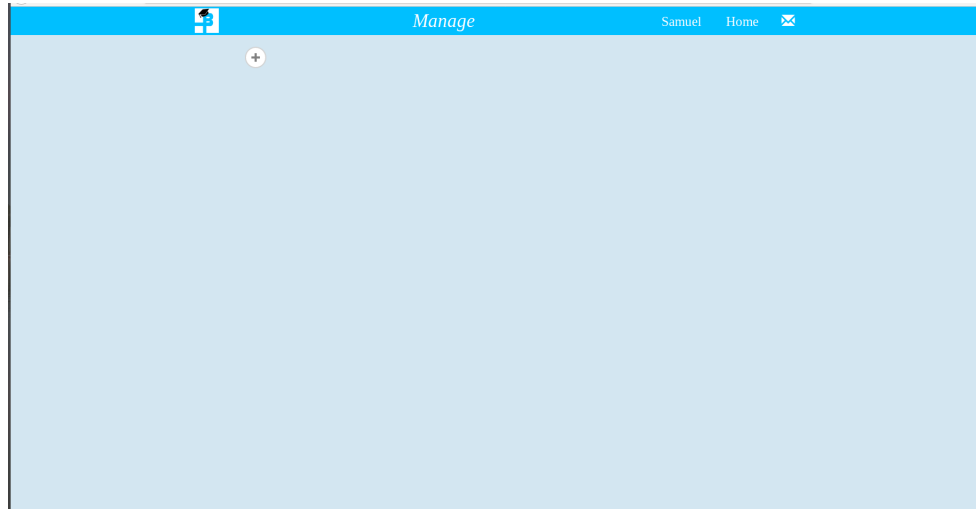
The instructor will get other features that are detailed in this document.

Notice: All the privileges and pictures found here are for the instructors. If you're not instructor, you don't get any of the features mentioned in the document. To become instructor, click on the button link displayed on the instructor page and contact us.

## 1 Create courses and exercises

Only instructors can create courses and exercises. To get started, the first step is to create a course.

In the page manage.html (that you can access from the button "manage course" in the home page) click on the button "+" on the left to create a new course. (see screenshot)



Then, you will have to fill various fields.

- Course name: required field, this is the name of the course.
- Grader id: if you want to give to someone the status of grader, enter here his country id. The status of grader is explained in the "User" section of this document.
- Privacy: button radio, choose if you want the course to be private or public. By being public, every user can register to the course and submit his solution. If the course is private, only a list of students of your choice can access the course..

- Student ids: required field if you want the course to be private, this is the list of the country ids of the students you want to allow access to. Please, enter each id next to each other separate with a space.

Once your course is created, you are able to create an exercise. Please, click on the button "+" on the bottom of the created course. (see screenshot)

The screenshot shows the 'Manage' page with a blue header. On the left, there is a 'New course' button and a '+' icon. The main form has the following fields: 'Course name \*' with the value 'New course', 'Grader id' with the value 'undefined', and a 'Privacy' section with two radio buttons: 'Public' (selected) and 'Private'. At the bottom of the form are two buttons: 'Edit course' and 'Delete course'. A 'Download Course Grades' button is located to the right of the form. Below the form is a '+' icon.

The platform will ask you the type of exercise you want to create, please, choose "Normal Exercise" since the peer exercise is currently not available. Then, you will have to answer a four-step survey.

The screenshot shows the 'New exercise 1/4' form, which is a modal dialog box. It has a progress bar at the top with four steps, the first of which is highlighted. The form contains the following fields: 'Exercise name \*' with the value 'First assignment...', 'Exercise compiler \*' with a dropdown menu showing 'javac', 'Submission option \*' with radio buttons for 'GitHub' (selected) and 'Zip', and 'Main file \*' with the value 'Main.java, Ex01.cpp, s.c...'. At the bottom are two buttons: 'Next ->' and 'Cancel'.

- Exercise name: required field, this is the name of the exercise.
- Exercise compiler: required field, choose the right compiler.

- Submission option: required field, all checked field will become an option for the students to submit their solution. Either by a zip file, or by a GitHub repository. To submit via GitHub, the student just has to copy the link of his repository in our platform.
- Main file: required field, the filename of the file that contains the main function of the program. Every student will have to name this filename the same way.

The screenshot shows a web interface titled 'Manage' with a user profile 'Samuel' and navigation links 'Home' and an email icon. A 'New course' button is visible. A modal window titled 'New exercise 2/4' is open, showing a progress indicator with steps 1, 2, 3, and 4. The modal contains the following fields and options:

- Exercise description:** A text input field with the placeholder 'Your short description of the exercise...'. A blue circular icon with a checkmark is on the right.
- Pdf instruction file:** A section header above a 'Browse...' button and the text 'No file selected.'.
- Deadline:** A text input field with the placeholder 'dd/mm/yyyy'.
- Show input/output:** A section header above two radio buttons: 'Input' (checked) and 'Output'.
- Navigation:** 'Next →' and 'Cancel' buttons at the bottom.

- Exercise description: you can add a little description of your exercise.
- PDF instruction file: you are able to upload a PDF that every registered student will be able to download.
- Deadline: Choose a deadline for the exercise. There is no possibility for the student to submit after the deadline.
- Show input/output: If you want the student to be notified by his input and output when submitting. Each option checked will be displayed on the feedback of the submission of each student.

dd/mm/yyyy

Show input/output

Input

Output

1 2 3 4

New exercise 3/4

Input file name \*

standard

Output file name \*

standard

Next +> Cancel

- Input file name: by default, the input is standard (e.g: cin in c++), but you can choose to put it into a file with the name of your choice (e.g: input.txt).
- Output file name: by default, the output is standard (e.g: cout in c++), but you can choose to put it into a file with the name of your choice (e.g: input.txt).

Manage Samuel Home

New course

Course name \* New course

Download Course Grades

1 2 3 4

More input

Given input \*

2, abcd...

Expected output \*

4, a b c d...

Points number \*

10

Finish Cancel

- Given input: required field, enter the given input of your choice.
- Expected output: required field, enter the given input of your choice.
- Points number: required field, enter the number of points the student will receive if his output for the given input is equal to the expected output.

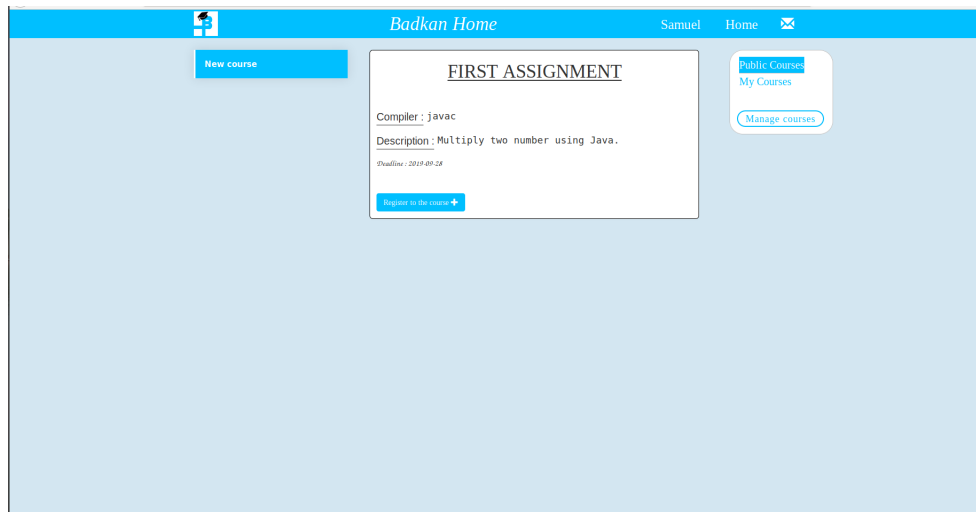
- button "+": if you want to enter another input/output, click here.

When you have finished to fill all the fields, click on finish and your exercise is now created. Every registered students can submit his solution.

Notice that even after created, exercises and courses can be easily edited from the manage course page.

## 2 Submit solution

If a student country id has been entered in the "Student ids" field when creating the course, the student is automatically registered to the course. In the other case, the student will have to register to the course in order to submit his solution, (see screenshot) (if the course is public of course).



Once the student is registered, he is able to get all the information needed to solve the exercise. He has access to the compiler name, the description (if exists), the PDF (if exists), the deadline (if exists), the filename where the main function resides and the way the input and output are read by the program.

Once his solution is ready to be submitted, and by clicking on the button "solve", the student is redirected to the page of the next screenshot.

The screenshot shows a web interface titled "Submit exercise" with a blue header bar. In the header, there is a user profile icon, the name "Samuel", a "Home" link, and a close icon. The main content area is titled "FIRST ASSIGNMENT". It contains three main sections: 1) Submission method selection with "GitHub" and "Zip" buttons. 2) A form for entering a GitHub URL with instructions: "Enter here the Github URL. Must begin with https and end with .git". 3) A section for "Your id:" showing a pre-filled ID "342533064" and two input fields for "Enter here the id of your first collaborator (if exists):" and "Enter here the id of your second collaborator (if exists):". Below this is a checkbox "Check it if you want the grade to be save" with the label "Save the grade". At the bottom of the form are three buttons: "Send", "Clean", and "Clean+Send". The text "Submission result" is visible at the very bottom of the page.

Here, the student can submit his solution either by zip file or by GitHub link. If the submission chosen is GitHub, the student will have to work with a GitHub repository and submit the link of his repository containing his solution. If the student want to keep his repository private, he has to provide us with a token. The student can do this from the settings (access from the header). From the settings, click on "Add GitHub token" and follow the instruction. The student is able to choose up until two collaborators by entering each country ids.

If the student wants to submit for free, he just has to click on the send button without checking the "save grade" checkbox. If he rather wants to save his grade, the student has to check the checkbox.

Then, the platform immediately displays the feedback to the student.

This screenshot shows a submission interface. At the top, there is a 'Browse...' button next to the filename 'multiply\_solution\_java.zip' and a 'Zip' button. Below this is a section for 'Your id:' with a text input field containing '342533064'. There are two more input fields for 'Enter here the id of your first collaborator (if exists):' and 'Enter here the id of your second collaborator (if exists):'. A section titled 'Check it if you want the grade to be save' includes a checked radio button for 'Save the grade' and three buttons: 'Send', 'Clean', and 'Clean + Send'. At the bottom, a 'Submission result' section displays a log of events: '< Submission starting!', '< Grade exercise First assignment', '< javac Main.java', '< The input is 2', '< The input is 4', '< The input is 24', '< Your final grade is 100', '< Your grade is successfully stored.', and '< Submission completed!'.

### 3 Instructor privilege

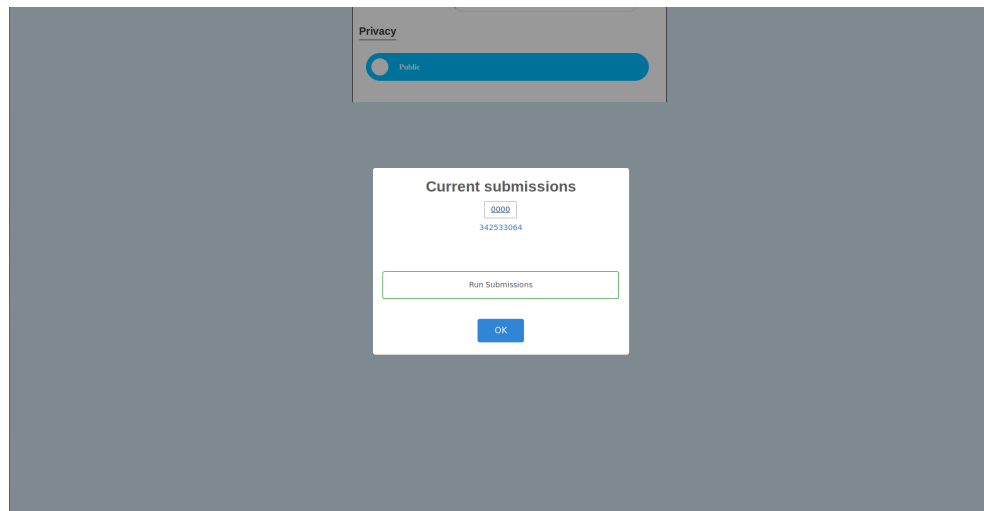
Once at least one student has submit his solution, the instructor will have various privileges. (see screenshot)

This screenshot shows the instructor privilege interface. At the top, there are 'Edit course' and 'Delete course' buttons. The main form contains several fields: 'Exercise name \*' with the value 'First assignment', 'Exercise compiler \*' with a dropdown menu showing 'javac', 'Submission option \*' with two radio buttons ('Getfile' and 'Zip'), 'Main file \*' with the value 'Main.java', and 'Exercise description' with the text 'Multiply two number using Java.'. Below the description is a 'Current pdf' section and a 'Pdf instruction file' section with a 'Browse...' button and the text 'No file selected.'. At the bottom, there is a 'Deadline' field. On the right side, there is a vertical list of buttons: 'Download Exercise Grades', 'Current Submissions', 'Check Plagiarism', 'Download Statistics', and 'Download Submissions'.

- Download course grades: this button will download the grades of all the exercises of the course.
- Current submissions: this button will open an alert with the list of all the current submissions. You will be able to click on a specific submission to access some other features.

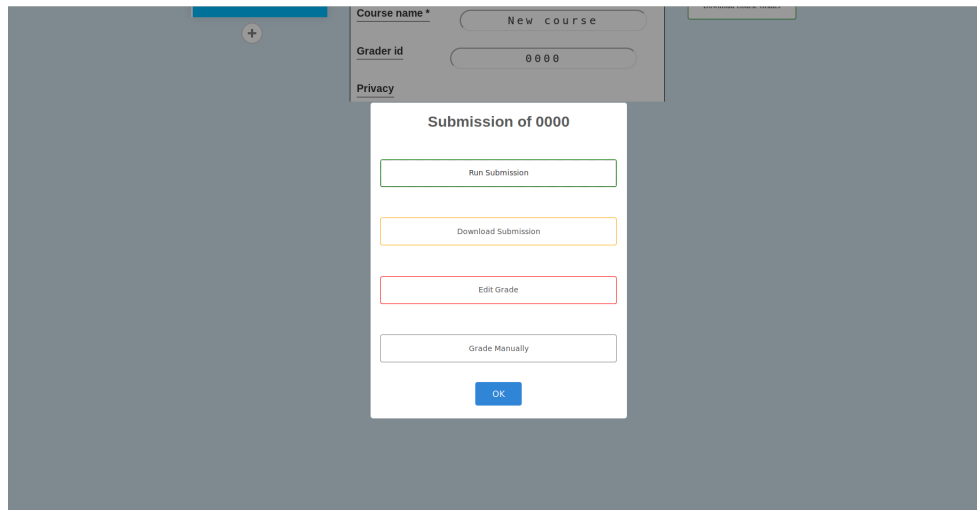


- Check plagiarism: this button will redirect you to another HTML page that will inform you if some projects seem to be similar.
- Download statistics: this button will download a CSV file with all the outputs of the submissions of the given exercise.
- Download submissions: this button will download all the current submissions for the given exercise.



The button "current submissions" leads you to a list of submissions and a button "Run submissions" that will run one by one all the current submissions, and display to the instructor screen the feedback for each submission.

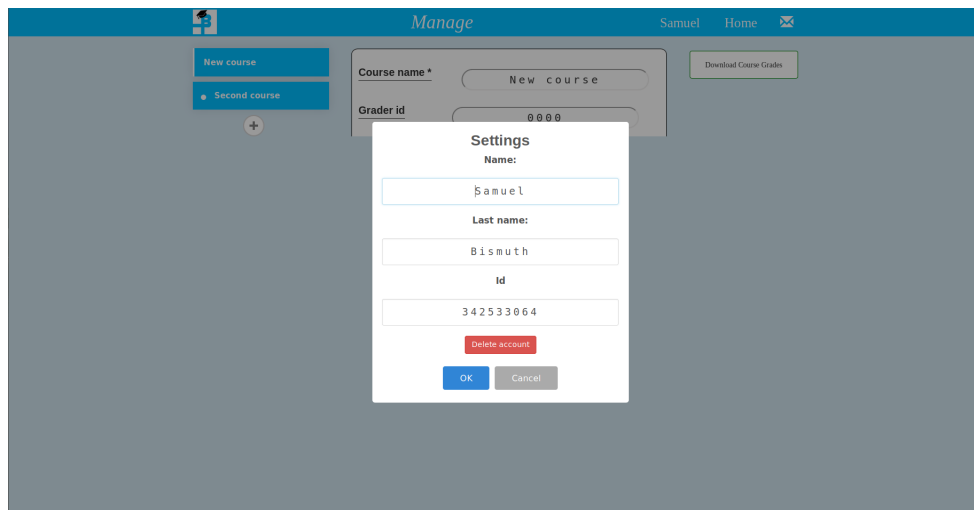
The instructor is able to focus on one unique submission by clicking on the country id of the submitter.



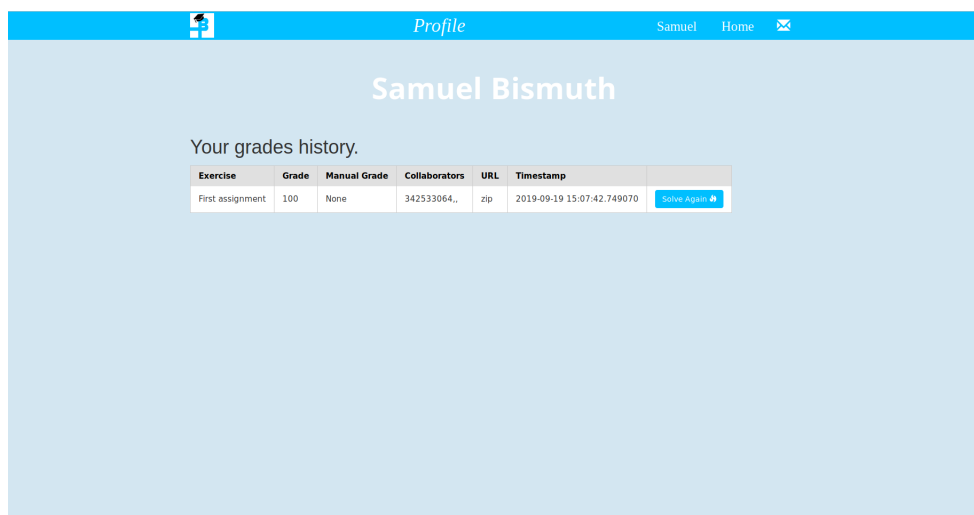
- Run submission: this button will run the submission of the student and the feedback will be displayed on the instructor screen (the grade of the student will remain the same).
- Download submission: this button will download the submission of the student.
- Edit grade: from here you can edit the grade of the student.
- Grade manually: if the instructor wants to add a manual grade and a comment.

## 4 User

At any moment, each user can edit his profile by clicking on the setting (from the header, click on the user name, and then "Settings").

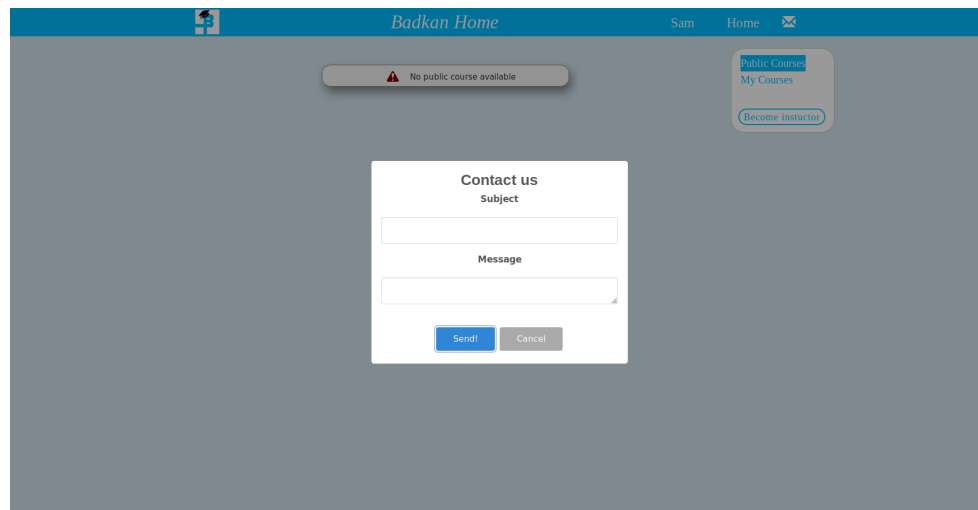


Each user has a profile. For a normal user, only his grade history will be displayed.



A grader user (the grader user is chosen by the instructor of the course), on top of his grade history, and for the course he is appointed "grader", the user will have access to the buttons: Download exercise grades, Current submissions, Check plagiarism, Download statistics, Download submissions. See the section Instructor privileges for further details.

At any moment, the user is able to contact us by clicking on the envelope icon in the header.



If there is any bug or any feedback, please use this to inform us.

If you want to become instructor, to get all the privileges, use the contact us button from the "become instructor page".