

# Quizics User Manual



## **Introduction**

Quizics is a physics quiz, using exam questions. It allows teachers to add questions to a pool of questions that are picked randomly when a quiz is requested – when a quiz is generated the number of questions can be chosen. Teachers may also add users and set their username and password, as well as to assign them a year group. Alternatively, a SUVAT quiz can be generated randomly – a set number of questions can be generated which can be completed interactively or printed into a worksheet which can be handed to students and marked by a teacher. A main menu bar at the top of the application is used to navigate between the different windows within the application, for example to open a new quiz. Users must log in to use the system, and when a teacher logs in they have access to other settings; allowing them to edit existing users and questions, delete or add them. Alternatively, users can change their own passwords.

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## Installation

### System Requirements

Windows 7 or higher

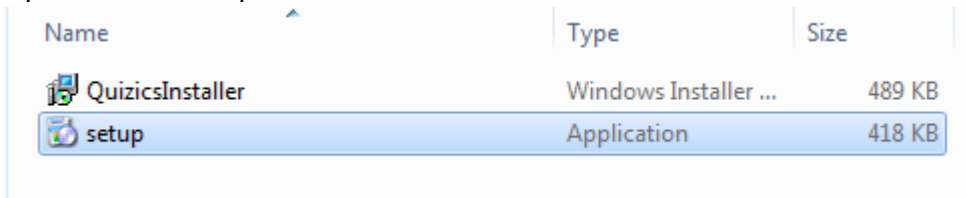
Minimum 1280x1024 resolution monitor

10MB disk space

1GB RAM

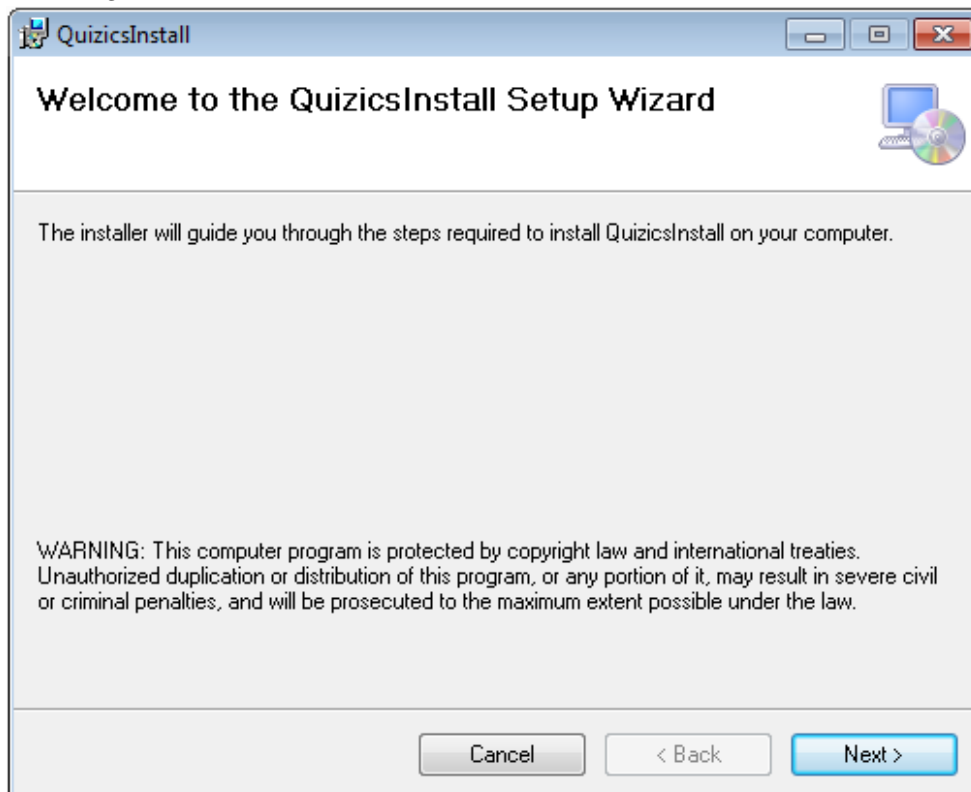
### Instructions

1. Insert the installation media (USB drive).
2. Open the installation folder in Windows Explorer.
3. Open the file 'setup' to run the installation wizard.

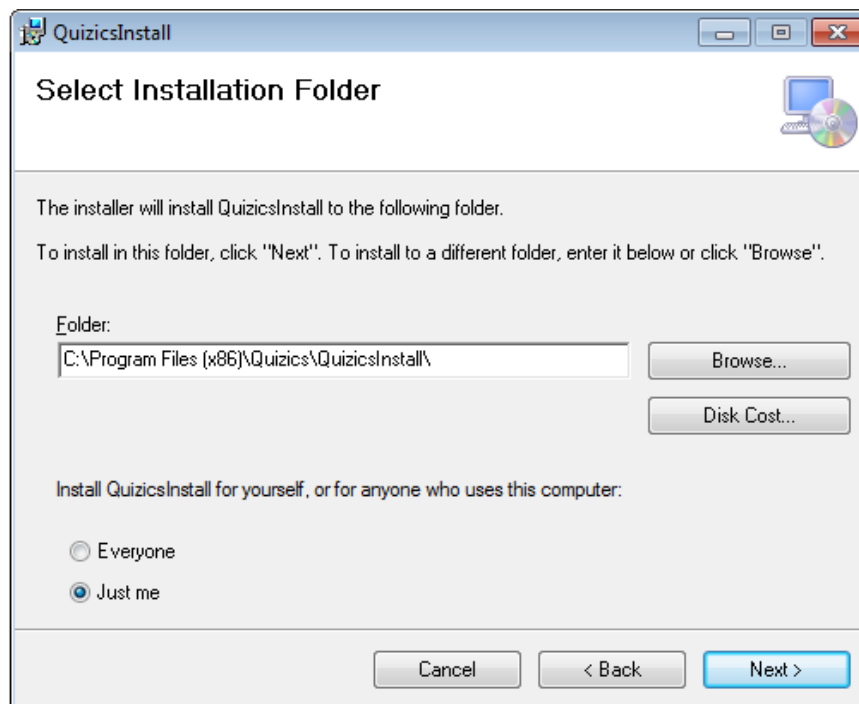


Name	Type	Size
QuizicsInstaller	Windows Installer ...	489 KB
setup	Application	418 KB

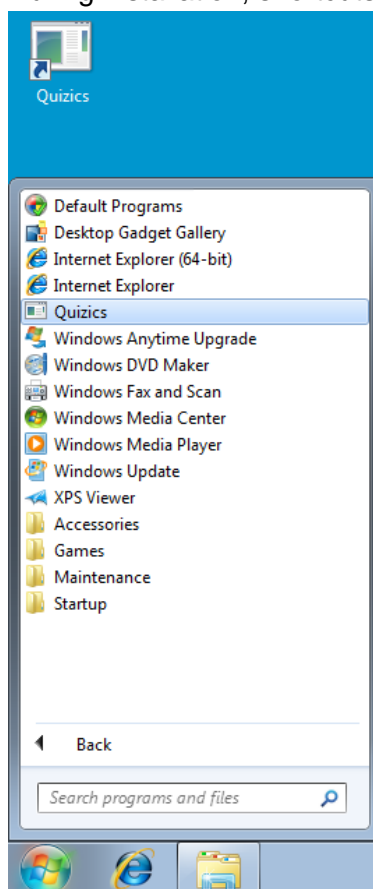
4. If prompted, allow the program to run or update if necessary, once completed the following window should be shown.



5. Click next, the following page should be shown. From here, it is possible to change the installation directory.



6. Choose whether the program should be installed for all users or just the current user, and click next. Click next on the next page to confirm installation.
7. During installation, shortcuts are created automatically on the desktop and start menu

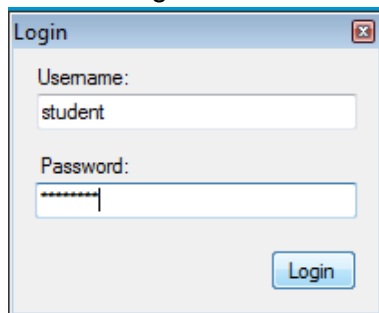


8. In order to run the program, use one of the created shortcuts.

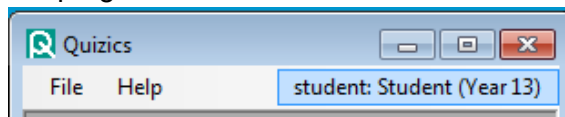
## Using the system

### Log in

1. Open the program using one of the shortcuts, on the desktop or start menu.
2. Enter your username into the username textbox.
3. Enter your password into the password textbox.
4. Click the login button.

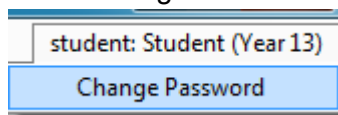


5. Once logged in, the current user and its type will be shown in the menu bar at the top of the program's main window.

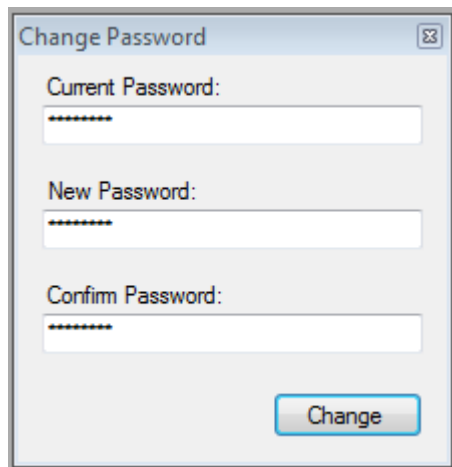


### Change password

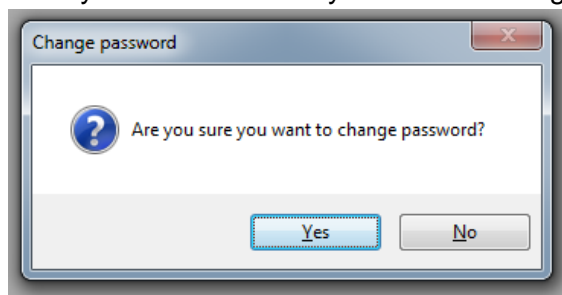
1. Once logged in, click your username on the top right of the menu bar.
2. Click 'Change Password'.



3. Enter your current password into the current username textbox.
4. Enter your new password into the new password textbox.
5. Confirm your new password by retyping it into the confirm password textbox.
6. Click the confirm button.

A dialog box titled "Change Password" with a close button in the top right corner. It contains three text input fields: "Current Password:", "New Password:", and "Confirm Password:". Each field is filled with seven asterisks. At the bottom right is a button labeled "Change".

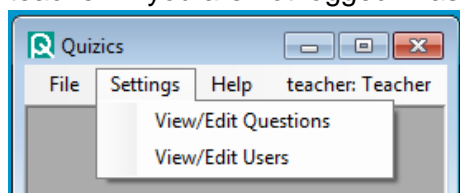
7. Click yes to confirm that you want to change your password, or no to cancel the change .



### Add a user

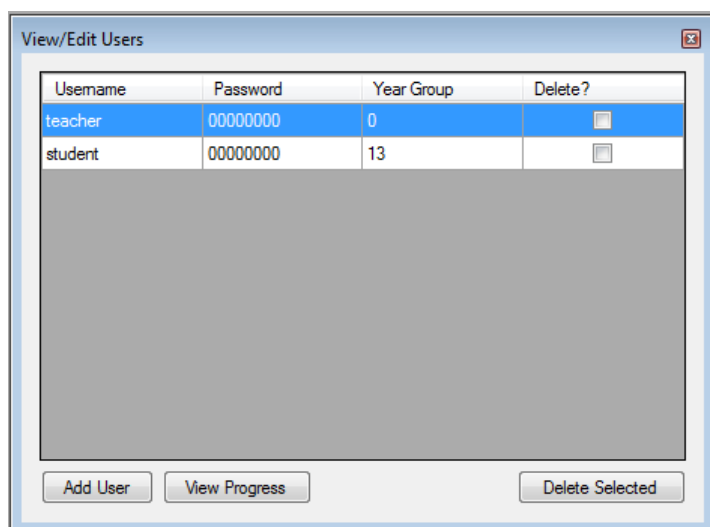
*In order to add a user to the system, you must be logged in as a teacher.*

1. Check that you are logged in as a teacher, the user type in the top right of the menu bar should show the current user as 'Teacher', if not, exit the program and log in again as a teacher. If you are not logged in as a teacher, the settings menu will be inaccessible.

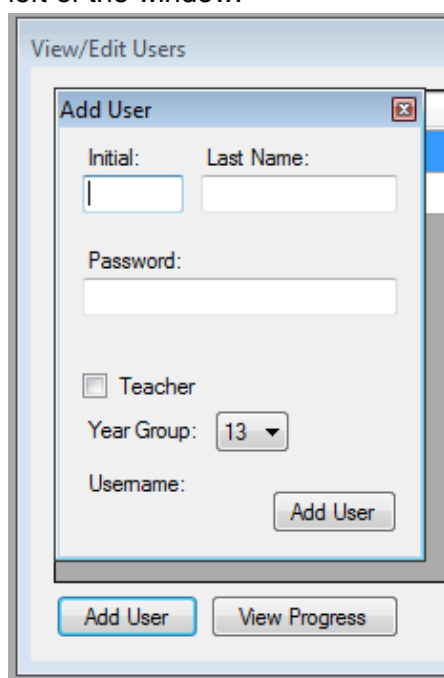


2. Click the settings menu item, and then click 'View/Edit Users' to open the user management window.

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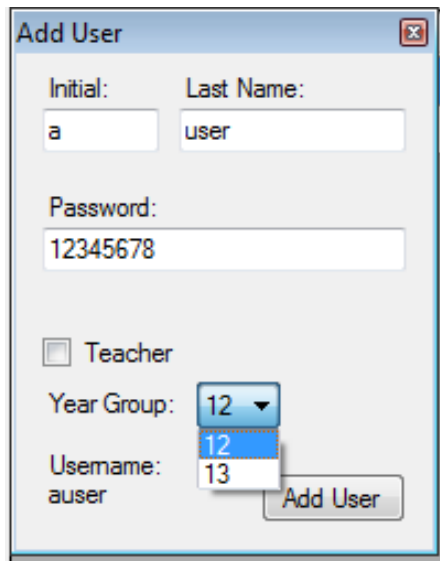


3. This window allows you to view all the users of the system, as well as to change their details, or delete them. In order to add a user, click the 'Add User' button in the bottom left of the window.



4. Enter the details for the user as shown, including the initial, last name, and password. The username must be between 5 and 12 characters in length, and the password must be between 8 and 50 characters in length. Ensure that a strong password is used but avoid using personal information as all teachers can see all users' passwords.
5. If the user will be a teacher, select the 'Teacher' checkbox, which disables the ability to change the year group as it would not be applicable, otherwise select the year group for the user.

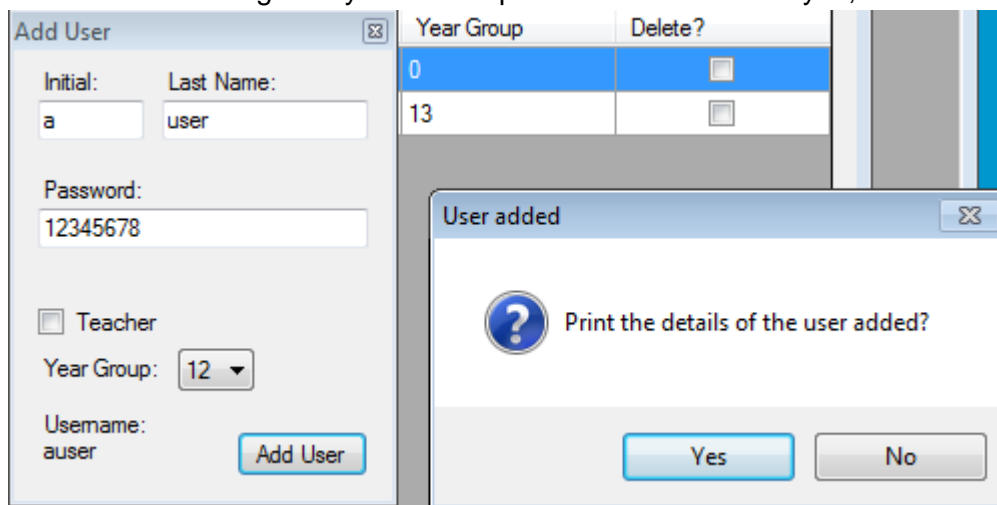




The 'Add User' dialog box contains the following fields and controls:

- Initial:** Text box with 'a'.
- Last Name:** Text box with 'user'.
- Password:** Text box with '12345678'.
- Teacher:** A checkbox that is currently unchecked.
- Year Group:** A dropdown menu showing '12'.
- Uusername:** Text box with 'auser'. A dropdown menu is open below it, showing '12' and '13' as options.
- Add User:** A button at the bottom right.

6. Click the 'Add User' button in the bottom right of the window to create the user.
7. A message will be shown when the user has been created, providing the option to print the details of the user you have just created, for example to give these details for a student to use to log in. If you wish to print these details click yes, otherwise click no.



The 'User added' dialog box is shown in the foreground, asking 'Print the details of the user added?' with 'Yes' and 'No' buttons. In the background, a table shows the user list:

Year Group	Delete?
0	<input type="checkbox"/>
13	<input type="checkbox"/>

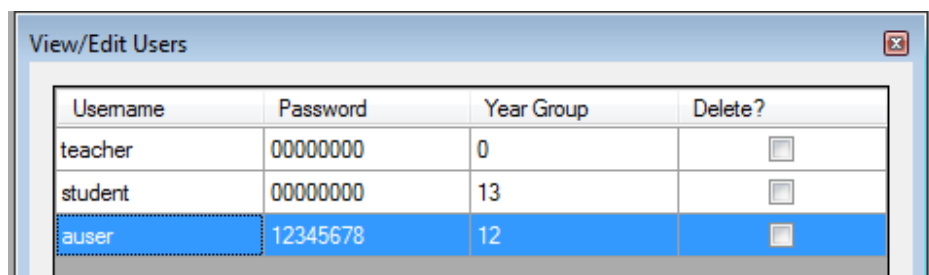
8. If you selected to print the user details, a print preview is shown. From here you can click the print button to print the user's details. Once printed or if the details were not selected to be printed, the user has been successfully added. The new user should be shown in the user list.



The 'Print preview' window displays the following information:

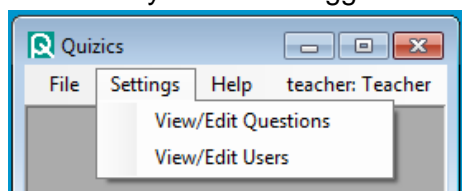
Username: auser  
Password: 12345678

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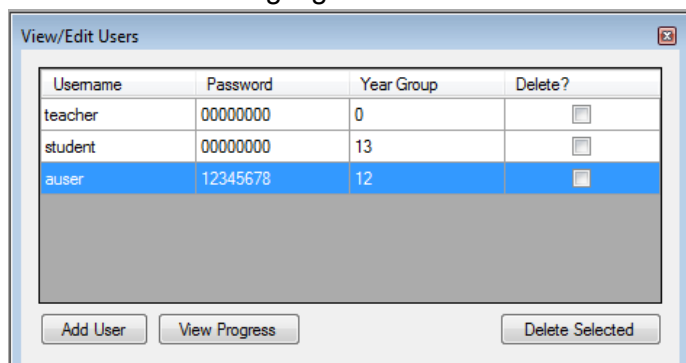
**View/print progress for a user**

*In order to view users in the system, you must be logged in as a teacher.*

1. Check that you are logged in as a teacher, the user type in the top right of the menu bar should show the current user as 'Teacher', if not, exit the program and log in again as a teacher. If you are not logged in as a teacher, the settings menu will be inaccessible.



2. Click the settings menu item, then 'View/Edit Users' to open the user management window.
3. Click on a user to highlight that user's row.



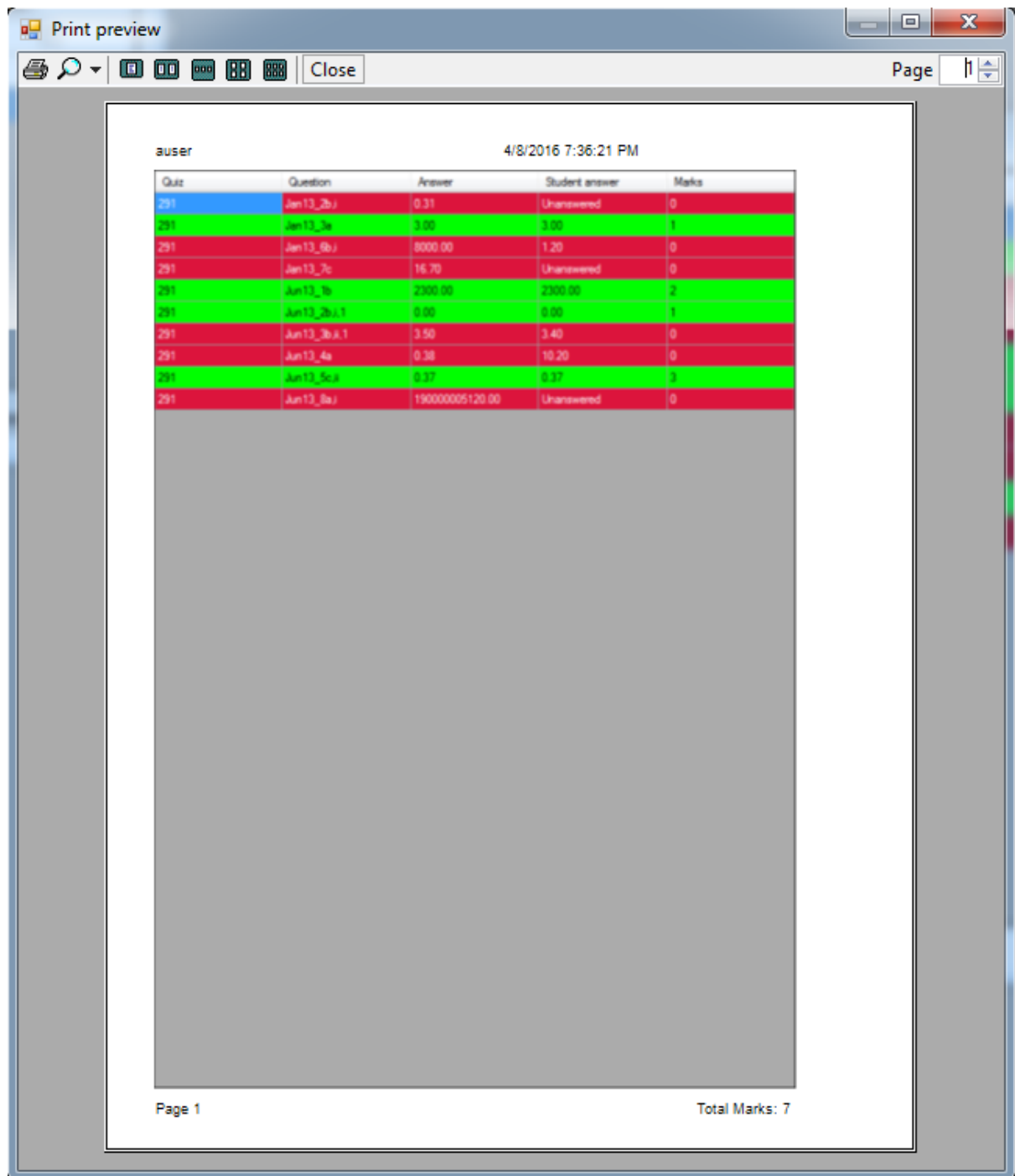
4. Once the user is highlighted, click the 'View Progress' button to open the progress window.
5. Rows highlighted green show where the user answered correctly, red indicates incorrect.

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View Progress				
Quiz	Question	Answer	Student answer	Marks
291	Jan13_2b.i	0.31	Unanswered	0
291	Jan13_3a	3.00	3.00	1
291	Jan13_6b.i	8000.00	1.20	0
291	Jan13_7c	16.70	Unanswered	0
291	Jun13_1b	2300.00	2300.00	2
291	Jun13_2b.i.1	0.00	0.00	1
291	Jun13_3b.ii.1	3.50	3.40	0
291	Jun13_4a	0.38	10.20	0
291	Jun13_5c.ii	0.37	0.37	3
291	Jun13_8a.i	190000005120.00	Unanswered	0
Total Marks: 7				

6. In order to print these results, use the menu bar to navigate to File>Print, or use the keyboard shortcut *Ctrl+P*.
7. When the print preview dialog window shows, it should automatically add the date and username, and if more data is available than can fit on one page, will automatically create multiple pages and display each page number.
8. If there are multiple pages, change the page number in the top right, or use the multipage view buttons in the top left to view other pages.

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- When ready to print, press the printer button (icon) in the top left of the print preview dialog window.

## Functionality

Quizics features 2 quiz modes, the first 'Quiz' uses real exam questions, where the 'SUVAT Quiz' uses randomly generated questions which can be presented in a worksheet format, and can be completed interactively or printed.

### Quiz

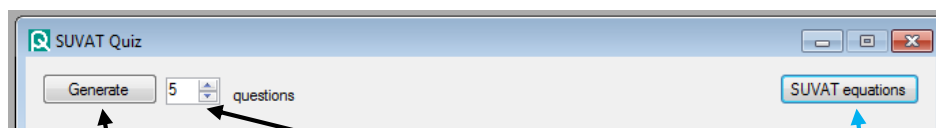
The Quiz is launched through the menu bar: File>New>Quiz, or alternatively, to quickly generate a 5 question quiz, use the keyboard shortcut *Ctrl+N*.

The screenshot shows the Quiz application window. The main area displays a stress-strain graph (Fig. 8.1) for a ductile material. The y-axis is labeled 'stress/GPa' and ranges from 0.0 to 2.0. The x-axis is labeled 'strain/%' and ranges from 0 to 1.2. The graph shows a linear elastic region (A to B) and a plastic region (B to C). Below the graph, the text reads: 'Use Fig. 8.1 to determine the Young modulus of the material.' and 'Young modulus = ..... Pa'. The bottom section of the window is divided into three parts: a 'Working area' for drawing, a 'Current question' area, and a 'Settings' panel. The 'Working area' is a large black rectangle with a red border. The 'Current question' area contains the text 'Jun13\_8a.i' and 'Current question'. The 'Settings' panel includes 'Working Area Colors' (Fore and Back buttons), 'Pen Size' (set to 1), 'Clear Working' button, 'Question 1 of 5', 'Marks: 0/10', '00:00:06', 'Next Question' button, and 'Check Answer' button. Annotations with arrows point to various parts of the interface:

- Drag this splitter to change the size of the image & working areas (points to the vertical splitter between the graph and the working area).
- The image for the current question is displayed here (points to the graph area).
- Settings for the working area (points to the 'Working Area Colors' section).
- Information about quiz (points to the 'Question 1 of 5' section).
- Area to draw in, which can be used for working (points to the 'Working area' rectangle).
- Current question (points to the 'Current question' text).
- Enter answer here (points to the input field at the bottom).
- Navigate the quiz, go to next question or check entered answer (points to the 'Next Question' and 'Check Answer' buttons).

## SUVAT Quiz

A SUVAT quiz can be opened using the menu; File>New>SUVAT Quiz, or *Ctrl+Shift+N*.



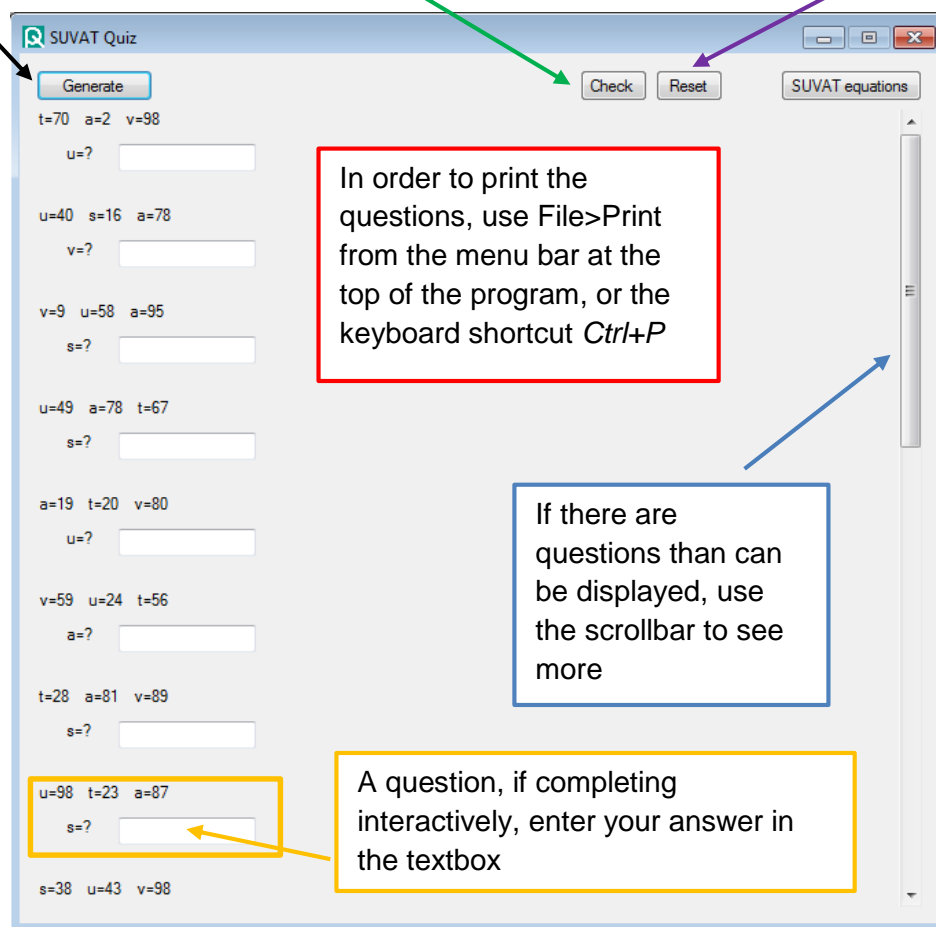
Enter the desired number of questions, and click Generate to make a quiz

Click the SUVAT equations button to open a window displaying the SUVAT equations to use for the questions

To make another quiz with the same number of questions, click Generate again

If completing the quiz interactively (entering answers into textboxes, not printing), use the Check button to check answers

To delete all questions or change the number of questions, click the Reset button



### View/edit Questions

Teachers are able to view and edit the questions used for the Quiz, this functionality is accessible only when logged in as a teacher by using the menu bar, File>Settings>View/Edit Questions.

Questions are shown as rows, data about the questions are shown in columns

To edit data about a question, click on the appropriate cell and type the new value, then press enter to confirm the new value

The currently selected question has its row highlighted (blue)

Check this box for each question you wish to delete

Click to add a new question to be used for quizzes

Click to view the image of the selected question

Delete all of the questions that have a checkbox in the delete column

Name	Answer	Marks	Delete?
Jan13_2b,i	0.31	2	<input type="checkbox"/>
Jan13_3a	3.00	1	<input type="checkbox"/>
Jan13_6b,i	8000.00	2	<input type="checkbox"/>
Jan13_7c	16.70	3	<input type="checkbox"/>
Jun13_1b	2300.00	2	<input type="checkbox"/>
Jun13_2b,i,1	0.00	1	<input type="checkbox"/>
Jun13_3b,ii,1	3.50	3	<input type="checkbox"/>
Jun13_4a	0.38	3	<input type="checkbox"/>
Jun13_5c,ii	0.37	3	<input type="checkbox"/>
Jun13_8a,i	190000005120.00	3	<input type="checkbox"/>

Add Question View Question Delete Selected

### Add exam question

Teachers are able to add questions to the quiz through the 'View/edit Questions' window as shown above, and then by clicking 'Add Question'; in this example an exam question will be created by clicking 'Exam Question' from the 'Add Question' menu that is shown.

The screenshot shows the 'Add Exam Question' dialog box with the following fields and annotations:

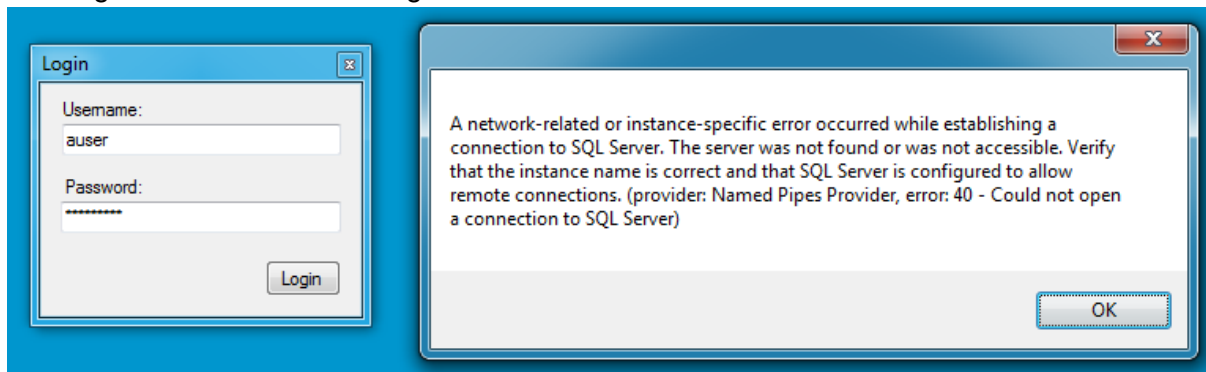
- Image Location:** A text input field with a 'Browse...' button next to it. Annotation: "The location of the image used for the question, it can be entered manually but it is suggested to use the 'Browse' button".
- Paper:** A dropdown menu showing 'Jun' and '2016'. Annotation: "Choose the date of the paper the question is from".
- Question:** A dropdown menu showing '1' and 'a'. Annotation: "The question number and parts, which are used to make up the question name".
- Question Name:** A text field showing 'Jun16\_1a'. Annotation: "Name that will be used for question".
- Answer:** A text input field. Annotation: "Enter the answer for the question here, the answer must be a number and it is recommended to give it to 2 decimal places, otherwise it will be rounded automatically".
- # marks:** A text input field. Annotation: "Number of marks for the question, must be an integer (whole number)".
- Add Question:** A button at the bottom right. Annotation: "After confirming that the question data is correct, click the 'Add Question' button to confirm and add the question".



## Potential errors and solutions

### Network error/server inaccessible

When performing tasks which connect to the database server, the connection is checked automatically – this may take some time – and if there is an error, it will be shown in a message similar to the following.



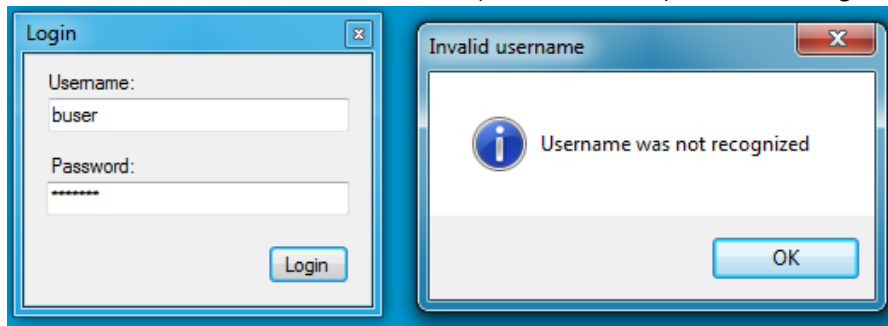
In order to ensure that the program works correctly, a network connection must be established, if you believe that you should be connected, wait some time before trying again. If the error persists, ensure that you are connected correctly, for example checking that an ethernet cable is connected if wired, or alternatively that you are connected to a wireless network and that that network has connection to the internet.



Without access to the internet, the program is unable to communicate to the database which stores user and question data, meaning you will be unable to use the program.

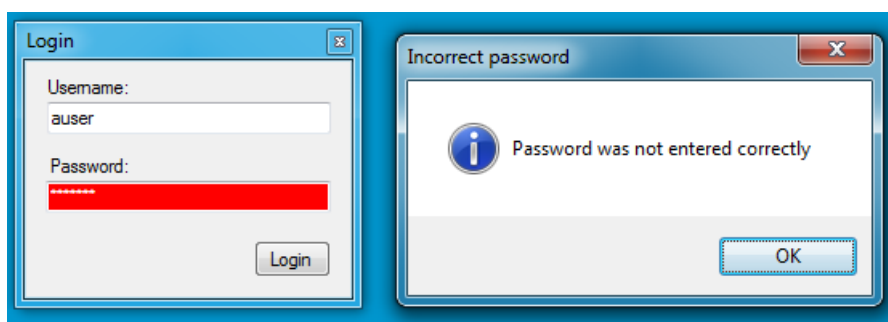
**Incorrect login details (username/password)**

If the entered username is not valid (does not exist), the following message will be shown.



Ensure that the username was entered correctly and that there are no errors such as spelling mistakes. If you are unsure what your username is, it is possible for a teacher to find or change it.

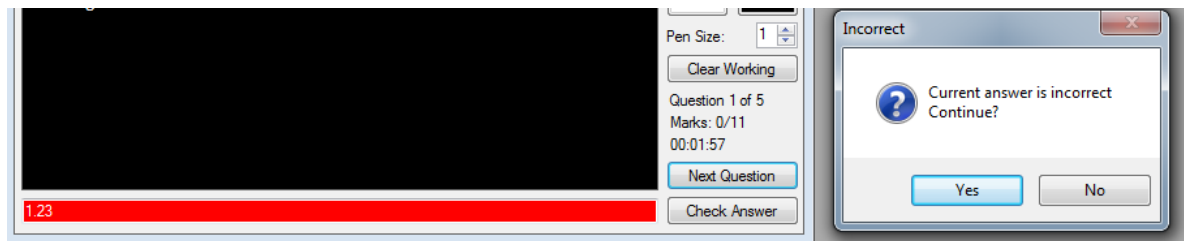
If the username is valid but the password entered is not the correct password for the entered username, both the following message will be shown and the password will be highlighted red until it is corrected. When the message is closed the entered password will be cleared for additional security so must be re-entered.



If you are unsure what your password is or you have forgotten it, it is possible for it to be found or reset by a teacher.

**Incorrect or invalid quiz answer**

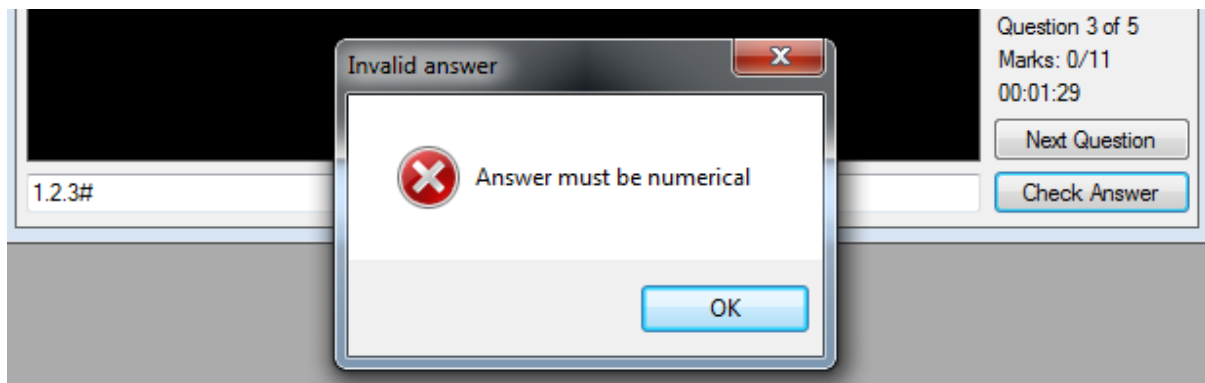
If an answer to a quiz question is incorrect, when checking, the answer textbox is highlighted red, and when trying to navigate to the next question, the following message is shown.



When the next question button is clicked, the answer is automatically checked, if it is correct the next question is navigated to automatically, but if incorrect the same message is shown as above and the answer is marked incorrect. If the answer is incorrect make sure that it was typed correctly, for example with the decimal place in the correct location if applicable.

You may wish you clear the working area using the 'Clear Working' button if you wish to restart the question.

If the answer entered was invalid, the following message will be shown.



Ensure that there are no non-numerical characters, and that there is only 1 decimal point if applicable.