INSTITUT SUPÉRIEUR D'ÉLECTRONIQUE ET DU NUMÉRIQUE DE LILLE

PROJECT M1

Optimization of the project distribution

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1 Introduction

Our project aims to have the "best" project distribution for 4th year students in Junia through many algorithms and mathematical functions. This is an application which automates almost all tasks instead of doing them manually. It uses Python and its libraries. Make sure you follow the instructions in the README file to make it functional.

2 Global Overview

Our application looks like this:

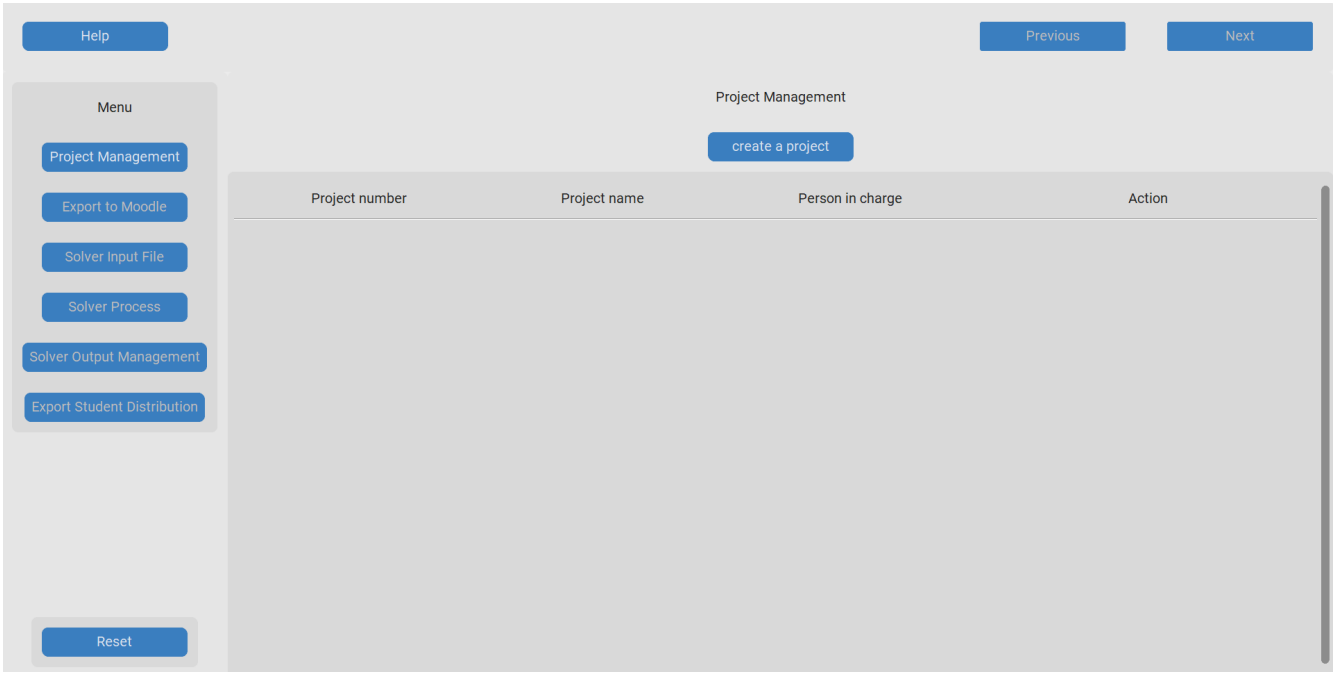

Figure 1: Home page of the application

At the left, there are all the steps classified by order to have the results wanted, but you can also navigate through the steps using the "Next" and "Previous" buttons.

3 Creation of projects

First of all, you have to create all the projects. Click on "Create a project" and fill in all the details for each project, including name, person in charge, mails of creators of the project, phone number, mails, range of people who can work on it, eventual company and description.

- The mails on the fields "Team emails" and "Mail" have to be separated by a semicolon (;).
- All fields are mandatory except "Phone number" and "Company".

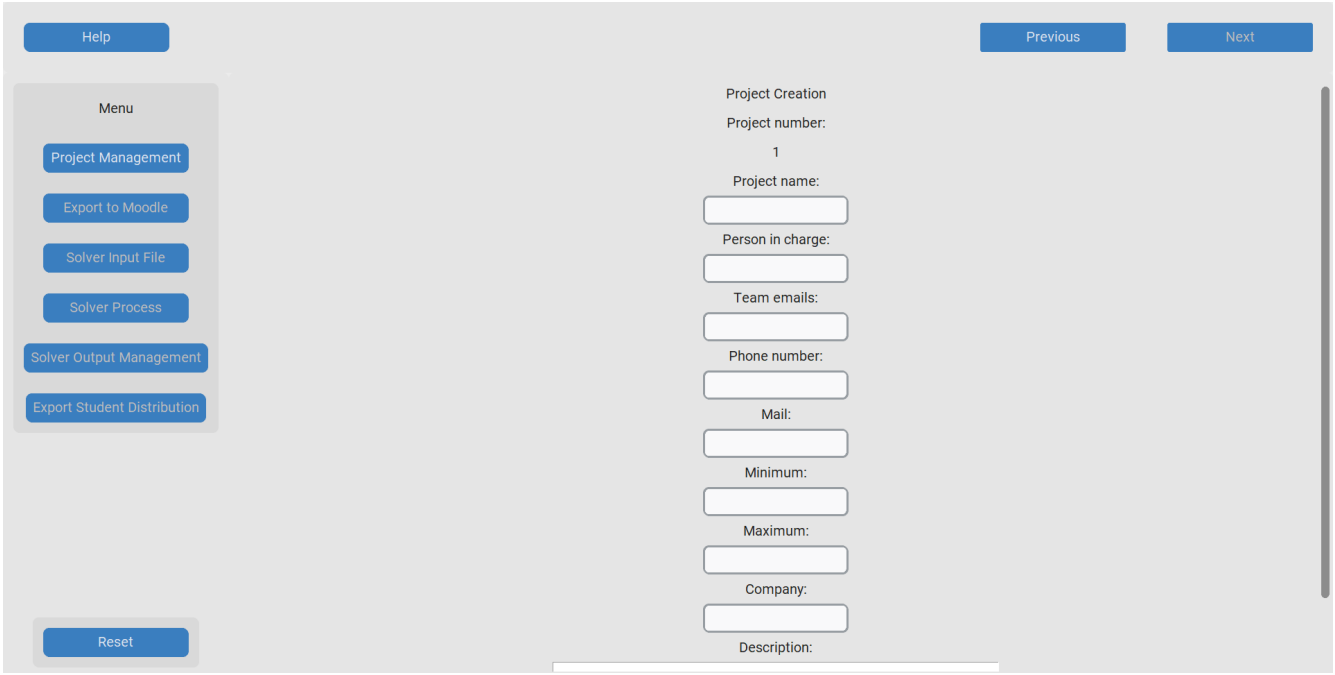

Figure 2: Project creation

Once it is done, you can click on “Add project” and do the same for all the projects. If needed, you can modify or delete a project.

4 Export to Junia Learning

After that, you can go to the next step and download the PDF file to send it to students. Then download the XML file in order to create the quiz on Junia Learning. Do not forget to fill in the name of the question folder before downloading it.

- Choose the name for the question bank (for example, Promo 66 M1), and click on “Download Moodle initialization file” to generate the XML file.

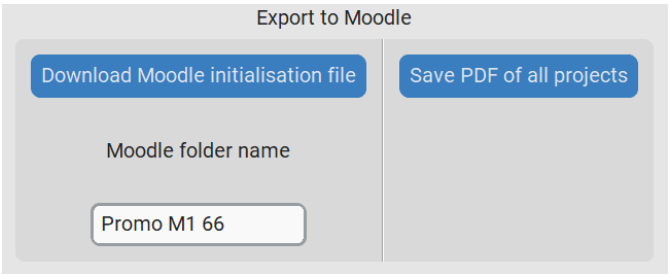

Figure 3: Exporting to Moodle

- Go to Junia Learning, log in, and create a new section or an existing section (verify if it is only available for M1 students).
- Click on “Edit mode” and on “Add an activity or resource”.

Figure 4: Edit on Moodle

- Click on the pink icon “Quiz”.

Figure 5:

- Fill in the name, the description and click on “Display description on course page”.

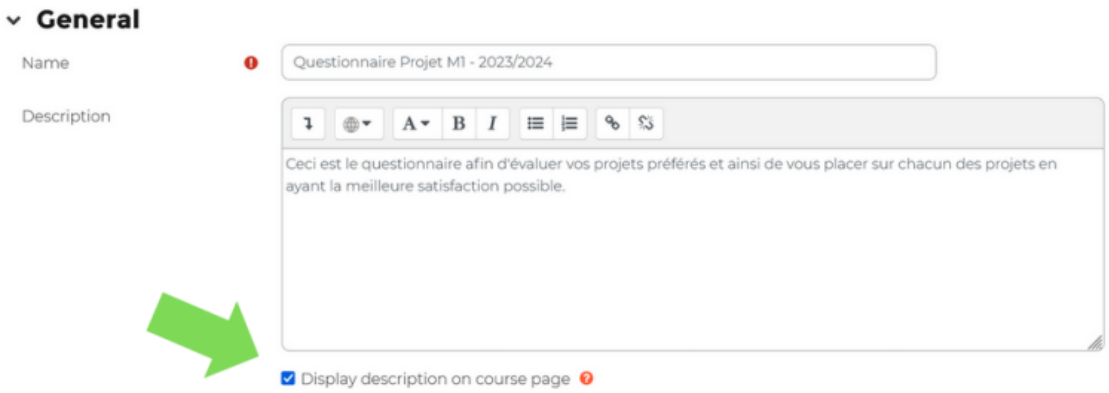

Figure 6:

- Expand the “Timing” section, click on “Enable” next to “Open the quiz” and “Close the quiz” and choose the desired dates. Choose the option “Attempts must be submitted before time expires, or they are not counted” for the option “When time expires”.

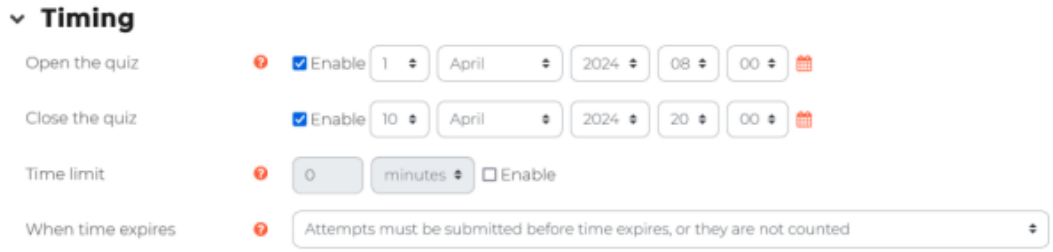

Figure 7:

- Unfold the “Grade” section and change the “Grading method” to “Last attempt”.

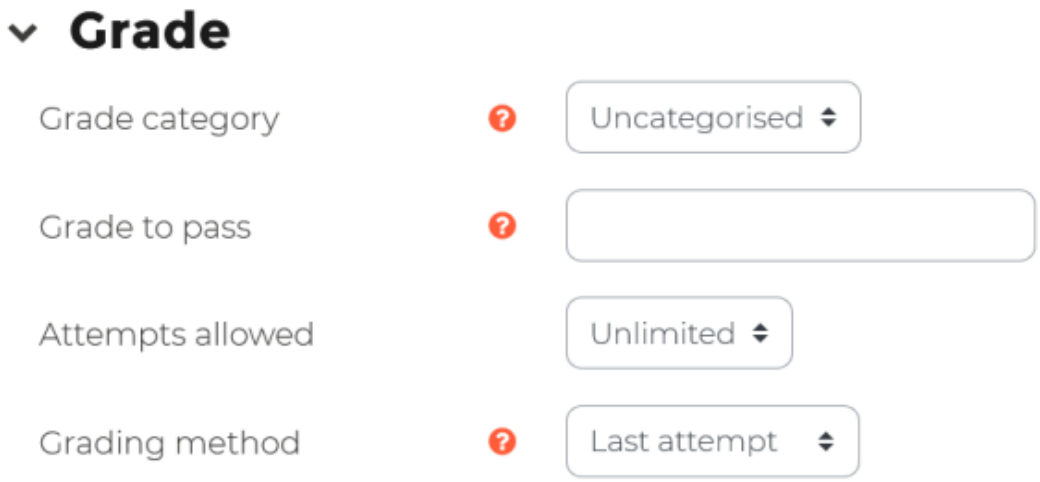

Figure 8:

- Go to the “Layout” section and change the “New page” on “Never, all questions on one page”.

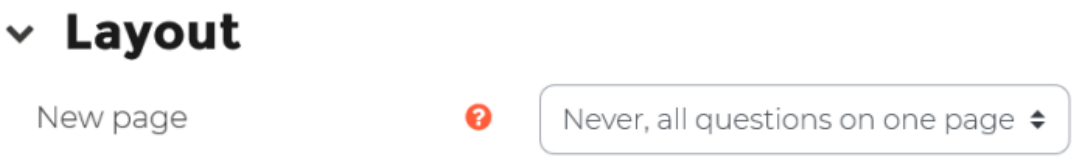

Figure 9:

- Click on “Question behaviour” and change “Shuffle within questions” to “No”.

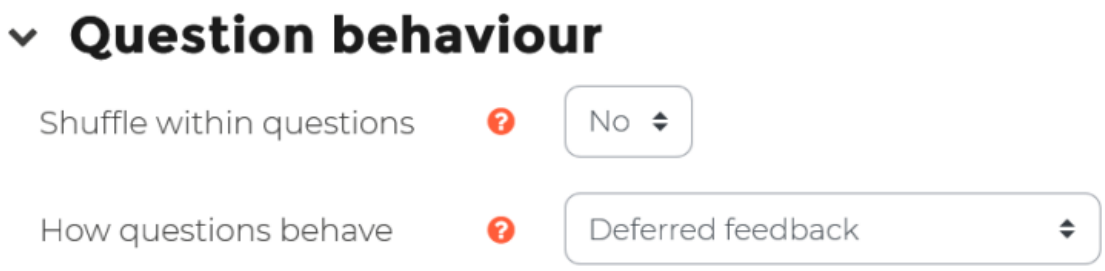

Figure 10:

- For the “Review options” section, ensure only “The attempt” is selected for each column.

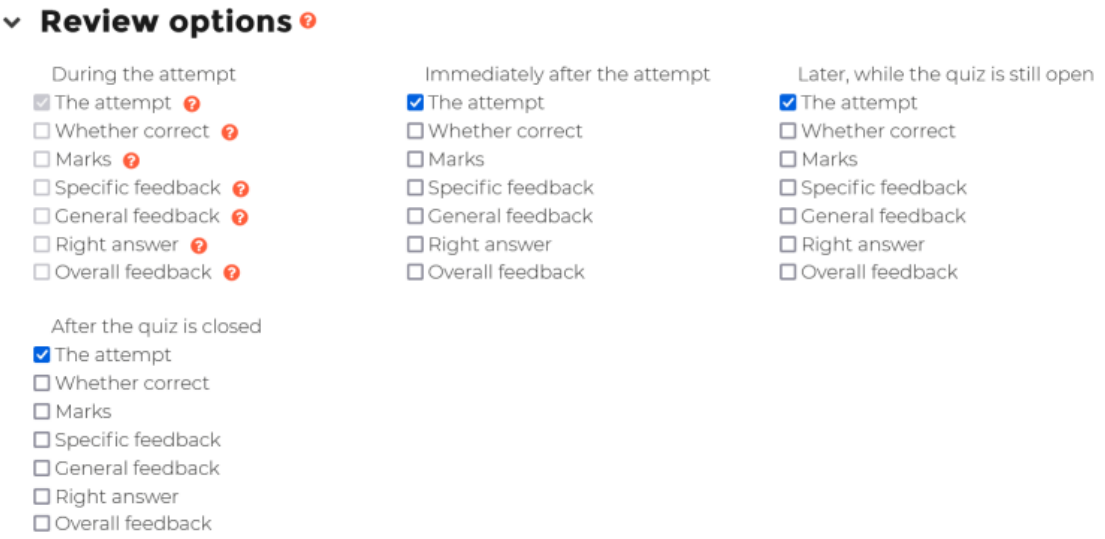

Figure 11:

- Put “0” for “Decimal places in grades” in the “Appearance” section.

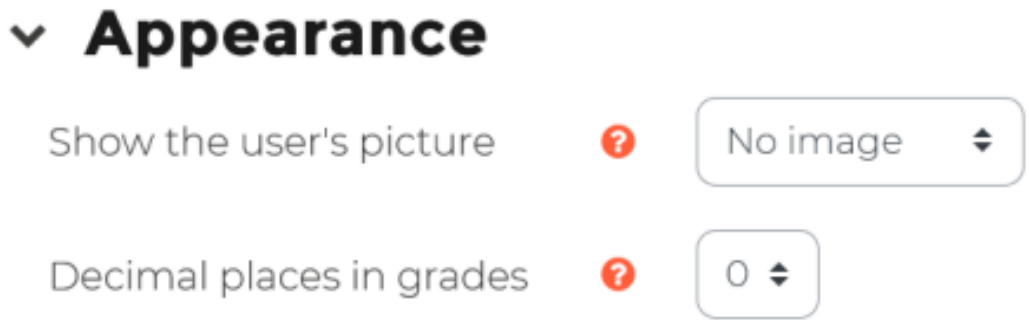

Figure 12:

- Change nothing for “Safe Exam Browser”, “Extra restrictions on attempts”, and “Overall feedback” sections, then open the “Common module settings” and change “Group mode” in “No groups”.

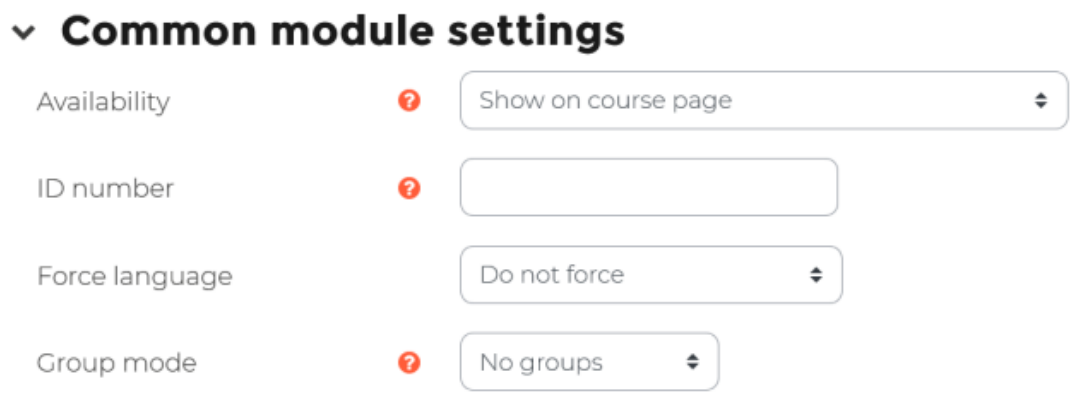

Figure 13:

- Don't change anything on the last 3 sections and click on "Save and Display".
- Click on "Question bank" and then on "Import".

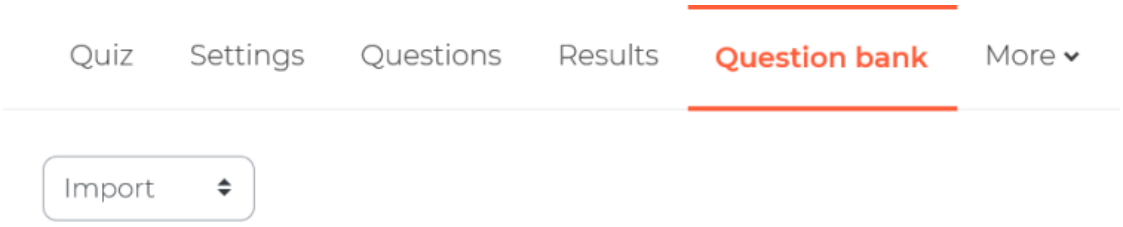

Figure 14:

- Choose "Moodle XML format" for "File format", don't change "General" section and import the XML file downloaded before, either by clicking on "Choose a file" or by moving it in the appropriate area and click on "Upload this file".

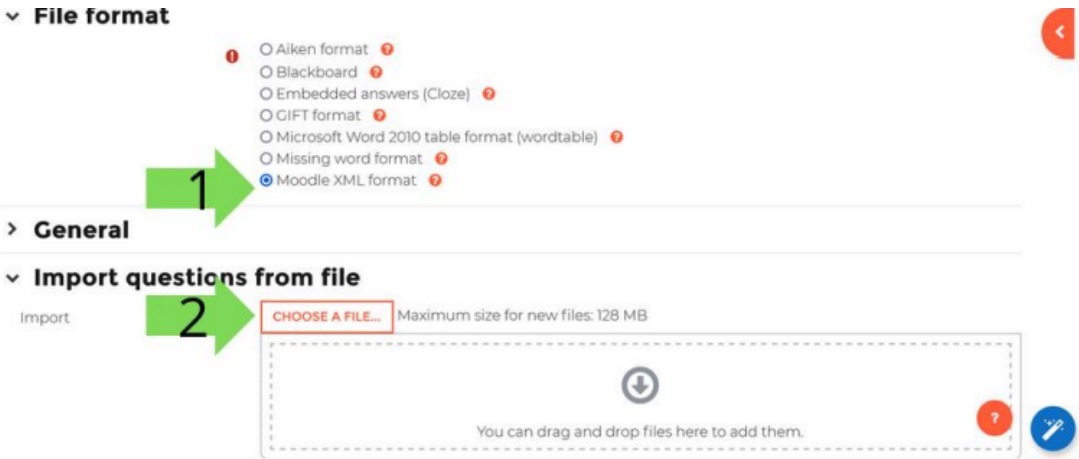

Figure 15:

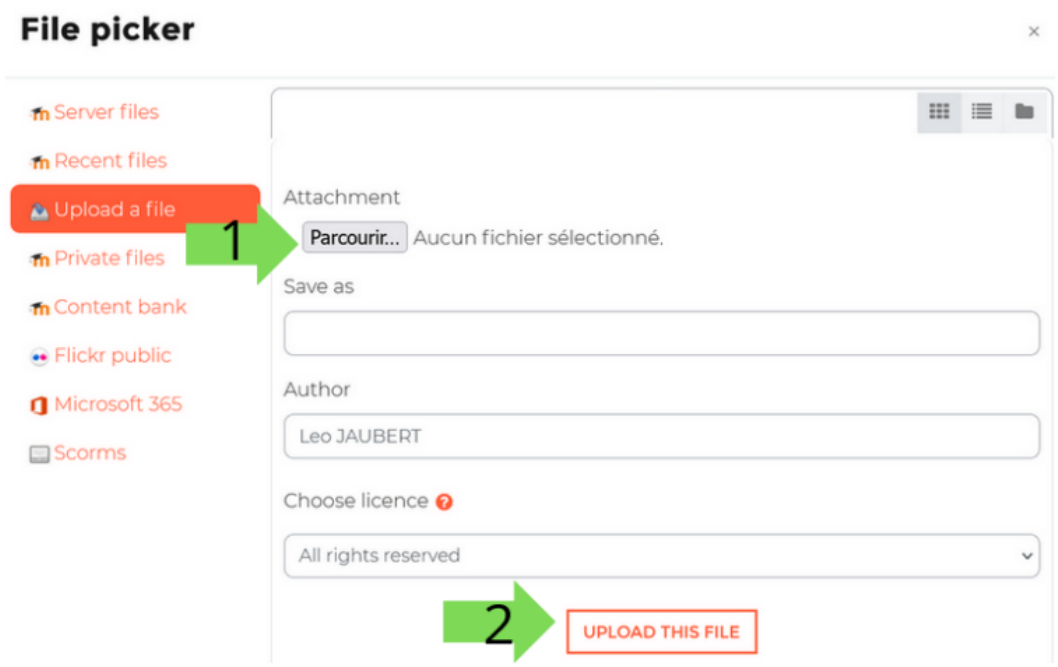

Figure 16: Upload file

- Go down the page and click on “Continue”.

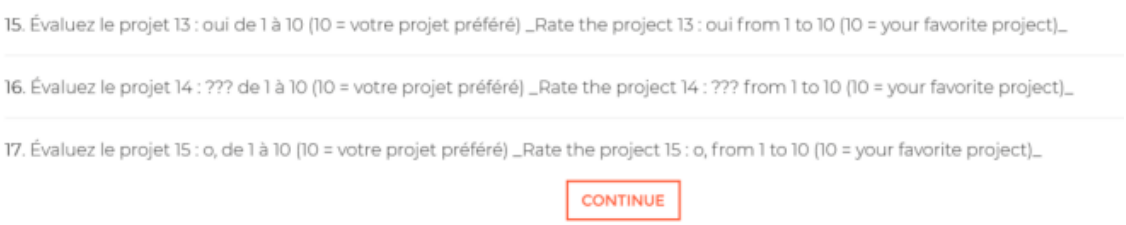

Figure 17:

- Click on “Questions”, click on “Add” then on “from question bank”.

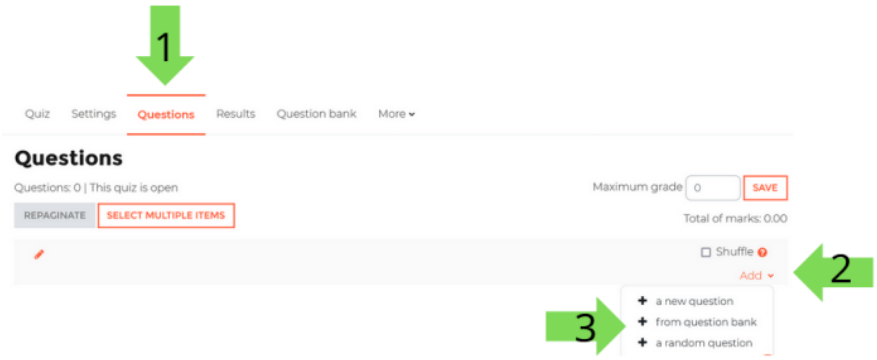

Figure 18:

- Choose the category with the name you chose at the beginning and change the other option by “Yes, with images, medias, etc.”.

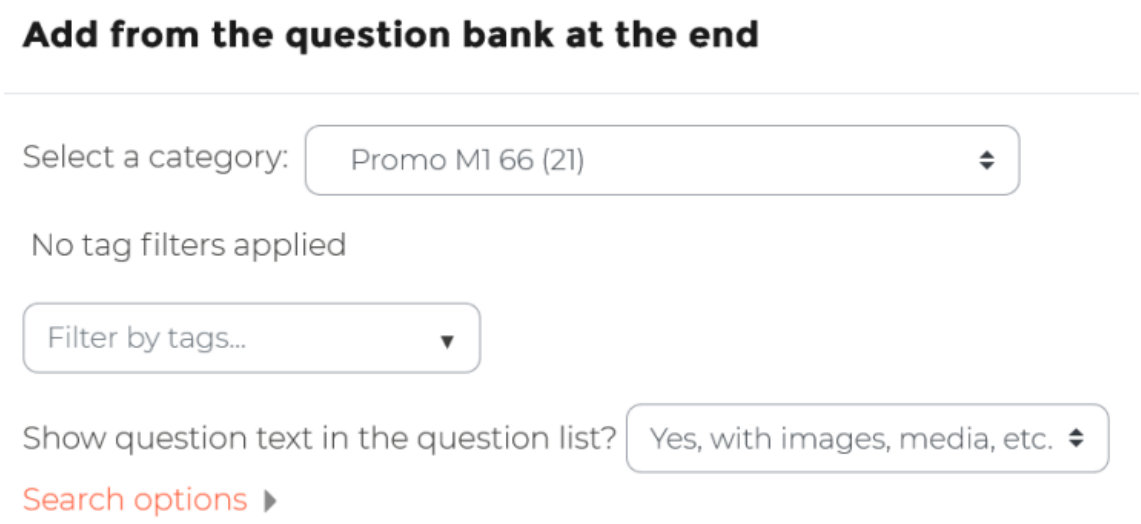

Figure 19: Add questions

- Go down the page and click on “Show all”
- Click on the box “Select questions for bulk actions” and go down the page and click on “Add selected questions to the quiz”.

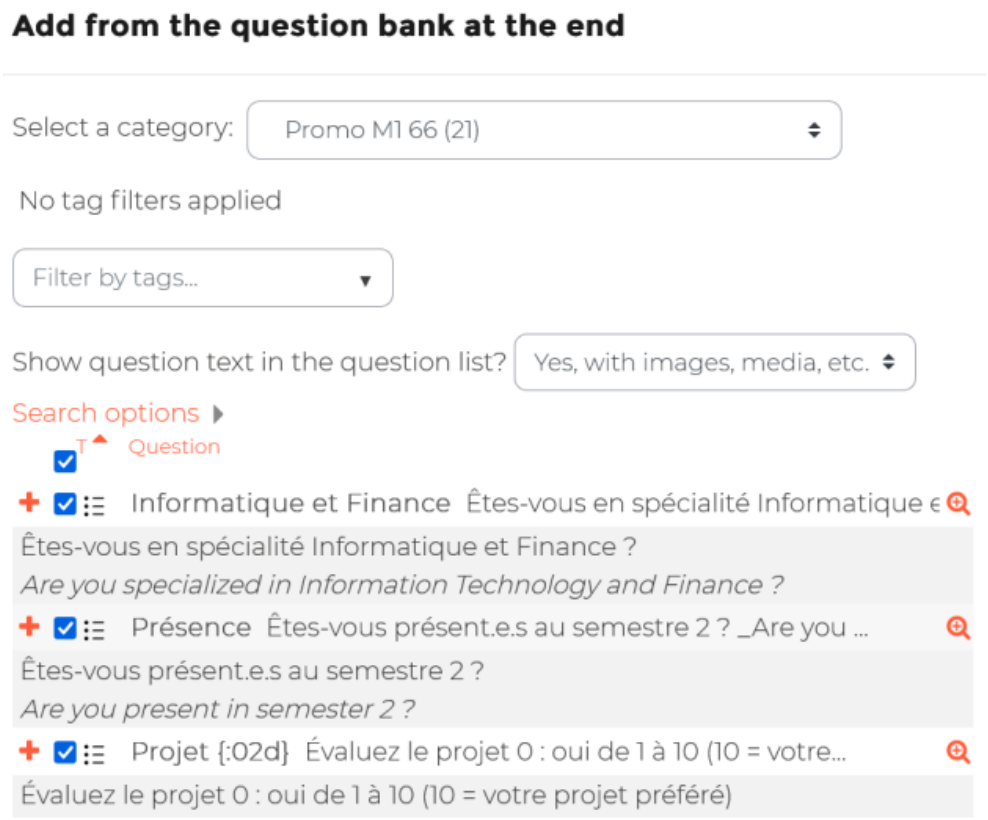

Figure 20: Questions options

- Separate the 2 first questions on a different page, set the maximum grade at “0” and click on “Save”.

Figure 21: Save the Quiz

- You can now click on “Quiz” and preview quiz if you need to modify a question.

5 Collect students’ answers

- After all the students answered, you can download the results by clicking on "Results" and "Responses".

Figure 22: Students answer

- Choose the same options as depicted below:

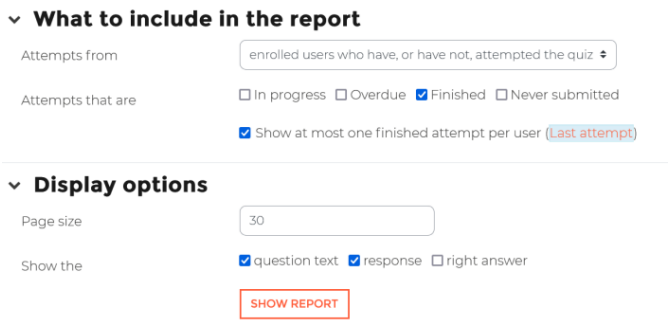

Figure 23: Report Answer

- Click on ”Show report” then choose ”Microsoft Excel (.xlsx)” and download it.

Figure 24: Exporting in xlsx format

- You can then export the file by clicking on ”Open file”.

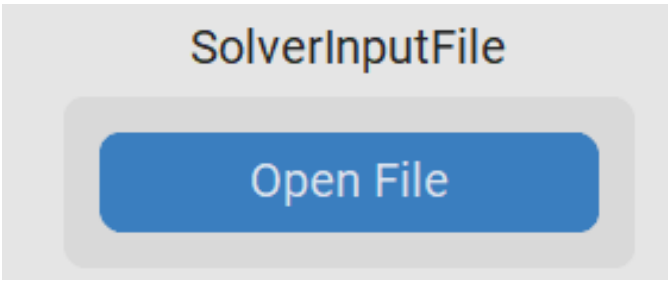

Figure 25: Solver Input

6 Solve

After the file is imported, you can now click on “Solve”.

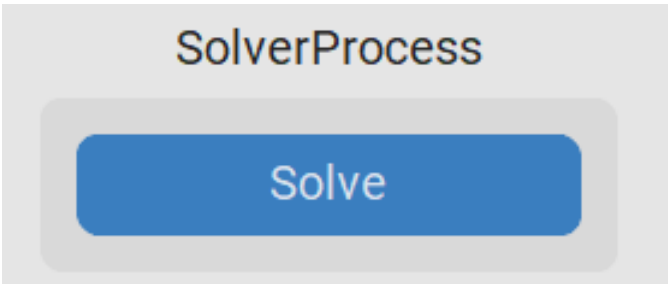

Figure 26: Solver Button

7 Solving results

After the solving is finished, you can go to the next page "Solver output management" and see the results, i.e. the students affected for each project.

Figure 27: Solver output management

If needed, there is a column for anomalies: a student who is not affected to any project, and a project that did not reunited enough people.

8 Export student distribution

The final step is to download the PDF file with all the details of team projects and to send it to students.

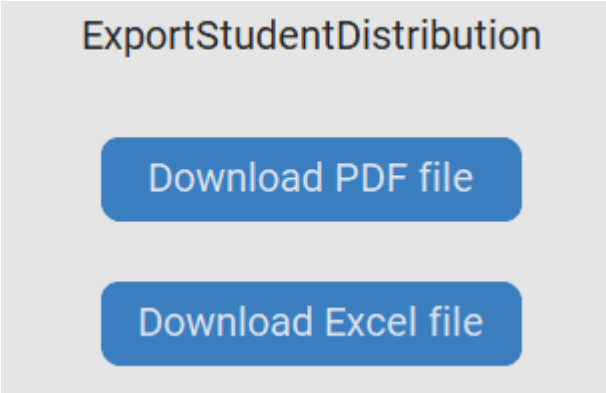

Figure 28: Export student distribution

9 Save results

If you want to save the results, you can go to your file explorer and search for our application, open it, then copy the folder “common”.

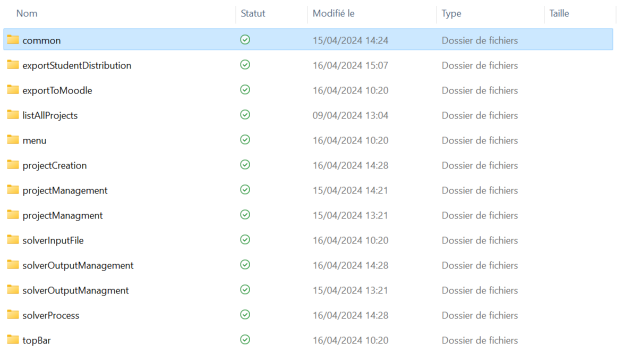

Figure 29: File explorer

Useful data may be in the files “answerProjects.xlsx”, “dataProjects.xlsx”, and “recap.xlsx”. You can paste it at the desired place in your computer and reset the application to make it functional for the next year. If necessary, you may delete the actual folder “common” and paste the one you saved to regenerate PDF file or another thing.