

MULTIPLE CHOICE APP

Manual
Version 1.3

Jens-Peter Bardt

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Introduction

With the multiple choice app, you can create so-called multiple or single choice tests and carry out these tests with the app. The number of questions and the number of answers per question can be freely selected and can vary within a test. The number of correct answers is also freely defined for each question. Once a test has been defined, it can be transmitted wirelessly to one or more devices via a direct connection. The results of the test are stored on the device on which the test was performed, along with the tester's registration information. If the test was wirelessly sent to the tester's device from another device, the test results will be sent back to that device. The app can be used as a single-user application and also as a classroom application.

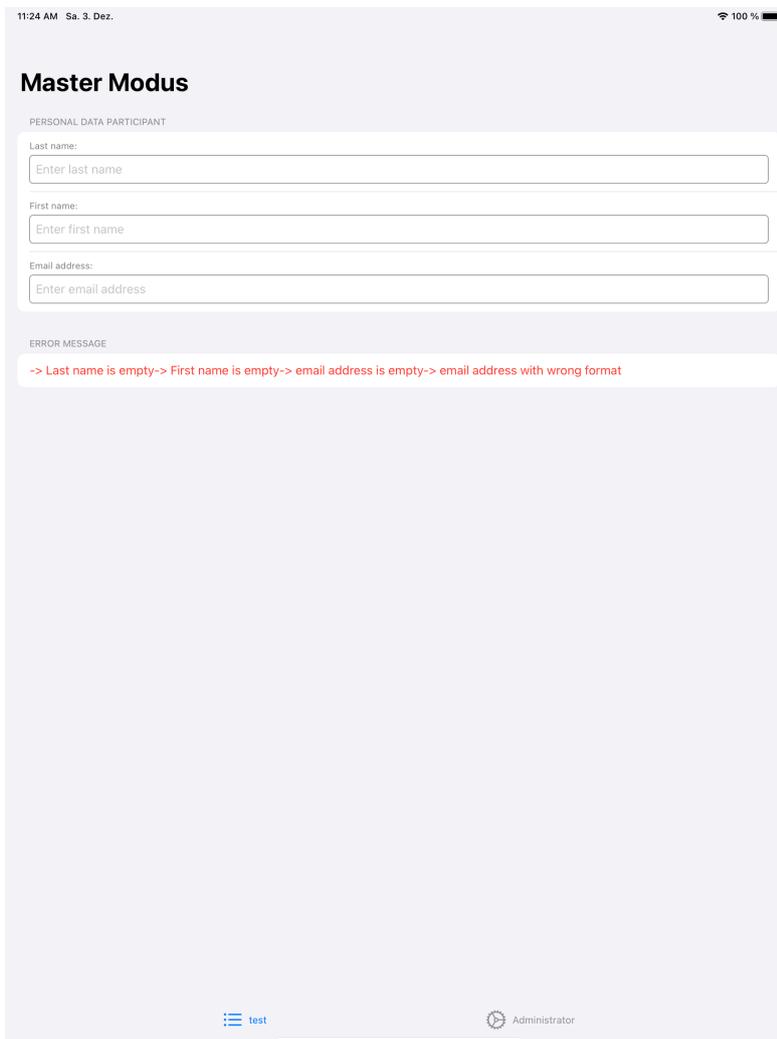
Install the App

Download and install the app from the Apple App Store. The app can be installed on an IOS device (iPad, iPhone) or a macOS device.



Layout

The interfaces differ slightly between iPhone, iPad and macOS. It also plays a role whether



the devices are operated in portrait or landscape format. There are two buttons in the footer that can be used to switch between the two application roles. The **test** button selects the role as a test participant who wants to carry out a test. The **Administrator** button selects the administrator role. The administrator can create test templates, evaluate the test results, and create and send test certificates for participation.

The app's mode is displayed in the header. There is the **Master mode** and the **Tester mode**. This mode can be changed via the settings menu item in the Administrator menu. The significance of the two modes is described in more detail in the Workflow chapter.

Workflow

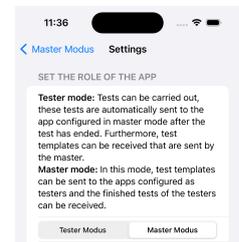
The workflow and the procedure differ when used as a single-user application and when used as a classroom application.

Single-user application

In the administrator menu of the app under "Settings" you can set the **Master mode**. In this mode you can use all functions of the app without restrictions. All completed tests are saved in the database after answering the last question. The results are stored in the app on the device and are not transferred to another iPad.

The workflow then looks like this:

- If the app is to be used as a single-user application, there is no need to enter the classroom ID on the opening screen. The input can be skipped with the "Work locally" button.
- The administrator must create in front of the test a test template with the questions and answers of the test. In this template, he defines the right and wrong answers and how many points can be achieved for each correctly answered question. (Chapter Test Templates)
- Once the template has been defined, the administrator still has to activate the test template. This is necessary so that this test is visible and selectable for the participant who wants to choose and perform the test. (Chapter Activate test template)
- The test participant can now select the activated test after entering their name and email address on the registration.
- If the test template contains a data protection clause that the test participant has to accept or reject before the test can start, a message box with the data protection no clause and two buttons for confirming or rejecting will automatically appear.
- Now the test begins. The test participant chooses the correct answer or answers by clicking on the correct answers. These selected answers then turn green. Clicking again resets the answer back to an incorrect answer. The navigation to the next question or previous question is done using the two buttons "next question >" or "< previous question" in the header area. In the footer there are additional question numbers that can be used to navigate directly to the surrounding questions. After the last question, a page appears with a button to end the test.



Classroom tests: Please enter the classroom ID. The teacher and students must use the same ID.
Work locally: Only work locally without a network.

12345



Work in the network

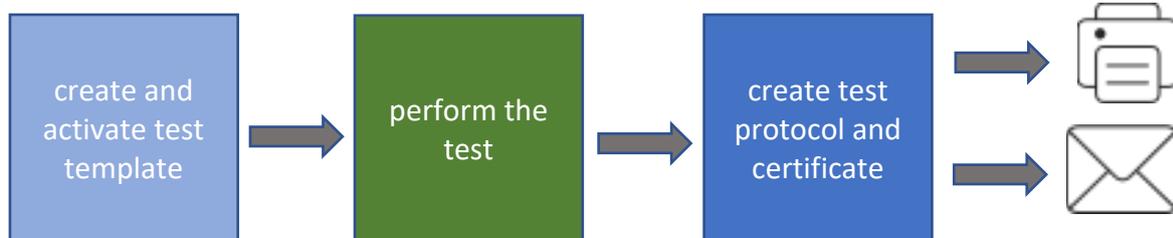
Work locally

delete

< previous question next question >

1 2 3 4 5
Question 1 Question 2 Question 3 Question 4 Question 5

- After completing the test, the participant can see their results in a short report. At the same time, the results are saved in the database. This is the last activity for an test participant.
- Later the administrator can then access the stored test results in the database. The administrator can see, print or send the test protocol. Furthermore, he can create a test certificate and send it by mail, print it or save it as a file.



Classroom application

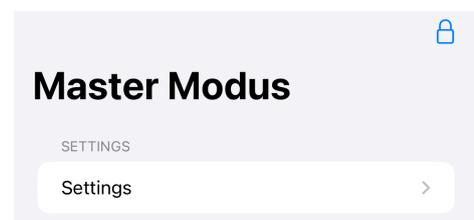
When using the app as a classroom application, a 5-digit classroom ID is to define on the opening screen. The teacher and students must use the same ID. This identifier can be redefined individually for each test. The teachers must make sure that the classes in the neighboring rooms use a different ID if they are also doing a test. This identifier ensures that the tests are only transmitted to the devices in the class in the same room.

Master mode is set on the teacher device and tester mode is set on all other devices on which the tests are to be performed.

The activities of the individual roles (test participant and administrator) are the same in terms of content as described in the single-user application section. However, these activities are no longer carried out on the same device but are divided between the device in master mode and the devices in tester mode.

The creation and activation of the test template are carried out by the administrator on the device in master mode. To do this, the administrator must be logged in as an administrator. You log in by pressing the lock symbol in the administrator menu (user management).

After logging in, the entire administrator menu is visible.



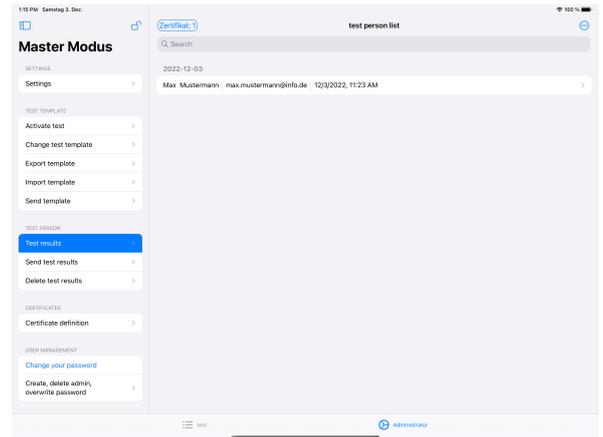
Once the test template has been created, it still has to be activated so that it is visible and selectable for the tester. The test template can then be sent to all devices that have entered the **same classroom ID** and are in **Tester mode**.

Note: maximum distance of approx. 9 m

The test participants work exclusively on the devices in tester mode. You can register with your personal data, take the test and see the short log after the test is complete. The results are stored in the database on the device where the test was performed. The app also tries to send the data to the device in **Master mode** that sent the test. If the device is not nearby and not ready to receive, the test results can be sent again later by the administrator.

After the end of all test participants, the administrator should check whether he has already received all test results. He can easily check this using the Test results menu item.

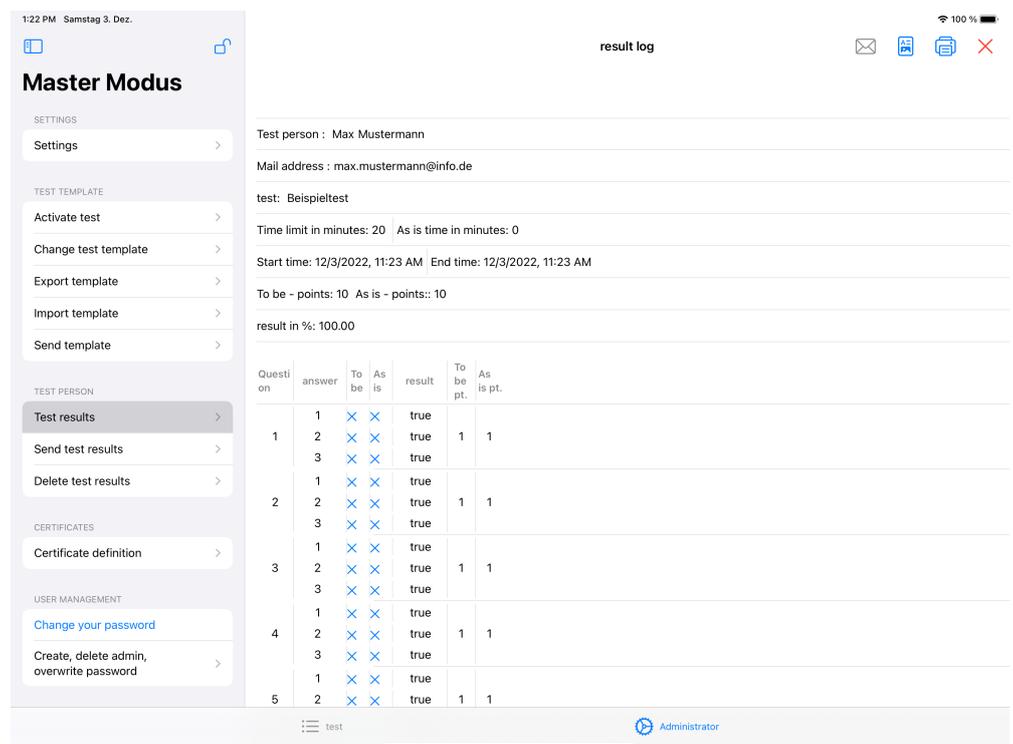
If there are a lot of entries in the list, the sorting of the list can be adjusted using the symbol ☰ at the top right, or the number of entries can be reduced by entering the surname, first name or email address in the search field.



If not all test results have been transmitted, the administrator can log on the device in tester mode with his administrator account and manually trigger the sending of the test results again via the administrator menu "Send test results".

If all test results are now available on the device in master mode, the administrator can print out, save or send the short reports. The test certificates can also be created, sent or printed.

The PDF documents created by the administrator are also located in the app's export directory on the iPad and can be further processed or archived from there. The test certificates are also created via the "Test results" menu item. It is important to ensure that the correct certificate definition has been selected. (top left in the picture "Certificate: 1"). If you click this button, you



can select a definition from the existing ones.

The certificate definition defines the title and subtitle of the certificate, a signature text can be specified and a signature for the signature as well as a logo can be stored. Furthermore, data fields can be shown and hidden. The texts can be adapted for mailing and an email address can be stored to which a copy of the certificate should be sent.

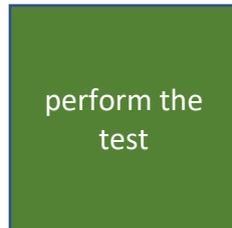
The test certificates are sent by e-mail using the ✉ button. An email is generated here and the test certificate is automatically added as an attachment.

The 📄 button generates a test certificate as a PDF document, which can then be processed further. The 📋 button creates a PDF document of the summary report.

Master Modus:



Tester Modus:



Test participant – perform the test

The test can be initiated from the test participant using the bottom button "test " to open the registration screen.

After the participant has entered their name and email address correctly, he can choose the activated test.

If the test template contains a data protection clause that the test participant must confirm or reject before the test can begin, a message box with the data protection clause and two buttons for confirmation or rejection will automatically appear.

Tester Modus

PERSONAL DATA PARTICIPANT

Last name:

Mustermann

First name:

Max

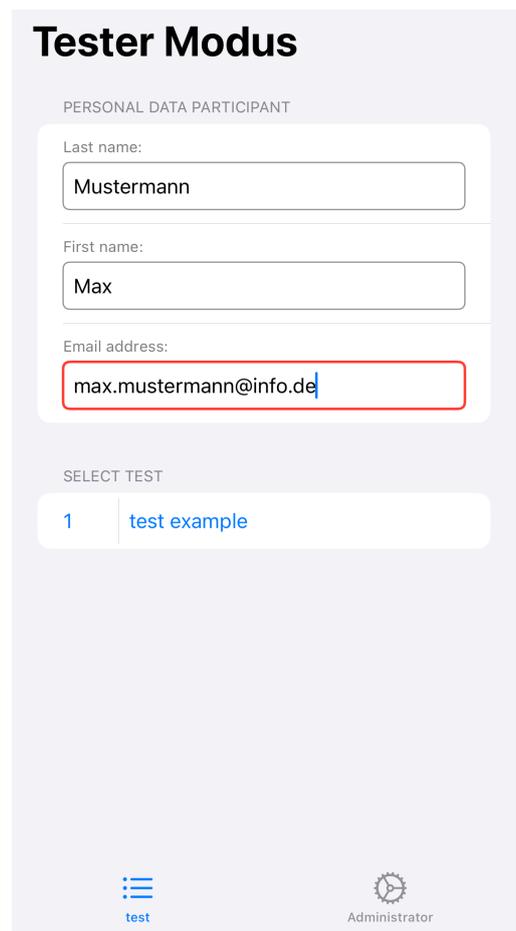
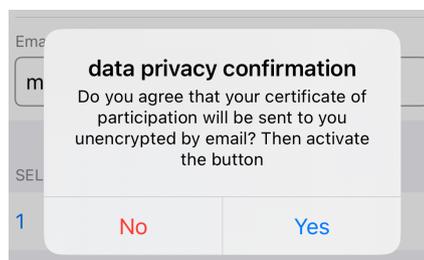
Email address:

max.mustermann@info.de

SELECT TEST

1

test example



A separate page is displayed for each question in the test. If the number of answers exceeds the visible area of the screen, you can scroll down.

The test- participant selects one or more correct answers by clicking on those answers. These selected answers then turn green. Clicking again resets the answer back to an incorrect answer. The navigation to the next question or previous question is done using the two buttons "next question >" or "< previous question" in the header area. In the footer there are additional icons with the surrounding numbers of the questions. When you click on these buttons, you can navigate directly to the respective question.

After the last question, a notice page will appear advising the participant to end the test.

After pressing the "finish test" button, the test is finished and a short report appears in which the test participant can see his result.

At the same time, the results are saved in the database.

After pressing "Close" the button all activities for an test participant are finished.

< previous question next question >

1. question 1

1	answer 1	✓
2	answer 2	✗
3	answer 3	✓



Close

Test person : Max Mustermann

Mail address : max.mustermann@info.de

test: test example

Time limit in minutes: 20 As is time in minutes: 0

Start time: 12/3/2022, 1:53 PM End time: 12/3/2022, 1:53 PM

To be - points: 10 As is - points:: 9

result in %: 90.00

Question	answer	To be	As is	result	To be pt.	As is pt.
1	1	✗	✓	false	1	0
	2	✗	✗	true		
	3	✗	✓	false		
2	1	✗	✗	true	1	1
	2	✗	✗	true		
	3	✗	✗	true		
	1	✗	✗	true		

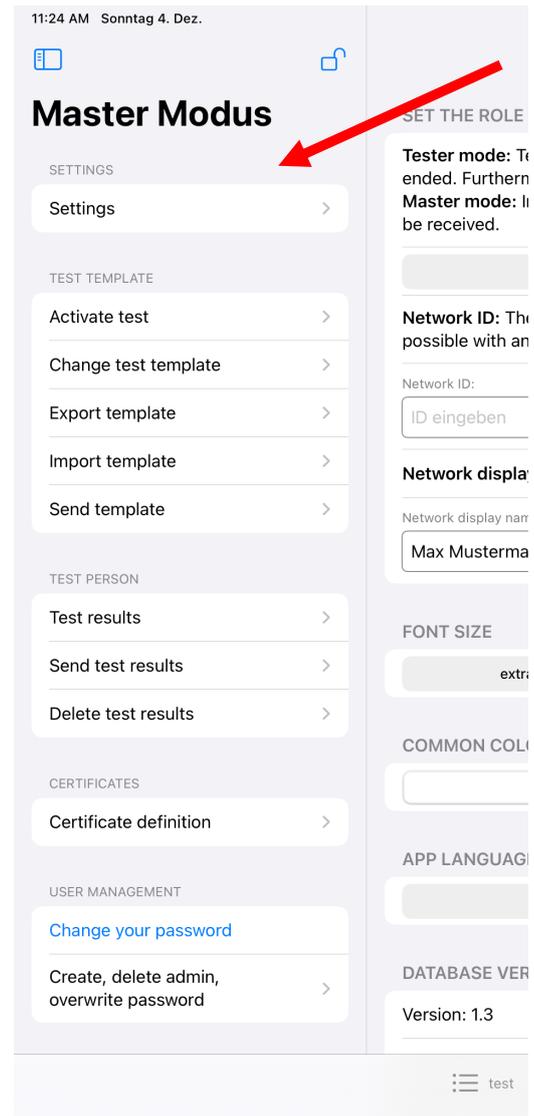
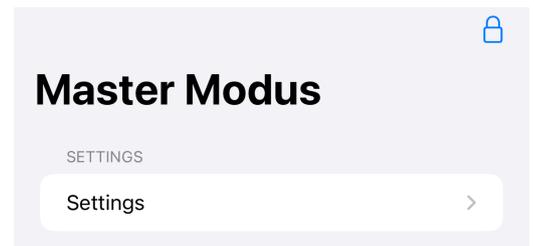
Administrator

You can access the administrator menu by pressing the "Administrator" button.

To see the complete administrator menu, the administrator must be logged in as an administrator. You log in by pressing the lock symbol (user management).

The following program parts are in the administrator menu:

- Settings
- Test templates
 - Activate test
 - Change test template
 - Export template
 - Import template
 - Send template
- Test person
 - Test results
 - Send test results
 - Delete test results
- Certificates
 - Certificate definition
- User management
 - Change your password
 - Create, delete admin, overwrite password



Settings

The mode of the app can be set in the Settings menu item. As already shown in the workflow section, the **Tester mode** is only intended for the devices that carry out the tests. The **Master mode** can send test templates and collect the test results.

The **Network ID** is the classroom ID entered on the app's home screen.

The **Network display name** is displayed on the network. When sending data, this name will appear in the list of connected devices.

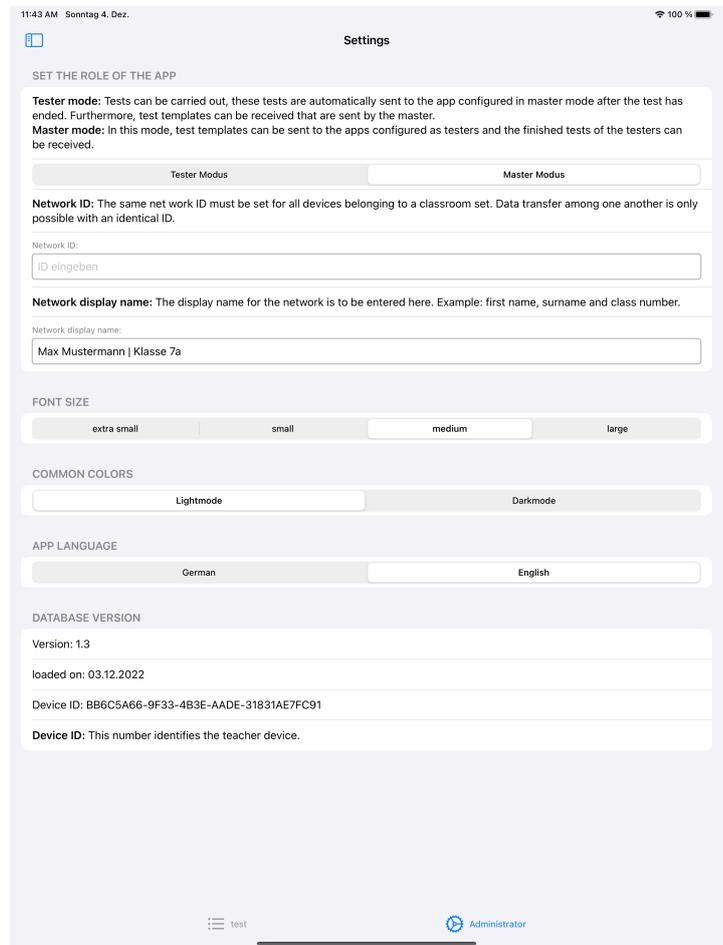
The **Font size** can be set in the range from **extra small** to **large**.

The view can be switched between **Light mode** and **Dark mode**.

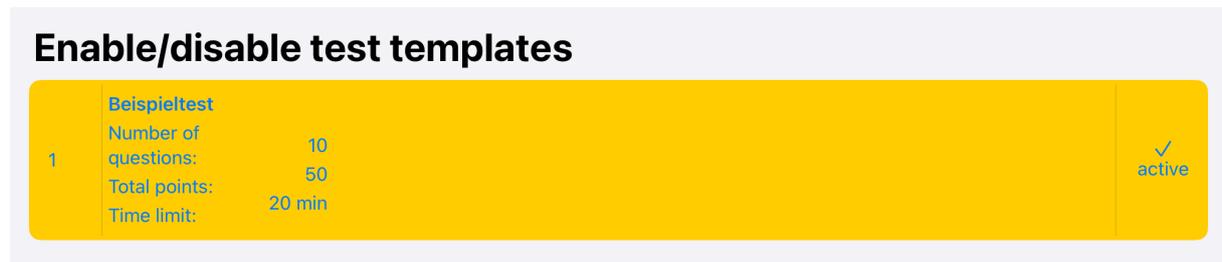
The language of the app can be set to **German** and **English**.

The database version corresponds to the app version.

The **Device ID** uniquely identifies the device on which the app is running. This ID is needed to send back the test results to the teacher device.



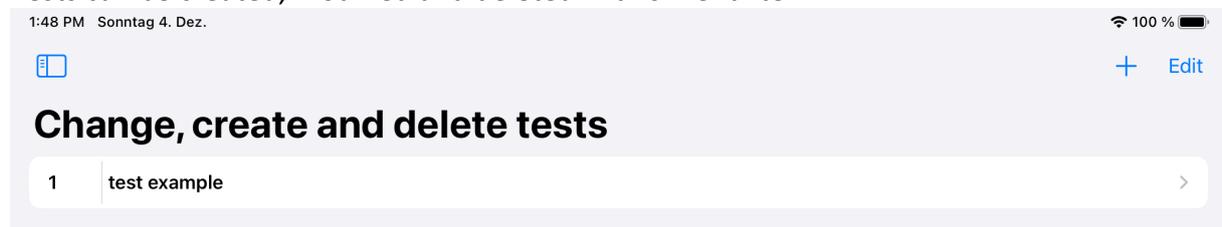
Activate test template



One or more tests can be activated from the list of test templates by clicking on the line.

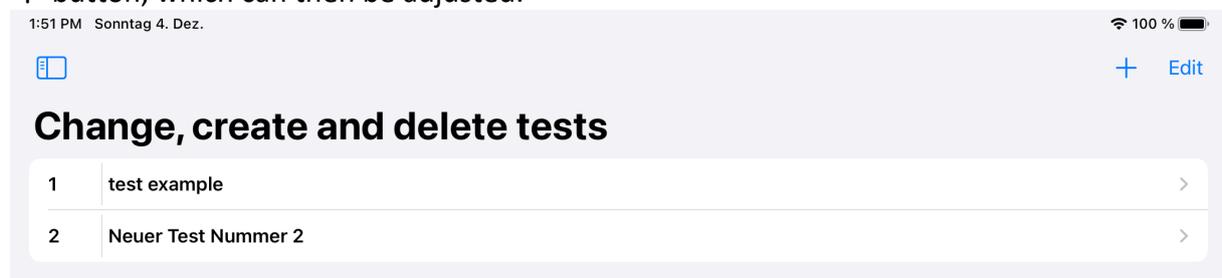
Change test template

Tests can be created, modified and deleted in this menu item.



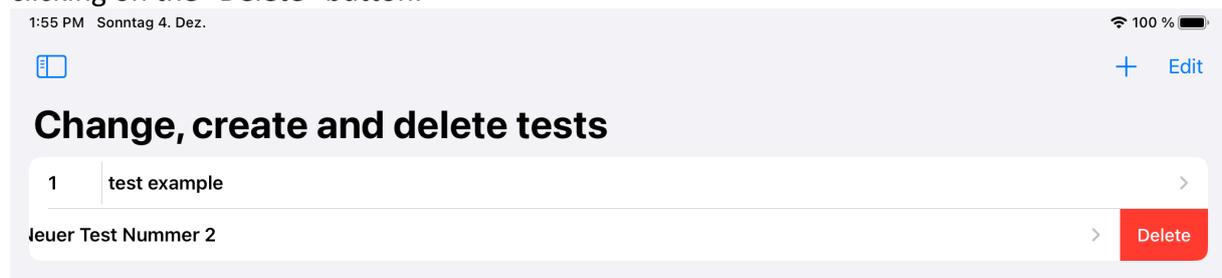
Create test template

A test template with the next free number is automatically created in the background via the + button, which can then be adjusted.



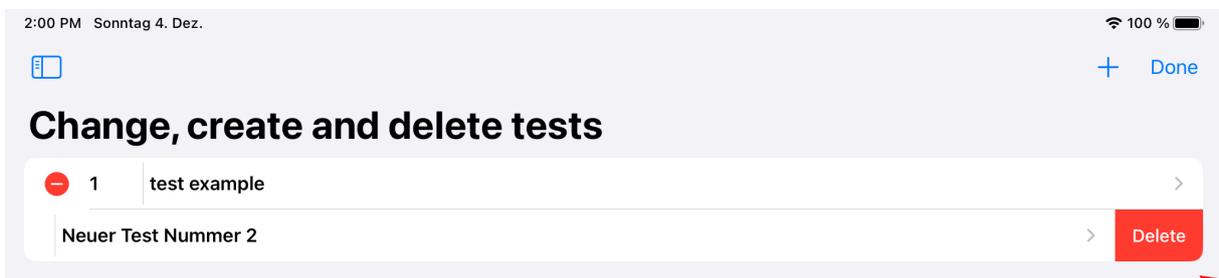
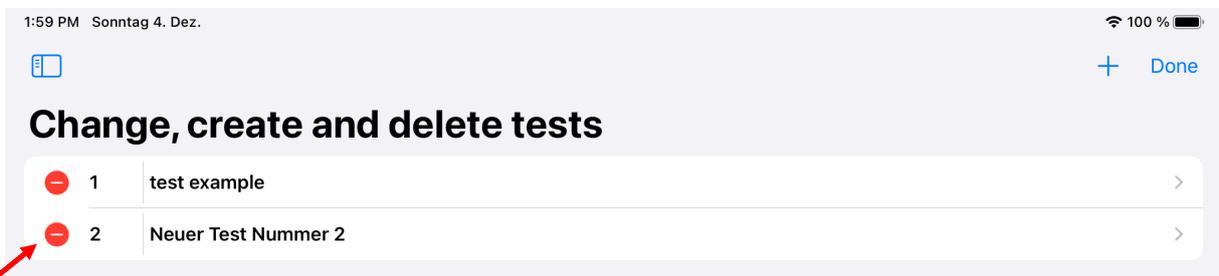
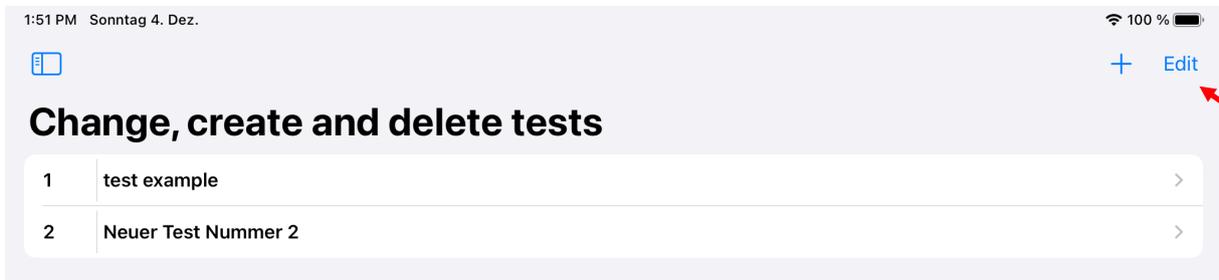
Delete test template

If a test template is to be deleted, it can be deleted by swiping the line to the left and then clicking on the "Delete" button.



Another way to delete test templates is the negative of "Edit" button. The template to be deleted can then be deleted by clicking on the red symbol and then clicking on the "Delete" button.

Ein weiterer Weg zum Löschen von Testvorlagen ist das Betätigen der Schaltfläche „Bearbeiten“. Danach kann die zu löschende Vorlage durch Klicken auf das rote Symbol markiert und dem anschließenden Klicken auf, die „Löschen“ Schaltfläche gelöscht werden.



Change test template

After selecting the test template from the list of test templates, the header data of the test can be changed on the following page. The change is made by clicking in the corresponding text field.

Additional questions can be recreated using the + button. As described in the previous chapter, questions are deleted by dragging the respective question to the left or by clicking on the "Edit" button.

2:05 PM Sonntag 4. Dez. Edit Edit Save

Change, create and delete tests

HEADER TEST TEMPLATE

No. number of questions: Time limit in min: total number of points:

1 10 20 50

test template name:

test example

DATA PRIVACY

Should the data protection clause be queried before the test? No

data privacy clause:

Do you agree that your certificate of participation will be sent to you unencrypted by email? Then activate the button

QUESTIONS +

1 question 1 >

2 question 2 >

3 question 3 >

4 question 4 >

5 question 5 >

6 question 6 >

7 question 7 >

8 question 8 >

9 question 9 >

10 question 10 >

test Administrator

After selecting the question line, the texts for the question can be changed.

2:07 PM Sonntag 4. Dez. Edit Edit Save

QUESTIONS

No. To be points:

1 1

Question:

question 1

ANSWERS +

1 answer 1 >

2 answer 2 >

3 answer 3 >

After selecting the answer line, the texts for the answer can be changed.

2:10 PM Sonntag 4. Dez. Edit Save

ANSWERS

No. wrong answer

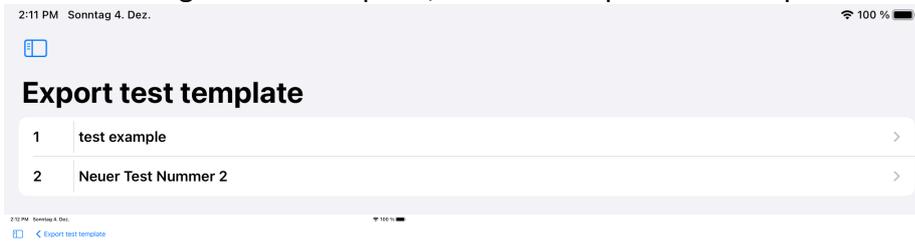
1

answer:

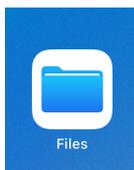
answer 1

Export test template

After selecting the test template, the test template to be exported is selected.

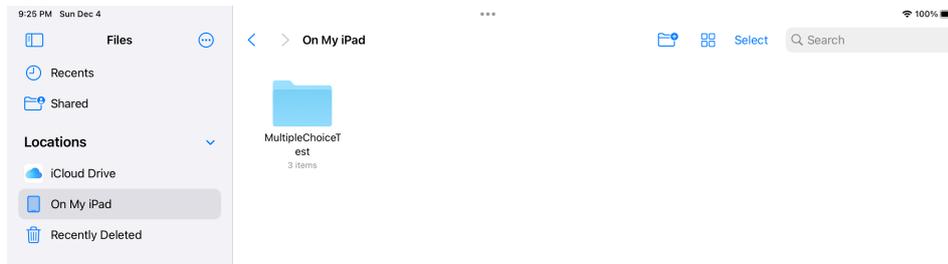


After exporting, the export file is in the app's document directory. The file is saved in JSON format. On the IOS devices, you can find the data via the "Files" app.

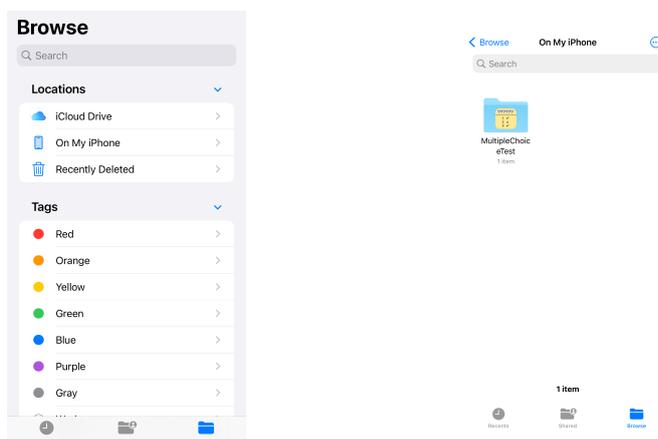


In the app, navigate to the location "On my iPad" or on the iPhone "On my iPhone". This location contains a document directory for the MultipleChoiceTest app.

iPad:

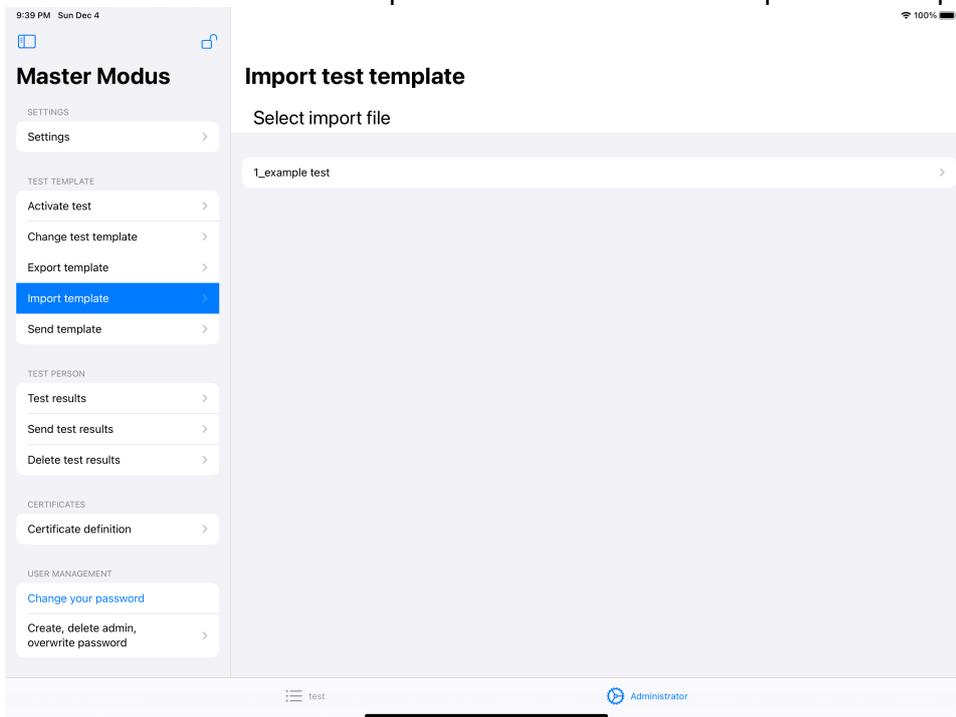


iPhone:

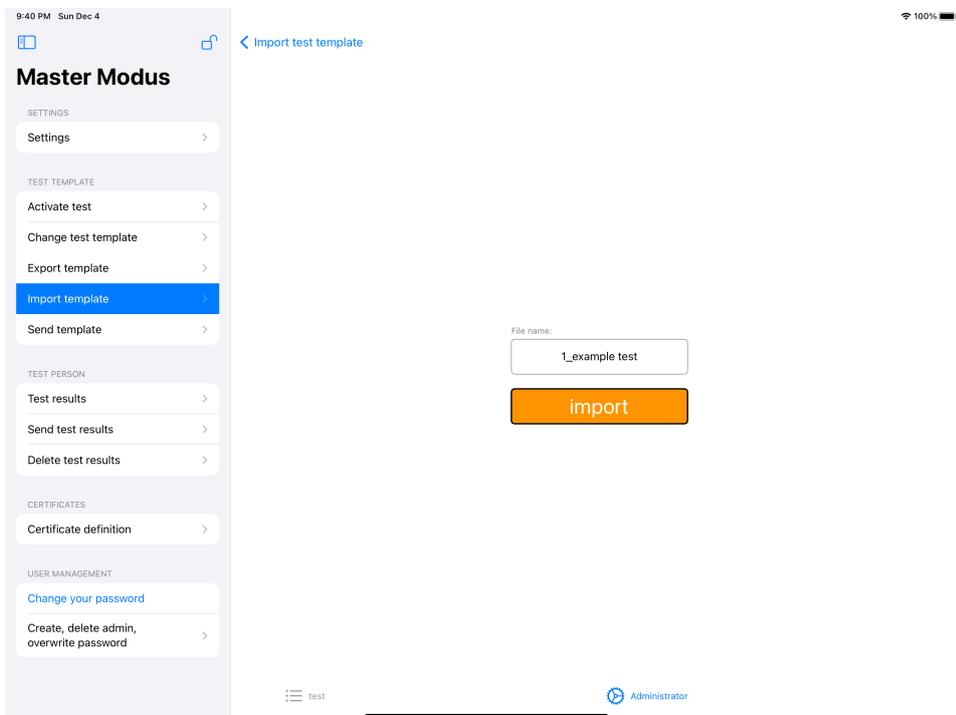


Import test template

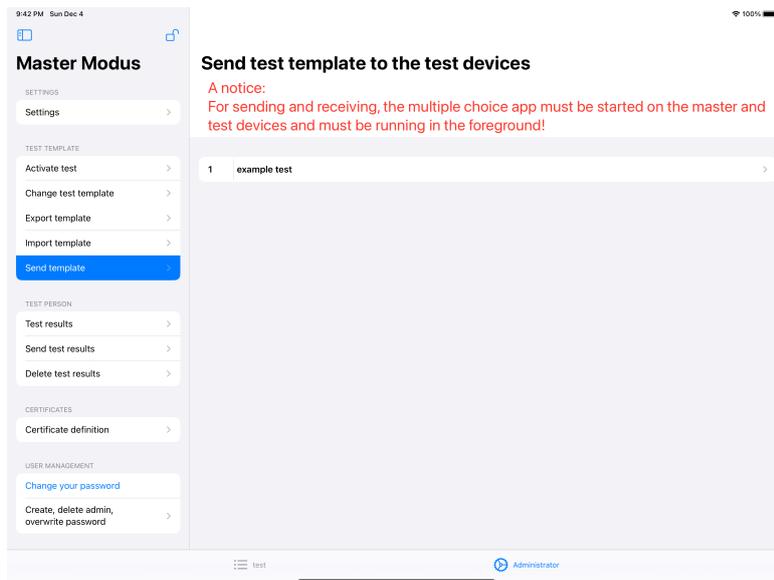
To import a test template, the file in JSON format must be in the app's documents directory. The files in this format are imported in the menu item "Import test template".



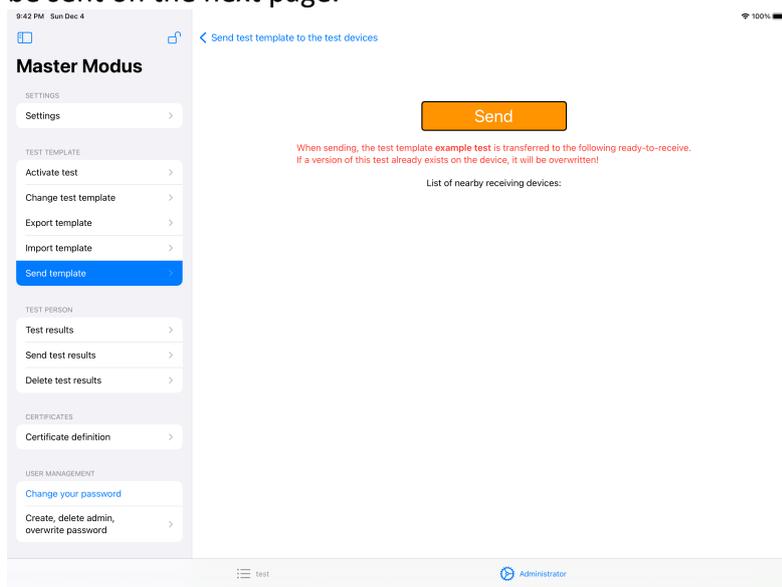
After clicking on the respective import file, the data can be imported on the following page.



Send test template



After clicking on the respective test template, this template is marked for sending and can be sent on the next page.

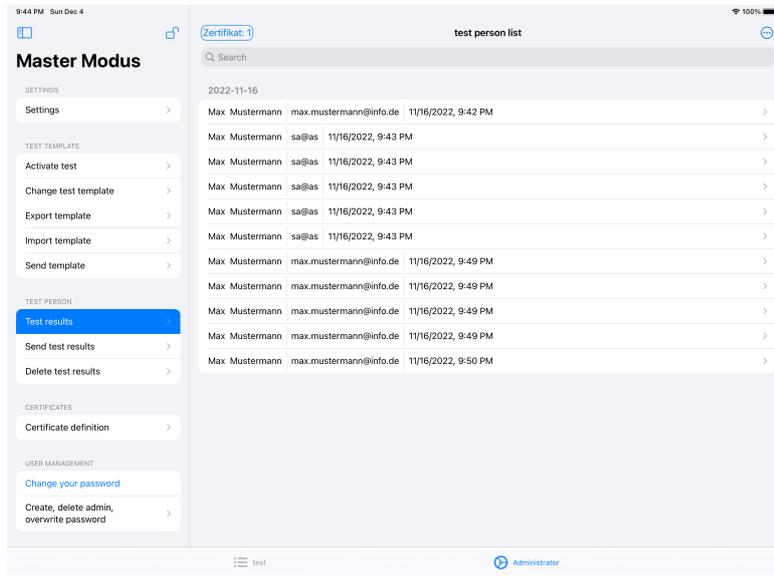


A list of nearby devices that are ready to receive is also displayed on the sending side.

Test person

Test results for test participants are managed in the Participants menu item.

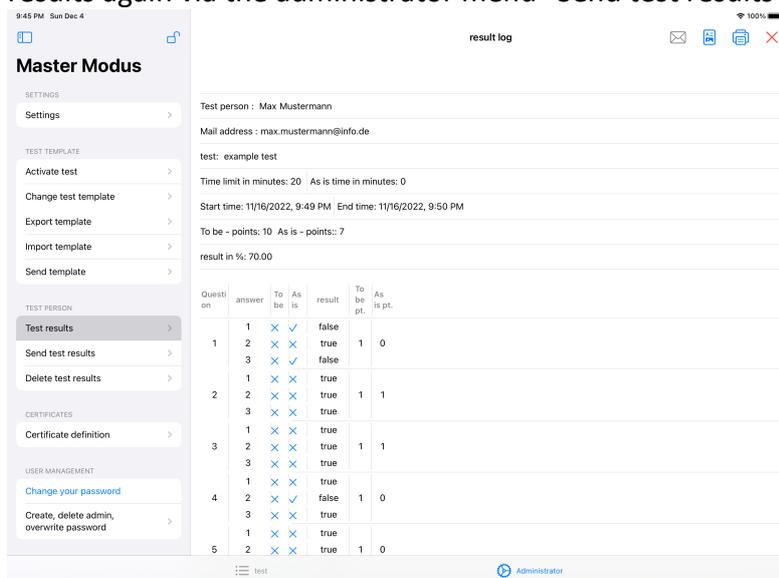
Test results



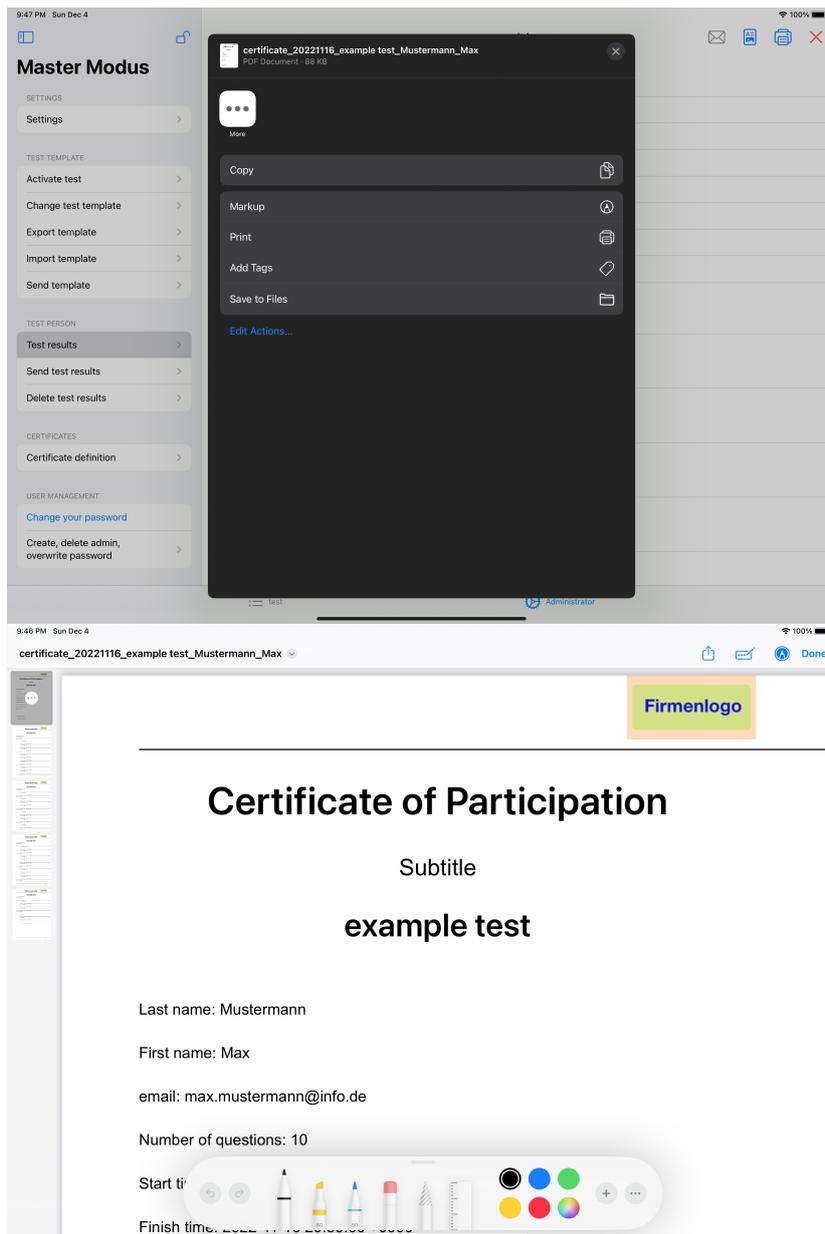
After the end of all test participants, the administrator should check whether he has already received all test results. He can easily check this using the Test Results menu item.

If there are a lot of entries in the list, the sorting of the list can be adjusted using the ☰ icon at the top right, or the number of entries can be reduced by entering the surname, first name or email address in the search field.

If not, all test results have been transmitted, the administrator can log into the device in tester mode with his administrator account and manually trigger the sending of the test results again via the administrator menu "Send test results".



If all test results are available on the device in master mode, the administrator can print out, save the results or send the short reports. A PDF document of the summary report is generated via the 🖨️ button and can be processed further.



The  button generates a test certificate as a PDF document, which can then be processed further.

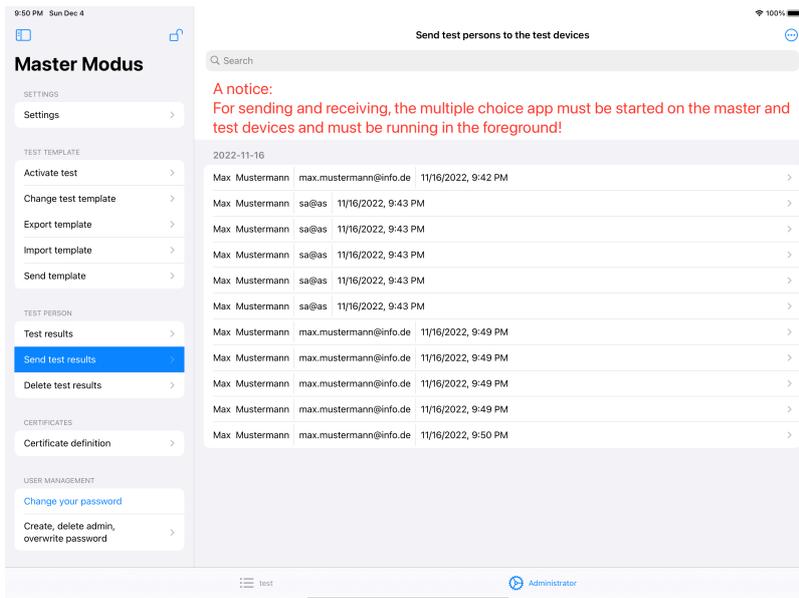
The PDF documents created by the administrator are also saved in the app's file directory.

The test certificates are also created via the “Test results” menu item. It is important to ensure that the correct certificate definition has been selected. (Top left in the picture "Certificate: 1"). If you click this button, you can select a definition from the existing ones. The certificate definition defines the title and subtitle of the certificate, a signature text can be specified and a signature for the signature as well as a logo can be stored. Furthermore, data fields can be shown and hidden. The texts can be adapted for mailing and an email address can be stored to which a copy of the certificate should be sent.

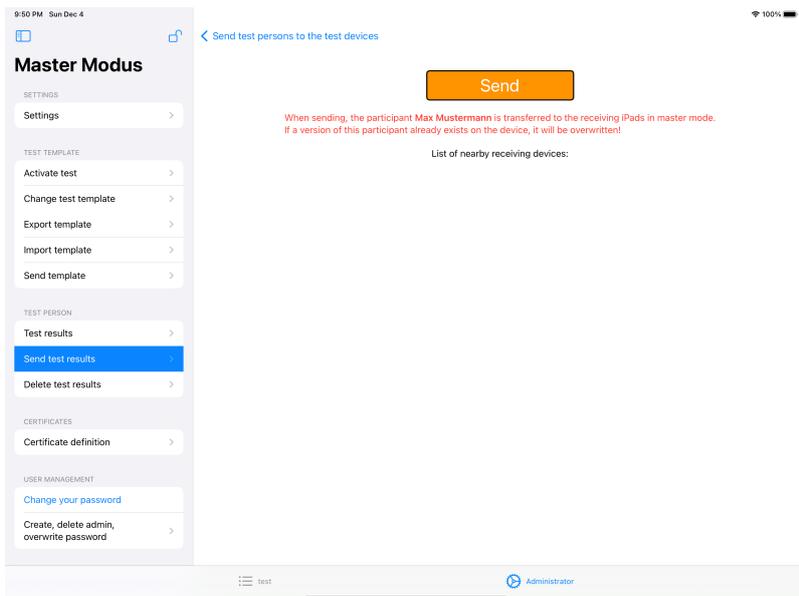
The test certificates are sent by e-mail using the  button. An email is generated here, and the test certificate is automatically added as an attachment.

Jens-Peter Bardt

Send test results

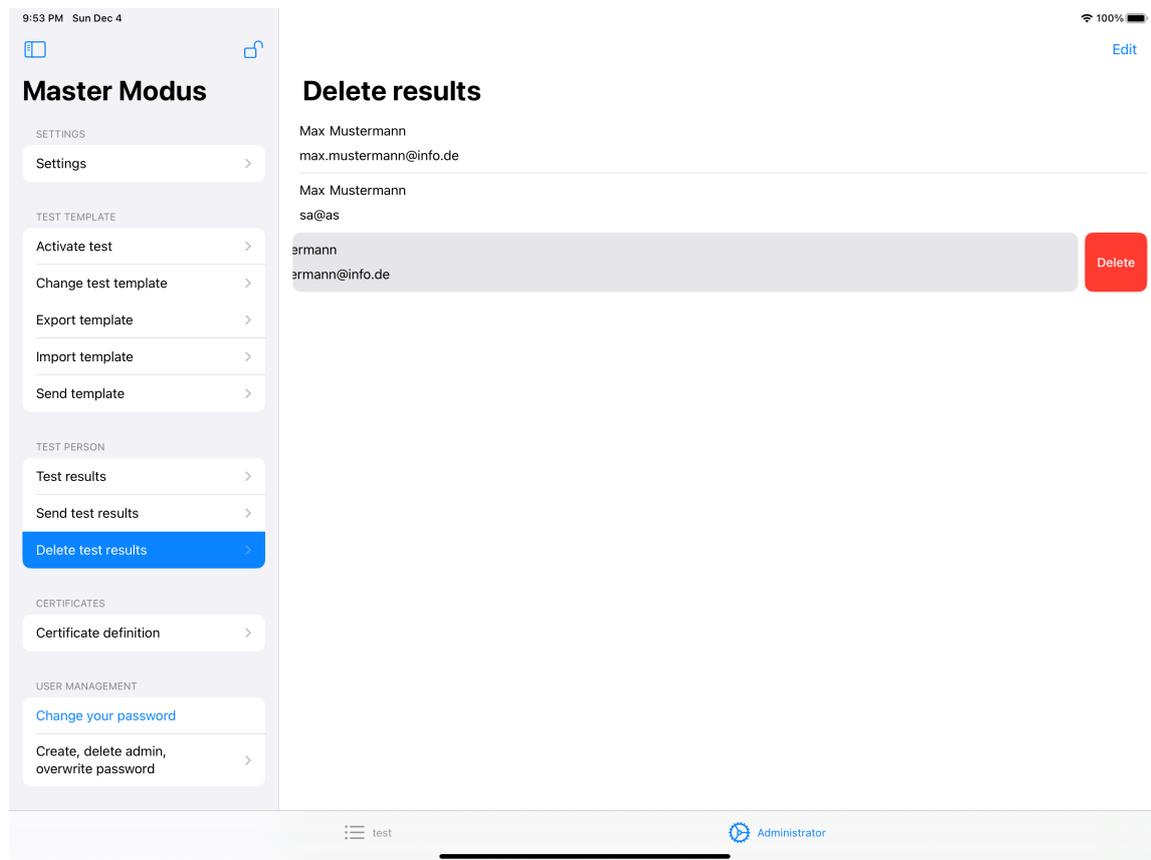


After clicking on the respective test participant, this is marked for sending and can be sent on the next page.



A list of nearby devices that are ready to receive is also displayed on the sending side.

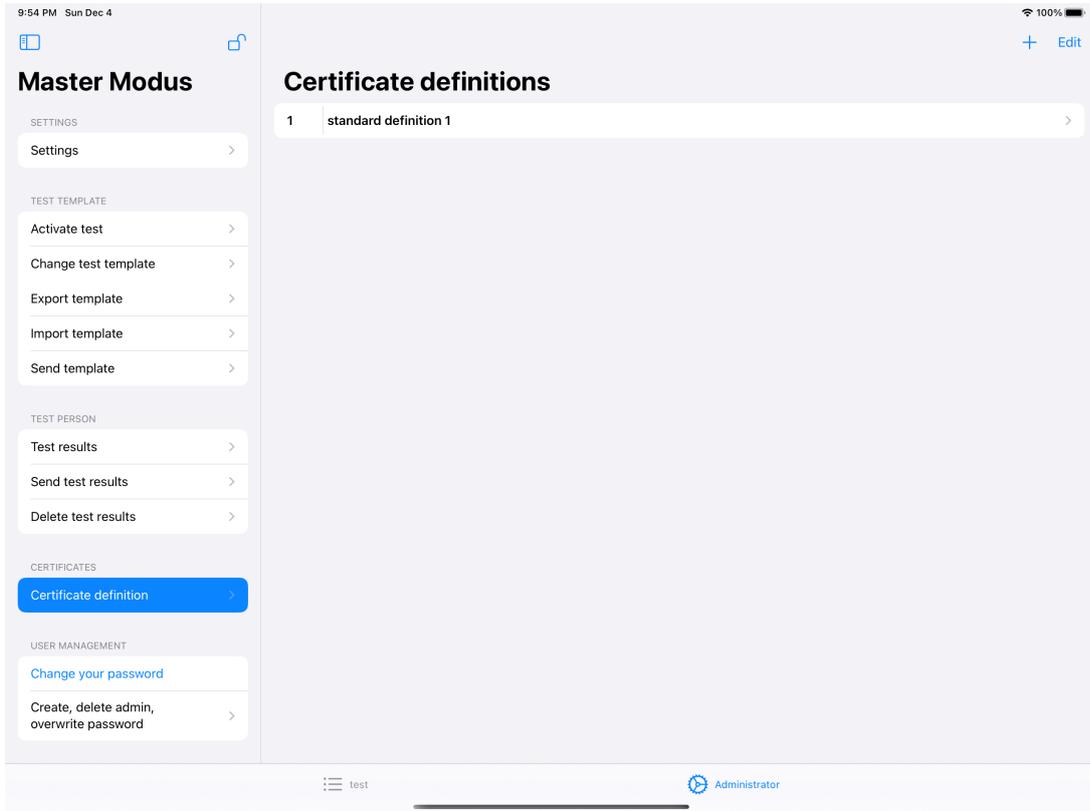
Delete test results



If a test result is to be deleted, it can be deleted by swiping the line to the left and then clicking on the "Delete" button.

Another way to delete test results is to click the Edit button. The template to be deleted can then be deleted by clicking on the red symbol and then clicking on the "Delete" button.

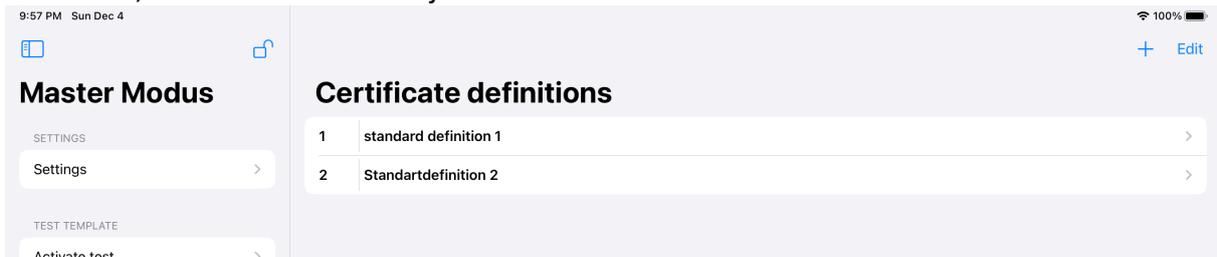
Certificate definition



In this menu item, the definitions for the certificates are created, changed or deleted.

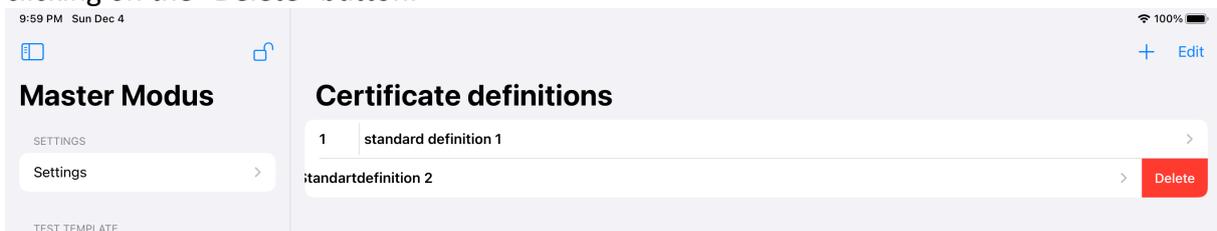
Create certificate definition

A test template with the next free number is automatically created in the background via the + button, which can then be adjusted.



Delete certificate definition

If a definition is to be deleted, it can be deleted by dragging the line to the left and then clicking on the "Delete" button.



Change certificate definition

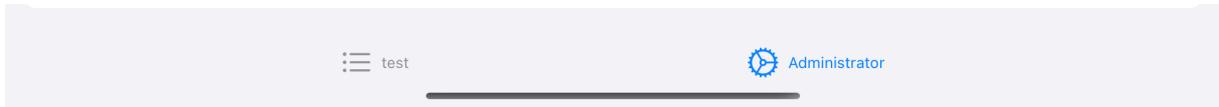
After selecting the definition from the list of definitions, the data can be modified via the following page. The change is made by clicking in the corresponding text field. The certificate definition defines the title and subtitle of the certificate, a signature text can be specified and a signature for the signature as well as a logo can be stored. Furthermore, data fields can be shown and hidden. The texts can be adapted for mailing and an email address can be stored to which a copy of the certificate should be sent.

The screenshot shows the 'Edit Certificate Definition' screen in a mobile application. The interface is organized into several sections:

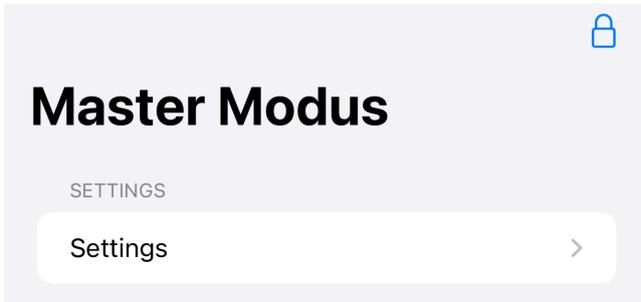
- HEADER DEFINITION:** Includes a 'No.' field with the value '1' and a 'Certificate definition name' field with the value 'standard definition 1'.
- HEADER DEFINITION (continued):** Includes a 'Certificate title' field with the value 'Certificate of Participation' and a 'Subtitle' field with the value 'Subtitle'.
- SIGNATURE:** Includes a 'Signature text' field with the value 'Certificate of Participation' and a 'Signature' field containing a blue handwritten signature.
- MAIL DATA FOR SENDING THE CERTIFICATES:** Includes a 'Mail address to which a copy should be sent' field with the value 'info@sdd.de', a 'Subject of the email' field with the value 'Certificate of Participation', and a 'Text of the email' field with the value 'attached you will find your certificate of participation'.
- HIDE FIELDS:** A list of fields with toggle switches: 'last name' (on), 'first name' (on), 'Show email address' (on), 'number of questions' (on), and 'result in percent' (on).
- POINTS:** A list of fields with toggle switches: 'To be' (on) and 'As is' (on).
- TIME LIMIT IN MIN:** A list of fields with toggle switches: 'To be' (off) and 'As is' (on).
- DATE AND TIME:** A list of fields with toggle switches: 'start' (on) and 'Close' (on).
- RESULT TABLES:** A list of fields with toggle switches: 'detail result table' (on) and 'short result table' (off).
- LOGO:** A field containing a logo with the text 'Firmenlogo'.

The bottom of the screen shows a navigation bar with a 'test' button and an 'Administrator' profile icon.

User Management



To log in as an administrator, press the administrator icon.



Pressing the lock icon will start the login process.

First Login as administrator

If there is no administrator yet, a user account will be created for the superadmin. The account name cannot be changed. The password must be at least 6 characters long and entered twice.

[cancel](#)

Master Modus

Administratorname:

Password:

Repeat password:

Pressing the lock symbol again logs you out as admin.

Login as administrator

If an account already exists, pressing the lock icon will bring up a list of user accounts. Here the user account which is to be used for the registration must be selected by clicking on the respective line. Even if there is only one account, this selection is important. The password must then be entered.

cancel

Master Modus

Superadmin

SELECT ADMIN ACCOUNT

Superadmin

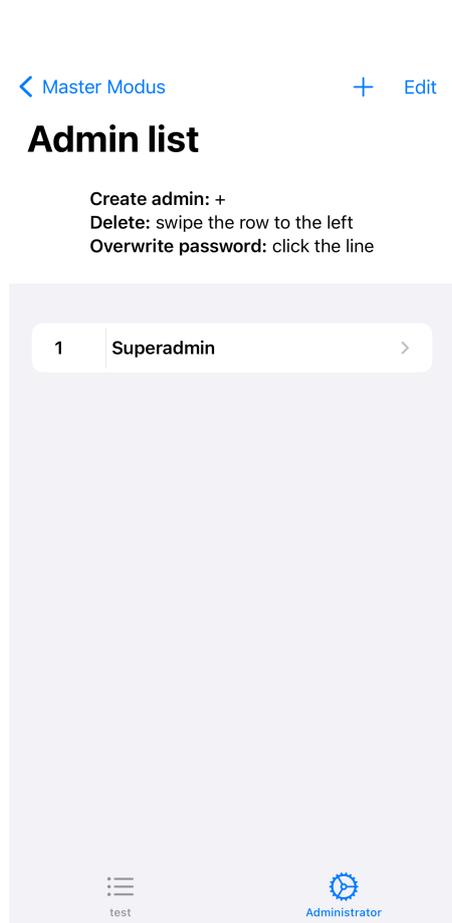
Enter password:

Enter password 

Create, delete admin, overwrite password

Additional admin user accounts can be created and deleted and passwords can be overwritten via the menu item "Admin create, delete, change password". This function is reserved for the superadmin only.

Über den Menüpunkt „Admin Anlegen, Löschen, Passwort ändern können weitere Admin Benutzerkonten angelegt, gelöscht und Passworte überschrieben werden. Diese Funktion ist nur dem Superadmin vorbehalten.



Wenn über dem + neue Konten erstellt werden, lauten die Standardpasswörter für den Superadmin „456789“ und für einen normalen Admin „123456“. Der Superadmin muss diese Passwörter dann dem Admin sagen damit dieser über den Menüpunkt Eigenes Passwort ändern sein eigenes Passwort hinterlegen kann.

Das Löschen von Benutzerkonten erfolgt durch ein Ziehen der Kontozeile nach links oder mit dem Bearbeiten Button.

Hat ein Admin ein Passwort vergessen, kann der Superadmin das vorhandene Passwort mit einem neuen Passwort überschreiben.

Ist das Superadmin Passwort nicht mehr vorhanden muss die App gelöscht und neu installiert werden. Dabei gehen alle Testergebnisse und Vorlagen verloren.