# ExamIO

# 1.6

# Basic use Tutorial

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**ExamIO**

ExamIO is a software based on the OMR technology (Optical Mark Recognition). Use ExamIO to design, correct and analyse automatically the test exams carried out by means of sheets of paper.

This tutorial has been created to speed up the landing to ExamIO. It has been written to explain step by step the basic use of ExamIO that one user will do when starting with ExamIO. Please, follow this guide step by step in order to use ExamIO in an easy way without stopping in advanced use options.

# ExamIO basic use instructions

The steps to follow to create a test and its correction are as follows:

**1.- Create the new test**

**2.- Export test to pdf for printing**

3.- Print test

4.- Fill in printed tests by students        **External Steps to ExamIO**

5.- Scan filled in tests

**6.- Add the tests solutions**

**7.- Add names of students to the test →** if you want the result to display the names of the students along with ID number
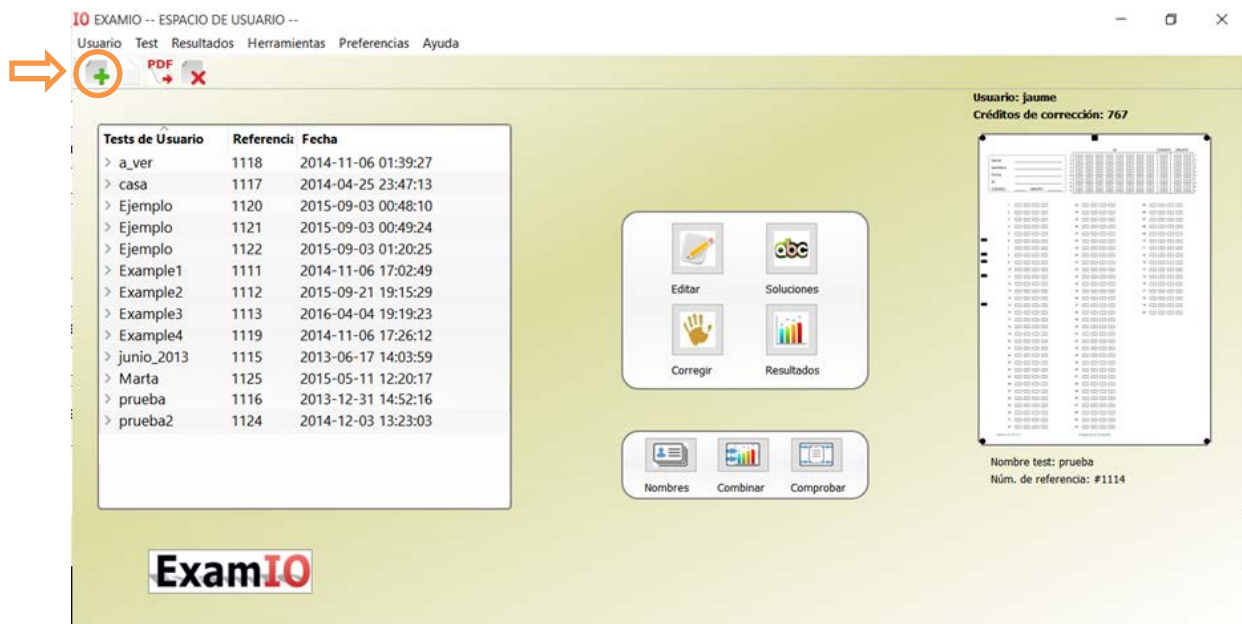
**8.- Correct filled in tests**

**9.- View results**



Each of these steps is detailed below in successive sections.

# 1. How to create a new test:
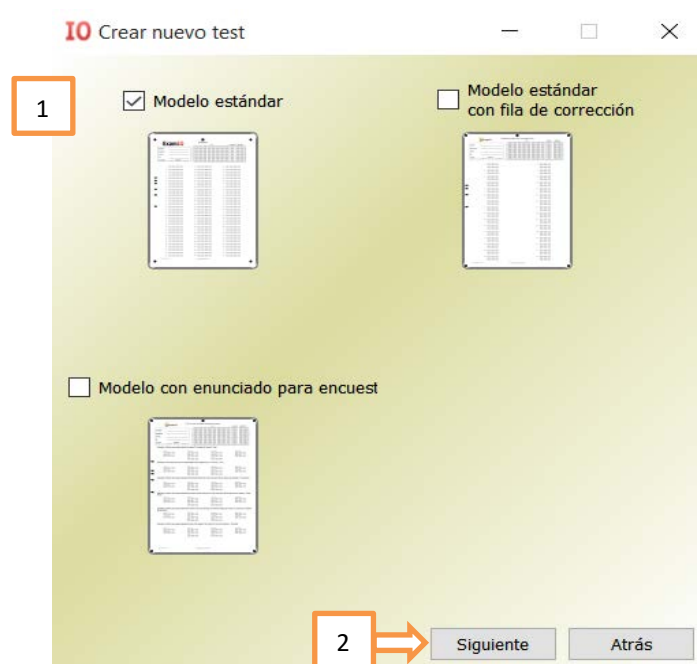
## 1.1.- Click New button:



## 1.2.- 1.2 Select test type:

1.- Select test model by checking the box of the test

-**Standard model** →   1 row of boxes by question

-**Model with correction now**→ 2 rows of check box on the question (mark in the 2nd row cancels the mark of the 1st row)

2.- Click on "Next"

ExamIO

## 1.3.- Configure test

1- Insert name for the test (up to the user)

2- Select number of questions

3- Select number of possible answers (boxes per question)

4- Check "Personal ID" checkbox➔Use call sign of student ➔ Mandatory use person identification number.

5- Check "Permutation ID" checkbox➔ Use Code and Group ➔ Encode permutation ➔ Imperative to correct tests with mark.

6- Customize titles (optional)

7- Customize Logo ➔ Checking box "Insert Logo" ➔ Right button mouse over listing ➔ displayed menu to Add/Remove logos



*Reference number is written in the bottom left of the test for visual verification if necessary:

Reference: #1114

In turn, reference number appears in the list of the main screen of ExamIO tests:

## 2.- Export printable test

1.- In the home screen, click Export to PDF

**ExamIO**

# 3.- Instructions to print tests:

1.  **Use blank sheets (without colouring or recycled).**

2.  **Print the test only on one side →  <span style="color:red">Not to print or write anything behind</span>**

3.  **Be sure that all the reference marks appear correctly within the sheet margins:**
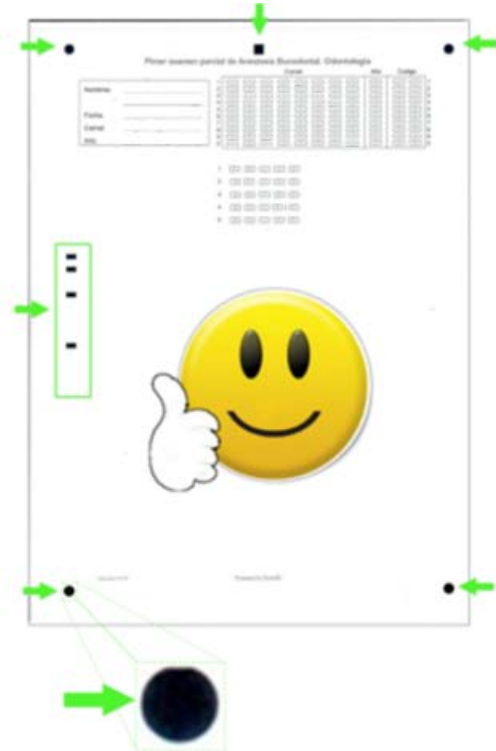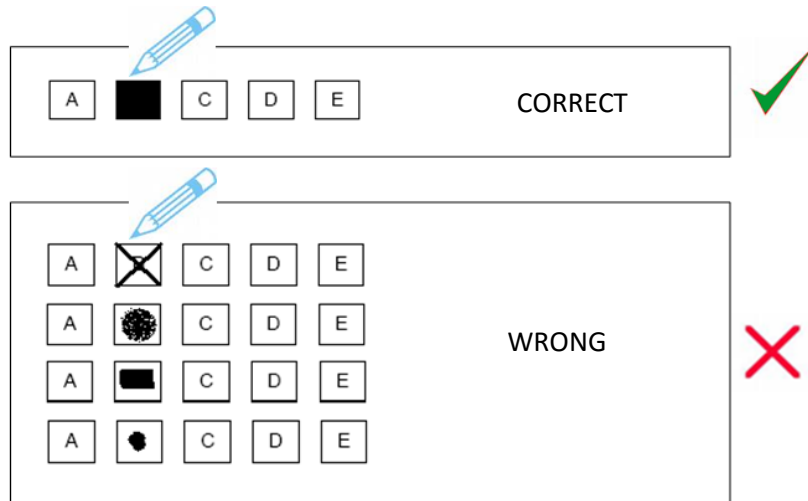
**TEST WRONGLY PRINTED**            **TEST CORRECTLY PRINTED**
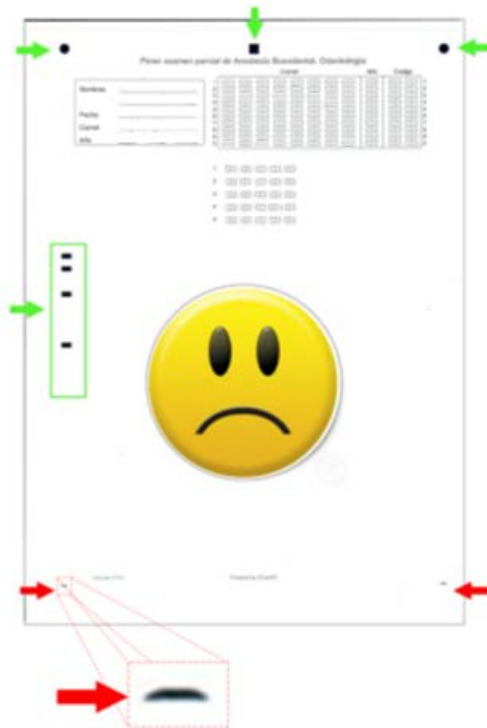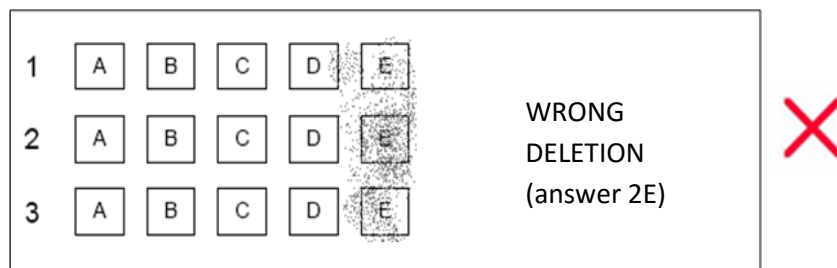
## 4.- Instructions to correctly fill in the tests:

- Use pen: **Blue**, **Red**, **Green**, **black or dark pencil** HB2 or superior(3B, 4B,...,9B)

| 2B | 3B | 4B | 5B | 6B | 7B | 8B | 9B |

- **Fill in identification and answer boxes completely**

| A | ■ | C | D | E | | CORRECT | ✓ |

| A | ⊠ | C | D | E | | | |
| A | ● | C | D | E | | WRONG | ✗ |
| A | ▬ | C | D | E | | | |
| A | ◆ | C | D | E | | | |

- **With pencil → Avoid incorrect boxes deletion**

| 1 | A | B | C | D | E | | | |
| 2 | A | B | C | D | E | | WRONG DELETION (answer 2E) | ✗ |
| 3 | A | B | C | D | E | | | |

- **With pen → Delete with typex**

- **Do not write or paint out of the boxes.**

- **Report these instructions before the test!!!**

## 5.- Instructions to scan correctly the tests:

- **Scan on colour ALWAYS → DO NOT scan in grayscale or in black and white**
  - **Scan at 300 dpi (dots per inch) or higher.**
  - **Create 1 image file for each sheet of test.**
  - **Output format: jpg, png o bmp**
  - **Make sure all reference marks correctly appear in within the leaf margins:**



**TEST WRONGLY SCANNED**          **TEST CORRECTLY SCANNED**
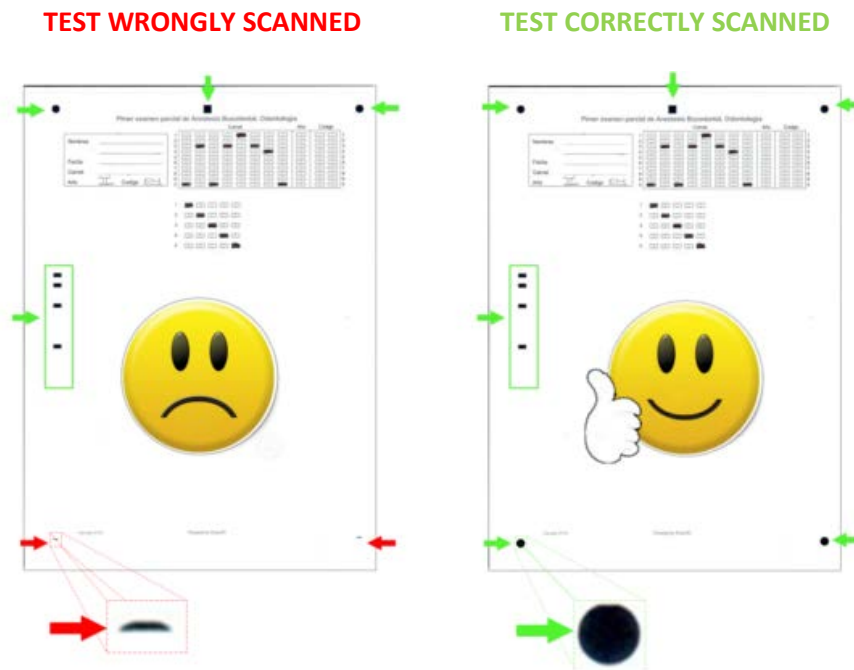
- **The scanned test must be equal to the test on paper.** If colours or tonalities do not match the real test paper, or spots or dirt appear, the scanned tests won't be valid. → You will have to repeat the scan until the test scan is a correct representation of the paper tests.

- **Save all scanned images in a single folder.**

- *Test the scanning process before the real exams!!!!!*

# 6.- Add the test solutions:

Each version of the test that is done by exchanging the order of questions is coded with a combination of code and group boxes. Each one of these combinations is called a permutation. The objective of carrying out different permutations lies primarily in adding an extra difficulty to the students that want to copy from neighbour students. For each one of the permutations of the test (test variants defined by code and group), we will add the solution indicating for each question, what is the correct box. This will enable the identification of the correct and incorrect questions to obtain the final mark. To do this:

1.- Select test to correct in the list of tests by clicking with the mouse
2.- Click on "Solutions" button
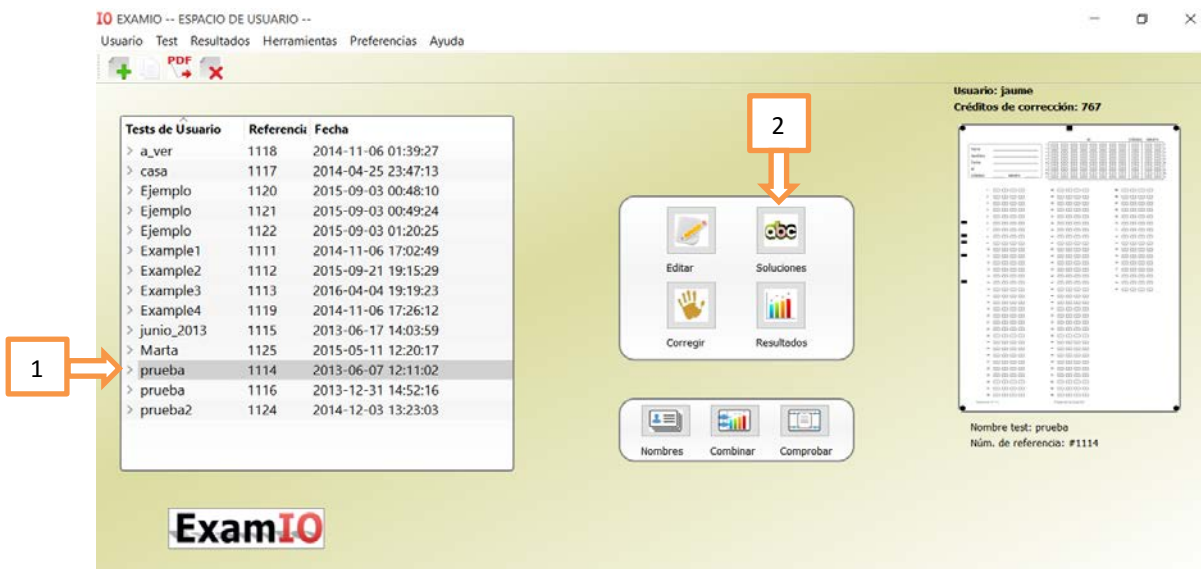


Repeat for each permutation needed

3.- Click on "New Permutation" → A new row will be added into the permutations table.
4.- Select added row by clicking with the mouse → Permutation selected will be displayed.
(Boxes in light blue can be clicked in order to check them)
5.- Click on the desired code and group boxes to identify the permutation
6.- Click on the answers boxes to check the correct box for each question.

7.- Click on "Save" to save the changes and close.
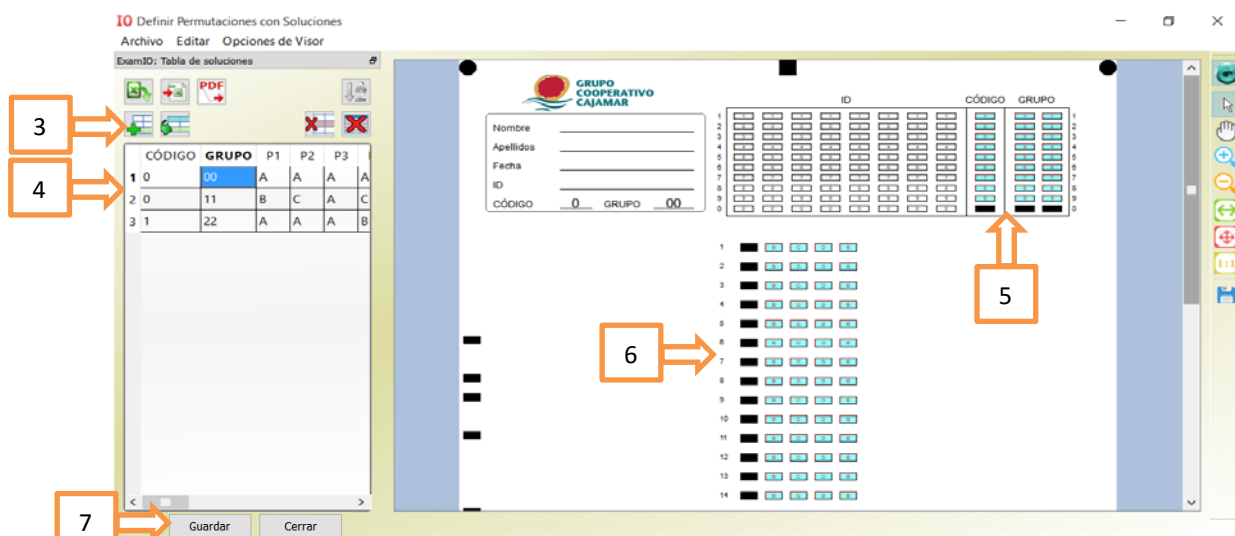
# 7.- Add names of students:

This section explains how to add the names of the students to the database to associate them with the identification number (ID) detected in the tests. It is useful if you want the names of the students appearing in the results. If you don't want this feature, you can go to the next section.

If you want to perform the association between names and identification numbers:
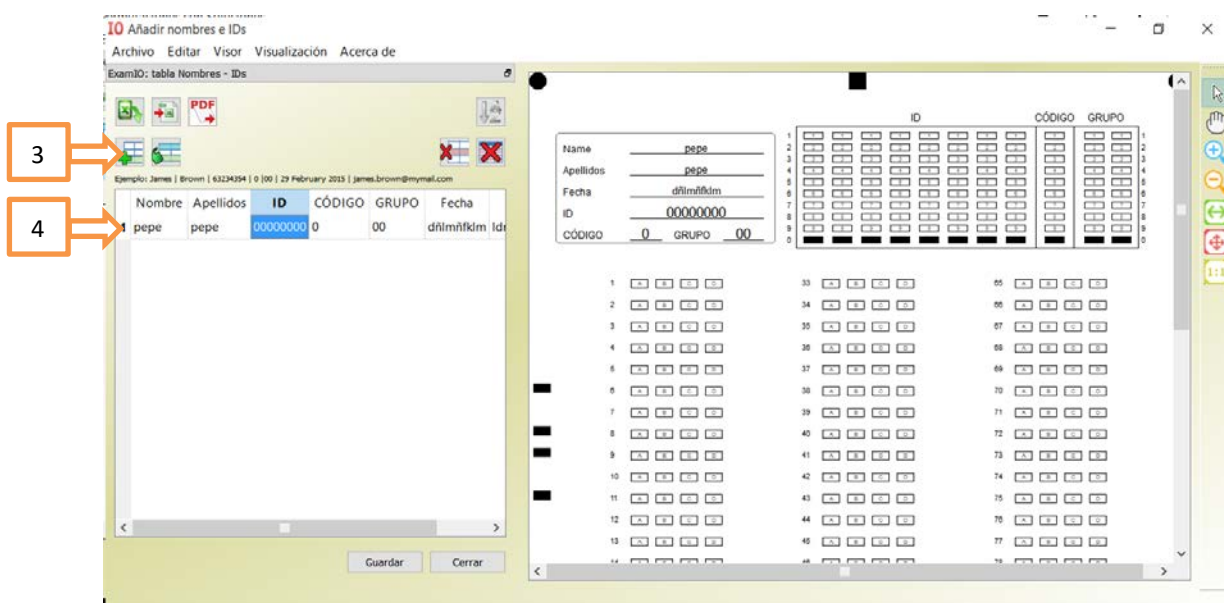
1.- Select test to correct in the list of tests by clicking with the mouse.
2.- Click on "Names" button
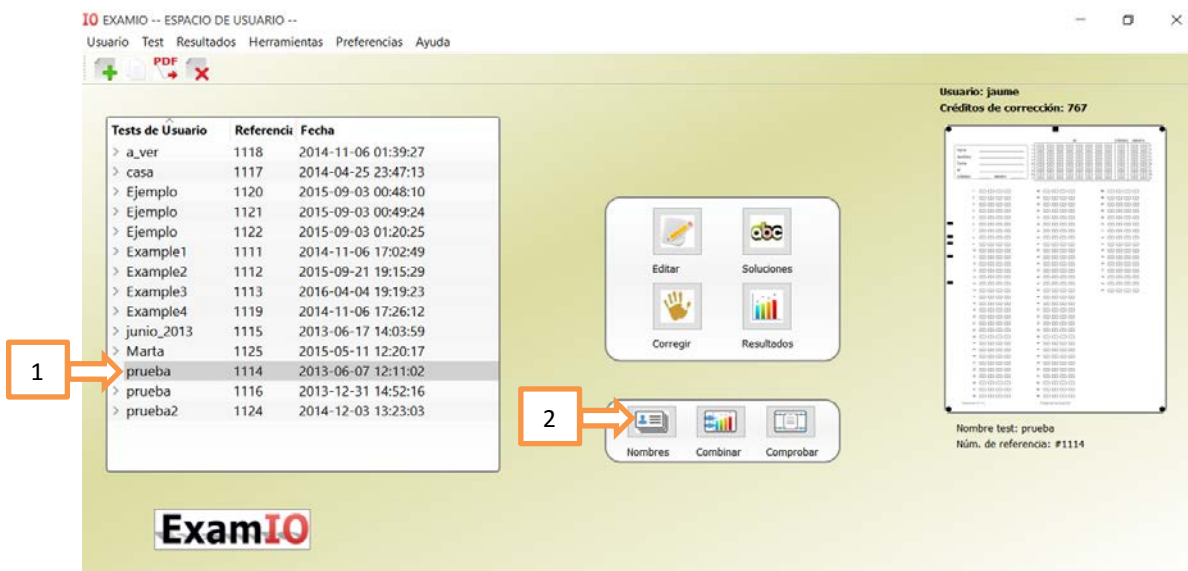


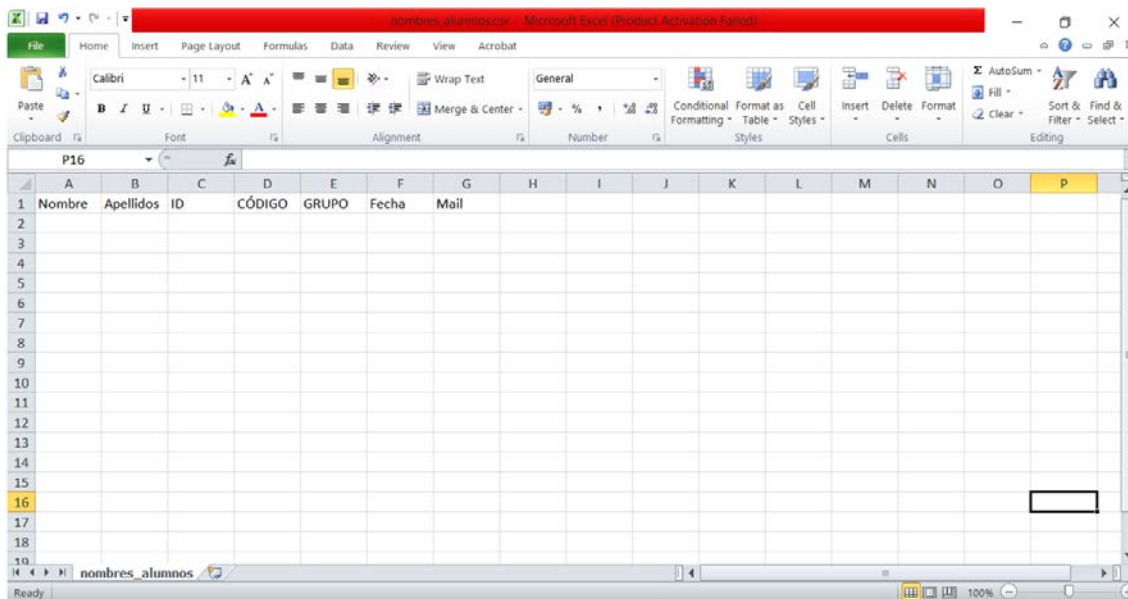**If we want to manually add the names and IDs of the students:**

Repeat for each student that we want to add

3.- Click on "Add row"
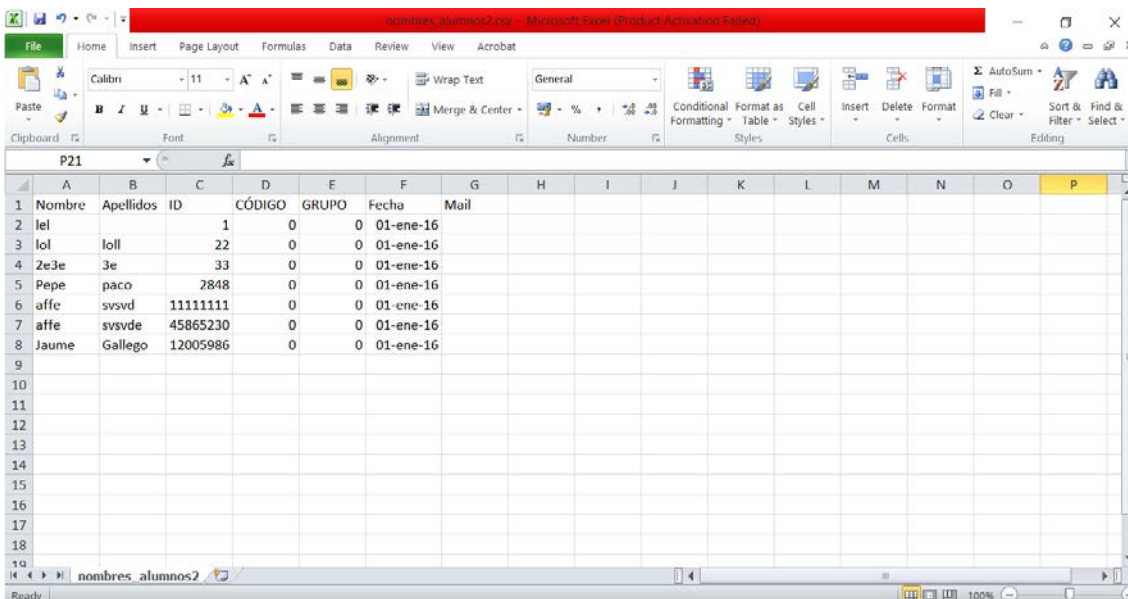4.- Fill in the new row with the data of the student we want to add

**If we want to import a student list from Excel:**

3.- Externally to ExamIO, you can create an Excel file with the following fields: name, surname, ID, code, group, date, Mail:



4.- Fill in the Excel with data from students: the first 3 columns (name, surname, ID) must always be filled. The last 4 (code, group, date, Mail) are optional:



5.- Export Excel .csv format, where each field is separated by ";" and each row appears as a new line in the document. Excel gives us this option, saving the file as a .csv format (MS- DOS):
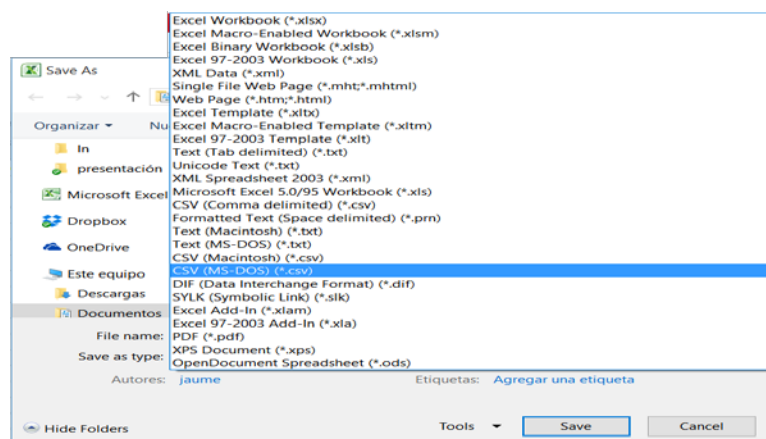
If we look at the Notepad-generated .csv file, it has the following structure:

```
nombres_alumnos2.csv: Bloc de notas                    —    □    ✕

Archivo  Edición  Formato  Ver  Ayuda

Nombre;Apellidos;DNI;CLASE;MODELO;clase;Mail
lel; ;00000001;0;00; ;
lol;loll;00000022;0;00; ;
2e3e;3e;00000033;0;00;wefwef;
Pepe;paco;00002848;0;00; ;
affe;svsvd;11111111;0;00;wefwef;
affe;svsvde; ; ; ;wefwef;
Jaume;Gallego;12005986;0;00; ;
```

After this, go back to the section "Names" of ExamIO and import the created .csv file:

6.- Click on the "Import from Excel" button

7.- Select the .csv file created in step 5.

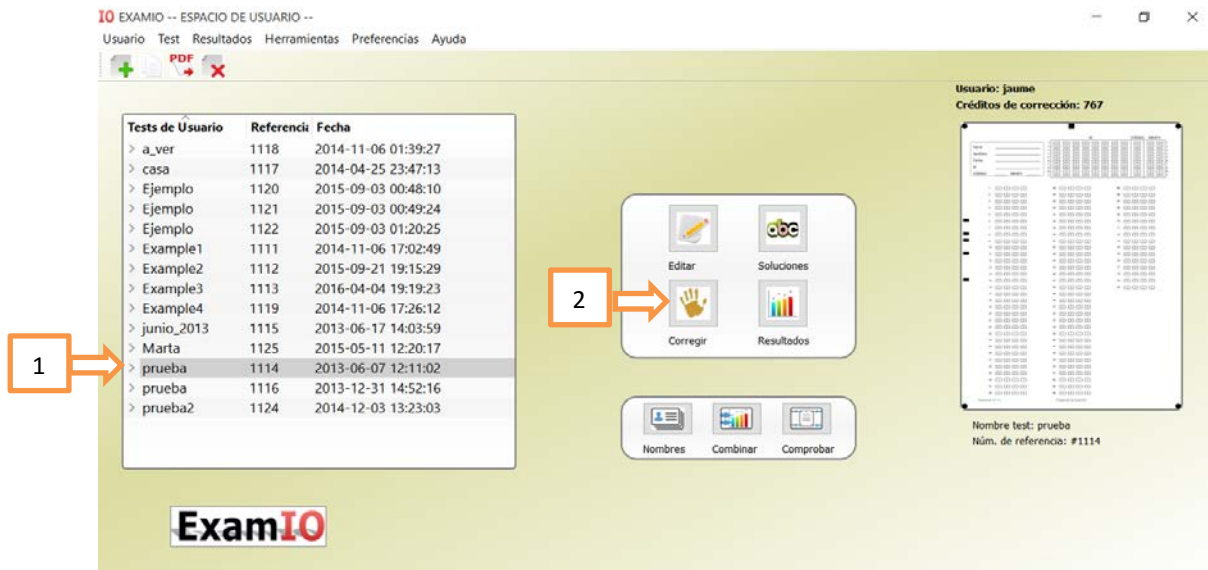8.- The window "Open csv" will be opened. Click on "OK to finally import the data".
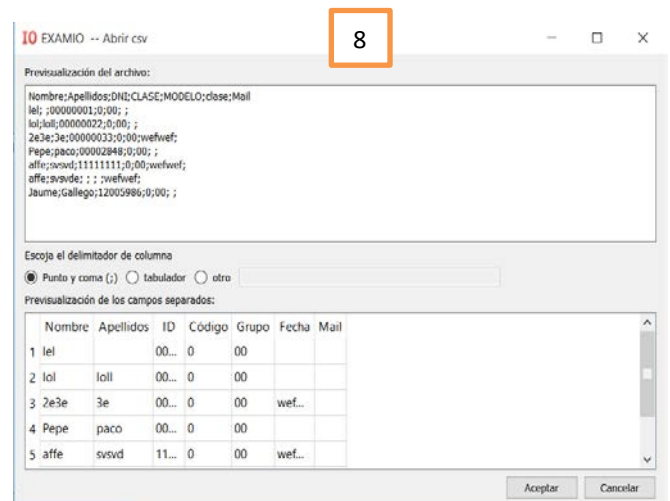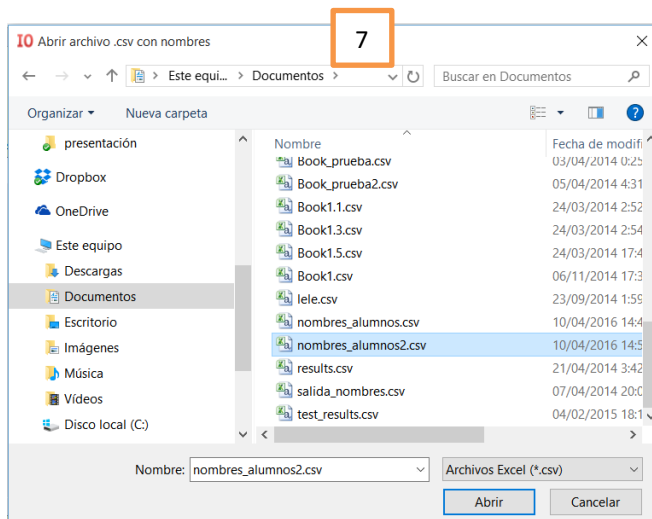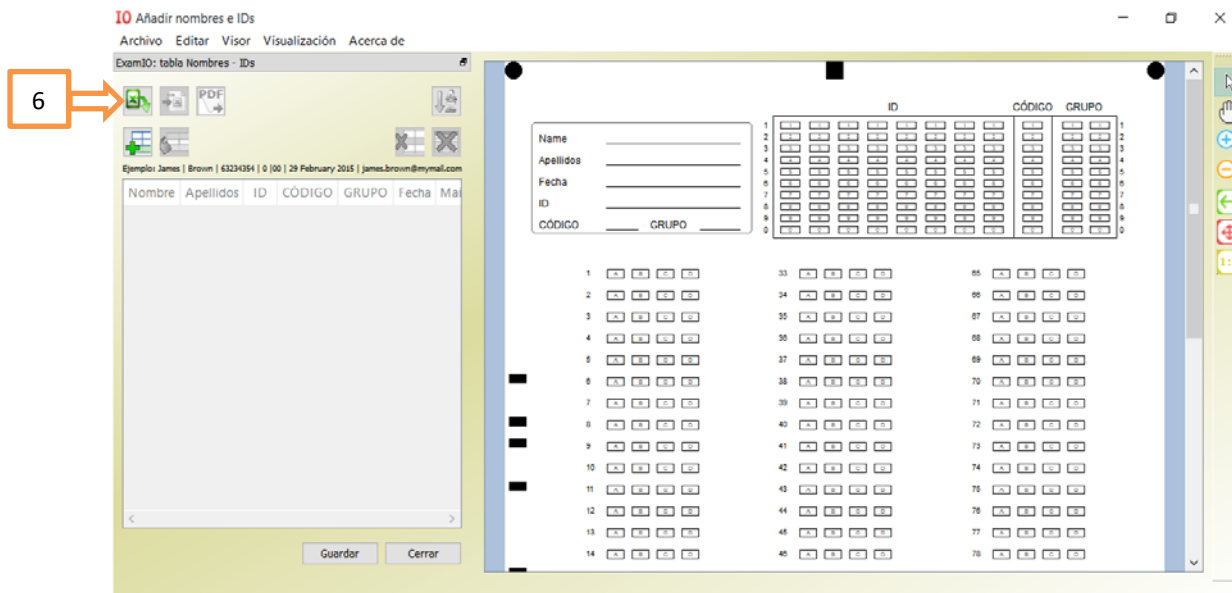
9.- After that, the list of names is charged in table names and IDs.

10.- Click on "Save". The names are already associated to the selected test.
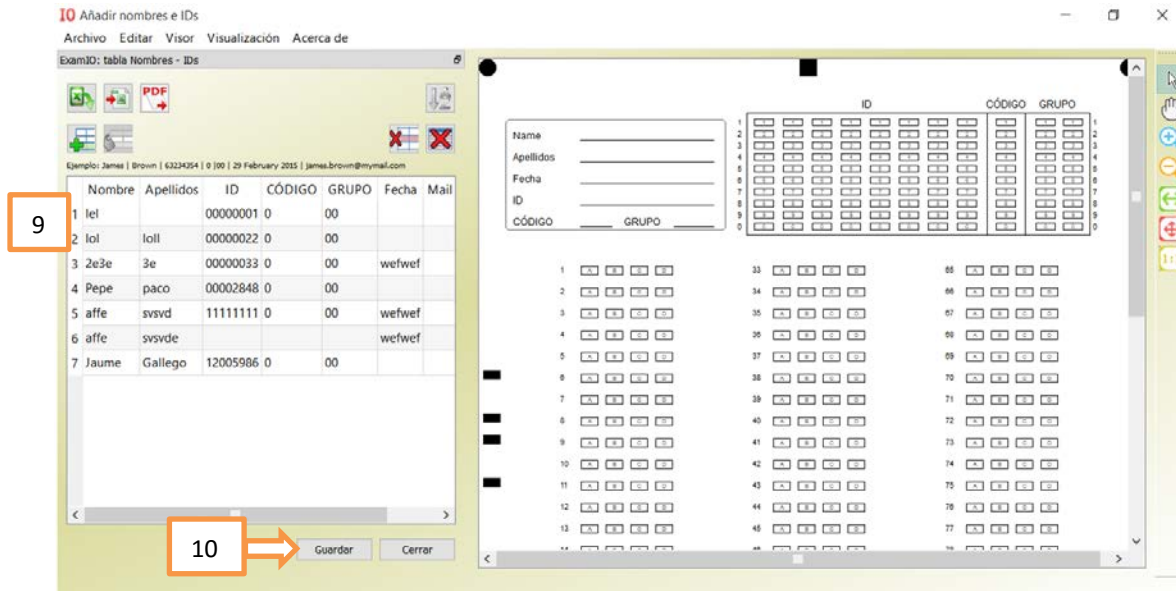
## 8.- Instructions to correct the tests::

1.- Select test to correct in the list of tests by clicking with the mouse.

2.- Click on "Correct" button



3.- Select input folder where all scanned tests are placed → to do this, select one of the scanned tests within the directory.

4.- Select folder to save the results → It can be the one proposed by default by ExamIO, or another one selected by the user
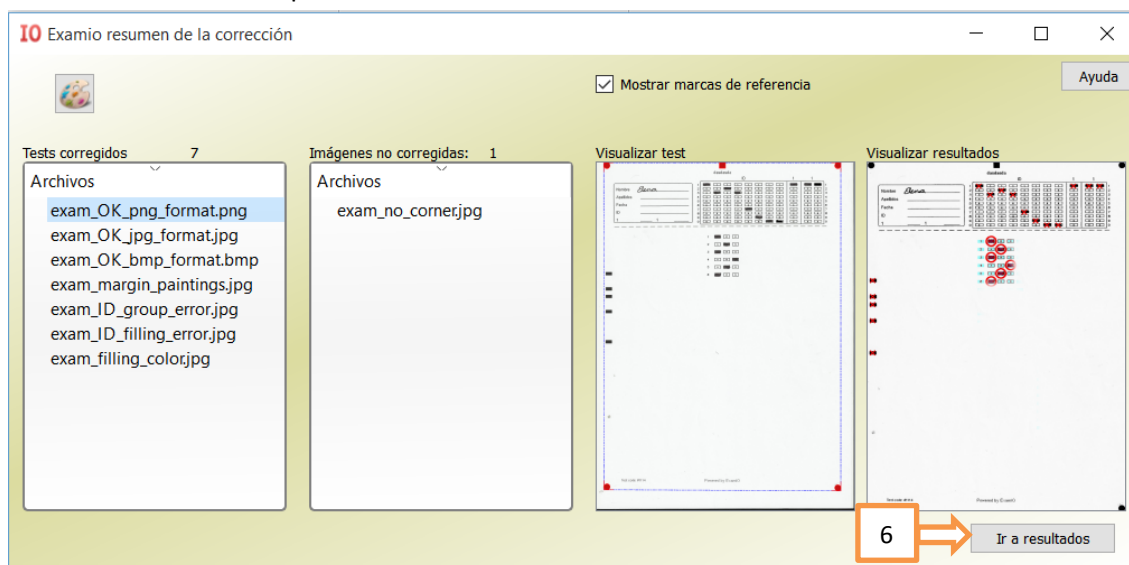
5.- Press "Correct" button to begin the correction.
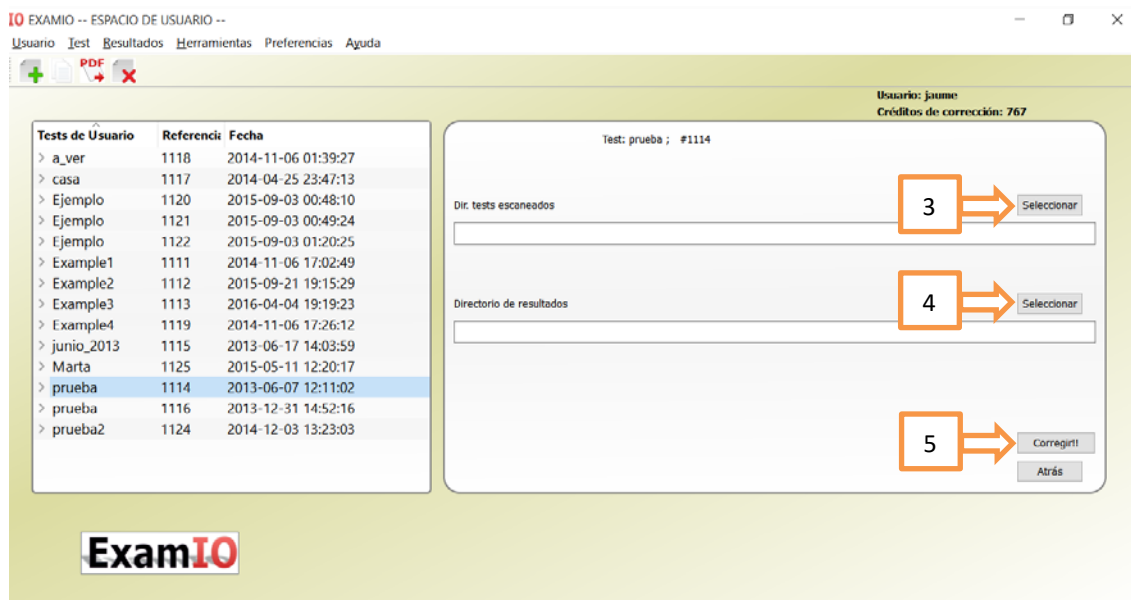


The correction will start at a speed of 3 seconds per test (approx.).
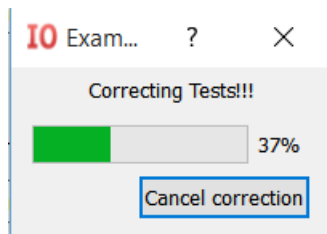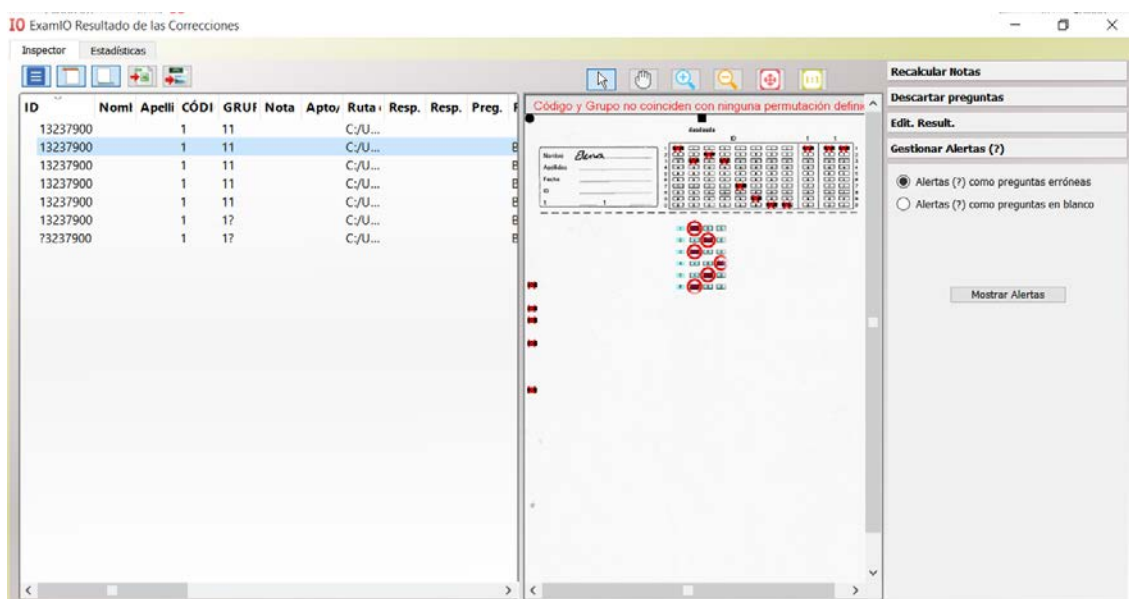
At the end of the correction process, A new window will appear with a list of tests that have been fixed, and those who have not corrected.

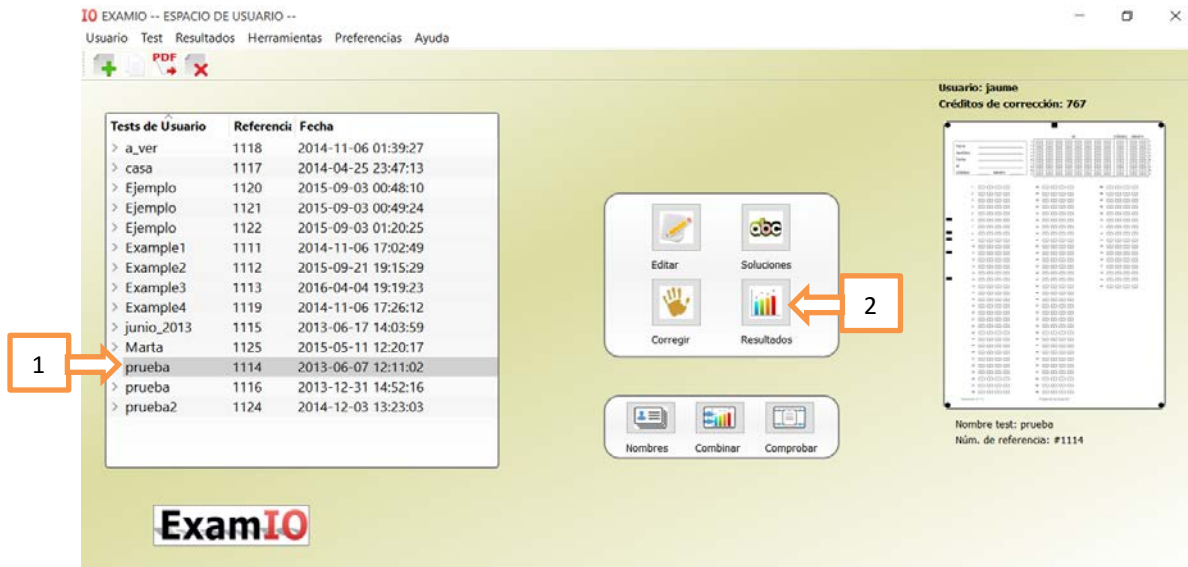6.- Click on "Go to results" to open the results.



The results inspector will be opened, to analyse and review the results:
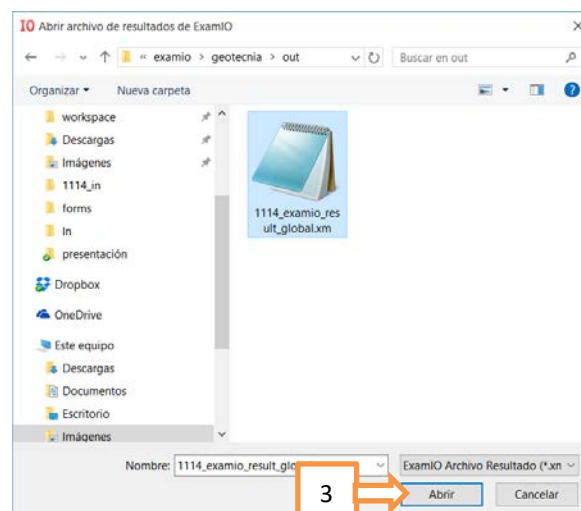
# 9.-View results

After the correction of the tests, the "Results Inspector" will open. Also you can open the test results file as many times as you need. To do this:

1.- Select test to correct in the list of tests by clicking with the mouse.
2.- Click on "Results" button



3.-A new window will appear where we can select the output (.xm) generated in the correction file:



Once selected, "Results Inspector" window will be shown. There we can perform the main actions:

4. Visual review of results → Scroll through the list of corrected tests to see if the correction has been performed correctly.
5. The correct answers will appear in green. Wrong ones in red.
6. Show alerts to resolve them → Alerts are questions where several marked boxes have been detected.



After opening alerts, tests showing errors will be highlighted.

7.- Click on "First Alert" to go to the first detected alert.

8.- In the Viewer, the alerts will be highlighted with a large ellipse encompassing all the question boxes.

9.- The alerts in the list of corrected tests will be denoted with the question symbol "?".

10.- Click on "Edit Results" →To resolve alerts by checking and unchecking boxes.

11.- Click on "Edit Results" button → Enable results manual edition



The Edit menu will open. The boxes that appear in blue color, can be clicked with the mouse to be selected.

12.- Click with your mouse on the question that you believe the student wanted to mark (in this example, A box), annulling the detection of less marked box (in this case, box B).

13.- Moreover, You may edit both questions and fields of: ID, code and group writing them in the text fields. In this case: 14.-Click "Apply" to apply these changes to text fields.

15.- After mouse clicking, the alert will be corrected marking only the selected box.

16.- The alert denoted in the table as "?" changes to mark the checkbox selected in step 15.
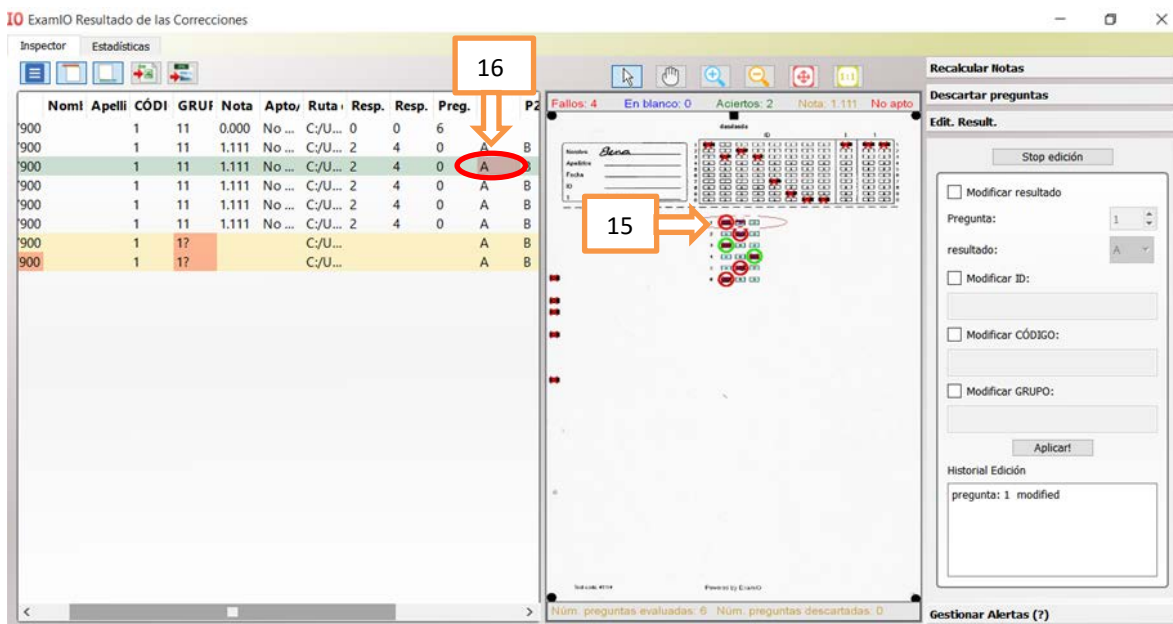


After editing the results, we can modify the score of the correct, wrong, and blank questions. To do this:
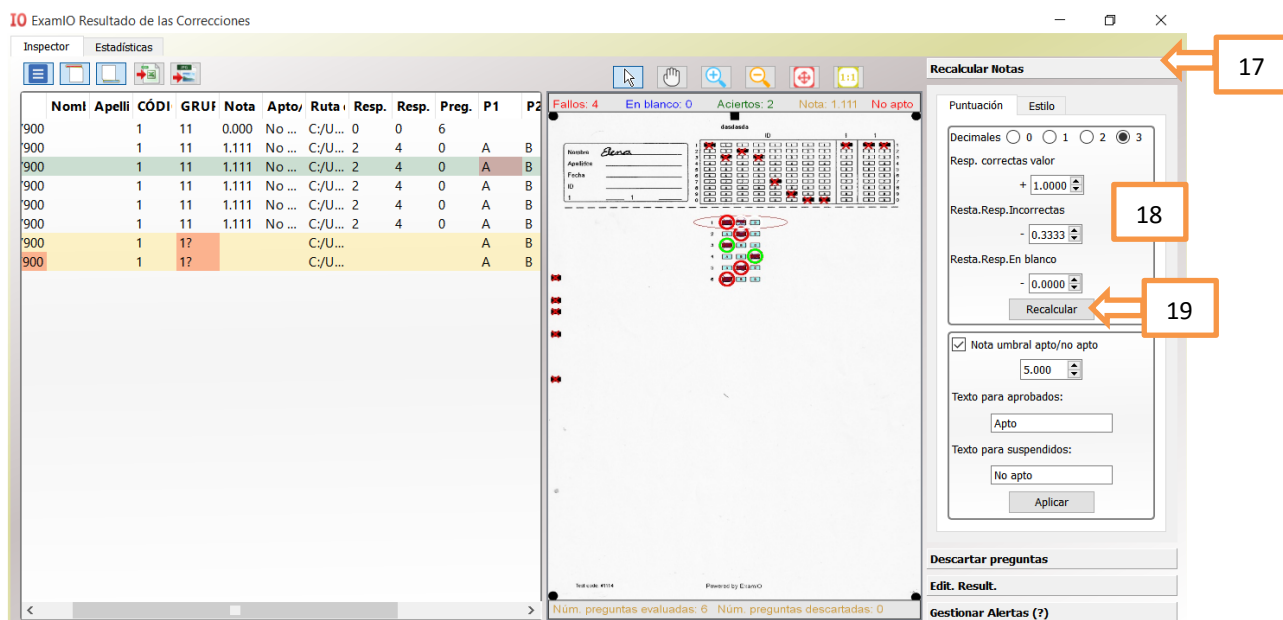
17.- Click on "Recompute Marks"

18.- Select the value from 0 to 1 to score the correct, wrong, and blank answers.

19.- Click on "Recompute" button to apply the changes to all tests



The mark for each test will appear normalized in a range between [0-10].

After obtaining the corrected results and with the desired score, we can proceed to export the results to Excel and the images of corrected tests if you want to give to the students. To do this:

20.- Click on "Export to Excel" →we will get the results in an Excel file

21.- Click on "Export tests (images)" →we will get the images of the corrected tests
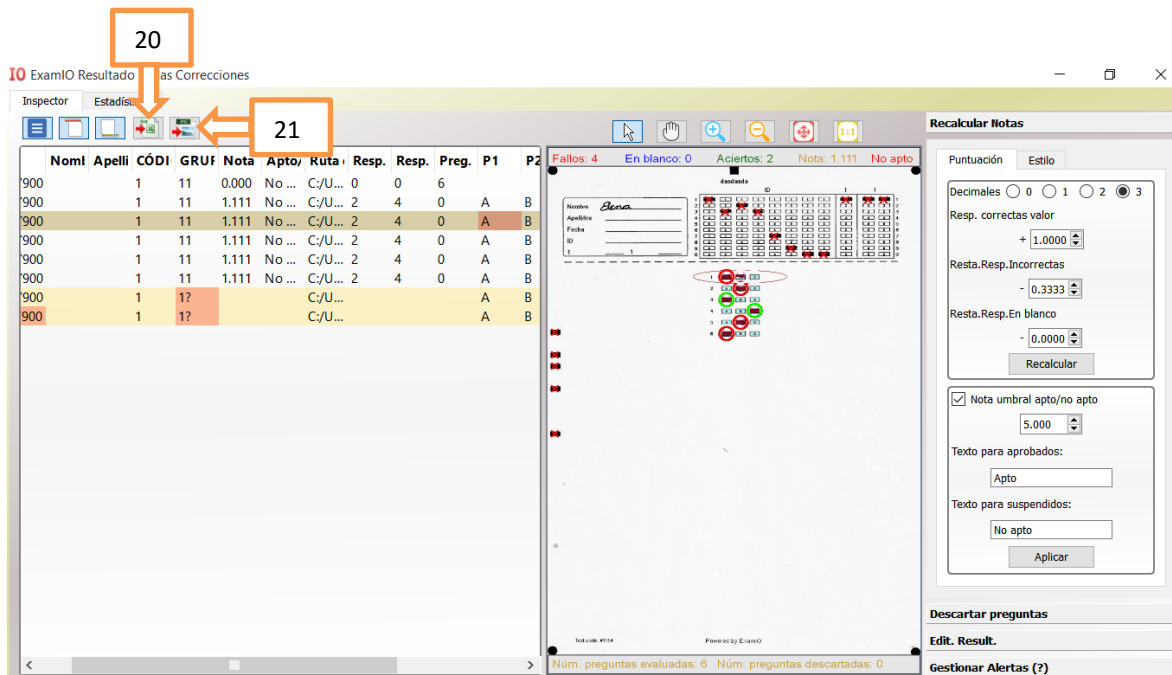


* The results can open and edit as many times as necessary.

* In case you need to modify the solutions or add names of students, such changes can be made at any time. Such changes will be applied to automatically to the results once the output file is opened.

We hope that this tutorial will be very useful in the educational and evaluation work you are carrying out.

Thank you very much for trusting in ExamIO!!!