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About

The Tower of London test is a well-known test used in applied clinical neuropsychology for the assessment of executive functioning specifically to detect deficits in planning, which may occur due to a variety of medical and neuropsychiatric conditions. It is related to the classic problem-solving puzzle known as the Tower of Hanoi.

With help of CogQuiz Tower of London you can create your own tests. You control the number of demo, practice, and scored trials, the number of direct and indirect moves, the total number of moves, the maximum moves per trial, and the time allowed to complete a trial. The figure on the far left shows an in-progress construction of a trial.

The screenshot displays the 'CogQuiz - Tower of London test [Administrator, Administrator]' window. The interface is divided into several sections:

- TESTS**, **ANALYZE TESTS**, **PARTICIPANTS**, and **MANUAL** tabs are at the top.
- Test Definition** section includes fields for **Test Name** (Adult Drexel), **Author Name** (Administrator, Admini...), **Create Date** (7/9/2018 8:46:37 AM), and **Last Update Date** (7/9/2018 10:02:47 AM). It also has checkboxes for **Use Audio** and **Use Demo Trial**, and buttons for **Real** and **Demo**.
- Trial Params** section includes **Add** and **Delete** buttons, and fields for **Peg Count** (3), **Min Moves** (4), and **Max Moves** (20). It also has fields for **Over Move Limit Message**, **Inter-Trial Interval (sec)** (0), **Max Trial Time (sec)** (0), and **Timeout Message**.
- Trial Definition** section includes a **Work Space** and a **Goal State** visualization. The **Work Space** shows a grid with three pegs and three disks (red, green, blue). The **Goal State** shows the same setup. Below these are six numbered thumbnails (1-6) showing different trial states.
- Test Messages and Captions** section includes fields for **Work Space** (Work Space), **Goal State** (Goal State), and **Test End Message** (Thank you for your participation). It also has checkboxes for **Display Wait Clock** and **Display Performance Feedback** (checked), with a corresponding message box: 'You made [MC] moves. Your goal was [MM] moves.'

At the bottom, there is a copyright notice: 'Copyright © Cog Quiz LLC, 2016 All Rights Reserved.' and a link to 'Register the product'.

Figure 1. CogQuiz – Tower of London.

Create test

To create a new test - go to TESTS tab and click on button 1 (Figure 2a).

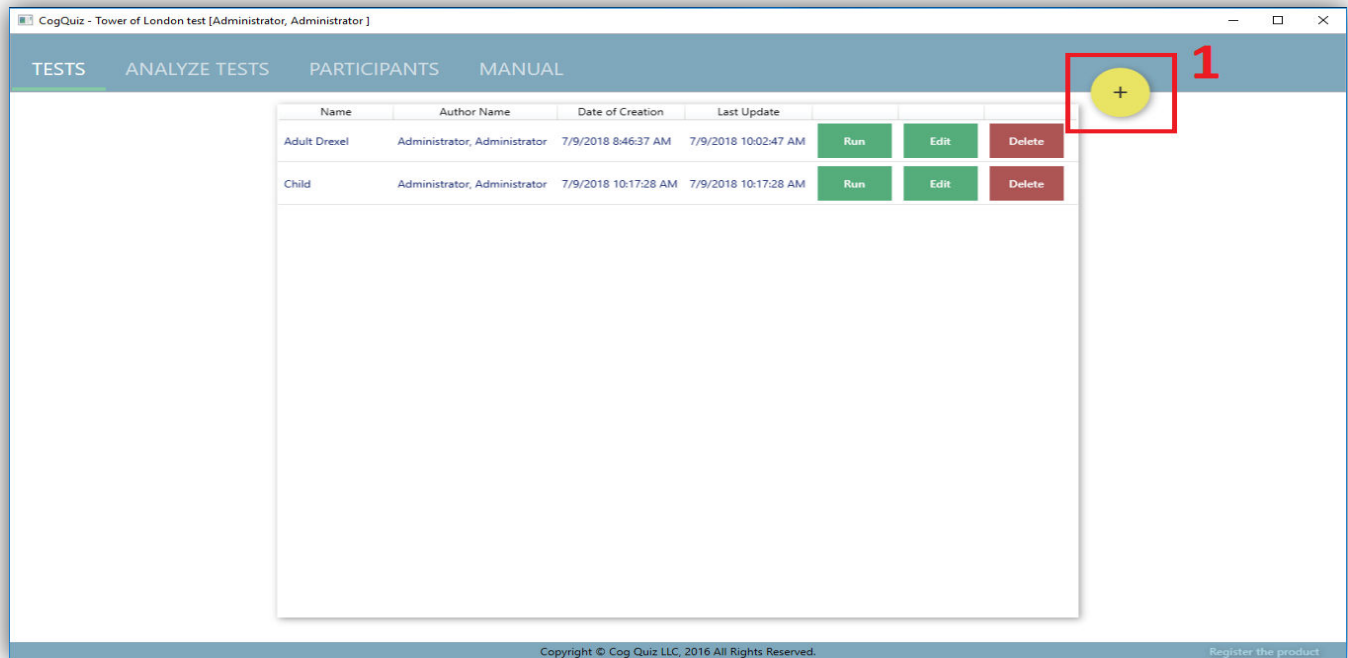


Figure 2a. Create test button.

After that test settings popup will appear (figure 2b).

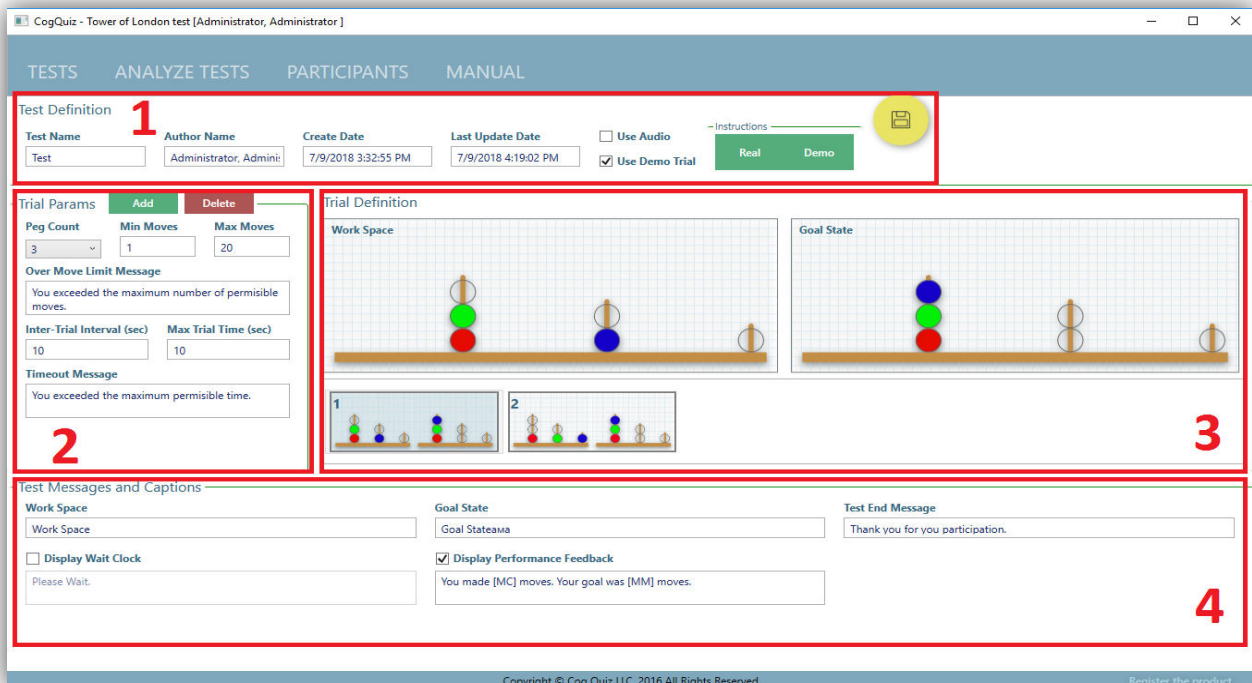


Figure 2b. Create test.

In the area 1(Figure 2b) you can see such(next) settings:

- **Use Demo Trial** sets Real or Demo mode;
- **Button Real** sets text before test begin (on Real Mode);
- **Button Demo** sets text before test begin (on Demo Mode);
- **Use Audio** enable playback text option before test begin;

In the area 2 (Figure 2b) you can see primary test round settings:

- **Peg Count** sets count **peg**. Possible options are: 3, 4, 5;
- **Min Moves** sets lowest count of moves to finish round;
- **Max Moves** sets maximum count of moves for the user, after which round ends;
- **Over Move Limit Message** sets text which would be shown to user after reaching of maximum moves;
- **Inter-Trial Interval** sets delay (in seconds) before next round (only when checked Display Wait Clock);
- **Max Trial Time** sets maximum allowed time to finish round;
- **Timeout Message** sets text which would be shown to user after reaching the maximum allowed test time;

On the area 3 (Figure 2b) are circles colors and placement settings. Click on suitable circle on the workspace to set color (Figure 2c).

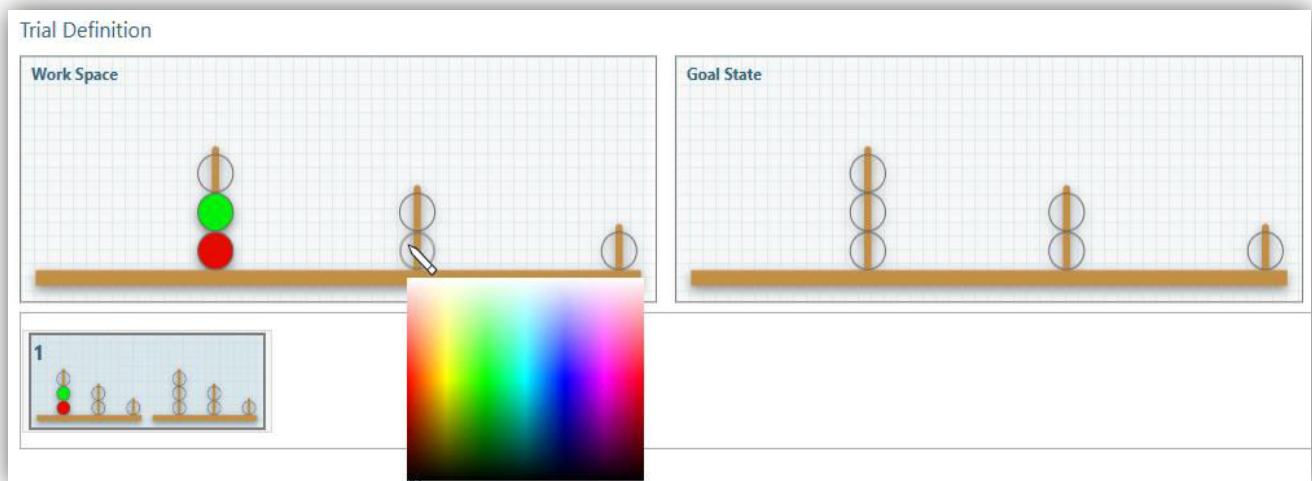


Figure 2c. Set color for Work Space.

GoalState color also sets there (Figure 2d).

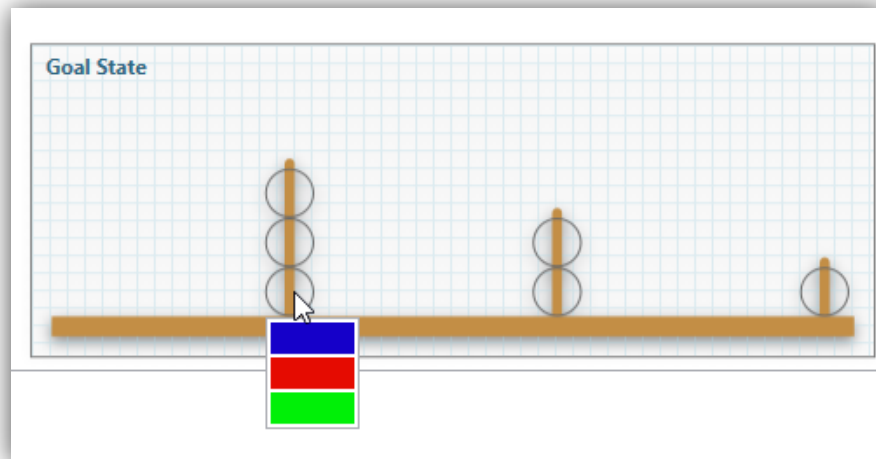


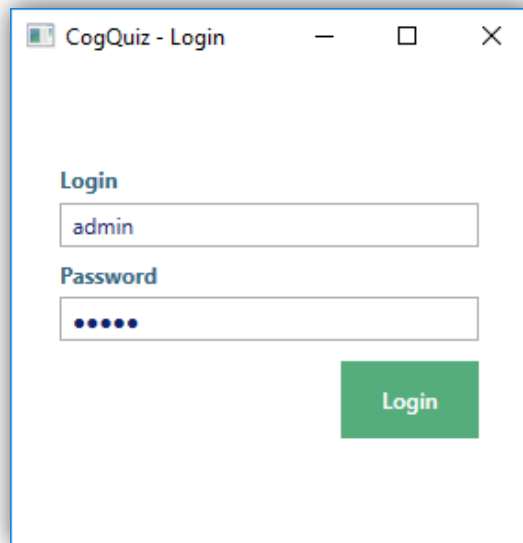
Figure 2d. Set color for Goal State.

On the area 4 (Figure 2b) there are text settings for titles and notifications:

- **Work Space** title for work space;
- **Goal State** task title;
- **Test End Message** text message which would be shown when on test finish;
- **Display Wait Clock** enable timeout (set in **Inter-Trial Interval**) and define message text;
- **Display Performance Feedback** sets text which would be shown at the end of each round and would inform about minimum user's moves count where ([MC] is count moves made by user and [MM] is count minimum moves)

Participant

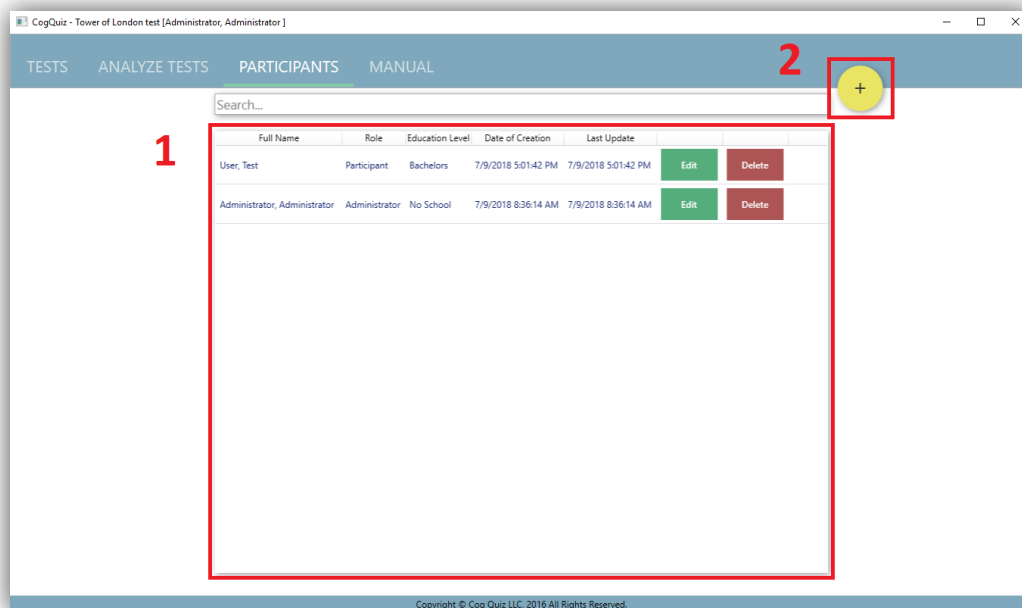
On start the program you need to sign in user`s credentials. By default login is: **admin**, password is: **admin** (figure 3a).



The image shows a login window titled "CogQuiz - Login". It contains two input fields: "Login" with the text "admin" and "Password" with masked characters (dots). Below the fields is a green "Login" button.

Figure 3a. Login window.

On the participants tab you can manage users. On the area 1(Figure 3b) user list is shown. It`s allowed to create, edit and delete.



The image shows the "PARTICIPANTS" tab in the CogQuiz application. A red box labeled "1" highlights the user list table. A yellow circle labeled "2" highlights the "+" button for adding new users.

Full Name	Role	Education Level	Date of Creation	Last Update		
User, Test	Participant	Bachelors	7/9/2018 5:01:42 PM	7/9/2018 5:01:42 PM	Edit	Delete
Administrator, Administrator	Administrator	No School	7/9/2018 8:36:14 AM	7/9/2018 8:36:14 AM	Edit	Delete

Figure 3b. Participant.

Click on button 2 on Figure 3b to create new user. User info window will open (Figure 3c). Here you can add additional information about the user.

CogQuiz - Tower of London test [Administrator, Administrator]

TESTS ANALYZE TESTS PARTICIPANTS MANUAL

User Info

First Name M.I. Last Name Login Password

Additional Info

Date of Birth (Age:0) Education Years Education Level

Select a date 15 0 No School

Gender Ethnicity Handedness

Male White/non-Hispanic

Aux-1 Aux-2 Role

Contact Information

Street Address

City State Zip Code Telephone

Tests Taken

Test name Date Id

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Figure 3c. Create participant.

When editing information in the area **TestTaken** 1(Figure 3b) also you can see user's passed tests.

CogQuiz - Tower of London test [Administrator, Administrator]

TESTS ANALYZE TESTS PARTICIPANTS MANUAL

User Info

First Name M.I. Last Name Login Password

Test User Test 123

Additional Info

Date of Birth (Age:24) Education Years Education Level

2/3/1994 7 Bachelors

Gender Ethnicity Handedness

Male White/non-Hispanic right

Aux-1 Aux-2 Role

Participant

Tests Taken

Test name Date Id

Test 7/9/2018 8:36:33 PM [18] Analyze test

Test 7/9/2018 8:33:51 PM [17] Analyze test

Test 7/9/2018 8:33:23 PM [16] Analyze test

Test 7/9/2018 5:02:59 PM [15] Analyze test

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Figure 3d. Test Taken.

Select Role → Administrator (2 on figure 3c) to create user with administrator's permissions (2 on figure 3c).

Run test

Go to Test tab, select test, select required user and click on Run button to start test (Figure 4a).

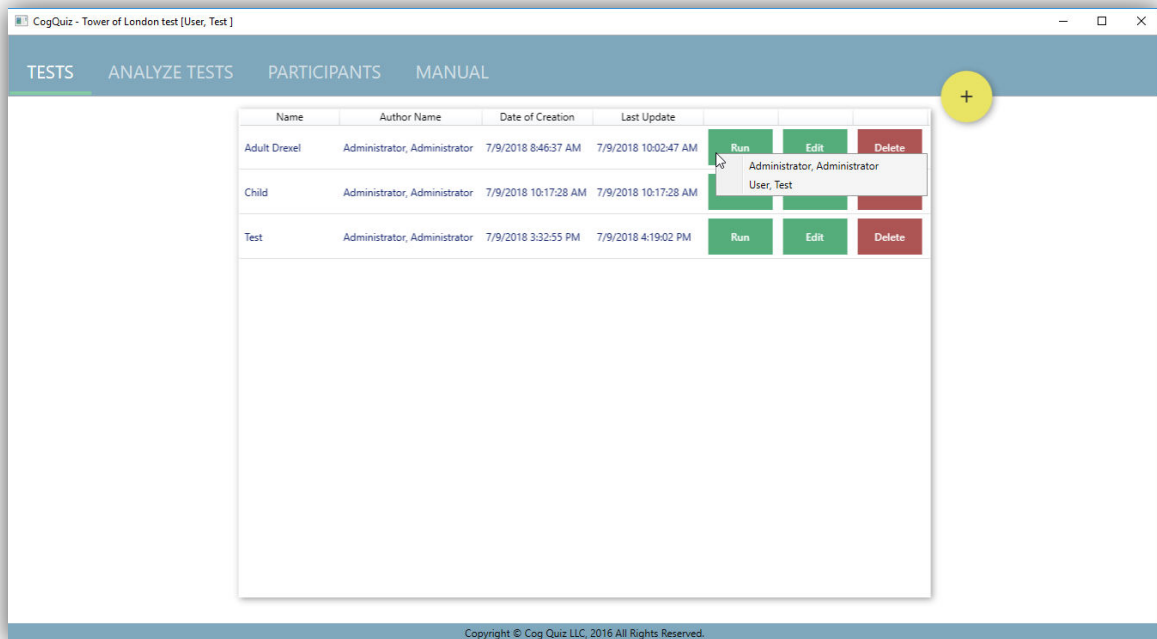


Figure 4a. Run test.

Text popup will appear (Figure 4b).

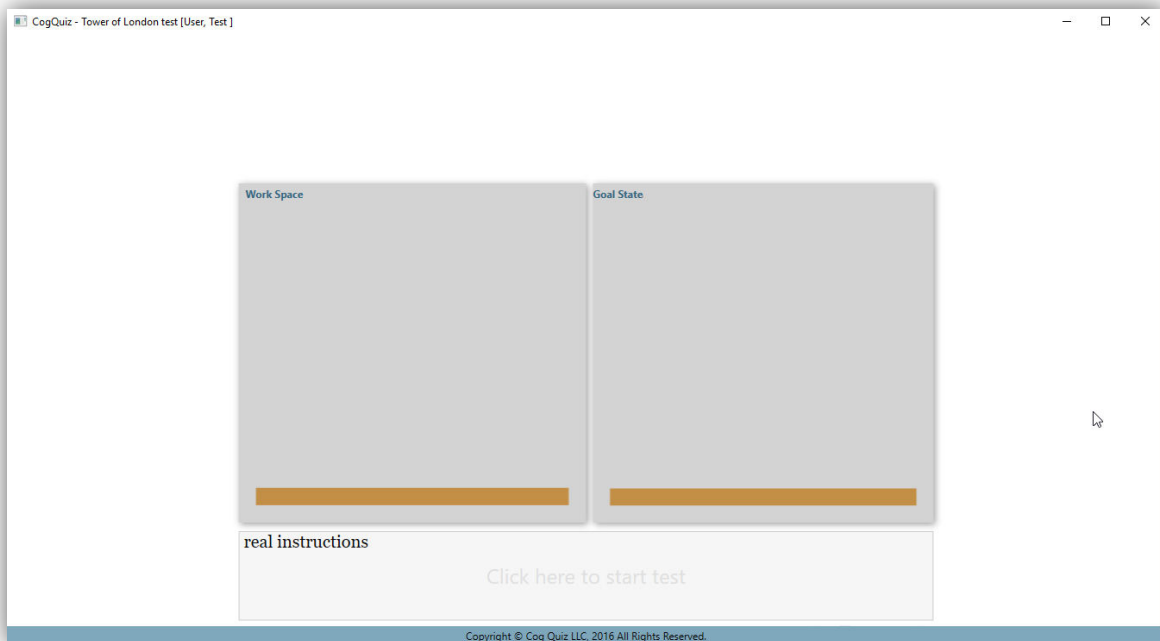


Figure 4b. Run test.

Click on text to start the test. Select circle and click on peg to move circle there (figure 4c).

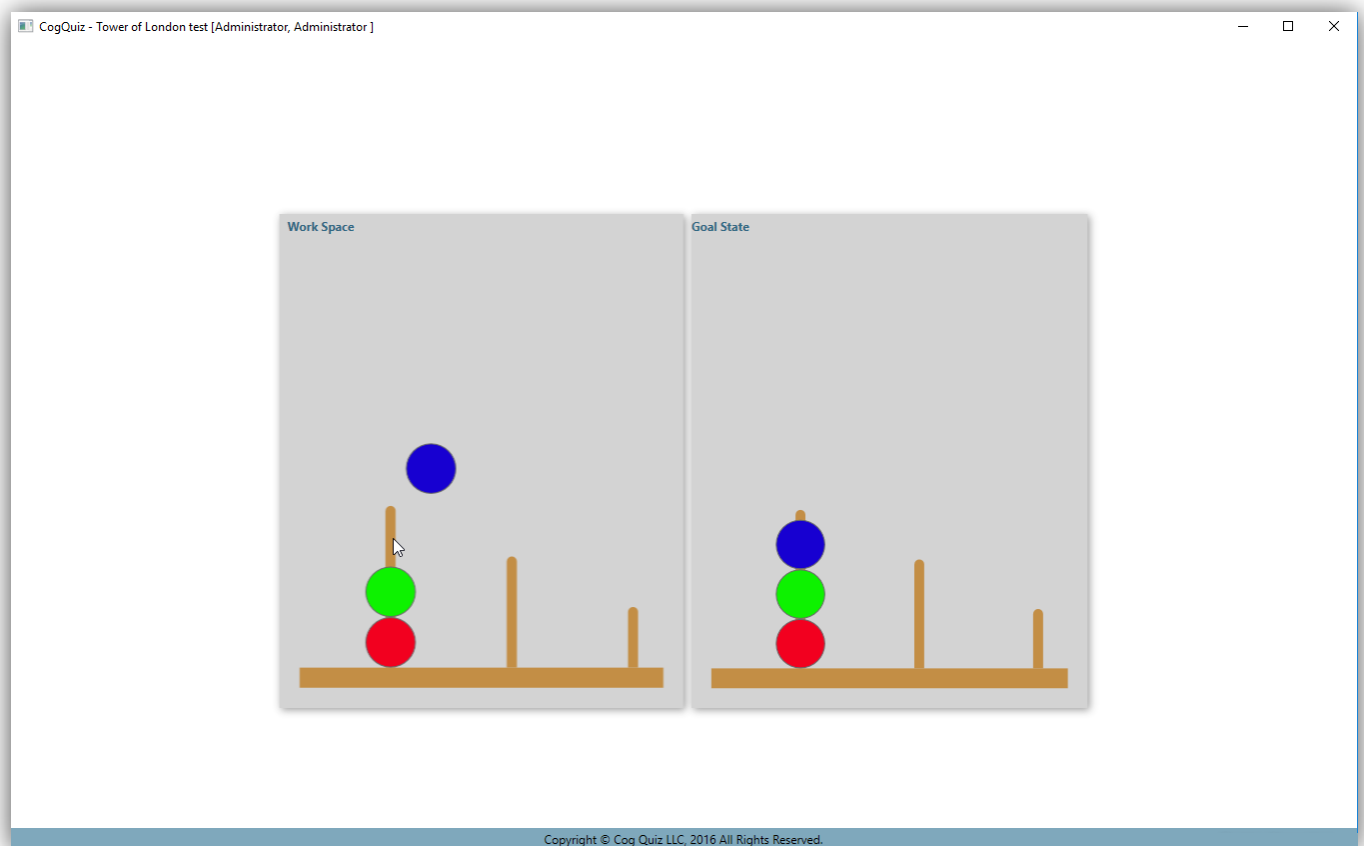


Figure 4c. Run test.

Analyze result

Go to Analyze tests tab to see results.

The screenshot shows the 'ANALYZE TESTS' tab in the CogQuiz application. The interface is divided into four main sections, each highlighted with a red box and a number:

- Area 1:** 'Get Participant Data' section. It includes a dropdown menu for 'User, Test', a table of test results, a checkbox for 'Suppress identifying participant information.', and buttons for 'Print Report', 'Export to CSV', and 'Copy to Clipboard'.
- Area 2:** 'Test Report Info' and 'Participant Info' sections. It displays details for the 'Adult Drexel' test, including participant ID, date taken, report date, and participant demographics (DOB, age, education, handedness, ethnicity).
- Area 3:** A table showing test results for the 'Adult Drexel' test. The table has columns for Trial, Peg Count, Bead Count, Minimum Moves, Participant Moves, Perfect Trials, Participant Drop Errors, First Move Time (Secs.), Total Trial Time (Secs.), and Trial Termination Type. The bottom row shows totals: 18 trials, 18 peg counts, 6 bead counts, 0 minimum moves, 18 participant moves, 6 perfect trials, 0 participant drop errors, 45122 first move time, 69960 total trial time, and 0 trial terminations.
- Area 4:** 'Event Log' section. It displays a list of events with columns for Event, Name, Argument, and Time Stamp. The events include 'START_TEST', 'START_TRIAL', 'BEAD_MOVED', and 'END_TRIAL'.

Figure 5a. Analyze tests.

In area 1 on Figure 5a you can select participant, then you can select one, which you like (are interested in). Also, here you can print results, export them in .csv, or copy to clipboard. Checkbox **Suppress Identifying Participant Information** shows whether to display user's info when save results.

Test name and participant name are shown in area 2 (on Figure 5a).

Common passed tests shown in the area 3 (on Figure 5a). Summary information are in the bottom row, but with help of specify the beginning row to be used in calculating totals for the summary data (Area 1 on Figure 5a) it's possible to sets row, which will be the first.

In area 4 (on Figure 5a) are more information about participant passing test. You can export that date into text file to click on the bottom **Export Event Record**. Also it's possible to look through playback(Figure 5b) to click on bottom. Use **Adjust playback speed** slider to change playback speed.

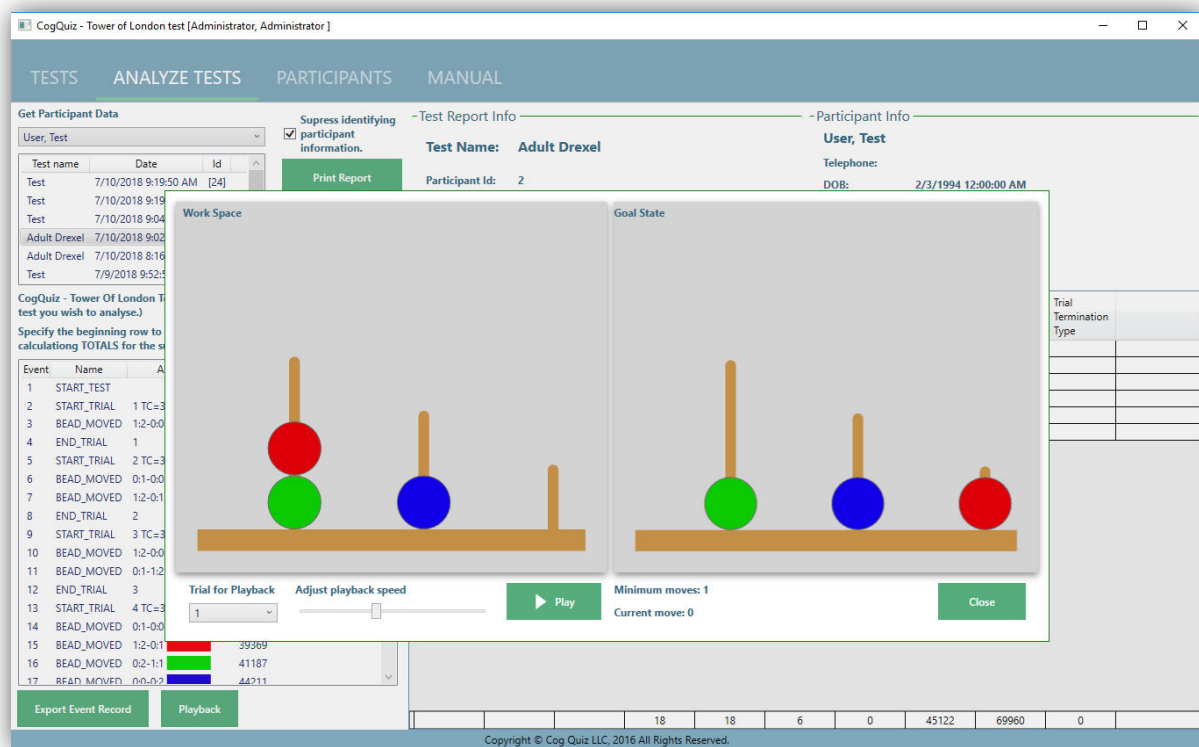


Figure 5b. Playback.

Registrations product

You have 10 days to try application for free. To use application with full functionality you need to buy registration key. To do this click on **Buy** button when run application (figure 6a).

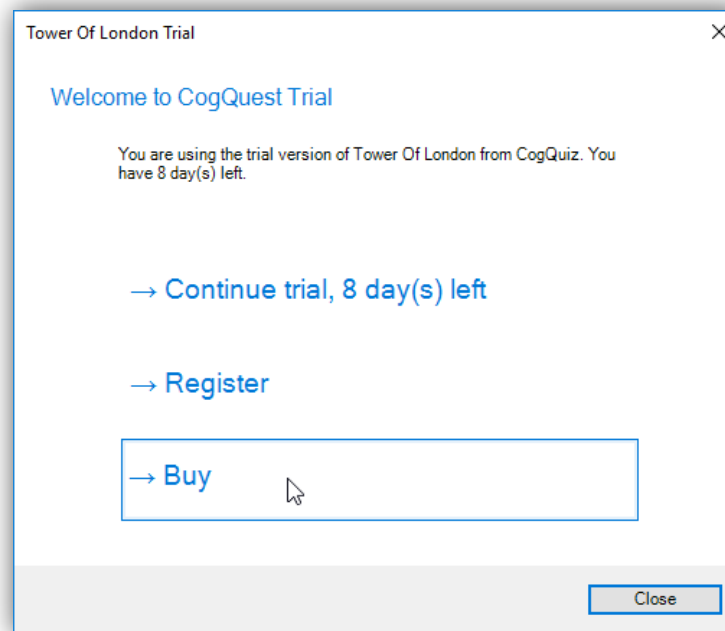


Figure 6a. registration.

Then you will see product page, click on **Buy now** button at the bottom of the page (1 on Figure 6b).

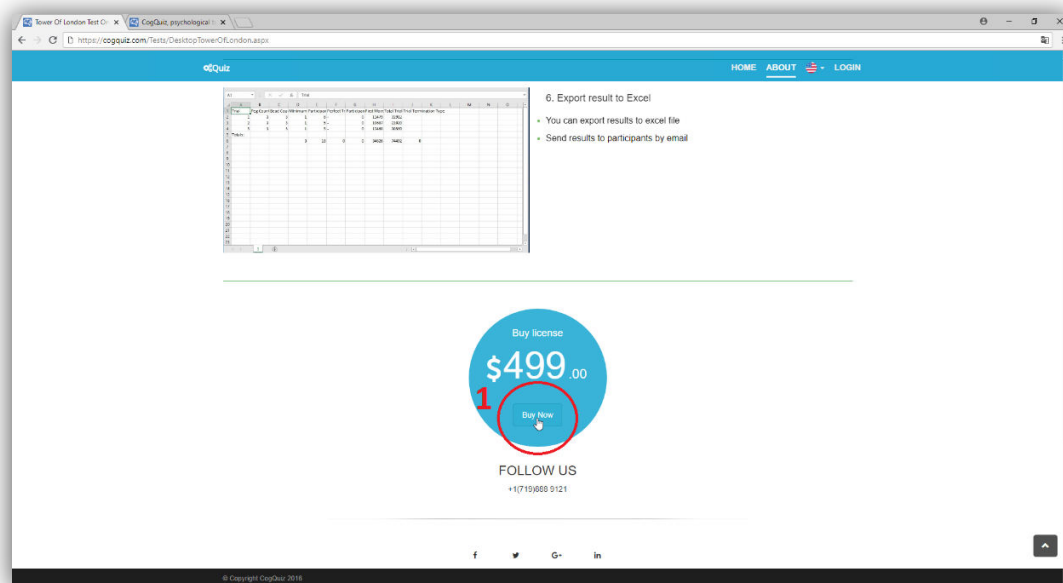


Figure 6b. Buy

Key field will appear at the top of the page after successful payment (1 on Figure 6c).

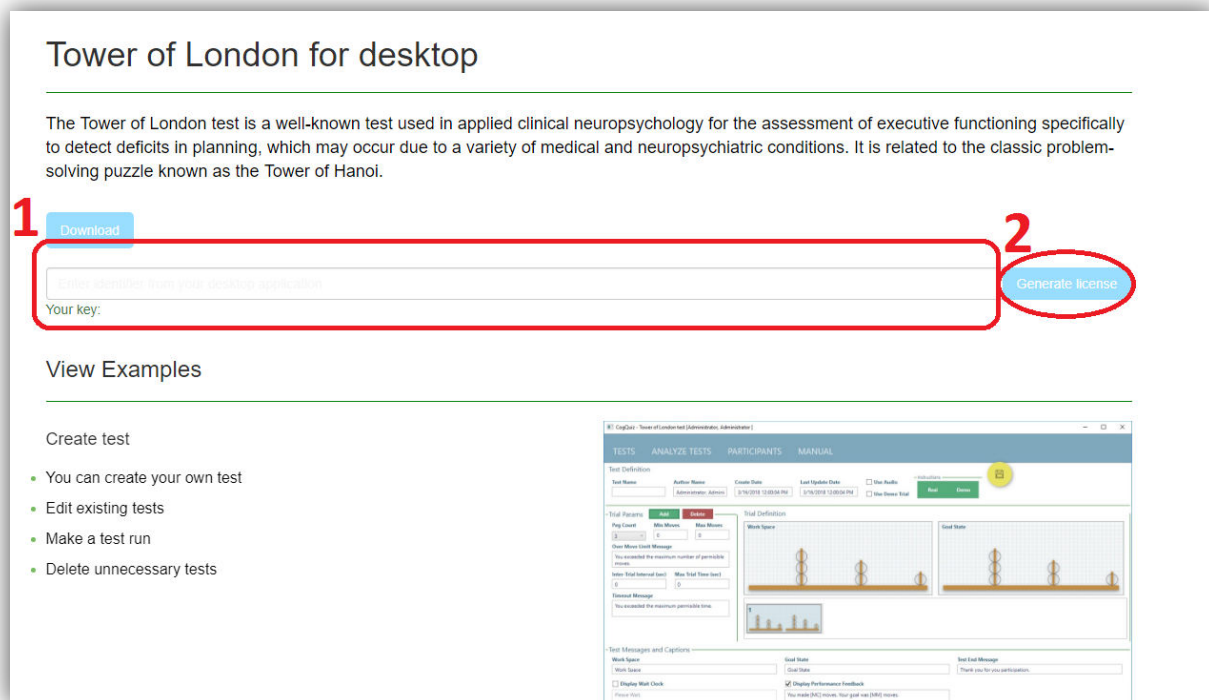


Figure 6c. Registration.

Input your computer's MAC-address into that field. If you don't know MAC-address – click on **Register** button (Figure 6d).

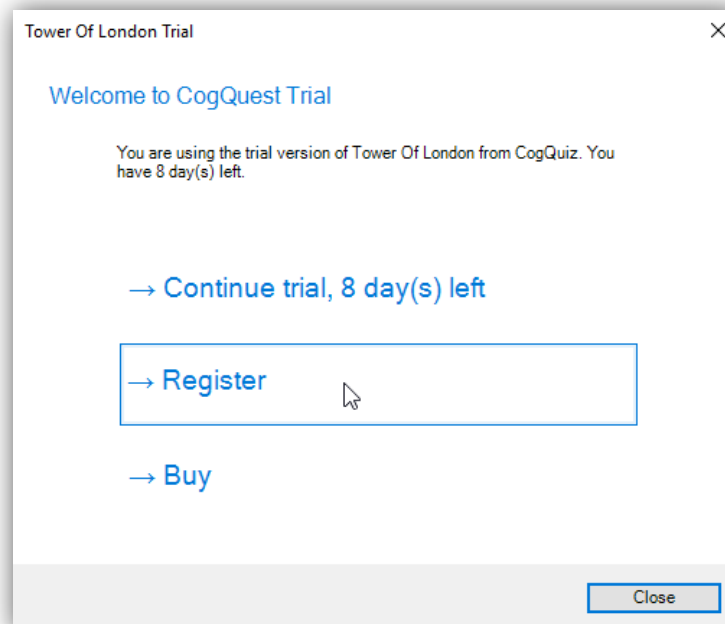


Figure 6d. Register button.

Registration key will be at the top of popup (1 on figure 6e).

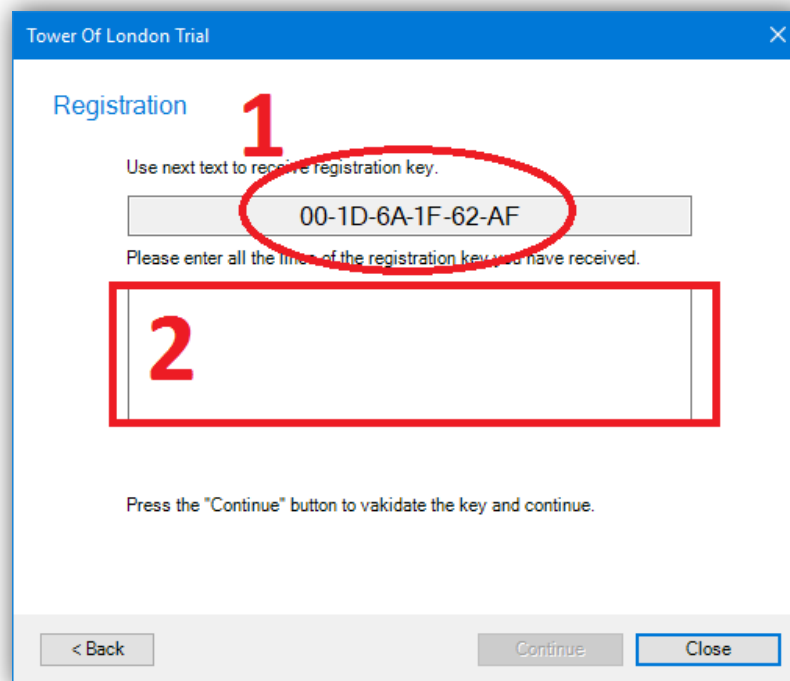


Figure 6e. Registration window.

Paste this text in the field 1 on Figure 6c and click **Generate license** button. Your computer Personal key will appear below. Copy it and paste into field 2 on figure 6e, and click Continue button. That's it, now you can use application.