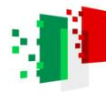




Digital Accounting Lab (DALab) User Manual General Ledger Plugin for Moodle

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Information on the project

The project was developed to digitize the hands-on learning of general accounting in Moodle, providing Teachers and Students with a structured environment to:

- Set up accounting starting positions (initial or intermediate);
- Record double-entry transactions in the General Journal and post them to the General Ledger;
- Obtain automatic corrections with customization of scores by type of error;
- Manage Exams and Assignments with immediate (or deferred) feedback in Italian and English.

This Financial Accounting plugin “Digital Accounting Lab (DALab)” was conceived and designed by Prof. Silvia ANGELONI (silvia.angeloni@unimi.it) and Dr. Marco PINO, Department of Economics, Management and Quantitative Methods, University of Milan, and was funded by the European Union’s NextGenerationEU programme under the National Recovery and Resilience Plan (PNRR), “Multilayered Urban Sustainability Action – MUSA”, Spoke 4: Economic impact and sustainable finance.

Below is the **link** to access the **project**:

- in **Italian**: <https://meiec.unimi.it/dalab/>
- in **English**: <https://meiec.unimi.it/en/dalab/>

Download the accounting plugin for Moodle

If you already have access to a Moodle platform, you just need to **download** the free **accounting plugin** for Moodle from the official DALab page: <https://download.moodle.org/releases/security/>

If you do not have an active Moodle platform, you must first install Moodle (version 4.5) for free from the official Moodle https://download.moodle.org/?utm_source website and then install the DALab plugin.

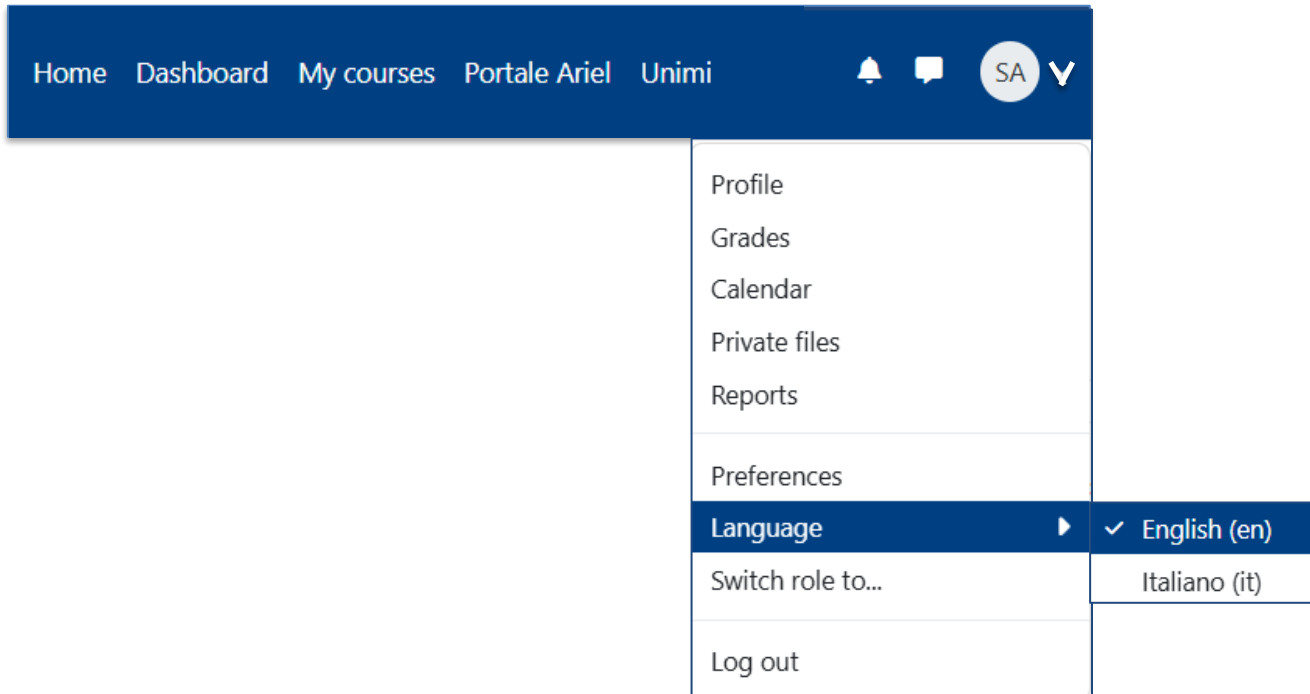
This user manual has been produced by Prof. Silvia ANGELONI and by Dr. Marco PINO, with the collaboration of Dr. Simone COLOMBO, Matteo BONAVERA and Andrea PELLEGRINO.

GUIDE FOR THE TEACHER

1. Choosing the interface language

The Teacher must first set the language of the interface, choosing between **English** or **Italian**.

To set the **language**, click on the **arrow** next to the user icon and choose, for example, "**English (en)**".



2. Creation of the “account list”

The Teacher can upload the “**account list**” to be used by Students in exercises.

Course Settings Participants Grades Reports More ▾

- Question bank
- Content bank
- Course completion
- Filters
- Repositories
- LTI External tools
- Import account list**
- Account list management
- Course reuse

From the top bar of the main homepage, click on “**More**” to view the two possible ways to create a list of accounts:

- 1) “**Import account list**” to upload accounts in bulk via **.csv** file;
- 2) “**Account list management**” to manage the accounts manually.

2.1 Import account list

By clicking on “**Import account list**”, the following screen appears.

Load Account List

Template

In the **scheme** column, the allowed values are: **BS, IS**
 In the **typology** column, the allowed values are: **assets, liabilities, equity, expenses, revenues**.
 The csv file must be saved with UTF-8 encoding.

File ! Choose a file... Maximum size for new files: 1 GB

1 Download the template to fill in the Account List

2 Upload here the completed template in .csv format

You can drag and drop files here to add them.

Continue

The **template** has this structure: once completed, the template has to be uploaded as a **.csv** file.

description	scheme	typology	lang
Account name 1	BS	assets	en
Account name 2	BS	liabilities	en
Account name 3	BS	equity	en
Account name 4	IS	expenses	en
Account name 5	IS	revenues	en

! You can also use a **.xlsx** (Excel) file with the same labels. Once the file has been filled in with the required information, it must be **saved only in .csv** format with **UTF-8 encoding** (the only format accepted by the system).

NOTE. On the site <https://meiec.unimi.it/dalab/> a **.csv** file with a large **Account list** is already available, which you can automatically import into your course.

The Teacher must enter the following information in the template.

- **description:** the system accepts any name for the accounts;
- **scheme:** indicate whether the account belongs to the IS (Income Statement) or the BS (Balance Sheet);
- **nature:** use ONLY one of the accepted labels (listed below), by writing:
 - “assets” if the account represents an asset;
 - “liabilities” if the account represents a liability;
 - “equity” if the account represents equity;
 - “expenses” if the account represents an expense;
 - “revenues” if the account represents revenue;
- **lang:** indicate the language of the Accounts, using ONLY the codes “it” for Italian, or “en” for English. The Teacher can create a single account list, including both Italian and English accounts. The system automatically matches each account with the reference language, displaying only the accounts of the language chosen by the Teacher when setting up the exercise.

Once the template has been uploaded, the system will verify the correctness of the information entered, returning feedback.

The system can identify existing accounts, update them if additional or different information is provided, and add any new accounts entered by the user.

2.2 Account list management

The entered accounts are viewable, editable and can be integrated through “More” and “Account list management”.

Course Settings Participants Grades Reports More ▾

- Question bank
- Content bank
- Course completion
- Filters
- Repositories
- LTI External tools
- Import account list
- Account list management

Account name	Scheme	Typology	Grouping	Language	Edit
Cash	BS	Assets		en	
Short-term investments	BS	Assets		en	
Accounts receivable	BS	Assets		en	

Add **Export**

Click here to manually add a new account

Click here to export existing accounts as a .csv file

Edit

- Edit the account
- Hide the account
- Delete the account

The trash can icon may not be displayed next to some accounts. This happens because the system does not allow you to delete accounts that have already been used in at least one Assignment/Exam. In this case, it's only possible to **hide** them.

3. Creating a new exercise

3.1 Adding the add-on for accounting exercises

Set the system to “**Edit mode**”, by clicking the switch in the top right corner.

Within a Moodle course, the Teacher can add the accounting add-on by selecting the plugin from the “**Activity or resource**” menu at the bottom of every section.

oard My courses Portale Ariel Unimi

Digital Accounting Lab Bulk actions

Course Settings Participants Grades Reports More

Introduction

Financial Accounting Exercises

Test 01/01/2026 with starting position

1 Activate **Edit mode**

2 Click the “+” symbol at the bottom of a section to **add** the **accounting module**

Activity or resource

Search

All Activities Resources

T Accounting ☆ ⓘ	 Assignment ☆ ⓘ	 Book ☆ ⓘ	 Chat ☆ ⓘ	 Choice ☆ ⓘ	 Custom certificate ☆ ⓘ
 Database ☆ ⓘ	 eventmanager ☆ ⓘ	 Feedback ☆ ⓘ	 File ☆ ⓘ	 Folder ☆ ⓘ	 Forum ☆ ⓘ
 Glossary ☆ ⓘ	 Group choice ☆ ⓘ	 H5P ☆ ⓘ	 IMS content package ☆ ⓘ	 Lesson ☆ ⓘ	 Page ☆ ⓘ
 Panopto Video ☆ ⓘ	 Quiz ☆ ⓘ	 SCORM package ☆ ⓘ	 Survey ☆ ⓘ	 Text and media area ☆ ⓘ	 URL ☆ ⓘ
 Wiki ☆ ⓘ	 Workshop ☆ ⓘ				

3 Click here to **create** a new Assignment/Exam of **accounting**

The following are the 4 sections required to set up the exercise:

- **General**
- **Options**
- **Score starting position**
- **Score recordings**

The last 4 sections (from “**Common module settings**” onwards) are related to technical aspects that must not be changed.

Edit settings

- > **General**
- > **Options**
- > **Score Starting position**
- > **Score Recordings**
- > **Common module settings**
- > **Restrict access**
- > **Completion conditions**
- > **Tags**



Do not change these 4 sections

3.2 General section

In the “**General**” section the Teacher proceeds to:

- **name** the exercise by entering a text in the “**Name**” field (e.g., *Test 10/01/2026 with starting position*);
- provide a **general description** of the activities to be carried out (e.g., *reconstruction of the Initial Position and entries in the Journal*), by entering the generic instruction in the “**Description**” field.

v **General**

Name

! Test 10/01/2026 with starting position

Description

Edit View Insert Format Tools Table Help

↶ ↷ **B** *I*

The candidate should record the following transactions in the General Journal after reconstructing the Initial Position as of January 1, 2026, on the basis of the following accounts and amounts.

1. Cash \$5,000
2. Common stock \$10,000
3. Equipment \$35,000
4. Long-term debt \$30,000

p 40 words Build with tinyMCE

Display description on course page ?

3.3 Options

The following fields are available in the “Options” section.

3.3.1 Exercise description

In “**Exercise description**”, the Teacher will write the detailed description of the transaction to be recorded in the General Journal or General Ledger.

3.3.2 Type of exercise: Assignment or Exam

The Teacher may choose between two options:

- **Assignment** → in this mode, the Student will have the option to receive instant feedback, provided the Teacher has enabled it;
- **Exam** → when this mode is selected, instant feedback is disabled.

3.3.3 Instant fix

In the “Assignment” mode, the Teacher can allow the Student to receive instant feedback.

3.3.4 Language of the account list

The Teacher selects the language (e.g., English) of the account list and the system will only display the accounts available in the selected language from those uploaded using the specific template.



The language selected at this stage only determines the **language** in which the Student will view the **account list** during the Assignment or Exam; it does not affect the language of the plugin interface or the text of the exercise itself.

3.3.5 Resume attempt

The Teacher may allow Students to continue modifying the Assignment or Exam after completing it.

3.3.6 Number of attempts

The Teacher may set a maximum number of allowed attempts or leave the number of attempts unlimited.

3.3.7 Time limit

The Teacher can set a time limit within which the Student must complete the Assignment or Exam once started. Once the time limit expires, the test will be considered finished.

3.3.8 Starting position

The Teacher chooses whether or not to include a starting Trial Balance (opening or interim).

By selecting:

- **Yes** → the section for uploading the starting balances will be activated (see point 4).
- **No** → the Student will only be required to perform the accounting entries.

3.3.9 Show Decimals

The Teacher can choose whether or not to display decimals for number entries within the Assignment or Exam.

In particular, the system provides the following options:

- **Always:** every number will always display decimal places;
- **Only if at least one value contains decimals:** decimal places are shown only if at least one value has a decimal part; otherwise, trailing zeros are not displayed.

3.4 Score for the Starting position

In this section, the Teacher must specify the **percentages** for distributing the score for the starting position between the **IS/BS** classification and the **D/C** classification. The sum of the percentages must equal **100**.

▼ **Score Starting position**

IS/BS

D/C



If the **total score** does not equal **100**, the system will report an error

▼ **Score Starting position**

IS/BS The scores must add up to 100

D/C The scores must add up to 100

In the **"Final grade calculation"** field, you can select the method for determining the total score: Depending on the preferences, it is possible to set:

Sum = Score Starting position + Score Recordings

$$\text{Average} = \frac{\text{Score Starting position} + \text{Score Recordings}}{2}$$

Final grade calculation ?

Sum

Average

3.5 Score for the Recordings

Following the same logic used for the starting position, the Teacher must determine the **percentages** for distributing the **score** for the **entries** across the following **4 criteria**.

▼ **Score Recordings**

Date

Account name

Debit/Credit

Amount

This setting indicates that **10%** of the score for each entry is attributed to the correct **Date** entry, while the remaining **90%** depends on the correct input of **Account name**, **Debit/Credit** and **Amount**. Each individual row is evaluated in the same way.



If the account name selected by the Student is incorrect, the entire row is scored 0.

4. Starting position configuration

The **Starting position** is represented by a Balance Sheet (opening position) or by a Balance Sheet and an Income Statement (interim position).

Starting position ! ? Yes

Final grade calculation ? Choose No Yes

The system will also display a tab titled **"Starting position"**, if enabled.

ACCOUNTING

T Test 10/01/2026 with starting position

Accounting Settings **Starting position** Recordings Final situation More ▾

The **Starting position** can be configured in one of the following two ways:

- 1) Bulk import using a **.csv template**;
- 2) **Manual** entry of accounts.

Starting position Summary BS Summary IS

Import account

Starting position

Add 5 rows

Bulk import **Manual entry**

Account name	Amount	D/C	Score	Action
! Choose	! <input type="text"/>	! Choose	! <input type="text"/>	Delete
! Choose	! <input type="text"/>	! Choose	! <input type="text"/>	Delete

Save and continue Cancel

4.1 Uploading the "Starting position" via .csv template

The **"Import account"** button opens the following upload screen.

Load account o

Template

File ! Choose a file... Maximum size for new files: 1 MB

1 To download the template

3 Once completed, upload the template here

You can drag and drop files here to add them.

Continue Cancel

The **template** has the following structure and must be **populated** by adding a **row** for each desired **account**.

2

account	amount	dc	score
Cash	3000	d	1
Common stock	3000	c	1

! **The account name must match one of those already entered in the Account List**

4.2 Manually entering the "Starting position"

Directly from the "Starting position" interface, the Teacher selects the accounts from the Account List and enters the required information (Account name, Amount, D/C, Score).

Starting position Add 5 rows

Account name	Amount	D/C	Score	Action
Cash	5,000	Debit	1,00	Delete
Common stock	10,000	Credit	1,00	Delete
Equipment	35,000	Debit	1,00	Delete
Long-term debt	30,000	Credit	1,00	Delete

Save and continue Cancel

1 Enter the data:

- Account name
- Amount
- D/C
- Score

2 Click to **save** the entered values

5. Uploading accounting entries

In the "Recordings" section, the Teacher enters the accounting records to be assigned to the Student.

ACCOUNTING
T Test 10/01/2026 with starting position

Accounting Settings Recordings Final situation Evaluation More v

The candidate should record the following transactions in the General Journal after reconstructing the Initial Position as of January 1, 2026, on the basis of the following accounts and amounts.

1. Cash \$5,000
2. Common stock \$10,000
3. Equipment \$35,000
4. Long-term debt \$30,000

Recordings New recording

There aren't recordings

Reorder and publish

Click on "New Recording" to display the grid below to be filled in the various fields

1 Enter the recording number

2 Enter the recording score

3 Enter the recording date

Recording N 1 Score 3 1 February 2026

Account name	Amount	D/C	Action
Supplies	370	Debit	Delete
Cash	300	Credit	Delete
Accounts payable	70	Credit	Delete

Save changes Cancel

4 Enter the account name

5 Enter the amount

6 Enter D (Debit) or C (Credit)

7 Click here to **save**

8 Click here to **add a new row** for the entry

Once recorded, the entries appear as follows:

Recordings

#	Date	Account	Debit	Credit	Scheme	Score	Edit
1	1/02/26	Supplies Cash Accounts payable	370 - -	- 300 70	BS BS BS	3	[Edit] [Delete] [Move Down] [Move Up]
2	15/02/26	Cash Accounts receivable Sales revenue	1,000 500 -	- - 1,500	BS BS IS	3	[Edit] [Delete] [Move Down] [Move Up]

Reorder and publish

To edit the entry

To delete the entry

To move the entry down

To move the entry up

Reorder the entries, if necessary, and publish them to make them visible to Students

6. Final situation

By clicking on **Final situation**, the system allows you to **download** an **.xlsx** file containing the account names and amounts of the **BS** and **IS** items, based on the opening balance and the recorded entries.

7. Evaluation and Correction

The Teacher can view all the exercises completed by the Students and can manually adjust the score assigned by the system for the **Starting position** or for the **Recordings**.

Digital Accounting Lab / Financial Accounting Exercises / Test 10/01/2026 with starting position

ACCOUNTING

T Test 10/01/2026 with starting position

Accounting Settings Starting position Recordings Final situation More ▾

The candidate should record the following transactions in the General Journal after reconstructing the Initial Position on 01/02/2026, on the basis of the following accounts and amounts.

- Cash \$5,000
- Common stock \$10,000
- Equipment \$35,000
- Long-term debt \$30,000

Filters
Permissions
Logs
Backup
Restore
Evaluation

For each Student, the number of attempts and the scores obtained will be displayed. By selecting **"Details"**, it is possible to view the solutions submitted by each Student and modify the scores.

Name	Email	Attempts	Score St. posit.	Score Recording	Score Tot (Sum)	Score Max	Details
Silvia Angeloni	sangelonistudente@nomail.invalid	1	4.00	6.00	10	10.00	[Details]

For each Student, the Teacher can review and manually adjust, if necessary, the score for the **Starting position**.

Details of the Student's Solution for the **Starting position**

Starting position
Recordings

Account	Amount	Scheme	D/C	Score	Manual score
Cash	5,000	BS	Debit	1.00	<input type="text"/>
Common stock	10,000	BS	Credit	1.00	<input type="text"/>
Equipment	35,000	BS	Debit	1.00	<input type="text"/>
Long-term investments	30,000	BS	Credit	1.00	<input type="text"/>

Tot: 4.00 / 4.00

Save changes
Back to list

Click here to **save changes**

Use these fields if you wish to assign a **different score** than the one **automatically** generated by the **plugin**

For each Student, the Teacher can review and manually adjust, if necessary, the scores for the **Recording** (accounting entries).

Details of the Student's Solution for the **Recordings**

Starting position
Recordings

#	Date	Account	Debit	Credit	Score	Manual score	Solution
1	1 February 2026	Supplies Cash Accounts payable	370	300 70	3.00	<input type="text"/>	<input type="button" value="🔍"/>
2	15 February 2026	Cash Accounts receivable Sales revenue	1,000 500		3.00	<input type="text"/>	<input type="button" value="🔍"/>

Tot: 6.00 / 6.00

Save changes
Back to list

Click here to **save changes**

Use these fields if you wish to assign a **different score** than the one **automatically** generated by the **plugin**

To view the exercise **solution**

If the Student submits the test, the Teacher can view the Student's score even in **Assignment** mode (not only in **Exam** mode).