ProgExam - Instructor Guide (v1.0):

Student Management & Financial Dashboard

1. Student Enrollment Methods

There are three primary ways to bring students into your ProgExam courses.

1.1 Self-Enrollment

Students join the course manually using an enrollment key or direct access.

- **Use Case:** Best for public or large-scale courses where you don't have a student list.
- **How it works:** Instructors provide a link and a "Key" to students, who then register themselves on the platform.

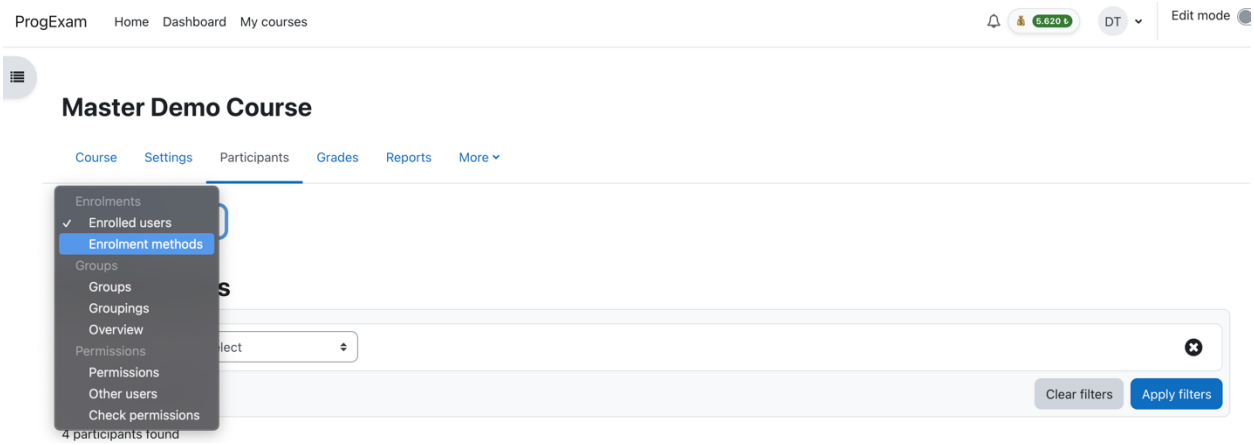

Figure 1: Select Enrolment Methods

From Figure 1, you can select enrolment methods and navigate to the Enrolment Methods page as follows:

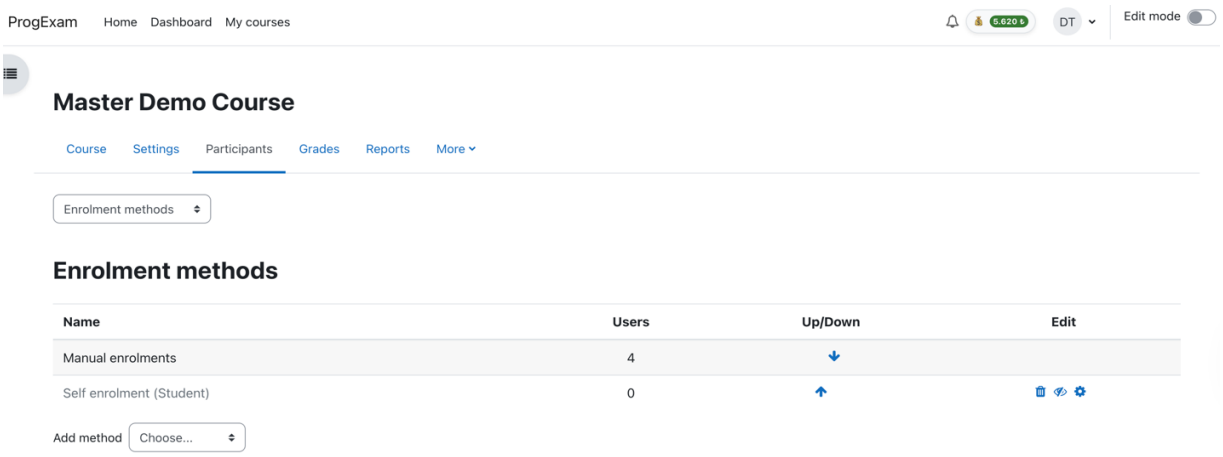

Figure 2: Enrollment methods page

As shown in Figure 2, you can enable self-enrolment by clicking on the eye icon under edit. After enabling the self-enrolment, by clicking on the settings icon under the Edit column again, you are navigated to the self-enrolment settings page as follows:

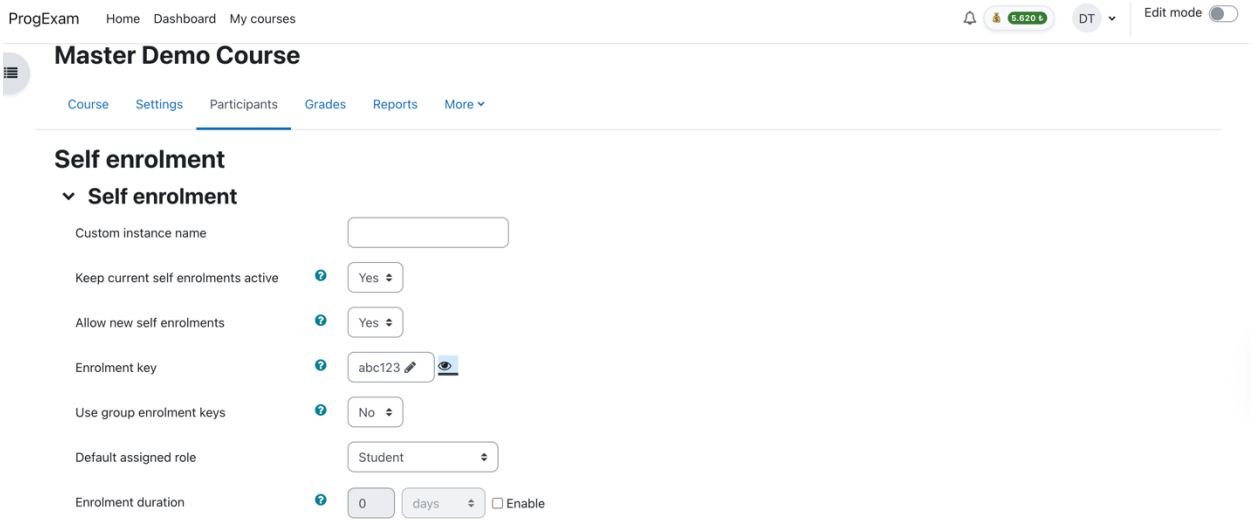

Figure 3: Self-enrolment page

As shown in Figure 3, you can set the enrollment key. You can also set the enrollment duration or make it valid only between specific dates. After setting your self-enrolment settings, do not forget to press the Save Changes button below.

The link to be shared shall be something like the following:

https://progexam.com/moodle/course/view.php?id=144

Here, instead of 144, set your course ID. You can see your course ID in the browser URL bar when you select the current course under My Courses. Then you should share the link and key with the students so that they can enroll themselves.

1.2 Manual Individual Enrollment

Located under the **Student Enrollment** tab. You can access all tabs by clicking on the green badge, where you see your balance right top close to your profile name.

- **How to use:** Enter the Student ID, Name, and Email in the "Individual Registration" table.
- **Validation:** The system checks if the user exists. If not, it automatically creates a new Moodle account.

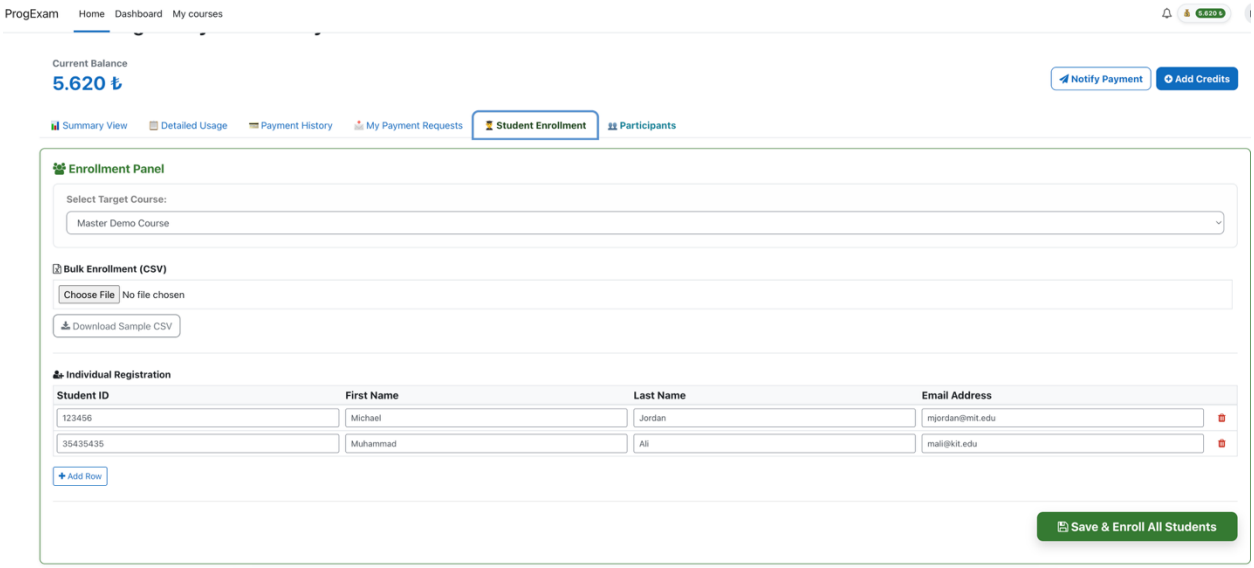

Figure 4: Manual Individual Student Enrollment

1.3 Bulk CSV Enrollment (Advanced)

A high-speed method to enroll hundreds of students at once.

- **Preview Feature:** Before uploading, the system generates a **live preview**.
- **Status Indicators:**
  - **Green Ticks:** Row is valid and ready for processing.
  - **Red Crosses:** Row has column errors (missing data or extra commas).
- **Safety:** The "Confirm & Upload" button only appears when the CSV structure is 100% correct.

In Figure 5, Bulk CSV enrollment with some errors in CSV is given. To have a corect CSV file, you can use the sample CSV file as a reference. Unless you provide a correct CSV file, the confirm & upload button will be invisible.

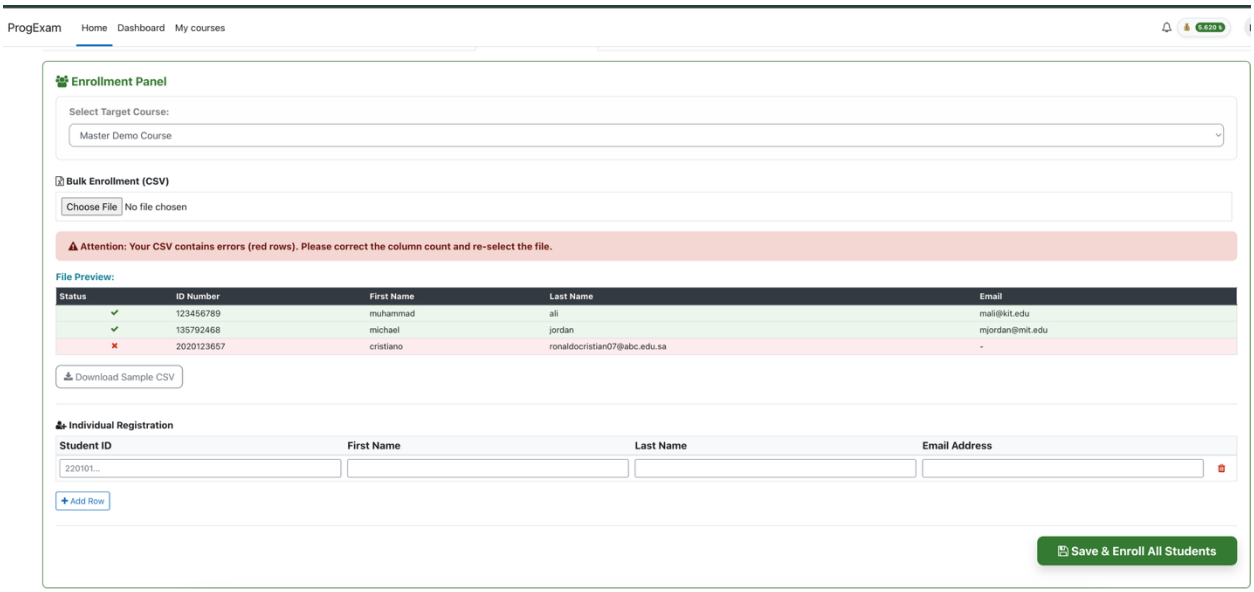

Figure 5: Bulk Student Enrollment with incorrect CSV file

A successful bulk student enrollment is provided in Figure 6. After previewing and checking the students to be added, the students can be registered and enrolled to the ProgExam system by clicking on green Confirm & Upload button. Here, if the student is not registered to the ProgExam, he/she will be registered to the ProgExam and enrolled to the course at the same time. You can also enroll existing users, who are already registered to the ProgExam system, to your selected course.

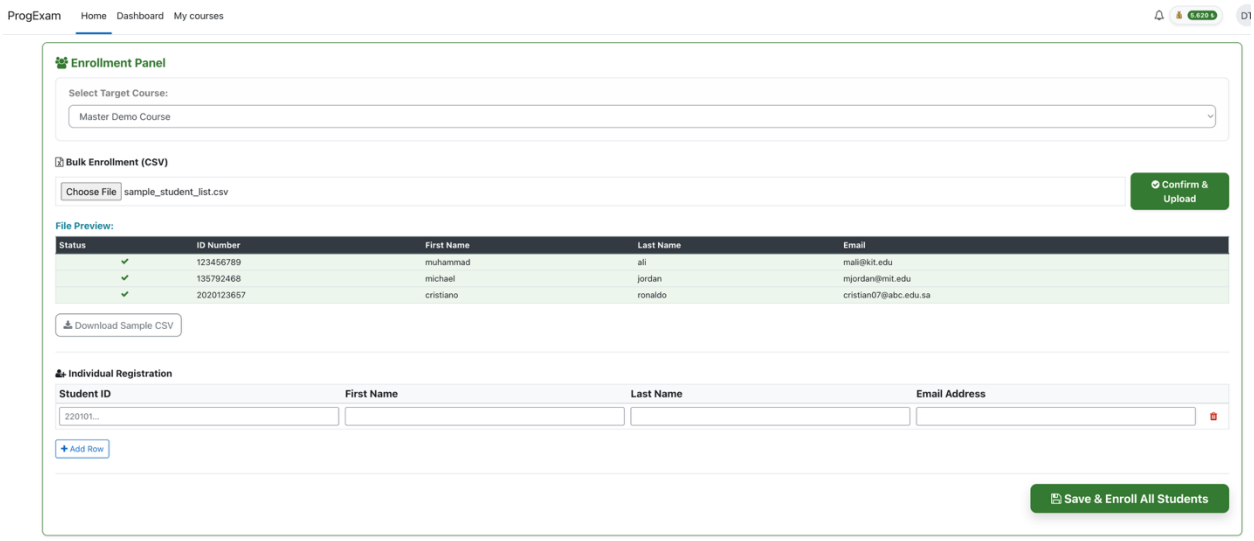

Figure 6: A successful Bulk Student Enrollment

After a successful bulk student enrollment, you will be given an enrollment report as shown in Figure 7.

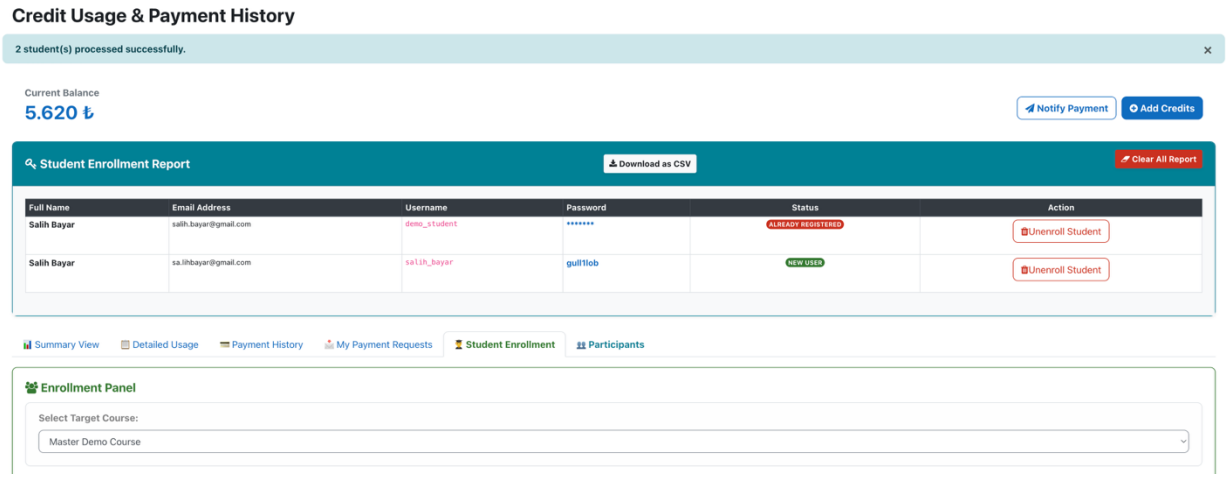

Figure 7: Student Enrollment Report

2. Examination Types & Credit Logic

ProgExam distinguishes between standard questions and high-performance coding tasks.

- **Standard Questions:** Multiple-choice, true/false, or matching. These have a lower credit cost.
- **CodeRunner Questions:** Advanced programming questions where students write code (C, Java, Python, etc.) that is executed and graded on the server. These require more server resources and have a higher credit cost.

Figure 8: A Synchronous Coding Exam for Python Programming Language

There is a sample synchronous coding exam for Python programming language given in Figure 8. The exam is a coding exam, because it contains at least one CodeRunner exercise (Red Icon with Cr). In this exam there are 6 exercises and all are CodeRunner exercises. The exam is a

synchronous exam, because the duration of this exam is less than three hours. This can be seen under **Settings Tab** of the exam. As it is obvious from Figure 8, you can set the grade of each exercise, you can edit each exercise. If there is no any attempt yet, then you can add some new exercises and delete some of existing exercises from the exam. By clicking on the gear icon on any of the exercises you will be navigated to the edit exercise screen as shown in Figure 9.

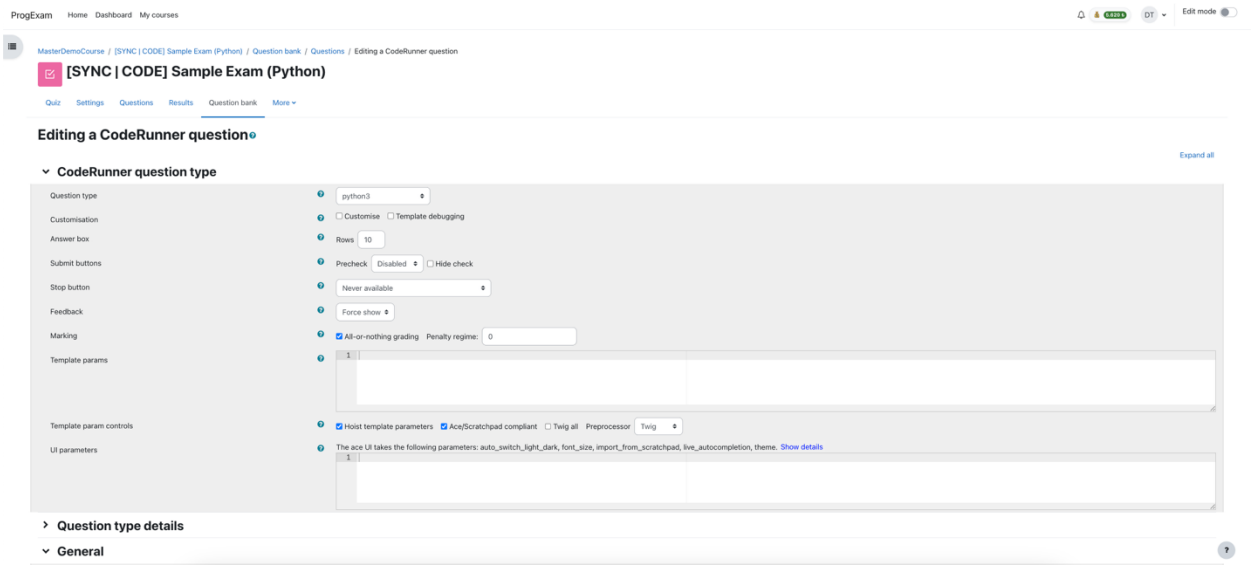

Figure 9: Editing a CodeRunner (Coding) Exercise

As shown in Figure 9, you can select the **Question Type.** In this example the language python as python3 is selected, you can change it whenever you need. The rest of this editing page is shown in Figure 10. Here, you can provide question text, answer, answer box preload and test cases.

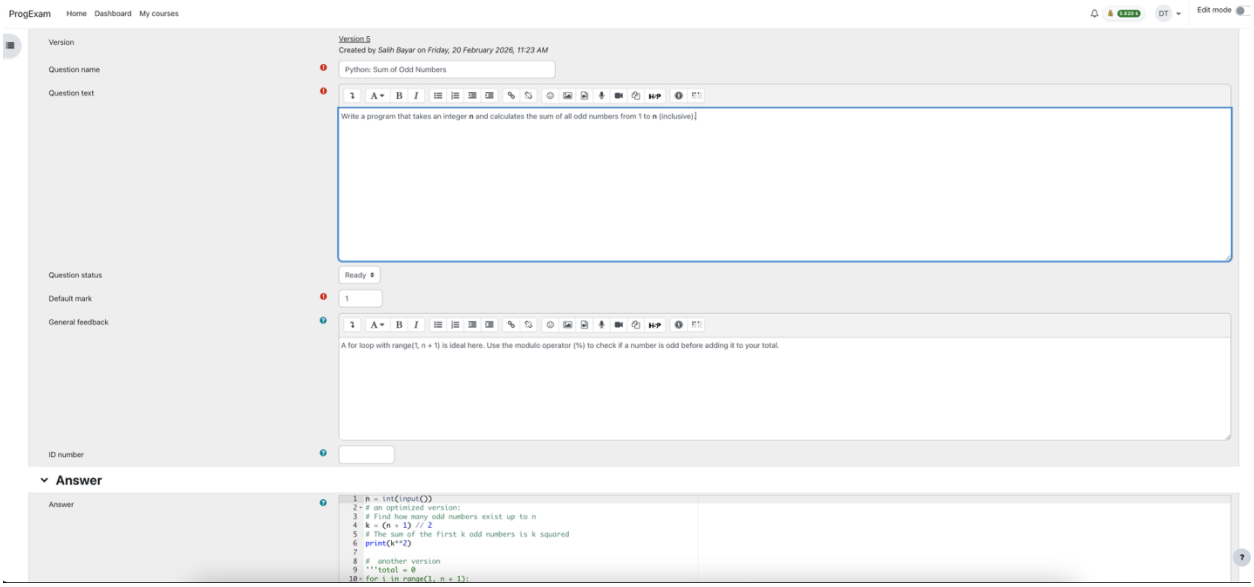

Figure 10: Editing a CodeRunner (Coding) Exercise with Question Text, Answer, etc.

3. Server Load Optimization: Staggered Starts

To ensure system stability during high-concurrency exams (e.g., 100+ students), we implement **Staggered Group Starts**.

- **The Logic:** Instead of 100 students clicking "Start" at exactly 10:00 AM, divide students into groups (e.g., 20 students per group).
- **Intervals:** Start Group A at 10:00, Group B at 10:02, and Group C at 10:04.
- **Benefit:** This prevents "Login Spikes" and ensures the CodeRunner execution engine remains responsive for everyone.

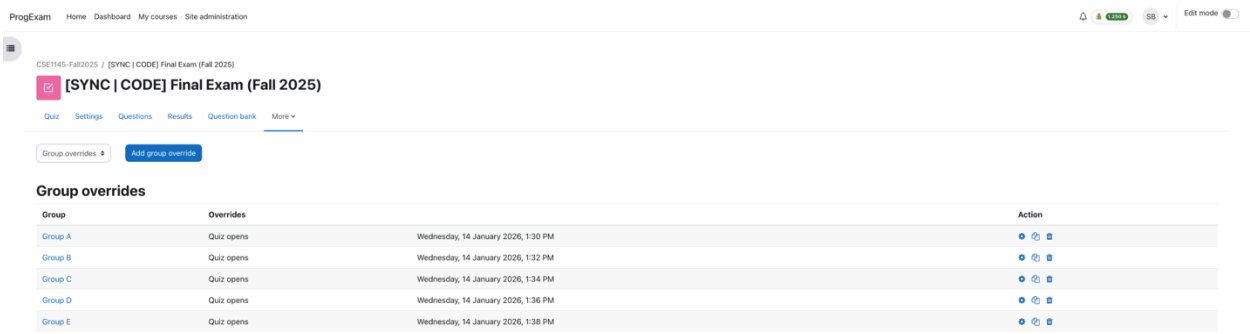

Figure 11: Staggered Group Starts

4. Navigating the Financial Dashboard (Tab by Tab)

4.1 Summary View

A birds-eye view of your exam history.

- **Badges:** Look for **SYNC/ASYNC** and **CODE/STANDARD** labels to identify the nature and cost of past exams.

4.2 Detailed Usage

A granular log showing every single student attempt. Every 1৳ deduction is tracked here by timestamp and student name.

4.3 Payment History

The **Master Ledger**. It shows all credits loaded and spent, maintaining a running balance.

4.4 My Payment Requests

Where you track the status of top-up requests sent to the Admin.

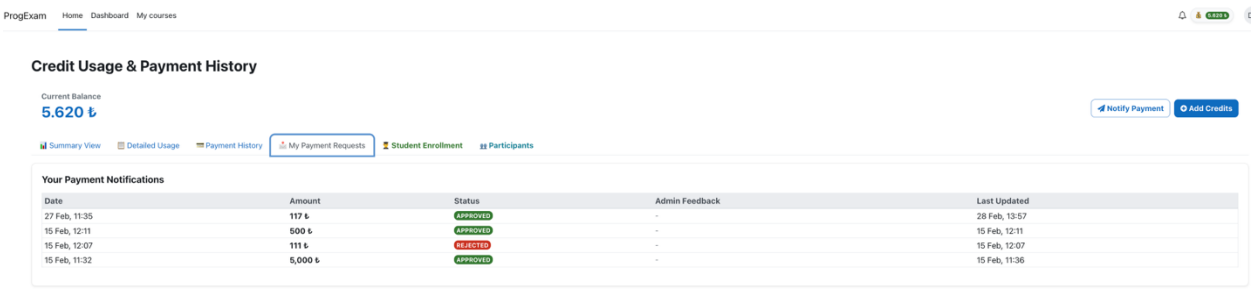

Figure 12: Payment Request Notifications & Status

4.5 Student Enrollment (New)

The control center for adding students. This tab generates the **Enrollment Report**, which lists the temporary passwords for new users.

4.6 Participants (New)

A live view of the course database.

- **Unenroll:** Remove students directly from the course.
- **Last Access:** See exactly when a student last logged into your specific course.
- **Safety:** Instructors are protected and cannot unenroll themselves.

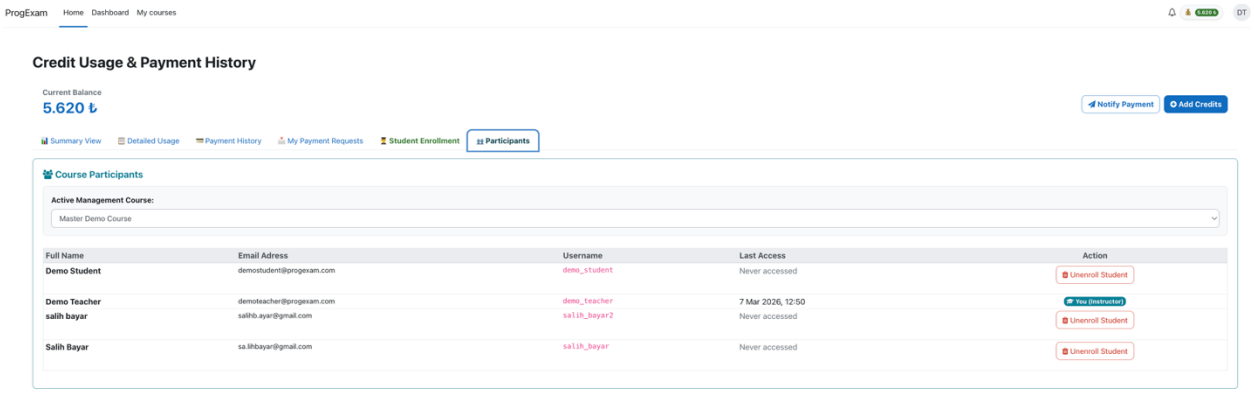

Figure 13: Participants

5. Understanding & Using the Enrollment Report

After you complete an enrollment action (CSV upload or individual entry), the system generates a temporary **Enrollment Report**. This is a critical administrative tool for onboarding your students.

5.1 How to Read the Report

The report displays five key columns:

- **Full Name**: The student's legal name.
- **Email Address**: The contact email provided during registration.
- **Username**: The unique login ID generated by the system (often the Student ID).
- **Password**: A temporary password generated for **New Users**.
    - *Note: If the student was already registered in the system, this field will show their existing status instead of a new password.*
- **Registration Status**:
    - **NEW USER**: A new account was created and enrolled.
    - **ALREADY REGISTERED**: The account existed; the student was simply added to your course.

5.2 Distributing Credentials

To distribute these details to your students, follow these steps:

1. **Download as CSV**: Click the **"Download as CSV"** button at the top of the report table.
2. **Excel Compatibility**: The file is optimized with a UTF-8 BOM, meaning it will open correctly in Microsoft Excel without breaking Turkish characters (like ç, ş, ğ).
3. **Communication**: Use your preferred communication method (e.g., email merge or a secure document) to send the **Username** and **Password** to each "New User".
4. **Security Note**: Once you are finished, you should click **"Clear All Report"** to remove the temporary credentials from your session for security.

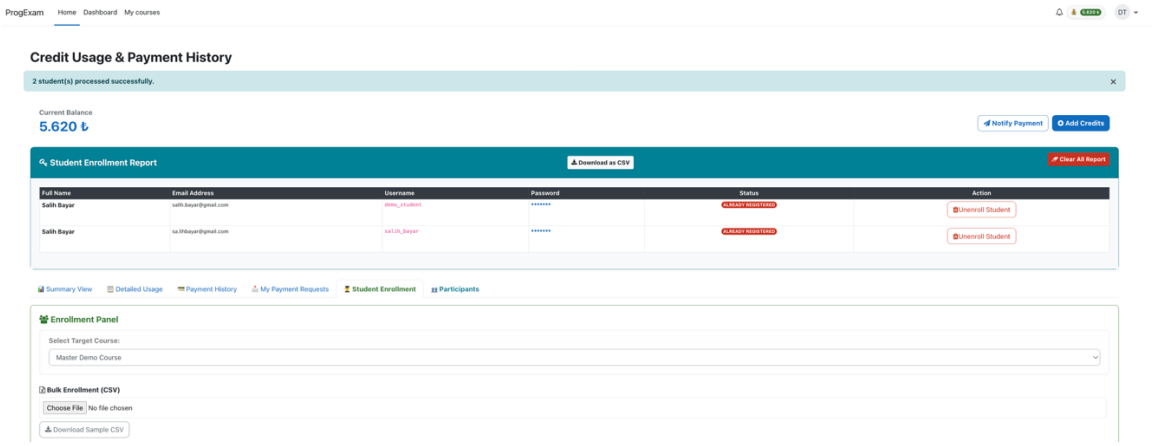

Figure 14: A Sample Student Enrollment Page

Final Checklist for Success

- **Verify CSV Headers**: Always ensure your CSV file has the headers: idnumber, firstname, lastname, and email.
- **Check the Preview**: Never click "Confirm" if you see red rows in the preview area.
- **Monitor Last Access**: Use the **Participants** tab after 24 hours to see which students have successfully logged in.

6. Troubleshooting & Frequently Asked Questions

Even with a smooth system, students may occasionally encounter issues. Here is how to handle common scenarios.

6.1 "I forgot my password / I can't log in"

- **For New Students:** Check your downloaded **Enrollment Report CSV**. If the status was "NEW USER," provide them with the temporary password listed there.
- **For Existing Students:** If their status was "ALREADY REGISTERED," the system did not change their password. They must use their previous ProgExam password or use the "Forgotten Password" link on the login page.
- **Instructor Action:** You can verify their username in the **Participants** tab to ensure they are trying to log in with the correct ID.

6.2 "I logged in, but I don't see the course"

- **Check Enrollment:** Go to the **Participants** tab and search for the student's name or username.
- **Hidden Status:** If they are in the list, ensure the course itself is not "Hidden" in the Moodle course settings.
- **Delayed Sync:** Ensure you clicked **"Confirm & Upload"** or **"Save & Enroll"** and received the green success message. Simply seeing them in the CSV preview does not mean they are enrolled yet.

6.3 "The CSV upload is failing"

- **Header Errors:** Ensure your CSV headers match the required format: idnumber, email, firstname, lastname.
- **Empty Rows:** Check for empty rows at the bottom of your Excel file, as these can sometimes cause column mismatch errors.
- **File Format:** Ensure the file is saved as **CSV (Comma Delimited)** and not an Excel Workbook (.xlsx).

6.4 "My credits didn't update after payment"

- **Pending Status:** Check the **My Payment Requests** tab. If the status is "PENDING," the admin has not yet verified the transaction.
- **Rejection:** If the status is "REJECTED," check the **Admin Feedback** column to see the reason (e.g., "Incorrect transaction ID").

7. Best Practices: Exam Security & Monitoring

Maintaining the integrity of high-stakes examinations is crucial, especially when using advanced tools like **CodeRunner**. Following these best practices will help ensure a fair and secure testing environment.

7.1 Real-Time Monitoring

The **Participants** tab is your best friend during a live exam.

- **Track Access**: Use the **Last Access** column to verify that all students have successfully entered the exam environment.
- **Identify "Ghost" Students**: If a student is present in the physical room but their **Last Access** shows "Never accessed," they may be having technical or account issues.

7.2 CodeRunner Integrity

Since students are writing and running code live, monitor for unusual patterns.

- **Result Plagiarism**: Moodle's built-in plagiarism plugins can often be configured to check CodeRunner submissions for identical code structures between students.
- **Execution Limits**: Ensure your questions have appropriate time and memory limits to prevent a single student's inefficient code from consuming excessive server resources.

7.3 Managing Concurrency & Server Health

As discussed in Section 3, large groups require careful handling to prevent server lag.

- **The "Silent" Start**: If you have 500 students, tell them the exam starts at 10:00 AM, but use Moodle's "Group Overrides" to actually open the quiz for different groups in 2-minute increments. This smooths out the initial credit deduction and login spike.
- **Monitor Your Balance**: Always ensure you have enough credits in your **Financial Dashboard** *before* the exam starts. If your balance hits zero mid-exam, students may be blocked from submitting their attempts.

7.4 Post-Exam Security

Once the exam is completed, take these final steps to protect the data:

- **Clear the Report**: Click **"Clear All Report"** in the Student Management tab to ensure temporary passwords are no longer visible in your session.
- **Verify Completions**: Compare the number of attempts in the **Summary View** with the total number of students in the **Participants** tab to ensure no one was missed.