

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:

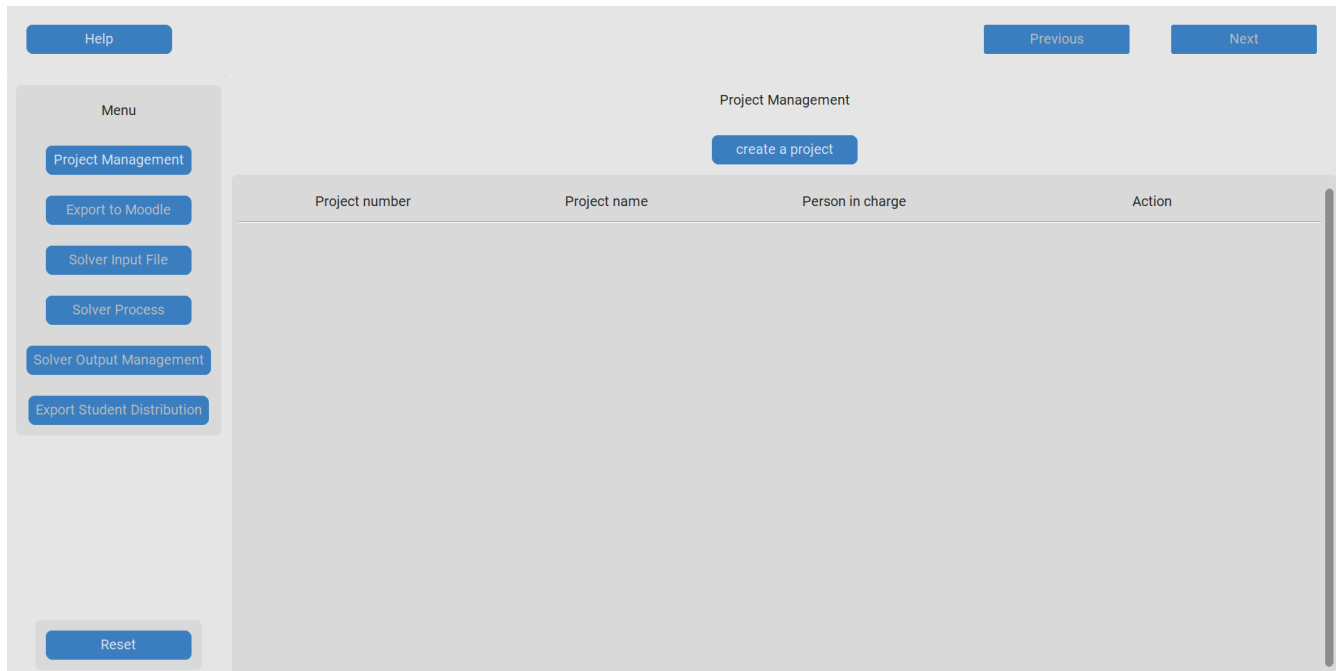


Figure 1: Home page of the application

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 (;).
- If not filled, fields “Minimum” and “Maximum” are respectively assigned at 3 and 7.

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”.

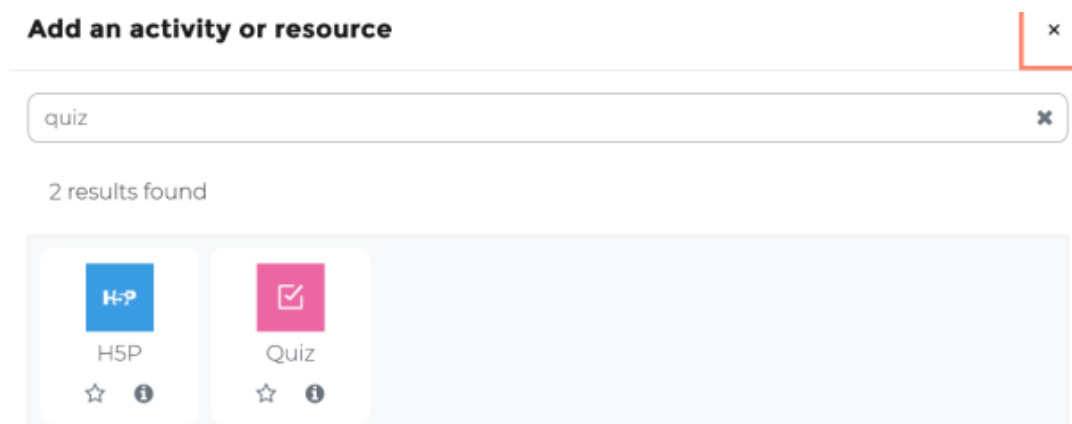


Figure 5:

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

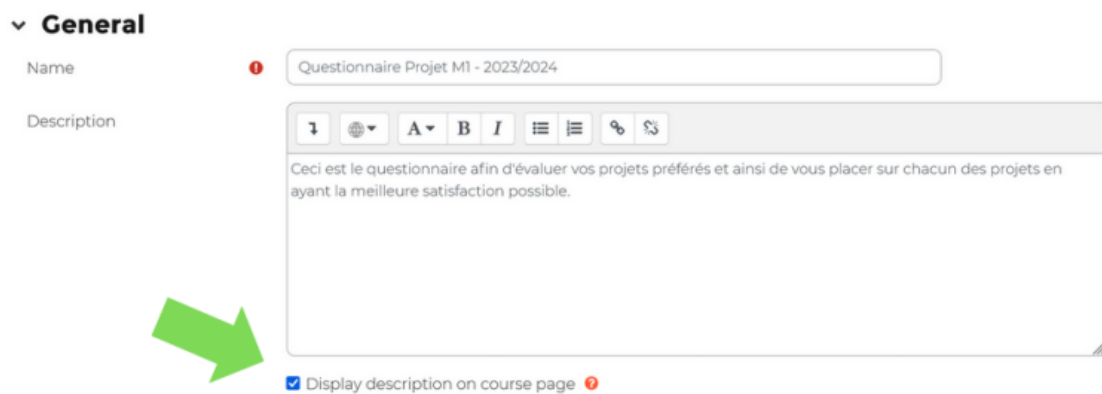


Figure 6:

- 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”.

▼ Timing

Open the quiz ? ☒ Enable 1 April 2024 08 00

Close the quiz ☒ Enable 10 April 2024 20 00

Time limit ? 0 minutes ☐ Enable

When time expires ? Attempts must be submitted before time expires, or they are not counted

Figure 7:

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

▼ Grade

Grade category ? Uncategorized

Grade to pass ?

Attempts allowed Unlimited

Grading method ? Last attempt

Figure 8:

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

▼ Layout

New page ? Never, all questions on one page

Figure 9:

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

▼ Question behaviour

Shuffle within questions ? No ▾

How questions behave ? Deferred feedback ▾

Figure 10:

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

▼ Review options ?

During the attempt	Immediately after the attempt	Later, while the quiz is still open
<input checked="" type="checkbox"/> The attempt ?	<input checked="" type="checkbox"/> The attempt	<input checked="" type="checkbox"/> The attempt
<input type="checkbox"/> Whether correct ?	<input type="checkbox"/> Whether correct	<input type="checkbox"/> Whether correct
<input type="checkbox"/> Marks ?	<input type="checkbox"/> Marks	<input type="checkbox"/> Marks
<input type="checkbox"/> Specific feedback ?	<input type="checkbox"/> Specific feedback	<input type="checkbox"/> Specific feedback
<input type="checkbox"/> General feedback ?	<input type="checkbox"/> General feedback	<input type="checkbox"/> General feedback
<input type="checkbox"/> Right answer ?	<input type="checkbox"/> Right answer	<input type="checkbox"/> Right answer
<input type="checkbox"/> Overall feedback ?	<input type="checkbox"/> Overall feedback	<input type="checkbox"/> Overall feedback

After the quiz is closed

☒ The attempt

☐ Whether correct

☐ Marks

☐ Specific feedback

☐ General feedback

☐ Right answer

☐ Overall feedback

Figure 11:

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

▼ Appearance

Show the user's picture ? No image ▾

Decimal places in grades ? 0 ▾

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”.

▼ Common module settings







Availability		Show on course page 
ID number		<input type="text"/>
Force language		Do not force 
Group mode		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".

Quiz Settings Questions Results **Question bank** More ▼
















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".

▼ **File format**



 ☐ Aiken format 
 ☐ Blackboard 
 ☐ Embedded answers (Cloze) 
 ☐ GIFT format 
 ☐ Microsoft Word 2010 table format (wordtable) 
 ☐ Missing word format 
 ☒ Moodle XML format 

> **General**

▼ **Import questions from file**

Import 

CHOOSE A FILE... Maximum size for new files: 128 MB


You can drag and drop files here to add them. 




Figure 15:

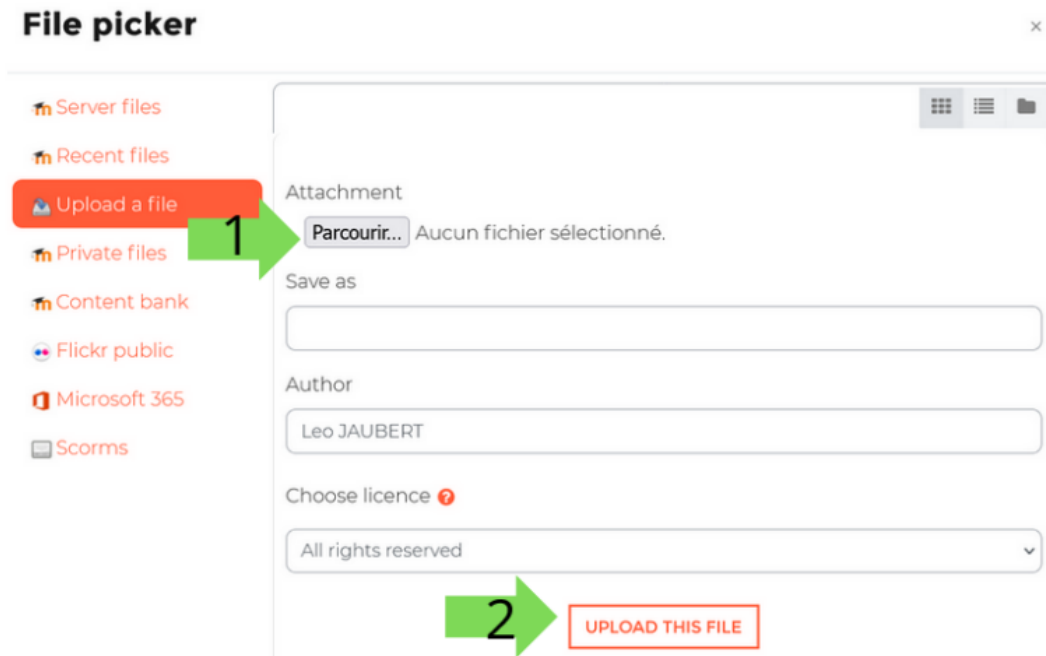


Figure 16: Upload file

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

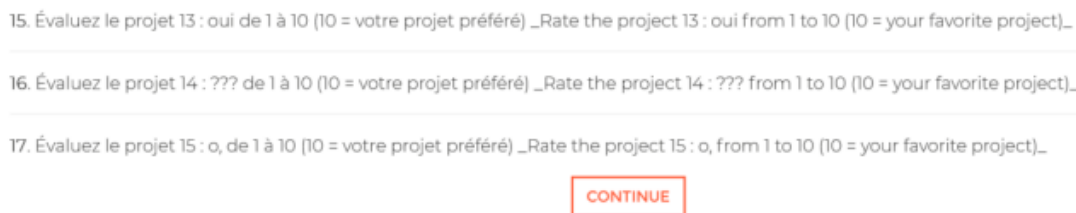


Figure 17:

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

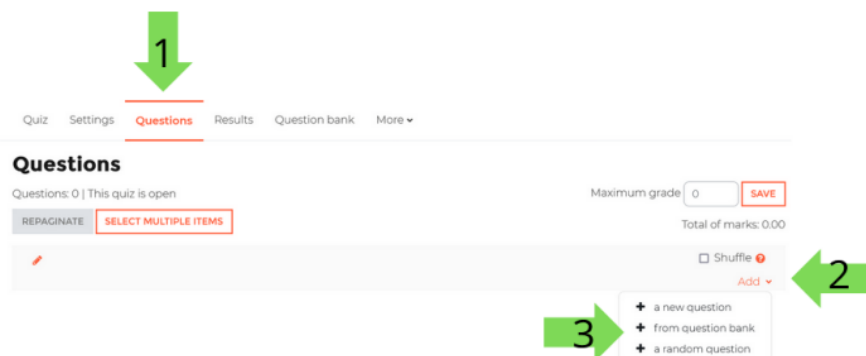


Figure 18:

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

Add from the question bank at the end

Select a category: Promo M1 66 (21)

No tag filters applied

Filter by tags...

Show question text in the question list? Yes, with images, media, etc.

[Search options](#)

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”.

Add from the question bank at the end

Select a category: Promo M1 66 (21)

No tag filters applied

Filter by tags...

Show question text in the question list? Yes, with images, media, etc.

[Search options](#)

☒ Question

<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Informatique et Finance Êtes-vous en spécialité Informatique et Finance ?	<input checked="" type="checkbox"/>
Êtes-vous en spécialité Informatique et Finance ?			
Are you specialized in Information Technology and Finance ?			
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Présence Êtes-vous présent.e.s au semestre 2 ? _Are you ...	<input checked="" type="checkbox"/>
Êtes-vous présent.e.s au semestre 2 ?			
Are you present in semester 2 ?			
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Projet {02d} Évaluez le projet 0 : oui de 1 à 10 (10 = votre...	<input checked="" type="checkbox"/>
Évaluez le projet 0 : oui de 1 à 10 (10 = votre projet préféré)			

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:

▼ **What to include in the report**

Attempts from

Attempts that are ☐ In progress ☐ Overdue ☒ Finished ☐ Never submitted

☒ Show at most one finished attempt per user (Last attempt)

▼ **Display options**

Page size

Show the ☒ question text ☒ response ☐ right answer

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".

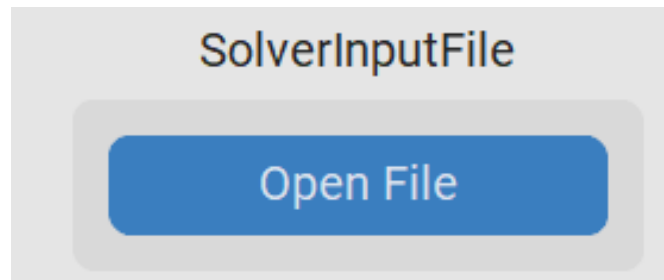


Figure 25: Solver Input

6 Solve

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

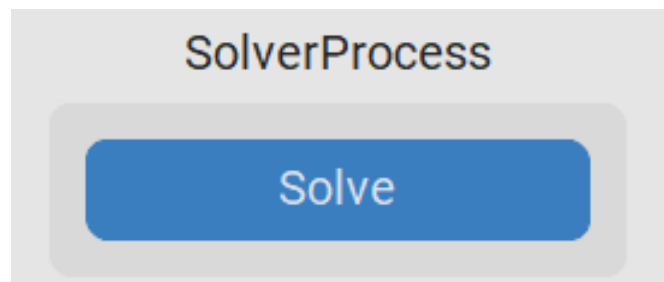


Figure 26: Solver Button

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.

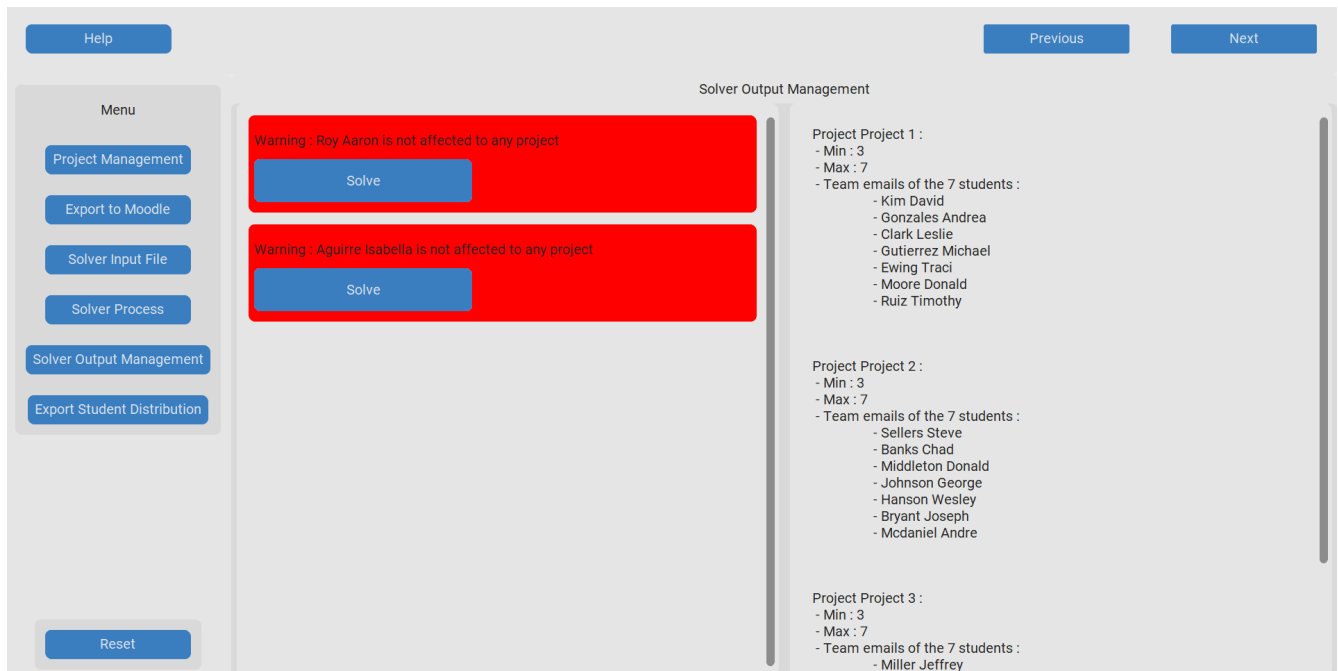


Figure 27: Solver output management

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.

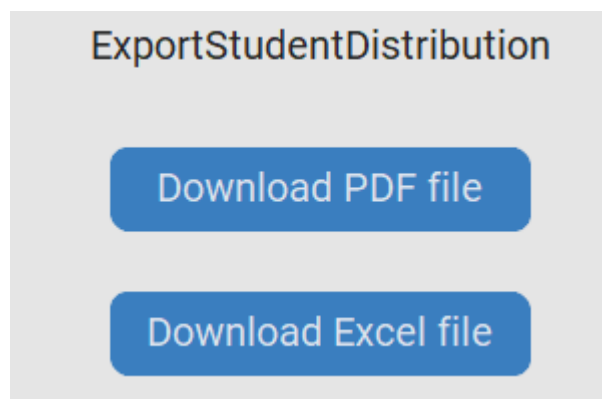


Figure 28: Export student distribution

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”.

Nom	Statut	Modifié le	Type	Taille
common	✓	15/04/2024 14:24	Dossier de fichiers	
exportStudentDistribution	✓	16/04/2024 15:07	Dossier de fichiers	
exportToMoodle	✓	16/04/2024 10:20	Dossier de fichiers	
listAllProjects	✓	09/04/2024 13:04	Dossier de fichiers	
menu	✓	16/04/2024 10:20	Dossier de fichiers	
projectCreation	✓	16/04/2024 14:28	Dossier de fichiers	
projectManagement	✓	15/04/2024 14:21	Dossier de fichiers	
projectManagment	✓	15/04/2024 13:21	Dossier de fichiers	
solverInputFile	✓	16/04/2024 10:20	Dossier de fichiers	
solverOutputManagement	✓	16/04/2024 14:28	Dossier de fichiers	
solverOutputManagment	✓	15/04/2024 13:21	Dossier de fichiers	
solverProcess	✓	16/04/2024 14:28	Dossier de fichiers	
topBar	✓	16/04/2024 10:20	Dossier de fichiers	

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. If you need to change some attributions for students in the file “recap.xlsx”, it is possible to put it again in the folder “common” to regenerate the PDF file.