



# **Question Mark Designer for Windows**

## **Network Guardian**

User manual  
Version 2.1

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# 1. Getting started

## 1.1 Introduction

### 1.1.1 What is Guardian?

The Question Mark Network Guardian (or Guardian for short) is an add-on program to Question Mark Designer for Windows that lets you control and secure access to tests.

Guardian is primarily aimed at network users of Question Mark who need to control which students can access which tests when. However it can also be used on standalone PCs, or when distributing material at a distance, when you want to control which tests are available to run, how many times they can be done, and in what order.

These are some of the potential security problems you can help resolve with Guardian.

- *You may want to allow certain users or groups of users access to some tests only, and prevent access to other tests.*

This is the essence of what Guardian does, assigning users a list of tests they are allowed to do.

- *You may be worried that people will answer tests giving a false name (eg "Santa Claus").*

With Guardian, you can define a list of valid user names with a password assigned to each. People can only run tests if they quote their name and password.

- *You may want to stop a user from being able to do a test*

*more than once.*

You can set with Guardian that a test can only be done once (or twice or any other number of times).

- *You may be worried that people will try and run a test before it is released, or after it has expired.*

With Guardian, you can define date and time ranges within which a test is valid.

- *You may want to make sure that users cannot attempt an advanced test without passing a simpler one first.*

You can give tests priorities in Guardian, and the high priority tests must be done before the lower priority ones.

- *You may want to keep a reliable record of who does what test and what score they get, and prevent unscrupulous users from attempting a test and trying to hide this from you (eg by deleting the answer file or turning off their machine).*

Guardian can store all test results in a key file, and let you see at a glance who has done what test. Guardian also lets you control which directory each test saves its answer files in, which helps security and organisation.

- *You may want to assign users to different groups so that you can look at results on a group basis.*

You can easily assign users to groups within Guardian, and group information is stored in the answer file and is available in reporting with the Reporter software.

## 1.1.2 Introduction to this manual

Section 1.2 describes some general concepts in using Guardian and section 1.3 describes how to install the software. Section 1.4 gives you some ideas on how to get started using the software.

Chapter 2 describes the core part of Guardian, how you can create and edit a key file. Chapter 3 describes how Presenter works with key files created by Guardian. Chapter 4 describes how you can use Guardian to review results information.

Appendix A includes some examples of use of Guardian; Appendix B contains some notes on security, and Appendix C gives some suggestions for trouble-shooting. Appendix D gives a reference listing of the Guardian menus.

If security is important to you, please read this manual carefully so as to make your testing system as secure as possible. You are also advised to restrict access to the Guardian program to people who need to use it. Guardian is a security product, and access to it and to this manual by people you are trying to secure against would be unhelpful.

Please make sure you look at the text G\_READ.ME file which is on the distribution disk, for any last minute information on Guardian.

## 1.2 General concepts

### 1.2.1 How Guardian works

Without Guardian, Presenter (the Question Mark Designer for Windows test delivery software) offers the user a choice of *all*



test files on one directory. Or else you can set up Presenter to run one test file by naming the file on the command line.

With Guardian, you can make Presenter ask the user his/her name and then, provided the name is checked as being valid, offer the user a list of tests that you want him/her to individually answer.

In order to define the names and tests, you create a "key" file with Guardian. This lists the users and tests and who can do what. Presenter then reads the key file, and only offers the tests permitted in it.

The Guardian software works only with the Windows version of Question Mark and does not control access to DOS or Macintosh tests (except DOS tests called as external tests under the Windows software).

### 1.2.2 Key files

Key files are encrypted, password-protected, proprietary files with extension .QDK. A key file consists of users, tests and instances of users being scheduled to or having done tests.

#### Users

A key file can contain up to 1000 users (or students).

For each user, you define a name (up to 16 characters) and an optional password and group.

#### Tests

A key file can reference up to 60 test files, by file name and directory.

For each test, you can define a date and time when the test becomes available and ceases to become available. For

example, you could set that a test becomes available on the 1st September at 10am, and is no longer available after 30th September at 5pm.

You can also define how many times a user can do a test, whether unrestricted, a specific number of times (eg once, twice) or until a certain score is reached.

### Scheduling

Once you have defined users and tests, you can schedule users to tests, ie assign the test to the user.

You can schedule any number of users in the key file to any number of tests.

For a simple use of Guardian, you may only want to create one key file. You would put all your users and all your tests in it, and say who is allowed to do what test when. For a more complex use of Guardian, you may want to create several key files, for different groups or classes of user. Each key file would permit a certain group of users to do certain tests.

### 1.2.3 Results and reporting

Guardian also aids in helping you securely record test results. Firstly you can specify in the key file which directory the answer file is saved to.

However Guardian also records all test attempts and resulting scores in the key file. Thus the key file not only records who can do which test, but who has done which test. This is a very powerful adjunct to the reporting system, and allows you to use Guardian as an addition to Reporter, as well as for its primary security functions.

(If you prefer, you can choose to make key files "read only", which means they do not record the results information. This may be appropriate if your network policy does not permit server files to be written to by student PCs, or if you do not need or want the information.)

### 1.2.4 Locking a test file

All the Guardian security features arise because Presenter reads the key file and acts on it. An obvious loophole for an unscrupulous user would be to delete the key file or hide it from Presenter, and then just run Presenter ordinarily and run the tests without the controls in the key file.

In order to prevent this, Guardian gives you the capability to "lock" test files. If a test file is locked, then Presenter will only run the test via a key file. If a user tries to access a locked file without doing so via a key file made by Guardian, Presenter refuses to run it.

You will usually want to lock all test files used with Guardian to ensure access only via the key file.

### 1.2.5 User groups

Guardian introduces the ability to band users into groups. These groups can represent classes, branches, or any other division of users into categories which you find useful.

A group is defined by a group name, which can be up to 16 characters long.

You can use groups within Guardian to make it easy to schedule similar users to the same test. Group names are also stored in the answer files created, and are included in reports

and database exports.

## 1.3 Installing Guardian

### 1.3.1 What you need to run Guardian

To use Guardian, you need a copy of Question Mark Designer for Windows, Version 2.10 or greater.

- You use the standard Designer software for creating tests and libraries. (Guardian also works with tests and libraries created with earlier versions of Designer than 2.10.)
- You then use the Guardian software to make key files to lock and control access to these test and library files.
- You use the standard Presenter software to look at the key files and run the tests. You must have a version of Presenter that is version 2.10 or higher in order to access the key files.
- You use the standard Reporter software to analyse and report on answer files created with tests.

### 1.3.2 What the Guardian program consists of

The Guardian distribution disk contains the following files:

- GUARDIAN.EXE, the program file that allows you to create, edit and view key files.
- QD\_GUARD.HLP, the Guardian Windows help file.



- G\_READ.ME, a text file which contains last minute information on this release of Guardian. Please make sure to look at this file.
- SETUP.EXE, and other files with names starting with SETUP, which are the files for the automatic installation program for Guardian.

### 1.3.3 Installing Guardian automatically

Before installing the Guardian software, you must first install the standard Question Mark Designer for Windows software. After this, you should do the following to install the Guardian software automatically.

1. Put the Guardian distribution disk in drive A: or B:.
2. Go into Windows File Manager, and click on drive A: or B:.
3. Double-click on the file SETUP.EXE. This runs the automatic installation program, which loads the Guardian software into the same directory as Question Mark Designer for Windows is installed in, and creates an icon to run Guardian.

### 1.3.4 Installing Guardian manually

If you prefer to install the software manually, or if you have any problems with the automatic installation, simply use File Manager to copy GUARDIAN.EXE, QD\_GUARD.HLP and G\_READ.ME from the distribution disk into your Question Mark directory. Then from Program Manager, use **File | New** to make a new program item in the Question Designer group to run GUARDIAN.EXE.

The GUARDIAN.EXE program needs access to the DLL program files (TCLASS31.DLL, OWL31.DLL and BC30RTL.DLL) that come with Designer. If you decide to copy the Guardian software into a different directory to Designer, you should copy these files into this directory as well, or move them into your \WINDOWS\SYSTEM directory.

Guardian stores its user interface settings between runs in file QD\_GUARD.INI on the \WINDOWS directory.

## 1.4 Tutorial on Guardian

Here is a short tutorial that guides you through the process of creating a key file and using Guardian for the first time. In order to run the tutorial, you should have installed the software on your Question Mark directory, and have at least one test in this directory ready to run, perhaps one of the example tests supplied with the Question Mark standard software.

We shall assume that you have four users, Adam, Bob, Charles and David, and you want to permit each user to do a test, with just a single attempt at the test allowed.

### 1. Run the Guardian software



First, double-click on the Guardian icon to run the GUARDIAN.EXE program. (If the program does not run, then check that you have installed the software correctly by carefully reading section 1.3 above.)

## 2. Make a new key file



Select **File** | **New** or click on the toolbar icon to make a new key file.

On the dialog you see as a result of this, you must define a name and password to control access to the key file. Anyone who wants to look at or edit the key file will need to quote what you put here. For this tutorial, just click on **OK** to accept the default name "anon".

You then see two further dialogs allowing you to set an introduction message and customise logon dialogs, which we shall ignore in this tutorial. Click on **OK** at each dialog.

## 3. Add some users into the key file

You should now see a screen with a window for users and a window for tests, with no users or tests defined. The Users window should be highlighted (if it is not, click on it).



Add a user, by selecting **User** | **Add**, or clicking on the toolbar icon. You should see a dialog similar to the following.

Enter "Adam" as the name of the user. Leave the group box empty. The password is set by the software to a random string of letters. (You can disable this random generation of

passwords with **Options** | **Generate passwords**, but for the moment leave this as it is.)

Click on **OK**, and the same dialog box re-appears asking for another user. Enter "Bob" as a user, and click on **OK**. Repeat with "Charles" and "David".

Then, when the dialog box for adding a user comes up another time, click on **Cancel** to indicate that you don't want to add another user.

The Users window should now have 4 users in it, Adam, Bob, Charles and David.

## 4. Print out the user list

Next you should print out the list of users. Select all four users, either by clicking and dragging with the mouse, or using **User** | **Select all**. Then choose **User** | **Information**, which creates a report of information on users.

Reports in Guardian work the same way as reports in the standard software (Reporter). A list of the users and passwords should be displayed in the Windows Notepad software. You can print it by selecting **File** | **Print** in Notepad, and then exit Notepad with **File** | **Exit**.

(If you have any problems running Notepad or printing, do not worry about them at this stage. Just take a written note of the user names and randomly generated passwords, so you can use them later on in this tutorial.)

## 5. Add a test into the key file

Now click on the Tests window to make it current. This should

be visible on the screen - if you have problems finding it, select it from the **Window** menu. When the Tests window is highlighted, the **Test** menu becomes active, while the **User** menu is greyed out. At any one time, you can only have one of these two windows and menus current.



Add a test to the key file by selecting **Test | Add**, or clicking on the toolbar icon. Choose on the file selection dialog one of the tests on your PC, perhaps the example quotations test supplied with Question Mark (file name EG2.QDT).

This should give you a dialog similar to the following, which lets you define some details of how the test is to run.

You need to restrict access to the test to a single attempt. To do this, press the **Attempts** button. Then in the dialog that follows, set **Limit number of attempts** on, and make sure that **Attempt number of times** is set to 1 (this should be the default).

Then click **OK** to leave this dialog, and **OK** again to leave the

next dialog, and then press **Cancel** to not add another test to the file. You should be back in the main Guardian window with the Tests window highlighted with one test in it.

## 6. Schedule the users to do the test

You have now added 4 users and 1 test to the key file, and you need to schedule the users to the test. There are three steps to scheduling.

- First, select the test you want to schedule. Click on the test you have just added to highlight it.
- Then select the users you want to schedule. Click on the Users window to make it current, and then select and highlight all four users. (They should already be selected from step 4. above.)
- Once you have highlighted the users and the test, the **Schedule** menu should be available. If it is not, check that you have added users and a test, and that you have clicked on and selected both users and the test. Then to make the scheduling happen, choose **Schedule | Schedule** or click on the toolbar icon.



You should then see a message dialog telling you that 1 test has been scheduled to 4 users. Click **OK** to dismiss this.

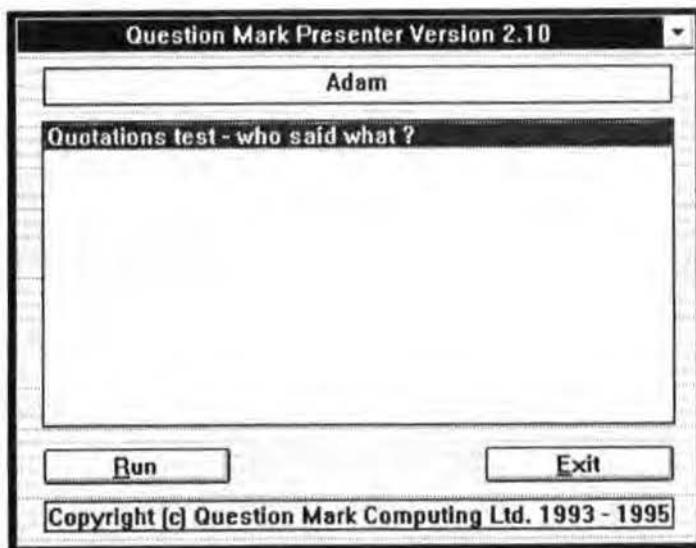
## 7. Save the key file and exit Guardian

Save the key file, by choosing **File | Save**, using the name TEST.QDK on the Question Mark directory, usually \QDESIGN. Then exit Guardian with **File | Exit**.

## 8. Run the tests from the key file

You now should run Presenter to run the test from the key file. You do this by double-clicking on the Presenter icon, or if the icon is not available running it from File Manager. The first thing that should happen is that Presenter asks you to enter your name. Enter the name Adam, and when asked for a password, enter the password printed or noted at step 4 above.

You should then get a dialog offering one test to do, like the dialog below. Press **Run**, and go through the test, answering the questions, and finish the test.



(If Presenter does not ask for a name, or else does not accept Adam, then please check that the file PRESENT.EXE, the key file TEST.QDK and the test file referenced (EG2.QDT or whatever) are all in your Question Mark directory (usually \QDESIGN). Also check there are no other key files on this

directory. This should be the case unless you have been using Guardian to make other key files; if so, move the other ones to another directory, and move them back later if you need them.)

After running the test, the software should return you to the Presenter dialog, with no tests available, as just one attempt was set up for each user. Press **Exit** to leave Presenter.

Repeat the above process with users Bob and Charles. Each user is allowed access to the test just once.

## 9. View the results in Guardian

Then return to Guardian, and open the key file TEST.QDK. You need to quote the name "anon" to get access to the file. Select all 4 users and select the test, so that all are highlighted.

Then choose either **User | Results** or **Test | Results**, and look at the report. You should see that the fact that Adam, Bob and Charles have done the test is visible, as well as the fact that David is scheduled to do it but has not done it. The scores achieved are also shown.

Guardian can be used to review results in tandem with the standard Reporter program, as well as to control access to tests.

That is the end of the tutorial - leave Guardian. You may want to delete file TEST.QDK, or move it to another directory, so that it will not be picked up and used by Presenter every time Presenter is run.

## 2. Making a key file

### 2.1 Using the Guardian software

#### 2.1.1 Running Guardian



You create a key file with the GUARDIAN.EXE software. You run the Guardian software by double-clicking on its icon, or in any of the other standard ways in which you run Windows programs. Guardian is an independent program that lets you create, edit and review key files.

The user interface within Guardian is very similar to the user interface within Designer. You can see what each menu item or toolbar icon does by dragging the mouse over it, and looking at the status line. If you need help at any time, you can get it by pressing F1 or by clicking on the **Help** menu.



To exit the Guardian program, you use **File | Exit**.

#### 2.1.2 Opening, closing and saving files

When you first run Guardian, you usually see a blank screen.

If you want to run Guardian so that it always opens the same key file when started, you can set this up by adding the name of the key file to the Program Manager command line attached to the Guardian icon. For example, a command line of "GUARDIAN.EXE KEY.QDK" will always start Guardian with key file KEY opened.

You can open only one key file at a time. When you create or

open another one, the previous one is closed. (If you have made any changes, you are asked whether you want to save the previous file.)



- To create a new key file, you use **File | New**.



- To open an existing key file, you use **File | Open**.



- To save a file, you use **File | Save**.
- To save a file with a new name, you use **File | Save As**.

When you open a key file and change it, then while it is open, the file is protected so that no-one else can change it. This prevents Presenter from using the unfinished information. However generally you should try and ensure that when you are accessing the key file with Guardian, no-one else is trying to do so, as the automatic locking mechanism may not be failsafe in all circumstances.

The .QDK file name of the current key file is shown on the Guardian window caption, along with whether you have modified the file since last saving.

If **Options | Backup** is set on, then whenever a key file is saved, the previous instance of the file is saved with the same name and a .Q!K extension. You can recover the old file by renaming it to a file with a .QDK extension.

#### 2.1.3 Key file windows

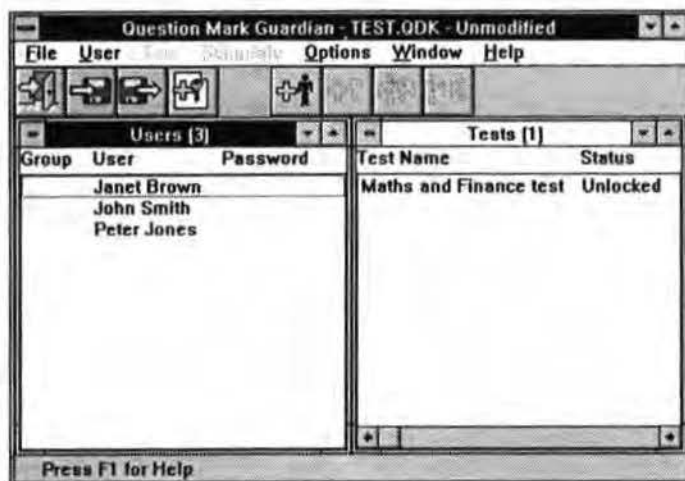
A key file contains two windows, one for users and one for



tests. The Users window shows all the users defined in the key file, and the Tests window shows all the tests.

You can re-size these Windows and move them around the screen in the standard Windows ways. Very often you will want to set the screen so that you can see both windows. The easiest way of doing this is to select **Window | Tile**.

The figure below shows an example Guardian screen. There are three users and one test.



## 2.2 General information in a key file

### 2.2.1 Overview

As well as the users, tests and scheduling, there is some general information defined in the key file, which is defined in three dialogs.

- You can define security information (name and password) to control access to the key file, as described in section 2.2.2.
- You can define an introduction message displayed in Presenter and information regarding where answers are to be written, as described in section 2.2.3.
- You can define the logon messages used in Presenter, eg for asking the user's name, as described in section 2.2.4.

When you use **File | New** to create a new key file, you are shown these three dialogs before adding users and tests to the file. You can change the settings, or click on **OK** to accept the standard settings.

You can return to these dialogs and change the information at any time while editing the file, using the three menu items **File | Password**, **File | Introduction** and **File | Logon messages**.

### 2.2.2 Password dialog

It is vital that access to the key file is secure. If someone can read or change the key file, then all the security measures in the key file can be changed or altered.

Unless you don't care about other people accessing the key file, you must protect your key file with a password. In fact, for extra security, Guardian lets you define a name and a password for the key file in this dialog box.

You can enter up to 16 characters in the **Enter your name** box and up to 8 characters in the **Enter your password** box.



Every time you use Guardian to open the key file, you have to quote your chosen characters. No-one else can access the file without quoting them. (If you forget the name and password used, you too will be unable to access the key file.)

You should use a password that no-one will guess. The name defaults to "anon", but for maximum security you should also change this to something people will not guess.

To change this information at a later time (once the key file is open), you use **File | Password**.

### 2.2.3 Introduction dialog

The next general dialog on creating a key file lets you define an introduction message that can be given to the user when being offered a choice of tests, and how results from the tests are saved.

#### Customise the introduction message:

There are four lines of possible introduction messages. You can fill these in, or keep them blank. Whatever you set will be displayed to the user on the initial Presenter screen, which displays the list of tests the user can choose from.

You might want to include some information that tells the user which tests are on offer, where the tests are from or what the user should do.

The messages are automatically centred on the Presenter screen, with any blank lines omitted.

#### Default answer file directory:

You can define here a directory where answer files are saved in, when tests are run via this key file. You can use the **Browse** button to select a directory interactively.

Whatever you set here is used as the default directory, but you can change it for different tests, as described in section 2.4.1 on adding tests. (The answer file directory set when defining the test takes precedence over the directory set here.) If you leave this box blank, then the answer file directory defaults to the current Presenter directory.

### Write results to key file

This check box defines whether results of tests taken are written to the key file.

The default situation (box set on) means that every time someone does a test via the key file, this is recorded in the key file by Presenter. This means that you can use the full facilities of Guardian, including results reporting, but the key file will contain all results of tests, and will expand in size to contain these. It also means that student PCs will write to the key file over the network, which may be discouraged on some network systems.

If you turn the box off, then Presenter does not amend the key file when a test is taken, which means that results are not stored in it. This means you cannot use Guardian to report on results, and you cannot restrict a user from only having limited attempts at a test (because there is no way of recording prior attempts) nor set test priorities.

To change this information at a later time, you use **File | Introduction**.

### 2.2.4 Logon messages dialog

The final general screen presented to you on creating a key file is one that lets you define some messages used in Presenter. You can define the messages that ask the user his/her name and password in Presenter, and also the error messages given if the user entries are wrong.

For each of the four messages in the dialog, you can define your own versions if you do not like the standard messages. For example, you might want "Enter your employee number" rather than "Enter your name".



To change this information at a later time, you use **File | Logon messages**.

## 2.3 Adding users into a key file

### 2.3.1 User names, passwords and group names

When Presenter is run so that it accesses a key file, the user is asked for his/her name before the software does anything else. If the name entered is in the key file, Presenter offers the user the tests he/she is scheduled to do. If another name is typed in, Presenter refuses to run. Thus you need to enter all allowable user names into the key file.

#### User names

User names can be any string of up to 16 characters (as in the rest of Question Mark Designer). You can use people's real names, some kind of code or identifying number, or any text identification that you want.

Normally you should have a separate user name for each person who is running Presenter, but there may be some circumstances where you want a common name to be used by many people. For example, you could give all managers the name "MANAGER" if you don't need to record personal identities. (Obviously, you cannot then restrict the number of times each person can take a test.)

### Passwords

As well as defining a user name, you can also set a password that the user must type in for Presenter to accept the user as genuine. This can be any string of up to 8 characters.

If you need to identify users securely, you should set passwords, and make sure that they are hard to guess. This makes it impractical for someone to pretend to be someone else, unless they are given the password.

If you set **Options | Generate Passwords** on, then the software automatically generates random passwords for you when you add users, which can be useful if you have large numbers of users.

### Group names

You can also assign users to groups. These groups can represent classes, regions or any other divisions of users that are convenient for you. A group name can be any string of 16 characters.

Groups can be used within Guardian for managing and scheduling users, and group names are also stored in the answer file.

Letter case (ie whether you use upper or lower case) is not significant in user names, passwords or group names.

### 2.3.2 The Users window

Users in a key file are shown within Guardian in the Users window. The number of users in the key file is shown in the window caption, and the name, password and group of each user is shown in the scrollable window.

The figure below shows a window with 6 users, 3 in the ROMANS group and 3 in the GREEKS group. Only one user has a password set.

Users [6]		
User	Group	Password
ARCHIMEDES	GREEKS	
BRUTUS	ROMANS	
JULIUS CAESAR	ROMANS	
OID	ROMANS	POETRY
PLATO	GREEKS	
SOCRATES	GREEKS	

To be able to add or change user information, you need to make this window current. You can do this by clicking on any part of it, selecting from the **Window** menu, or pressing CTRL-F6. You can then change user information via the **User** menu.

You can choose to view users in alphabetical order of user name or by group order. You can set which of these orders you want with **User | Sort**.

To add a user, you select **User | Add**, and fill in the dialog box.

### Adding a user



You must set the user name, and can set a password and group name. If **Options | Generate Passwords** is on, then the software automatically generates random passwords for you.

So as to make it easy to add lots of users, after adding a user, when you click on **OK**, the software automatically takes you to a dialog to create the next user, and so on. Clicking on **Cancel** or pressing **ESC** ends the process. If you define a group name for one user, it is carried forward for other users.

### Selecting users

You can select a user by clicking on it in the window. To select multiple users, click and drag, or click on each one while holding down the **CTRL** key. **User | Select All** selects all users. **User | Select Group** selects all users in a group.

### Deleting a user

To delete a user or users, select them and choose **User | Delete**.

### Editing information on a user

To change information on a user, double click on it, or else select and choose **User | Edit**.

To assign multiple users to a group, use **User | Assign Group**. This prompts for a group name, and sets all users to that group.

## 2.3.3 Importing and exporting lists of users

**User | Export** exports all users in the key file into an Ascii file. **User | Import** takes an Ascii file and adds the users in it, to the currently open key file.

Both importing and exporting use the same format of the Ascii file, with one line per user. Each line contains:

- The user name (16 characters). Blank if undefined.
- Two blank spaces.
- The password (8 characters).
- Two blank spaces.
- The group (16 characters). Blank if undefined.

You can use the exporting facility to print a list of all users, or to export the user names to another program. You can use the importing facility to copy names from another program, eg a word-processor. Imported names are added to those that exist already.

The export and import formats are the same, so you can export some users, edit them in a word-processor or other program, and re-import them, for example to a new key file.

If you are using Question Mark Professional for DOS, you can export names from Guardian and import them to the DOS software, and vice versa, though groups and passwords are not compatible between the programs.

## 2.4 Adding tests into a key file

### 2.4.1 How to add a test



To add a test into a key file, you make the Tests window active (eg by clicking on it) and then select **Test | Add**.

In order to make it easy to add several tests to a key file, when you have added one test, you are invited to add a second one, and so on. Click on **Cancel** or press ESC to finish adding tests.

On adding a test, you choose interactively a .QDT test file. The test file is referenced by the key file, not copied into the key file. This means that if you change the test file, the key file is not automatically updated with any changes (eg in the test name). You should usually only add tests to a key file when they are released and ready to run.

If the test file is protected with a password, you must quote this before being able to reference it in the key file. When you have done this, you see a dialog asking you to define the details of the test entry in the key file.

The dialog shows the test name (the Question Mark Designer internal name), the test filename (the DOS path and file name) and the status of the file (whether it is locked or unlocked). If the test file cannot be found in its original directory, the status shows as **Not found**.

Change test details	
Test Name	Status
Maths and Finance test	Unlocked
Test Filename	<input type="checkbox"/> Use Path
C:\QDESIGN2\EG1.QDT	
Answer file directory	
C:\	
Browse ..	Date & Time ...
Attempts ...	
OK	Cancel
Help	

The other fields in the dialog work as follows.

#### Use Path

If you set this on, then Presenter will look for the test on the original path (ie the same drive and directory as in the dialog). This means that when the user takes the test, his/her path to the test must be the same as yours.

If you set this off, then Presenter will look for the test file in the current directory, or in the directory defined in the /Q parameter to Presenter.

On a network, you would usually set **Use Path** on, because the path for the user/student will normally be the same as the path (on the server) when you are setting it up. However if you are distributing a key file on floppy disk for use at another site, then the path the test file will be in may be different on the delivery machine, and you will want to set **Use Path** off.

#### Answer file directory

This is the directory that answer files from the test are written



to. It defaults to whatever you set the introduction dialog answer file directory to be, but whatever you set in this dialog is the one actually used for this test. You can use the **Browse** button to interactively select a directory.

When an answer file is saved from this test via the key file, this is the directory it is saved in. If you omit the drive letter, the current drive is used.

You can leave this box completely blank, which means that the answer file will be saved on the Presenter working directory.

(An answer file is only saved if the control information page of a test has **Save answers to disk** set on. The key file does not change whether answer files are saved; it just defines in which directory they are saved.)

## Date & Time

If you press the **Date & Time** button, you get an additional dialog which allows you to restrict access to the test from or until particular times and dates.

In the example dialog below, access to the test is permitted from 9am on the 1st September 1995 to 5pm on the 30th September 1995.

You set a start date and time for a test by setting **Allow access from**, and you set a closing date and time for a test by setting **Allow access until**. For each test, you can set neither, one or both of these. This facility relies on the correct date being set on the PC, and is vulnerable to a user setting the date or time deliberately incorrectly by accessing the Control Panel or DOS or otherwise.

**Restrict access by time and date**

☒ Allow access from ☒ Allow access until

From	Until
0 Minute	59 Minute
9 Hour	16 Hour
1 Day	30 Day
9 Month	9 Month
1995 Year	1995 Year

OK Cancel Help

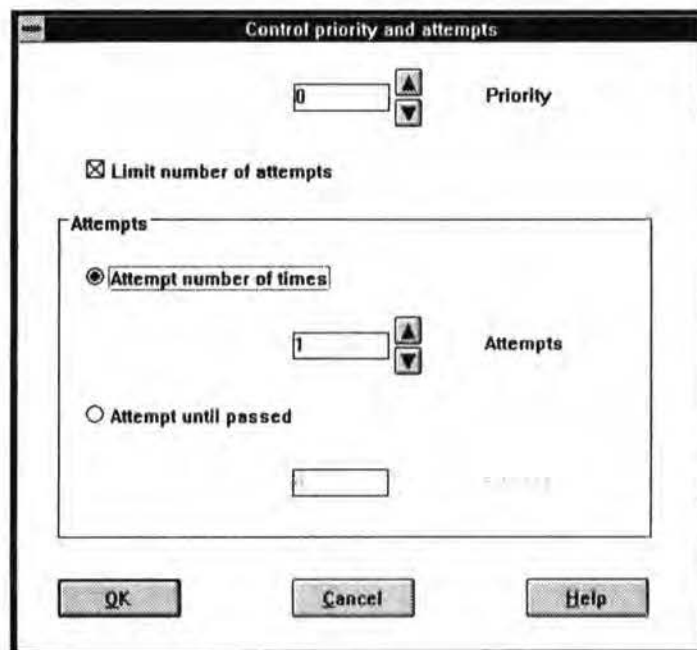
## Attempts

Pressing the **Attempts** button gives you access to an additional dialog that allows you to control how often the test is offered to each user. This dialog is only available if **Write results to key file** is set on in the introduction dialog, because if results are not written to the key file, then the number of previous attempts is not known.

- Here you can set the **Priority** of a test, which is a number from 0 to 10 that lets you set a sequencing order of tests to be done. Presenter offers all available tests of priority 10 first, then priority 9 and so on down to priority 0. The default priority for a test is 0 (lowest priority).



For example, you might set a basic and an advanced test, with users only allowed to take the advanced test when scoring at least 80% in the basic test. You could give the basic test priority 1 and allow it to be attempted until an 80% score was achieved. If you then give the advanced test a priority of 0, the advanced test would not be available until the basic test had been passed.



- Setting the **Limit number of attempts** check box lets you restrict the number of times a test is done. There are two alternative ways of limiting the number of attempts - you can either choose to set a fixed number of attempts the user can do, or else allow him/her to continue to do a test until a pass mark is reached. If you do not set this box, the test can be done an unlimited number of times

when scheduled.

- If you select **Attempt number of times**, then you can set the number of attempts allowed. Once this number of attempts has been made, the test is no longer available. For example if you set one attempt only to be made, then a user can do the test once, and then it will no longer be available.
- If you select **Attempt until passed**, you define a percentage score that must be achieved, and the test is continually available to the user until he/she attains this pass mark. Once the user scores this or higher, the test is no longer available.

You can include the same test file several times in a key file, with different information in it. For example if you want to give a test to one class one week and another class the following week, you could add it twice to the key file for the different date ranges. The test would be in the key file twice, one reference scheduled to one class, and one to the other.

## 2.4.2 The Tests window

The Tests window shows how many tests are currently defined.

You can manage tests with the **Test** menu similarly to the **User** menu. **Test | Delete** removes a test, and **Test | Edit** or double-clicking allows you to change details. **Test | Select All** selects all tests.

The following information is displayed in the test window for each test. (You may need to maximise or scroll the window to see all the information.)

- The test name (within Question Mark).
- The current locking status (locked or unlocked).
- The dates between which the test is valid, as applicable.
- The test priority, the way attempts are restricted, and the pass percentage if applicable.
- Whether **Use Path** is set.
- The DOS path and file name of the test. The path is only used by Presenter if **Use Path** is set.

### 2.4.3 Locking and unlocking tests

Usually test files can be run with or without a key file. Anyone with access to Presenter can run these tests without any security control.

Using Guardian, you can lock tests. This means that no-one can access them with Presenter except through a key file created with Guardian. Locked files can also not be opened with Designer, which can prevent the test being changed after it has been scheduled. The only way a locked test can be accessed is via a key file. (Note that only test files can be locked; library files cannot be locked.)

- To lock a test, you use **Test | Lock**. If a test is password protected within Designer, you need to quote the password to lock it.
- To unlock a test, you use **Test | Unlock**.

The current status (locked or unlocked) is shown in the Tests window.

All tests that you want to be secure, ie that can only be run via a key file, should be locked. Remember that once you lock a file, you need to use Guardian to unlock it if you want to access the test file with Designer (or with Presenter without using a key file).

If two users of Guardian both lock a file, and if one of them unlocks it, then it becomes unlocked, even if one of the users would prefer otherwise - this is a pitfall to beware of if there are multiple users of Guardian.

## 2.5 Scheduling users to tests

### 2.5.1 Basic procedure

Once you have entered users and tests into the key file, you need to schedule which users can take which tests.

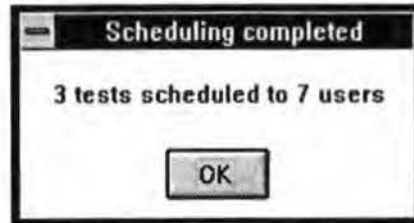
If you want to discover what scheduling is currently in effect, select all users and all tests, and then choose **User | Results** or **Test | Results**. This lists all scheduling for the selected users and tests. See Chapter 4 for a full description of these reports.

To schedule users to tests, you do the following.

1. Select one or more users. You may find the **User | Select group** or **User | Select All** commands helpful.
2. Select one or more tests.
3. Choose **Schedule | Schedule**. This makes an entry in the key file saying that the selected users are scheduled to do the selected tests, and gives you an information



message saying that the scheduling has been done.



If you want to remove scheduling, you can do so with the same procedure but selecting **Schedule | Unschedule**. If in doubt as to whether scheduling is in effect, you can just select users and tests and unschedule them to make sure.

When a user is scheduled to a test, this information remains in the key file until he/she becomes unscheduled. (Even if the conditions for the test to run no longer apply, eg the date has passed or the number of attempts have been used up, the user is still considered scheduled to do the test, and this information will show in the reports.)

## 2.5.2 Scheduling duplicates

You can schedule the same user to do the same test more than once if you want. Each instance will appear as a separate entry on the test menu for the user to do (even though it will be the same test file).

If **Options | Check when scheduling** is set on, then the software checks to see if the user is already scheduled to take the test, and asks you interactively for each occasion of duplication what you want to do with the duplication.

- You can choose **Keep old and add new**, which means

that both schedulings remain in effect. Thus the user will be scheduled to do the test more than once.

- You can choose **Cancel old and add new**, which means delete the old scheduling and add in the new one. This means that the previous scheduling is cancelled, and replaced with the new scheduling.
- You can choose **Keep old and cancel new**, which means do not change the current scheduling.

(If **Options | Check when scheduling** is off, this has the same effect as choosing **Keep old and add new**, ie the new schedulings are added to the old ones.)

## 3. How Presenter works with a key file

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### 3.1 Calling Presenter

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#### 3.1.1 Telling Presenter which key file to use

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You must use version 2.10 or higher of Presenter with Guardian. Earlier versions of Presenter do not look at key files. There are two ways you can tell Presenter which key file to use.

1. The best way is to pass the name of the key file on the command line using the /C= parameter.

For example: "PRESENT.EXE /C=D:\QM\KEY.QDK" uses the key file KEY.QDK in D:\QM.

2. If you do not pass the name of a key file, Presenter looks on its working directory and see if there is a key file there. If so, it uses it.

If there is more than one key file on the working directory, Presenter chooses the first one in DOS order (the one that appears first on a standard DOS directory listing). If you are using this method of accessing the key file, you are safest by making sure that there is only one key file in the directory.

If Presenter is not passed a key file with the /C= parameter and cannot find a key file in its working directory, it runs normally offering the user a choice of all tests in the directory.

You need to be careful about where you put key files. Because Presenter picks one up if it is there (as in 2. above), then a key file can disrupt an ordinary attempt to use Presenter without Guardian. You may wish to keep all key files in a special directory to avoid this happening.

As with all Windows programs, you can set the working directory for Presenter from Program Manager, by selecting its icon, and then using **File | Properties** (or pressing ALT+ENTER) to edit the **Working Directory** box. You can also edit the command line in the same way, perhaps to add a /C= parameter for every time Presenter runs, setting the **Command Line** box.

#### 3.1.2 Changes in the way Presenter is called

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When Presenter is operating with a key file, it is no longer possible to specify the test to be run and other information from the command line. Instead you put the key file on the command line with the /C= parameter, and specify the information about tests in the key file.

- The /P= parameter which defines in which path the answer file is stored is ignored. The answer file is always stored in the directory referenced in the key file when you define the test.
- The /D parameter which allows the user to choose tests from different directories is ignored.
- The /Q= parameter, which can define the path that test files reside in, is only used for any tests that do not have the **Use Path** field set (see section 2.4.1). If the **Use Path** field is set, the path for the test file is taken from the key file.

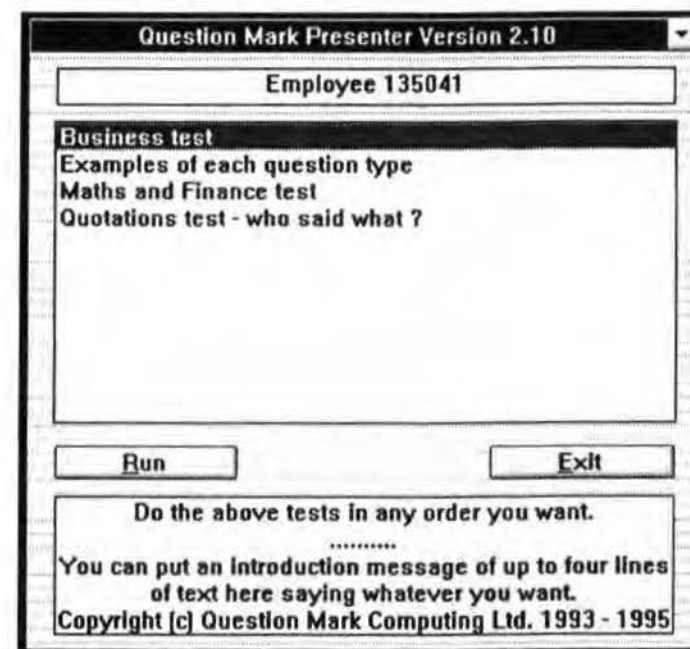
- The /S= parameter which can define the user name is allowed, but the name is checked against the list of names in the key file. If the name is in the key file, the software behaves as if the user had typed in the name. If the name is not in the key file, the software asks the user for a name, ignoring the /S= parameter.
- The standard /H and /K parameters continue to work.

## 3.2 Running a test

When Presenter is run via a key file, the following sequence of actions happens.

1. The user is prompted for a name. If the name is not in the key file, the user is given an error message, and re-asked for the name. This is permitted to happen up to three times before the software exits. (The name can also be set with the /S= parameter.)
2. If the key file has a password set for the name, the password is asked for. Up to three tries are permitted to enter the password, and if it is not entered correctly, the software exits.
3. A window is then presented to the user containing a list of all tests available to the user, with **Run** and **Exit** buttons, similar to the standard Presenter window for choosing which test to run.

The user name is shown on the dialog above the list of tests, and the introduction message defined in the key file (see section 2.2.3) is shown below it. In the example below, there are 4 tests available.



Tests are shown on the list if they are scheduled in the key file, and the appropriate conditions (eg time and date range) are met. If available tests have different priorities, then only these tests at the highest level of priority are shown, and any others are only shown when the higher priority ones are done and become no longer available.

If a test referenced in a key file cannot be found, it is ignored, and omitted from the list. The file is looked for either on the path set on the key file, or else if **Use Path** is not set then on the /Q= path if there is one defined, and otherwise on the current working directory.

When looking for tests, Presenter looks for the test by its DOS file name as stored in the key file, not by the



Question Mark name set in Designer. But in the user dialog, tests are described by their full descriptive test name.

4. The user then does the test in exactly the same way as if there was no key file. Any multimedia calls or external tests are executed in the standard way, with no special security controls from the original key file. If you plan to re-call Presenter from within a test, and you wish to use a key file, you should use a different key file from the one being used to run the first test, or call Presenter so that there is no key file in the working directory.
5. The answer file is saved in the directory specified in the key file.
6. (Unless **Write results to key file** is set off) Presenter updates the key file to show that the test has been attempted by the user, and records the score achieved in the key file.

If Presenter is unable to access the key file, it tries a number of times and then gives a message to the user saying that it is unable to access the key file and asks the user to contact a supervisor. **Retry** and **Cancel** buttons are offered at this stage - **Retry** retrying the key file access, and **Cancel** ignoring it. Usually the reason for a failure to access the key file is because someone else is accessing it, eg someone is in Guardian amending it, and this can be rectified by them leaving, and the access retried.

7. Presenter then shows the user another list of tests. This may be different to the previous list - for example the test just run could be removed from the list if the user has passed or done all his/her attempts, or else new tests could be added if the test just run had a high priority set,

and is now done.

8. This process repeats indefinitely until the user exits.

Please note that if a key file is being used, only those tests scheduled in the key file for the current user are shown as available in Presenter. Other tests, whether locked or not, are not shown on the list. If there is just one test available, Presenter does not automatically run it (as happens without a key file) - the test is simply shown on a list of one.

It can happen that no tests are available, either because none are scheduled, because they are all done, or because they cannot be found. In this case, the user gets a list of zero tests, and must press **Exit** to continue.



## 4. Reviewing results after using Guardian

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### 4.1 General concepts

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There are two ways that answers can be recorded after a test is delivered via a key file.

1. The answer file is stored in the usual way.

The key file defines the directory in which the answer file is stored. If you wish, you can choose to store answer files from different tests in different directories, for example to make it easier to analyse them separately.

2. Information is also stored in the key file (unless you have turned off **Write results to key file** when making the key file).

You can use Guardian to report on this information, as described in the rest of this Chapter.

### 4.2 Guardian report display options

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There are several reports available within Guardian. These all create an Ascii text file containing the data, which you can look at on-screen, print, or import into another program. The way the reports are viewed works similarly to Reporter. By default the information is saved to a text file called INFO.TXT and viewed with Notepad.

You can change the way reports work from the Options menu.

- **Options | Editor** allows you to set a different program to Notepad to view reports in.
- **Options | Report name** lets you set the path and file name for the report file.
- **Options | Append to report** allows you to append information from several reports after one another, rather than let each report overwrite the previous one.
- **Options | View report automatically** allows you to set whether you want to view reports automatically as soon as they are made.

See the main Question Mark Designer for Windows manual for fuller information about the way reports work. They work in a similar way in Guardian as in Reporter.

### 4.3 The reports available from Guardian

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To get a report in Guardian, you select one or more users or one or more tests and select the **Information** or **Results** options from the **User** or **Test** menus.

**User | Information** or **Test | Information** simply include the information visible on the screen in Guardian, ie they list the users or the tests, with all the information set in Guardian.

**User | Results** or **Test | Results** provide more information. For each user and test selected, these reports show information on scheduling and results.

**User |  
Information**

This report shows the user name, password and group for the selected users. (For all users, select all of them.) The data in the report is the same as when exporting user information. An example report might be:

Andrew Brown		CLASS A
Bob Josephs		CLASS A
John Smith		CLASS A
Peter Jones		CLASS A
Amanda Simpson	TYPOIE	CLASS B
David Williams	QTYUEU	CLASS B
Robert Adamson	TREREQ	CLASS B
Sue Jameson	YTREUU	CLASS B

(The users in Class B have passwords set, and the users in Class A do not.)

**Test |  
Information**

This report shows the information defined in the key file for the selected tests. (For all tests, select all of them.) An example report might be:

Test Filename: C:\QDESIGN\EG1.QDT  
 Test Name: Maths and Finance test  
 Use Path: No Status: Unlocked Priority: 0  
 From: None Until: None  
 Attempts: Unlimited

Test Filename: C:\QDESIGN\EG2.QDT  
 Test Name: Quotations test - who said what ?  
 Use Path: No Status: Unlocked Priority: 0  
 From: 09:30 1/09/1995 Until: 17:59 30/09/1995  
 Attempts: Unlimited

Test Filename: C:\QDESIGN\EG3.QDT  
 Test Name: Examples of each question type  
 Use Path: No Status: Locked Priority: 1  
 From: None Until: None  
 Attempts: 3

**User |  
Results**

This report shows a list of results and schedulings of users and tests. It applies to those users and tests that are selected; ie to get the report, you must first select one or more users *and* one or more tests.

To get a complete list of all schedulings and results, select *all* users and *all* tests, and call for the report.

If Class A in the example above had been scheduled to two tests, then an example report (before any tests had been run) might be the following.

Andrew Brown	CLASS A			
Test Name		Date	Attempt	Score %
Maths and Finance test		20/09/1995	Scheduled	
Quotations test - who said what?		20/09/1995	Scheduled	

Bob Josephs	CLASS A			
Test Name		Date	Attempt	Score %
Maths and Finance test		20/09/1995	Scheduled	
Quotations test - who said what?		20/09/1995	Scheduled	

John Smith	CLASS A			
Test Name		Date	Attempt	Score %
Maths and Finance test		20/09/1995	Scheduled	
Quotations test - who said what?		20/09/1995	Scheduled	

Peter Jones	CLASS A			
Test Name		Date	Attempt	Score %
Maths and Finance test		20/09/1995	Scheduled	
Quotations test - who said what?		20/09/1995	Scheduled	

Note that a user remains scheduled to do a test until unscheduled. The report will show the fact that the user has been scheduled, even when the test has been taken.

Every time a user runs a test from a key file, the results are stored in the key file, even if the test is not finished (eg there is an error or the time runs out).

**Test |  
Results**

This report is similar to that from **User | Results**, except that it is ordered by test rather than by user. Again, you must select the users and tests you are interested in, before calling for the report.

Suppose that each person in the example above does the Maths and Finance test once, then an example report for that test might be.

## Maths and Finance test

User	Group	Date	Attempt	Score %
Andrew Brown	CLASS A	20/09/1995	Scheduled	unlimited times
Bob Josephs	CLASS A	20/09/1995	Scheduled	unlimited times
John Smith	CLASS A	20/09/1995	Scheduled	unlimited times
Peter Jones	CLASS A	20/09/1995	Scheduled	unlimited times
Bob Josephs	CLASS A	21/09/1995	1	15
Bob Josephs	CLASS A	21/09/1995	2	63
Andrew Brown	CLASS A	21/09/1995	1	20
John Smith	CLASS A	21/09/1995	1	55
Peter Jones	CLASS A	21/09/1995	1	85

From this report, we can see that user Bob Josephs has taken the test twice, the first time with a low score and the second time with a higher score. (This test was scheduled an unlimited number of times, so multiple attempts are possible, but each attempt is recorded.)

## Appendix A - Examples of use of Guardian

### A.1 Test delivery on a standalone PC

This Appendix gives some examples and ideas on how to use Guardian. Guardian is a very flexible program, and there is a lot more you can do than is covered here, but these ideas will cover some common uses.

One of the simplest uses of Guardian is to control access to tests on a standalone or notebook PC. One way of doing this is as follows.

1. Make sure Presenter is on the PC, for example in directory \QDESIGN. (Check that you are licensed to use Presenter on this PC; you need an extra licence to use Presenter off the site in which Designer is used.)
2. Put the tests you want to run in a directory, for example \QDESIGN.
3. Create a key file with the possible user names, the tests and the scheduling you want. You may wish to lock the tests. Store the key file in directory \QDESIGN.
4. Create an icon in Program Manager to call Presenter. Set \QDESIGN\PRESENT.EXE as the command line and \QDESIGN as the working directory.

When users run Presenter, the key file will then be accessed, and the tests available offered. (You should make sure that there is just one key file in directory \QDESIGN.)

## A.2 Test delivery on a network

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Here are some suggestions for setting up Question Mark and Guardian for use on a network.

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### Tests

You may want to make separate directories for tests that have been released for use, and tests that are still in development. Released test and library files should be stored in a public directory; tests under development should be stored in a private directory.

You can make the public directory read-only, or else set each file in it as read-only. However before doing this (perhaps before copying them to this directory as you need write access to do the locking), you should usually lock all test files with Guardian. This prevents access to the files by Presenter except via a key file.

(If you want to lock a test file without necessarily including it in a permanent key file, you can do so by making a new key file, including the test in it, locking it, and then exiting Guardian without saving the key file. This locks the test file, with no other effect.)

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### Users

You should allocate each user who is able to take tests a unique 16 character name. If your network makes users logon with a name, you may be able to use this name within Question Mark. (If so, you can pass the name to Presenter using the /S= parameter.)

You may want to allocate a password for users to deter impersonation. You can think up these yourself, or else the computer can generate them for you at random. To do this when adding users, set **Options | Generate passwords** on

in Guardian.

If you have many users, you may want to export or report on user names and passwords from Guardian, to be able to communicate to each user his/her name and password. You can either make a printout and cut up the paper with the names and passwords on to give to users, or you can use a word-processor to mail-merge the information into a letter or memo to users.

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### Groups

You are recommended to divide users by groups, especially if you have many users. In education, you may wish to use groups to represent different classes or years of students; in business, you may want to use groups to represent different categories of employees, eg different branches.

Even if there is no distinction between your current users, it can be worthwhile to allocate them all to a single group name. This means that if you later have a different category of users, you can call them a different group, and this will then help you review the answer files or results in the key file by category of users.

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### The key file

You should put all users and reference all tests in the key file. Tests should be added by reference to the release directory (not the development directory), with **Use Path** set on.

You can then schedule users to tests. You may want to set date/time limits on tests to prevent users from accessing tests before or after they are allowed to. You may also want to set in the key file where answer files are stored, perhaps in different directories for different kinds of tests, or in a central network answer file directory.

You should consider making a public directory to store your key file in. Unless you set **Write results to key file** off, users

will need write access to the key file. If you or your network administrator do not like this, you can choose not to write results to the key file, providing you don't need to limit the number of attempts each user has at a test.

You should tell Presenter which key file to use by using the /C= parameter to point at the file when defining the call to Presenter - either in the Windows icon command line invoked by users, or in the network menu system entry that calls Presenter.

### A.3 Control of tests run at a distance

Guardian can also be used to control testing at a distance, when you want to send a user Presenter, test files and a key file, and control how the tests are delivered.

#### Setting up the files to send

You need to send the following files:

- Presenter (file PRESENT.EXE). You need a Question Mark distribution licence that gives you permission to copy Presenter in this way.
- The test files that are being delivered (and any subsidiary library or multimedia files). You should usually lock the test files.
- The key file to control access to the tests. You should make sure that **Use Path** is set off for all tests, as you may not know what directory the user will use.

It should be safe to put all the user names in the same key file, though you can make separate key files for each user if you

prefer. You could alternatively have one generic name that you tell people to enter (eg DEMO or STUDENT), so that everyone uses the same name. If using a generic name, you might want to change the standard logon message "Enter your name:" into something like "Type DEMO to identify yourself", to remind the user of the name he/she is supposed to enter.

#### Sending the files

One way of sending the files is to copy them onto floppy disk, and to post the floppy disk.

Alternatively, you may be able to send the files electronically, by e-mail or in some other way. If you are sending them electronically, you may want to compress the files to make the send easier and less expensive.

#### How the user runs the test

If you are using a floppy disk, the user could run the test(s) directly from the floppy disk. In this case, you would tell the user to put the disk in the drive, and then run file PRESENT.EXE from Program Manager or File Manager. However running from floppy disk is very slow, and is likely to be impractical in most cases.

Usually, you will want to get the user to load the files onto his/her hard disk, and you should provide instructions for doing this. The instructions need to cover the following steps.

1. Make or find a suitable directory to be used to store the files on. If an existing directory is used, it would be sensible to delete any existing files on the directory before loading the new files (or at least delete any key files).
2. Copy all the files onto this directory. (If the files are compressed, then obviously they must be uncompressed first.)



3. Provided that there is no other key file on the directory, the user can be told to run PRESENT.EXE from Program Manager or File Manager.

You may be able to automate this process with an installation program or batch file, or even with a self-extracting compression method.

### Returning answers

If you are distributing tests on floppy disk, you can set the path for answer files to be stored within the key file for each test as A:\ (assuming the user's floppy drive is A:). This will store the answer file on the disk, which can then be mailed back to you. You should obviously leave enough free space on the disk for the answer file(s). (Try out the tests first, to see how large the answer files are likely to be if all questions are answered.)

If distributing tests by e-mail, you should get the user to e-mail you back the answer file. In this case, you should probably leave the answer file directory in the key file for each test as blank, so that the file is saved in the current directory.

You may also want the user to delete the test and other files from the hard disk after delivering the test.

## A.4 Creating a sequenced set of tests

You can combine the facilities for setting priorities and running a test until a pass mark is achieved to create a group of tests that are done in combination.

For example, supposing you have 4 tests A, B, C and D, and you want the user to be unable to run test C before getting 80% on A and B, and also be unable to run test D before getting

80% in A, B and C.

Then you could set tests A and B as priority 2, test C as priority 1 and test D as priority 0. You would set tests A, B and C to be attempted until a pass mark of 80% was achieved.

Presenter would then initially offer only tests A and B (as they are higher priority than tests C and D). The user could choose to run either test A or test B, and each would be removed from the list of tests when a score of 80% is achieved. When both are removed, Presenter looks at the next priority level and would offer test C. Then when a score of 80% in this is achieved, Presenter would look at the last priority level and run test D.

You could tell the user that this was happening by setting appropriate messages in the final pages of the tests, depending on whether the user got more or less than 80%. You could also define some introduction wording in the key file, which would appear in the Presenter dialog showing the list of tests.

## A.5 Use of multiple key files

There are many circumstances where you may want to make multiple key files, including the following.

- If you have more than one person using Guardian to set up key files, you may decide to have a different key file for each user of Guardian to avoid confusion. (Please see the licence conditions at the front of this manual for how you are licensed to use Guardian; if you use the software on more than one PC, you need to purchase a site licence for Guardian or additional copies.)



- If you have more than 1000 users or more than 60 tests, then you need to create multiple key files as these are the maximum that can fit in one key file.
- If you are calling Presenter from itself (as an external test or multimedia call) to do nested testing, you will need to use a separate key file for each nested level of Presenter. (If you do this, then if you are using passwords, each level of Presenter will ask again for the user's password.)
- If you are using Question Mark in a number of separate applications or areas, you may decide to have a separate key file for each, to aid organisation of your work.
- Because a key file can record results to tests, you may wish to freeze or archive a key file at some point, for example the end of a training class or term, and start a new key file for subsequent use.

Remember that if you do make more than one key file, then you must identify to Presenter which one it should use. The safest way to do this is by using the /C= parameter to point at the file. For example, you could have a series of icons in Program Manager each calling Presenter with a different command line pointing to a different key file.

You can make a new key file from an old one by opening it and then saving it as a new file. This is often the best way of copying information from an existing key file to a new one. You can also copy users from one key file to another with the import/export facility.

## Appendix B - Notes on security issues

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No computer system can be completely secure. Guardian improves the security of standard Presenter and also allows you to schedule tests in a powerful way, but it is not a complete solution to everyone's security problems.

Please, please remember to make back-up copies of all your important files, including key files, test files and answer files. If there is a hardware or software malfunction, or if you make a mistake, you could lose your important data. Many more people will run into problems arising from failure to make a good back-up than will run into problems associated with not having good enough security.

However here are some guidelines to consider, which will improve security in most environments. Don't worry if you cannot follow all these guidelines. In most organisations, it is unlikely that any student or trainee will seriously try and break into computerised testing.

1. Make sure all test files are password protected with passwords others will not guess. If this is done, no-one will be able to look at the files in Designer, nor reference the files in Guardian, without quoting the passwords.
2. Make sure that you set a name and password for your key file that others will not guess. If someone can use Guardian to get into your key file, this removes all the security provided by Guardian.
3. If you do not want people to be able to run your tests without using a key file, lock them. This will prevent

access to them with the standard Designer or Presenter.

4. Do not allow users access to the Guardian program. Even if they do get access to Guardian, it is not that easy for them to do something with it, but there are some possible loopholes. Preventing people from running Guardian and from seeing this user manual are sensible precautions.
5. Choose good passwords for users and foster an atmosphere where people will not tell each other their passwords. The user name and password are the main protection you have that people are who they say they are.
6. Make sure the **Allow question window to be re-sized or moved** box is turned off in the control information for tests within Designer. If this is on, users are allowed to switch to other programs while taking a test, which can be a security hazard.
7. Consider setting up user PCs so that it is not possible for users to access files and programs they don't need to.
  - If running on a Novell or similar network, use the facilities available to restrict access to directories, to prevent users from directories except those needed.
  - If users have access to Program Manager, consider amending the PROGMAN.INI file to remove users' abilities to make new icons, run programs or exit Windows. Also remove access to File Manager and the DOS command line prompt, which allow users to delete and copy files.
  - Try and prevent users from having access to a local floppy disk drive, that they can copy files to.

- Consider what happens when a user turns off the PC, and the computer re-boots. It may be possible for a user to enter DOS in this way, and so access other files and programs that you would not want him/her to. PCs can be set up to prevent this being possible.
8. For maximum security, you should invigilate tests. This will make it harder for people to impersonate each other by swapping passwords, and can also deal with most other security problems. The user name is displayed on the Presenter dialog showing the list of tests, and can be displayed on the status line while answering a test; checking these can protect against impersonation.

If a user has access to an unsupervised PC, then if they are sufficiently clever and have enough time, it is theoretically possible that they could get through almost any security. But if they are properly supervised, then security is much stronger.

If users have free access to File Manager or DOS, for example if you are sending tests at a distance by floppy disk, and you cannot prevent them from using their PC as they please, then there are several loopholes in the Guardian security. Some examples of these, so you can be aware of them are:

- The key file records all attempts at tests. However a user could make a copy of a key file before running a test, take the test, and then if he/she didn't like the score, replace the new key file with the original one, by copying it in DOS or File Manager. The answer file would still be there, but this could be deleted too.
- If a file is password protected and locked, a user cannot access it. However if they have access to Guardian and

Designer, they could make another test file with the same name, make a key file and lock it, then switch files, and unlock the original file. One partial protection for this might be to put unusual characters in the test name to make it harder to re-enter.

- The protection regarding priorities can be sidelined by deleting the file that has to be done first, and the software will then switch to the next files.
- The protections regarding dates can be sidelined by changing the system date via Windows or DOS.

## Appendix C - Trouble-shooting and possible errors

### C.1 Problems using the Guardian software

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#### Cannot access key file (name/ password forgotten)

You must enter the name and password specified for the key file every time you open the file. If you cannot remember what these are, you cannot open the file.

(If you do forget your password, we may be able to help you recover your data if you send the file to us.)

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#### Cannot access locked test file with Designer

When a file is locked, you are not supposed to be able to access it with Designer or Presenter. To be able to edit or look at it in Designer, you need to unlock it in Guardian first.

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#### Cannot find key file

When you save a key file, you specify the directory in which it is saved. This defaults to the last directory used in Guardian, which is stored in the QD\_GUARD.INI file. You can check the directory by looking at the **File | Open** dialog in Guardian or by looking at the INI file.

If you delete the QD\_GUARD.INI file in the \WINDOWS directory, this restores all Guardian settings to the default ones.

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#### Cannot run Guardian

Check that the Program Manager icon is set up to run GUARDIAN.EXE, and that the file exists on your computer. If in doubt, re-copy the program file from the distribution disk.

Guardian needs the Question Mark .DLL files to be present in its directory or in the \WINDOWS\SYSTEM directory to run. Check that these are present, and if necessary copy them from the Question Mark directory, or from the Question Mark Designer for Windows distribution disks.

If you still have trouble, try deleting QD\_GUARD.INI from the \WINDOWS directory.

### Duplicate scheduling messages are confusing

If **Options | Check when scheduling** is on, then if you try and schedule the same user to the same test a second time, you are advised of this and asked to decide what to do. If there are many duplicates, you can get a series of dialog boxes asking you what to do.

To avoid these dialogs, either turn the option off, or else unschedule users to remove any out-of-date scheduling, before re-scheduling them.

### Need to rename or delete key file

You cannot rename or delete a key file from within the Guardian software. You should use Windows File Manager.

### Not sure who is scheduled to do what

If you need to know who is scheduled to do what, select all users and all tests (or all those you are interested in), and then choose **User | Results** or **Test | Results**.

If you want to be sure that nobody is scheduled to do any test, select all users and tests and choose **Schedule | Unschedule**.

If a user is scheduled to do a test, the fact that they are so scheduled will always appear on the Results reports until they are unscheduled, or until the user or test is deleted. (Even if the

test is only scheduled to be done a limited number of times, and that number of times is done, the record that they were scheduled remains.)

### Schedule menu is not highlighted

This menu is only highlighted when you have an open key file, with at least one user selected *and* at least one test selected.

### Test file not found by Guardian

Guardian will show **Not found** as the status for a test in a key file if the test file cannot be found on your PC in its original directory.

This may not matter if there is a different configuration of files on the delivery PC. The test will still be found by Presenter if a file of the correct name is present in a suitable directory according to the rules followed by Presenter as set out in Chapter 3.

### Test menu is not highlighted

To highlight the **Test** menu, you must open a key file, and make the Tests window current. To do this, click on it, or select it from the **Window** menu.

### User menu is not highlighted

To highlight the **User** menu, you must open a key file, and make the Users window current. To do this, click on it, or select it from the **Window** menu.

### What are .Q!K files?

.Q!K files are backup copies of .QDK key files. When you save a new copy of a key file with Guardian, the old file is renamed with a .Q!K extension. You can disable the creation of these files by setting **Options | Backup** off.

To recover a .Q!K file, you rename it to a .QDK file using

Windows File Manager.

## C.2 Problems using Presenter with key files

The most common problem occurring with Presenter is whether a key file is found or not. Remember that if Presenter does not start by asking you for a user name, then it has not found a key file.

### Key file preventing standard use of Presenter

If there is a .QDK key file on the Presenter working directory, Presenter will read this and run tests from it, possibly ignoring other command line parameters and test files on the directory.

If you want to use Presenter without a key file, you must move the key file to another directory, or set the Presenter working directory differently. You may want to have a special directory for key files to avoid this problem, and reference key files with Presenter using the /C= command line parameter.

### No key file found by Presenter

If you have specified the key file with the /C= parameter, check that the key file is present in the correct directory specified.

If you expect to pick up the key file from the working directory, check that it is there and that the Presenter working directory is what you expect (check the icon properties box in Program Manager).

Check also that you are using Version 2.10 or higher of Presenter. Previous versions of Presenter do not work with key files.

### Test does not appear on the list of tests

If a test does not appear in Presenter when you expect it to, here are a number of possible reasons.

- Has the correct key file been accessed?
- Has the correct user name been entered? Is the user scheduled to take the test in the key file?
- Is the test set to only run in certain date/time bands, which are not current? (And if they should be current, is the PC's date/time clock correct?)
- Is the test set to run only a certain number of times, or until a score has been achieved, and if so has this happened and so made the test no longer available?
- Is there another test of higher priority in the key file? No test of one priority level is done until all tests of all higher priorities are no longer available.
- Is the test present on disk in the correct directory (either the directory in the key file if **Use Path** is set, or the working or \Q= directory otherwise)? Can it be accessed if it is? If Presenter cannot find a test file, it is omitted from the list.

### User name not accepted by Presenter

Either the user name is not in the key file, or the key file being accessed is the wrong one (see below).

### Wrong key file found by Presenter

If you are referencing the key file via the /C= parameter to Presenter, you should check that the directory and file name in this parameter are correct.

If you are relying on the key file being found on the working



directory, then check the working directory is what you expect (check the icon properties box in Program Manager).

Also check to see if there are more than one key files in the directory. If there is, then Presenter will use the first one in DOS directory order (the order you get from DOS when doing a DIR command). If using this method of accessing key files, you should usually have just one key file in a directory.

#### Wrong test seems to run

Presenter looks for tests by DOS test file name. If you have two different tests with the same file name in different directories, then it may be that Presenter is accessing the wrong test. Or if you rename a test or change its internal Question Mark name after you add it into the key file, then this could cause confusion. Check carefully what is happening.

The safest way to tell Presenter to find a test is to reference the test in its directory in the key file with set **Use Path** on.

## C.3 Problems analysing results after using Presenter and key file

#### Answer file not saved where expected

If a test specifies that answers are saved to disk, then an answer file is always created - the test will not run if an answer file cannot be made.

The answer file is saved in the directory specified in the key file under the test file details. The directory specified in the introduction page is not used; this is just the default setting when a new test is added to the key file. Any /P= parameter to Presenter is ignored if a key file is used.

If the answer file directory in the key file is blank (empty), then the answer file is saved in the Presenter working directory.

#### Less data than expected in key file report

Remember that all Guardian reports include only information on the users and tests selected when calling for reports. Information on other users and tests in the key file is not included. To get all information, select all users and all tests.

If you make a Results report and there is less information than you expect, consider one of the following possibilities.

- The key file could have **Write results to key file** set off, so that test results are not written to the file.
- The key file could be set to be read only, or there could have been some kind of disk error which prevented some results being written.
- The user did not do the test, and so there is no result.
- A copy has been made of the key file, and the results stored in the copy, not in the original file.

#### More data than expected in key file report

Remember only to select the users and tests you want to report on.

You can also use Notepad or another editor or word-processor program to amend a report, for example to cut out parts you do not need.

Whenever a user selects to run a test from Presenter a result is saved in the key file, so the user could have attempted the test more than once. Even if there is an error in Presenter or in Windows, a result could be stored in the key file (usually with score 0%).

### Problems accessing reports in Guardian

When a user has taken a test, the report will still show that he/she is scheduled to do it (even if the test has been taken and is no longer available to the user).

By default, Guardian makes a report called INFO.TXT and calls Notepad to view it. You can change how this happens via the **Options** menu. If in doubt, you can restore the default settings by deleting the QD\_GUARD.INI file on the \WINDOWS directory.

Notepad only allows you to view files that are up to 64K long. If you have a very large report, it could be longer than this. You would then have to view it in a different editor. For example, to view the report in a word-processor, you would run the word-processor, choose **File | Open**, and select the file INFO.TXT (on whatever directory Guardian is using). Alternatively change the editor used to a program that can view larger files.

## Appendix D

### Reference listing of menus

Guardian has the following menus.

#### File

The **File** menu lets you create, open, save and modify key files.

<b>New</b>	Create a new key file.
<b>Open</b>	Open an existing key file.
<b>Save</b>	Save the current file.
<b>Save As</b>	Save current file using a new DOS file name.
<b>Password</b>	Edit the key file name and password.
<b>Introduction</b>	Set the introduction messages and default answer file directory.
<b>Logon messages</b>	Set the messages used by Presenter asking for user name and password.
<b>Exit</b>	Exit Guardian.

#### User

The **User** menu lets you add and change information about users in the key file. It is only active if the Users window is current.

<b>Add</b>	Add new users into the key file.
<b>Delete</b>	Delete the currently selected users.
<b>Edit</b>	Edit the currently selected user.
<b>Assign Group</b>	Assign the currently selected users to a user group.
<b>Sort</b>	Choose from a sub-menu to sort the users into alphabetical order by <b>Name</b> or <b>Group</b> .

<b>Select group</b>	Select all users in a group.
<b>Select all</b>	Select all users in the key file.
<b>Import</b>	Add new users into the key file from an Ascii text file.
<b>Export</b>	Export information on all users in the key file into an Ascii text file.
<b>Results</b>	Report on the scheduling and results of the currently selected users and tests.
<b>Information</b>	Report on information on the currently selected users.

**Test**

The **Test** menu lets you add and change information about tests in the key file. It is only active if the Tests window is current.

<b>Add</b>	Add new tests into the key file.
<b>Delete</b>	Delete the currently selected tests.
<b>Edit</b>	Edit details in the key file about the currently selected test.
<b>Lock</b>	Lock (prevent access by Designer and Presenter) the currently selected test files.
<b>Unlock</b>	Unlock the currently selected test files.
<b>Select all</b>	Select all tests in the key file.
<b>Results</b>	Report on the scheduling and results of the currently selected tests and users.
<b>Information</b>	Report on information on the currently selected tests.

**Schedule**

The **Schedule** menu lets you schedule users to take tests and also undo the scheduling. The menu is only active if both users and tests are currently selected.

<b>Schedule</b>	Schedule the selected users to take the selected tests.
<b>Unschedule</b>	Unschedule the selected users to no longer take the selected tests.

**Options**

The **Options** menu lets you control the way reporting works in Guardian and make some other preference selections.

<b>Editor</b>	Choose the editor used to view reports in.
<b>Report name</b>	Define the file name and directory for the report file.
<b>Append to report</b>	Choose whether to append new reports at the end of any existing report file, or to overwrite old reports with new ones.
<b>View report automatically</b>	Choose whether or not to view a report as soon as it is produced.
<b>Backup</b>	Choose whether to make backup .Q!K files whenever a key file is saved.
<b>Generate passwords</b>	Choose whether to randomly generate passwords for new users.
<b>Check when scheduling</b>	Choose whether to check to see if the user is already scheduled to take the test when scheduling.

**Window**

The **Window** menu lets you tile and cascade the Users and Tests windows or select one of them as current.

**Help**

The **Help** menu gives you access to the Guardian on-line help. **Help | About** shows you the version number of the software.