SortIt for iPhone & iPad

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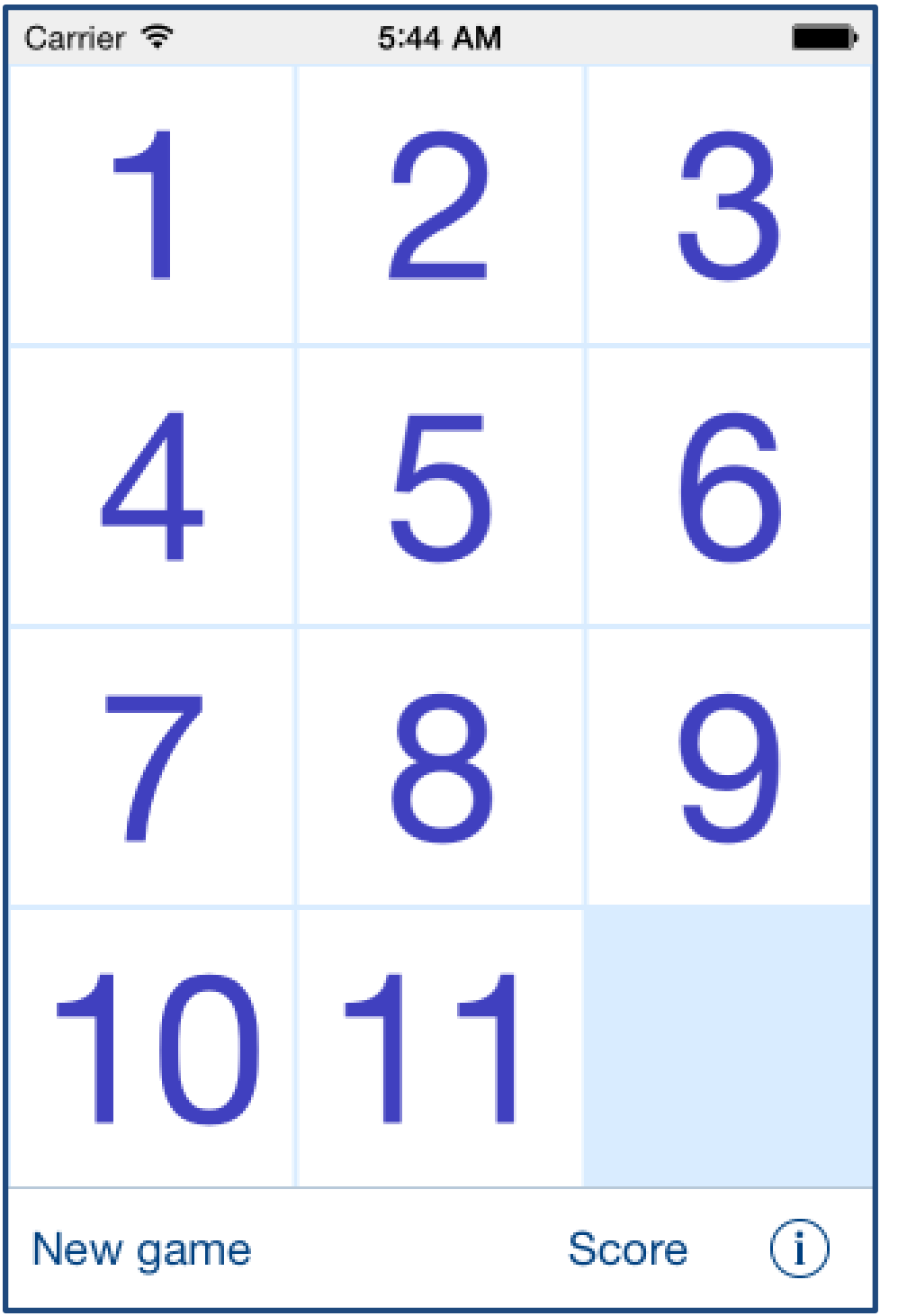
1. Introduction

SortIt is digital version of the classic combinatorial game 15-Puzzle, invented 1874.

Game is also called Gem Puzzle, Boss Puzzle, Game of Fifteen, Mystic Square, 16-puzzle.

The famous chess player Bobby Fischer “was an expert at solving the 15-Puzzle. He had been timed to be able to solve it within 25 seconds” [WikipediA].


Carrier
5:44 AM
1
2
3
4
5
6
7
8
9
10
11
New game
Score

Classic version of game was extended from size “4 x 4” to everything between “2 x 2” and:

- “5 x 7” on iPhone 4,
- “5 x 8” on iPhone 5, iPhone 5s, iPhone 5c,
- “6 x 10” on iPhone 6,
- “7 x 11” on iPhone 6 Plus,
- “9 x 11” on iPad, iPad mini.
- “12 x 15” on iPad Pro.

The goal of game is to sort the buttons from the upper left to lower right corner. At the end of the game the bottom right corner should be empty and all buttons should be ordered in numerically: 1, 2, 3..., left to right, top to

bottom.
Game result can be saved in score database.

Starting from version 3.0 app supports iCloud data synchronization - data on all iOS devices with same iCloud account will be synchronized. By using "Sync settings" you can determine what kind of data will be synchronized (saved in iCloud); rest of data is saved locally.

You can customize the app functionality by using "Settings". It is possible to adjust almost everything:

- Game dimension.

- Colors.
- Shape and size of buttons.
- Way of counting of score.
- Sound.
- Data which will be synchronized.

App “Help” available in the app or on WWW contains detailed description of all functions and options.

All app activities and events are recorded in the system Log. Statistics about the app usage are accumulated.

In the app has been implemented

total saving/restoration of state – it means that app might be interrupted at any time (by phone call, pressing one of device buttons, screen lock) and your data will not be lost. When app is activated next time all not saved data will be restored.

App is optimized for iOS9, iOS8, iOS7, iOS6.

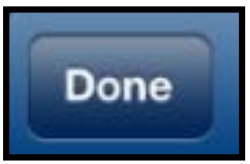
Pro-version does not contain advertisement banner in main game view.



Pictures in current documentation are taken from iOS8.x and iOS7.x version of SortIt. On devices, which are running older versions of iOS (6.x) some controls will look slightly different. Following table contains couple of examples of such differences.

Button

iOS6.x



iOS9.X, iOS8.x, iOS7.x



Picker

iOS6.x



iOS9.X, iOS8.x, iOS7.x

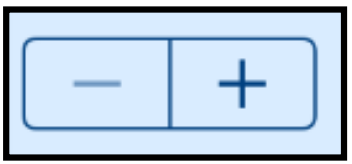


Stepper

iOS6.x



iOS9.X, iOS8.x, iOS7.x



Slider

iOS6.x



iOS9.X, iOS8.x, iOS7.x



Text field

iOS6.x



iOS9.X, iOS8.x, iOS7.x



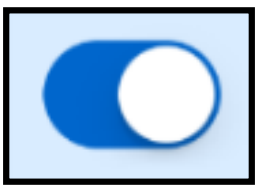
Switch

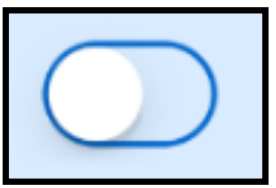
iOS6.x





iOS9.X, iOS8.x, iOS7.x





Alert

iOS6.x



iOS9.X, iOS8.x, iOS7.x



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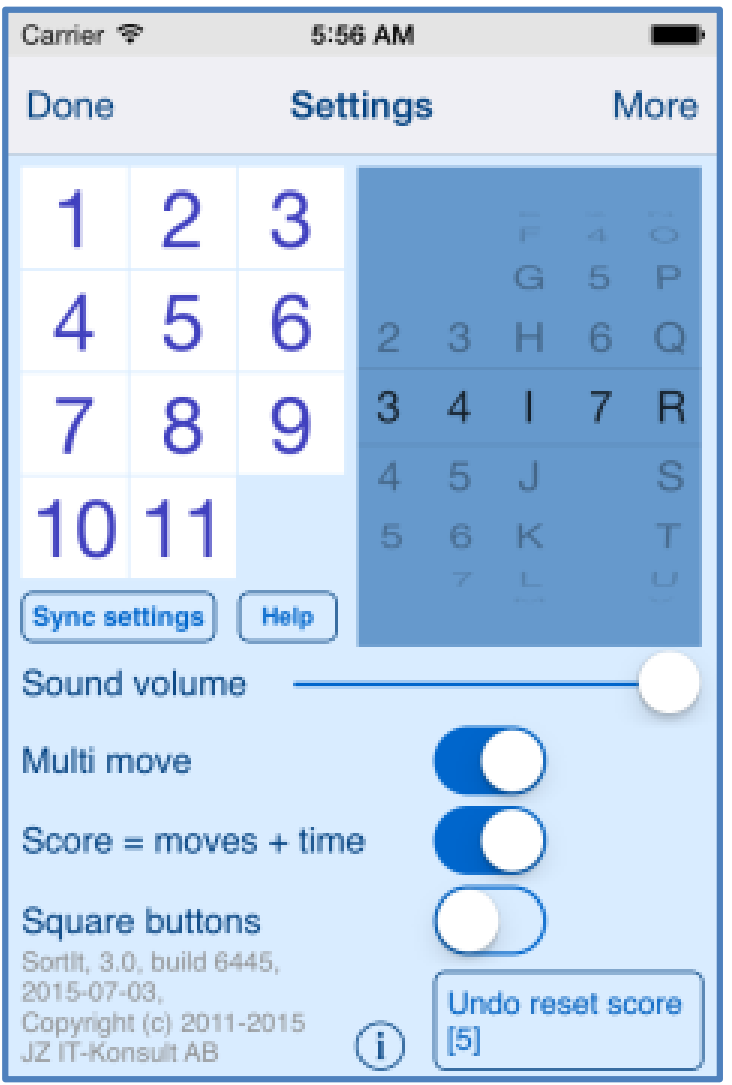
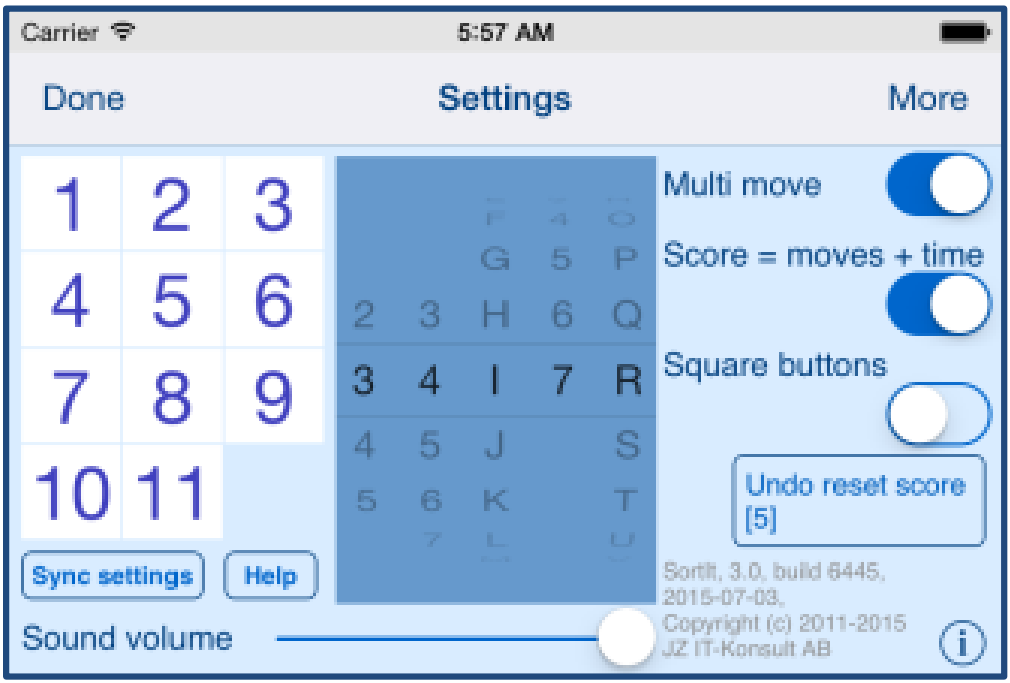
2. View orientation

All app views works in portrait and landscape orientation:



portrait orientation

or



landscape orientation

Just select orientation, which is most convenient for you. View orientation can be change at any time.

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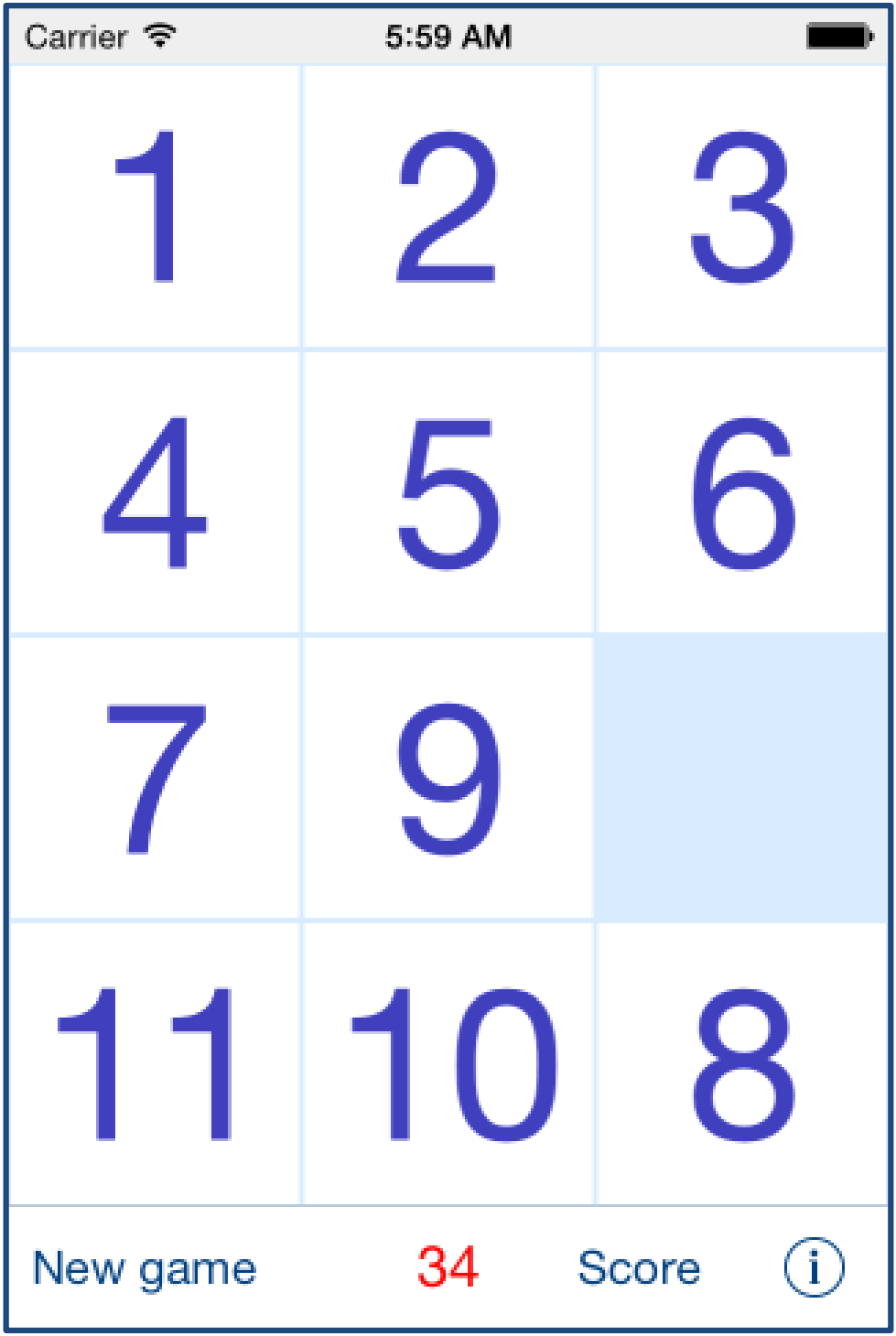
3. Main view

It is view you will usually see when you start the app. When app was terminated in another view, next time you start app you will be directed to that view.


Carrier
5:59 AM
1
2
3
4
5
6
7
9
11
10
8
New game
34
Score

View contains:

- Game desktop with button to sort.
- Game score.
- Controls to start new game and allow access to Settings view and Score view.



Button used to start new game



Game score, calculated as sum of:

- Number of times buttons were moved. Tapping on button

without move do not counts. When “Multi move” is activated – moving of many buttons in one row column counts as one move.

- Time in seconds from first game move divided by “Seconds per score point”. For example: when “1 second” is selected extra score point will be added for every game second. When “10 seconds” is chosen you will get extra score point every ten seconds.



Button used to open Score view.



Button used to open Settings view.

When game is terminated - the following will be shown:



When you answer “Yes” the new game will be started directly after that.

Next you will get opportunity to save score in score-database:



When new game has not been started and you are tapping on any game-button you will see:



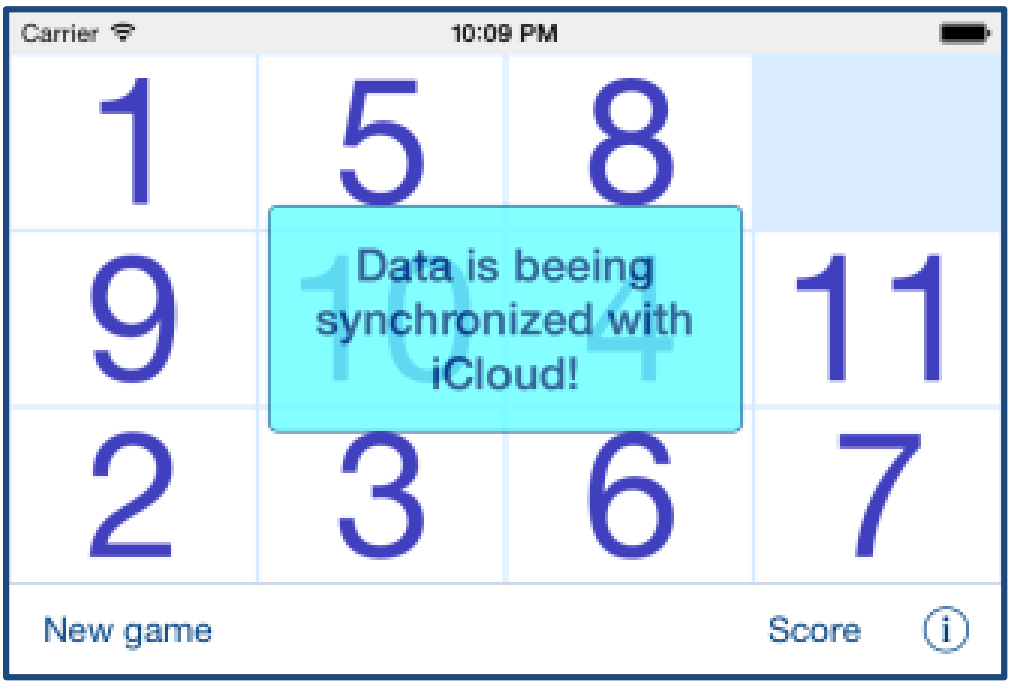
When you tap on “New game” button and game is not terminated you will see warning/question:



When you change orientation of your device after starting game and game has different number of buttons on height and width you will see warning/question:



When data is synchronized with iCloud following info box popups:



When it is impossible to synchronize game dimensions with dimensions from iCloud you will see following alert:



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4. Settings view

This view allows you to configure system parameters and settings. From this view you have also access to: Sync settings view, Help view and Statistics view:


Carrier
4:54 PM
Done
Settings
More
1 2 3
4 5 6
7 8 9
10 11
Sync settings
Help
Sound volume
Multi move
Score = moves + time
Square buttons
SortIt, 3.0, build 6445,
2015-07-03,
Copyright (c) 2011-2015
JZ IT-Konsult AB
Undo reset score
[5]

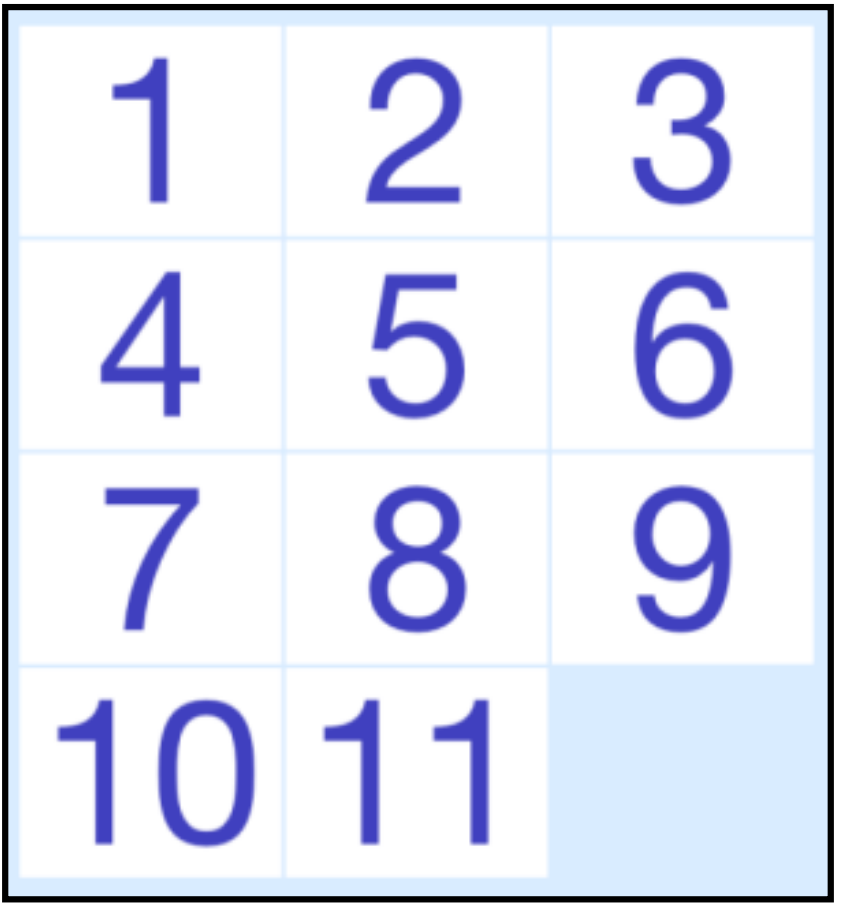
Here is detailed description of controls available from this view:



Terminate view and save changes. Instead tapping on button you can use gesture - swipe to the right.



Terminate view, save changes and go to More settings view.



Visualization of game surface.



Picker for selection of:

- Game dimensions (first and second selector from left)
- Desktop color (third selector)
- Button surface color (forth

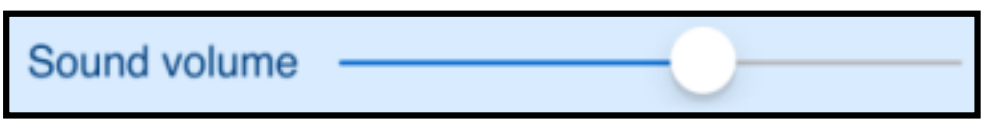
selector)
- Button text color (last selector)



Show Help view.



Show Sync settings view



Volume of sound effects in app.



Determines if it is allowed to move several buttons with one button-touch.



Determines if time will be counted as score.



Shape of game buttons: square or rectangular to fill whole game surface.



Show Statistics View



Undo resetting of score - number in brackets shows number of undo levels. When tapped the following will be shown:



When you answer “Yes” game results removed during previous

reset operation will be restored back and information about number of restored scores will be shown:



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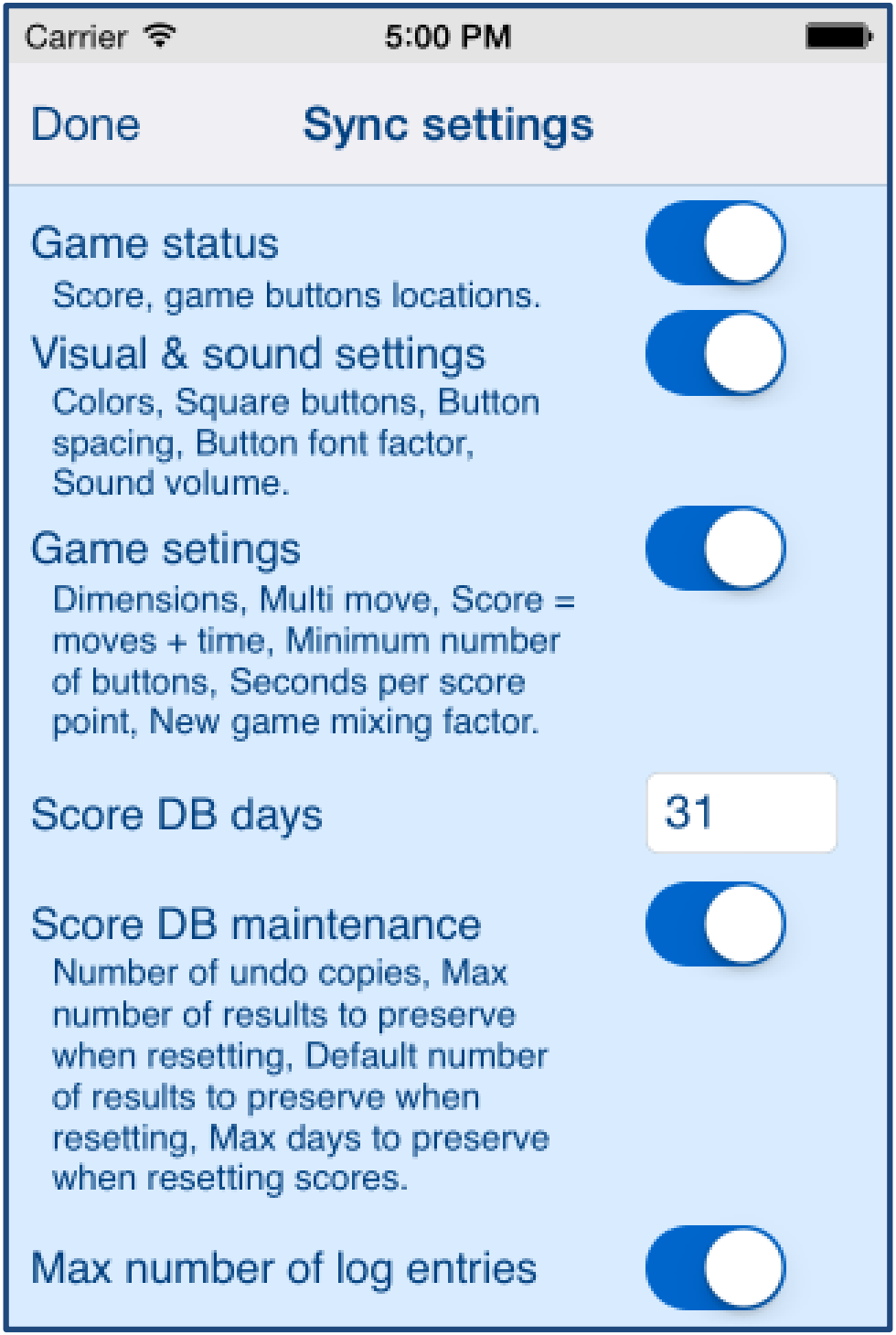
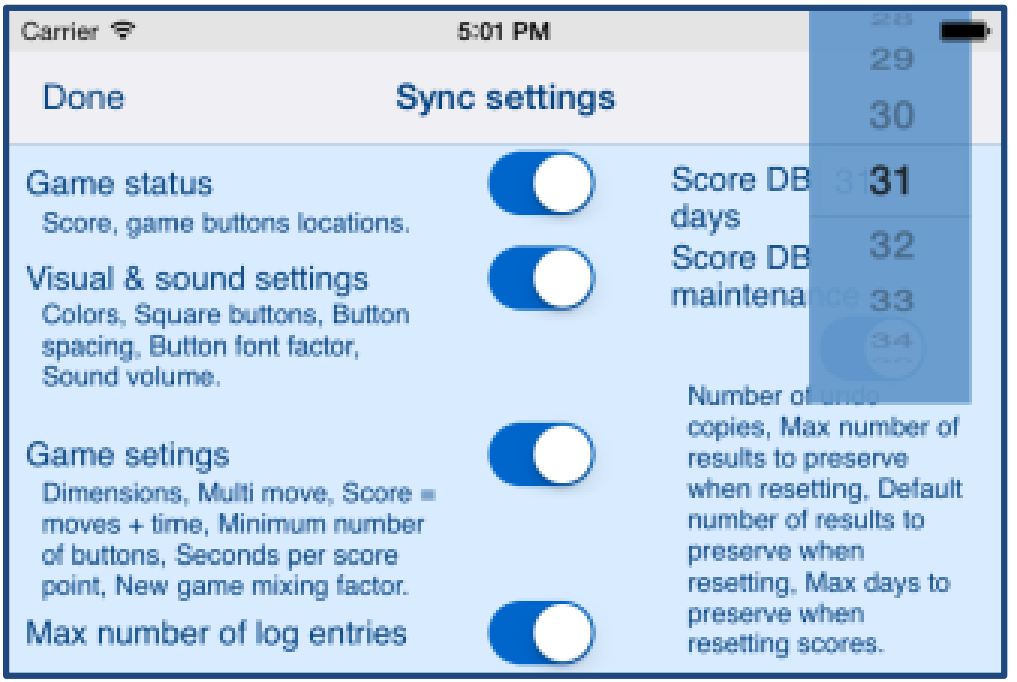
5. Sync settings view

This view is used to configure what data should be synchronized with iCloud.

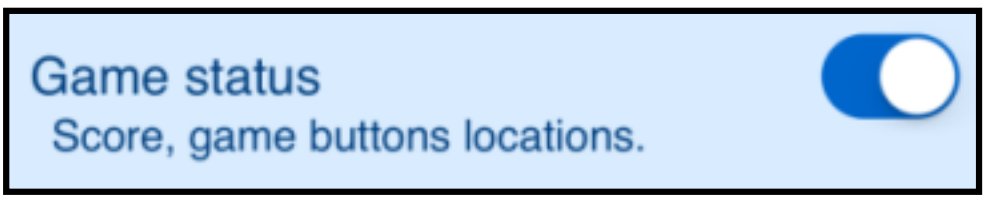
View looks like this:


Carrier
5:00 PM
Done
Sync settings
Game status
Score, game buttons locations.
Visual & sound settings
Colors, Square buttons, Button spacing, Button font factor, Sound volume.
Game setings
Dimensions, Multi move, Score = moves + time, Minimum number of buttons, Seconds per score point, New game mixing factor.
Score DB days
31
Score DB maintenance
Number of undo copies, Max number of results to preserve when resetting, Default number of results to preserve when resetting, Max days to preserve when resetting scores.
Max number of log entries

or



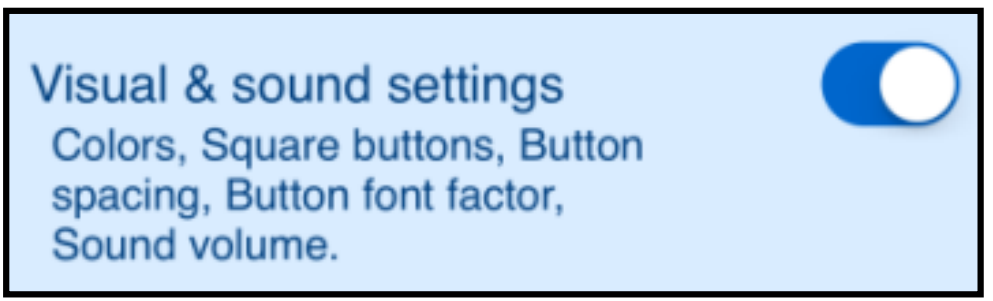
Here is detailed description of controls available from this view:



Determines if games status:

- Score

- Game buttons locations will be synchronized with iCloud and restored on all your iOS devices with same iCloud account.



Determines if game visual and sound settings:

- Colors
- “Square buttons” setting
- Button spacing
- Button font factor
- Sound volume

will be synchronized with iCloud

and restored on all your iOS devices with same iCloud account.



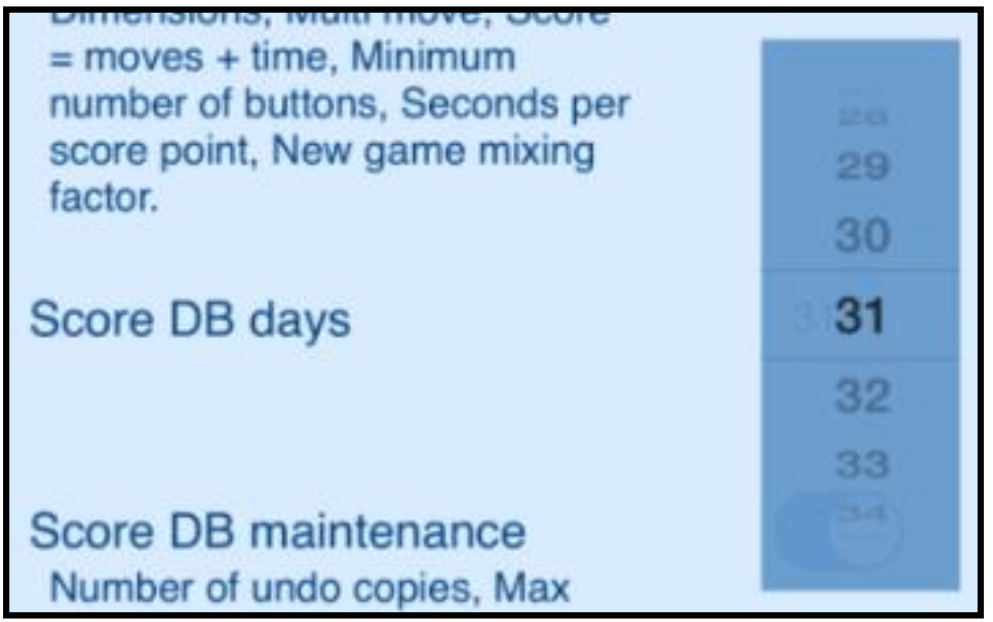
Determines if game settings:

- Dimensions
- “Multi move” setting
- “Moves + time” setting
- Minimum number of buttons
- Sound volume

will be synchronized with iCloud and restored on all your iOS devices with same iCloud

account.





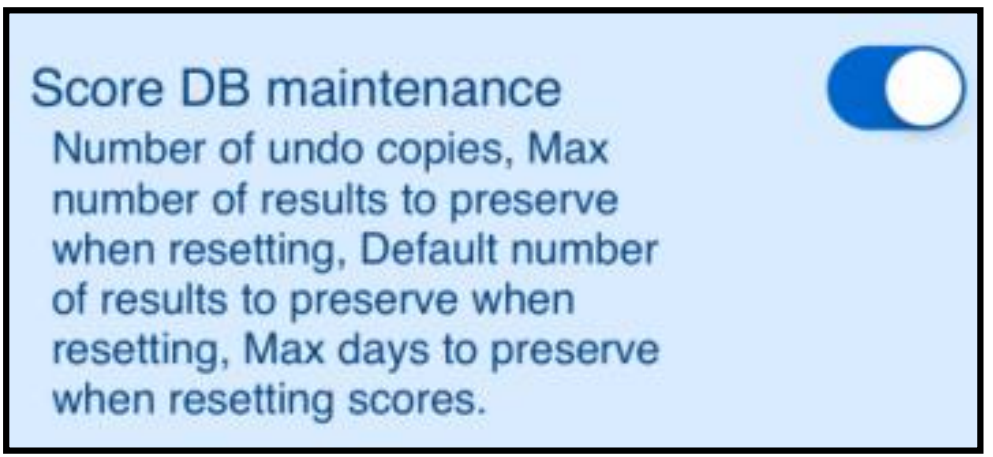
Determines number of “score days” which will be synchronized with iCloud on all devices with same iCloud account:

- “0” – means no synchronization

at all.

- 31 or other number – determines number of latest days of score which will be synchronized.

To change value - just tap on field and pick new value and tap somewhere.



Determines which DB maintenance settings:

- Number of undo copies

- Max number of results to preserve when resetting.
- Default number of results to preserve when resetting.
- Max days to preserve when resetting scores.

will be synchronized with iCloud and restored on all your iOS devices with same iCloud account.



Determines if setting:

- Max number of log entries

will be synchronized with iCloud and restored on all your iOS devices with same iCloud account.

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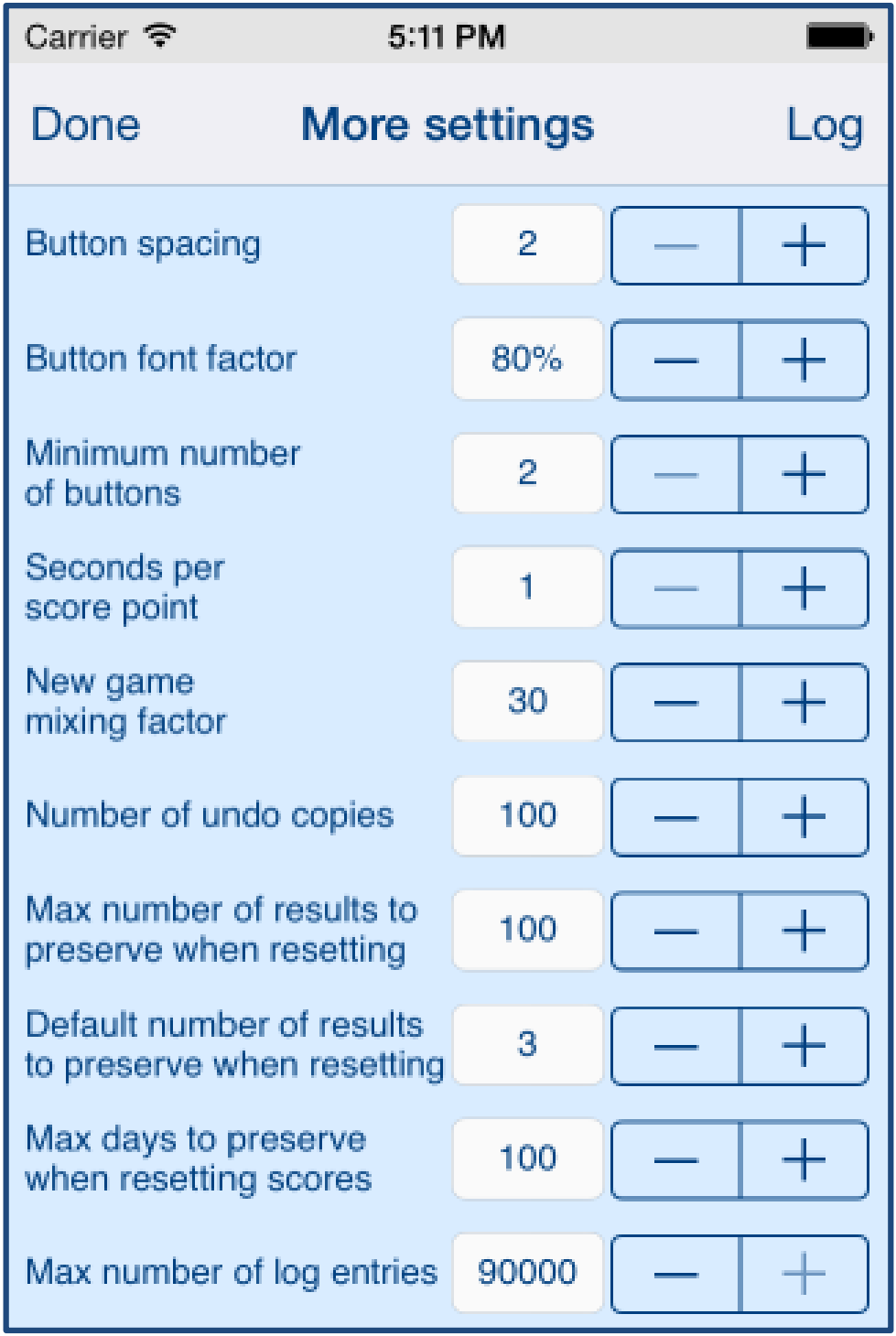
6. More settings view

This view is used to configure additional app parameters and allows access to some additional views.

On iPhone view looks like this:


Carrier
5:11 PM
Done
More settings
Log
Button spacing
2
Button font factor
80%
Minimum number of buttons
2
Seconds per score point
1
New game mixing factor
30
Number of undo copies
100
Max number of results to preserve when resetting
100
Default number of results to preserve when resetting
3
Max days to preserve when resetting scores
100
Max number of log entries
90000

On iPad there is additional part – visualization of game buttons:



Here is detailed description of controls available from this view:



Terminate view and save changes. Instead tapping on button you can use gesture - swipe to the right.



Terminate view, save changes and go to Log view.



Determines space between buttons.



Determines size of font used for text on game buttons. The greater percentage the bigger font.



Minimum size of game surface.



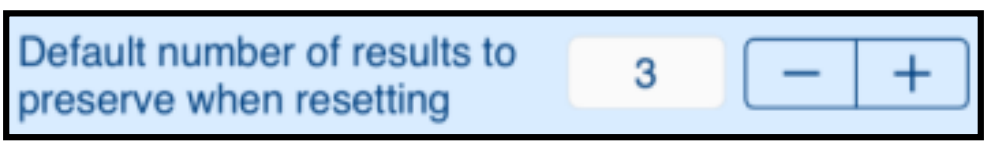
How many points per seconds is used for scoring game, when setting “Score = moves + time” is active.



Number of undo copies of score database. Determines how many levels of game results removed by reset might be taken back by undo operation.



Maximum number of score results, which will be preserved during “Reset score” operation.



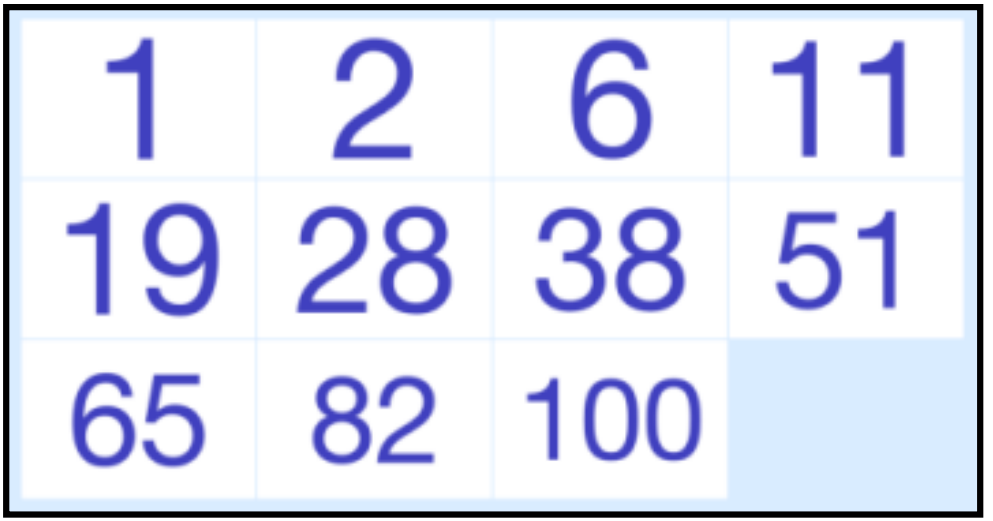
Default value of “Results to preserve” in Reset score view.



Default value of “Older than” in Reset score view.



Sets number of log entries used to log game events. When number of log entries reaches this limit, the oldest entries will be removed automatically.



Visualization of:

- Button spacing.
- Button font factor

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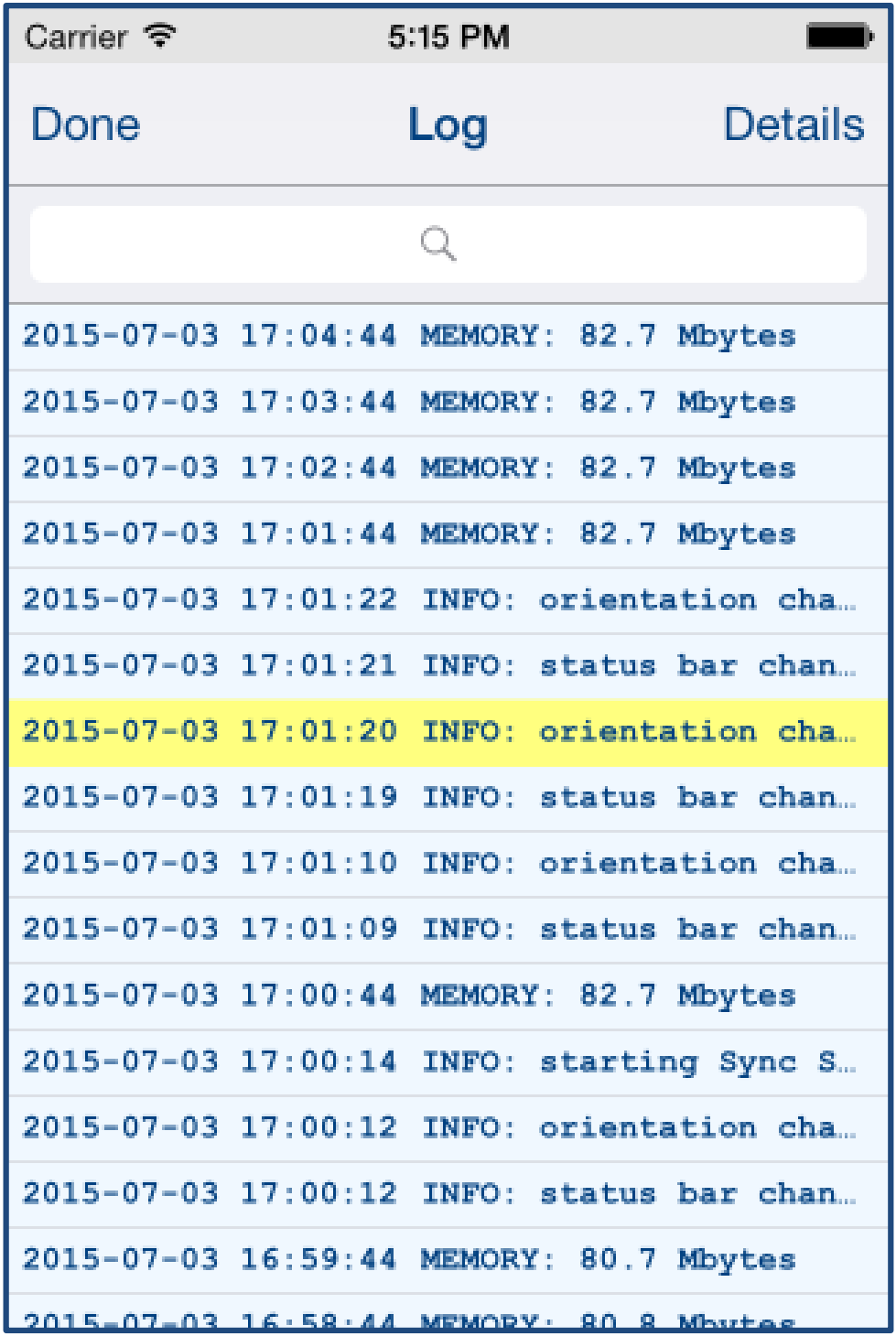
7. Log view

Log view contains list of all system events. Every event might be investigated by activating Log details view.


Carrier
5:15 PM
Done
Log
Details
2015-07-03 17:04:44 MEMORY: 82.7 Mbytes
2015-07-03 17:03:44 MEMORY: 82.7 Mbytes
2015-07-03 17:02:44 MEMORY: 82.7 Mbytes
2015-07-03 17:01:44 MEMORY: 82.7 Mbytes
2015-07-03 17:01:22 INFO: orientation cha…
2015-07-03 17:01:21 INFO: status bar chan…
2015-07-03 17:01:20 INFO: orientation cha…
2015-07-03 17:01:19 INFO: status bar chan…
2015-07-03 17:01:10 INFO: orientation cha…
2015-07-03 17:01:09 INFO: status bar chan…
2015-07-03 17:00:44 MEMORY: 82.7 Mbytes
2015-07-03 17:00:14 INFO: starting Sync S…
2015-07-03 17:00:12 INFO: orientation cha…
2015-07-03 17:00:12 INFO: status bar chan…
2015-07-03 16:59:44 MEMORY: 80.7 Mbytes

View shows program events, such like:

- Start of game,
- Termination of game,
- Memory used, errors, etc.
- To refresh data from this view use gesture – shake device.

Controls available from this settings view:



Terminate view. Instead tapping on button you can use gesture - swipe to the right.



Terminate view and go to Log details view.

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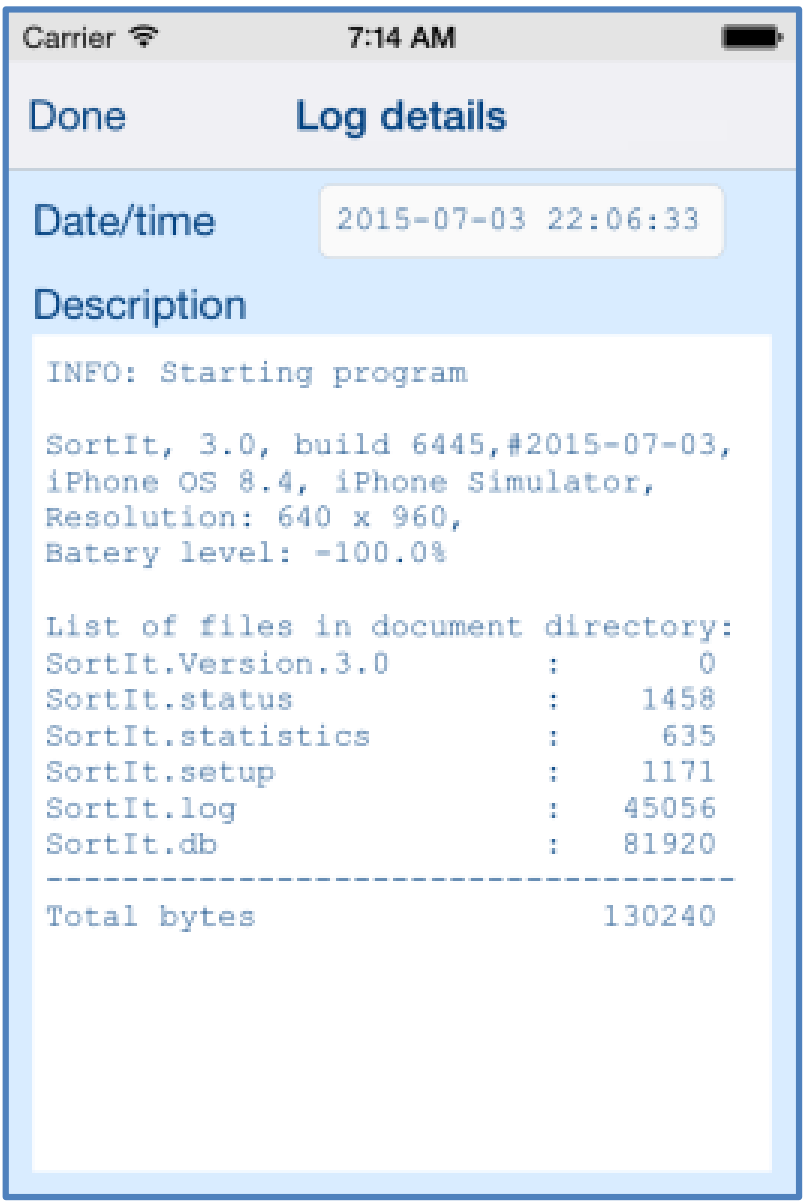
8. Log details view

View shows details of log event.



Controls available from this view:



Terminate view. Instead tapping on button you can use gesture - swipe to the right.

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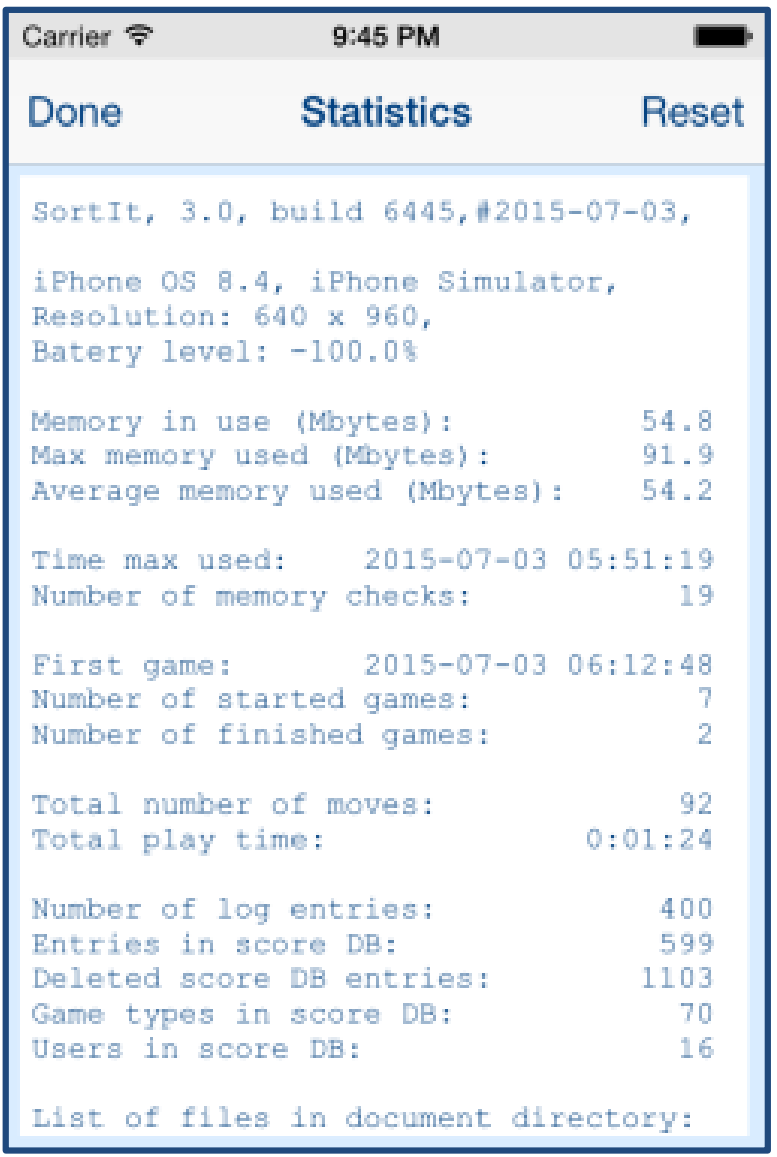
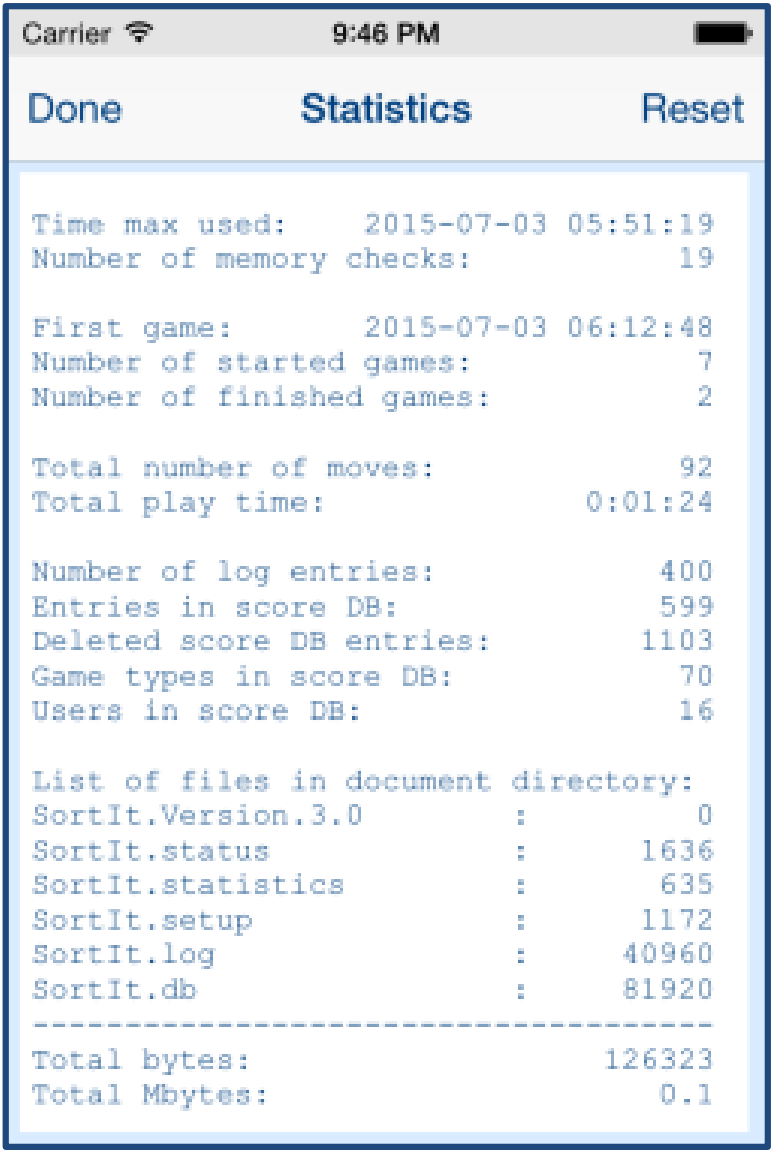
9. Statistics view

This view shows some statistics about usage of app:





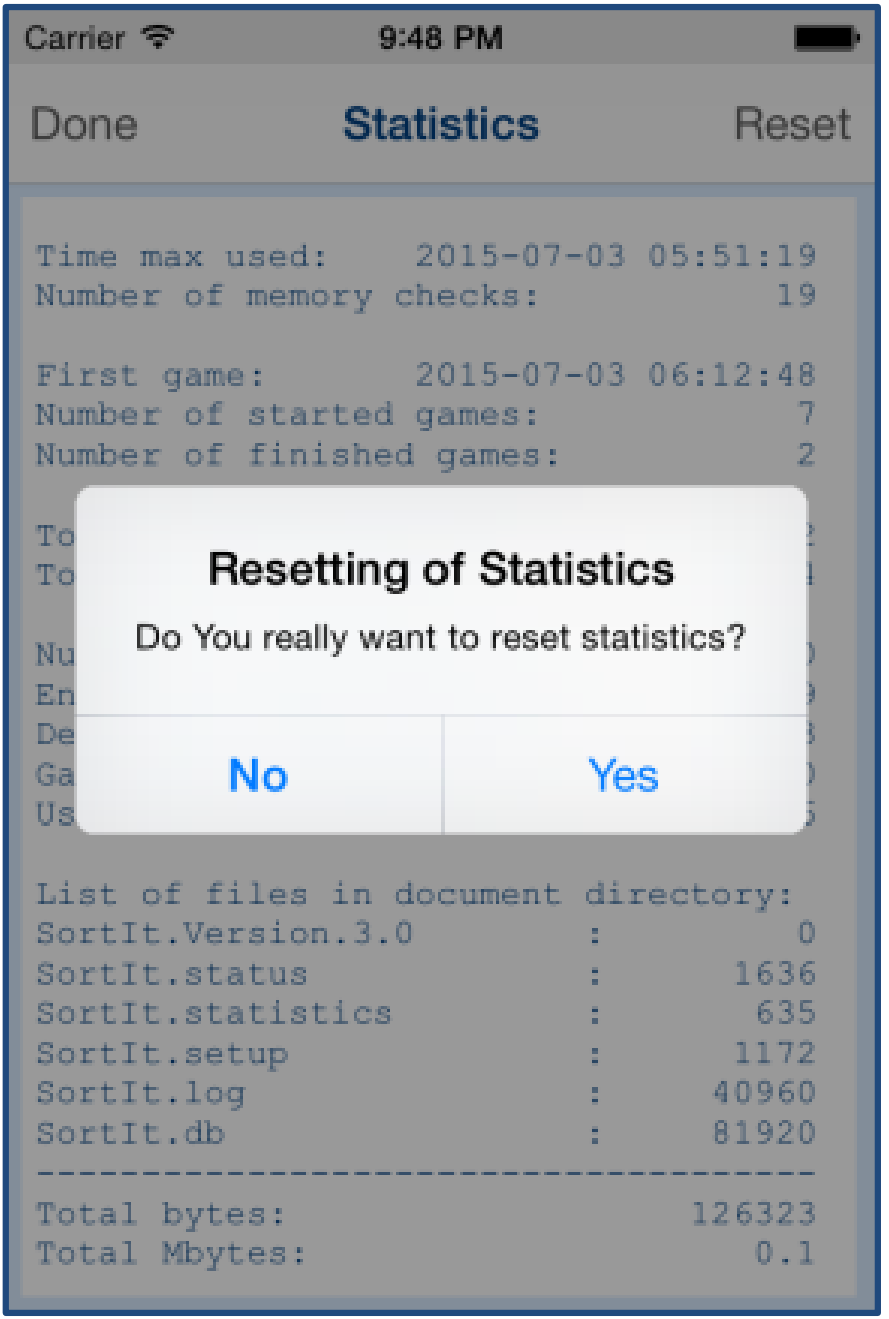
Here is detailed description of controls available from this view:



Terminate view. Instead tapping on button you can use gesture - swipe to the right.



Reset statistics. When tapped the following will be shown:



Reset statistics - clears

accumulated statistics and sets to zero system-counters. To reset statistics you must answer “Yes” on alert question.

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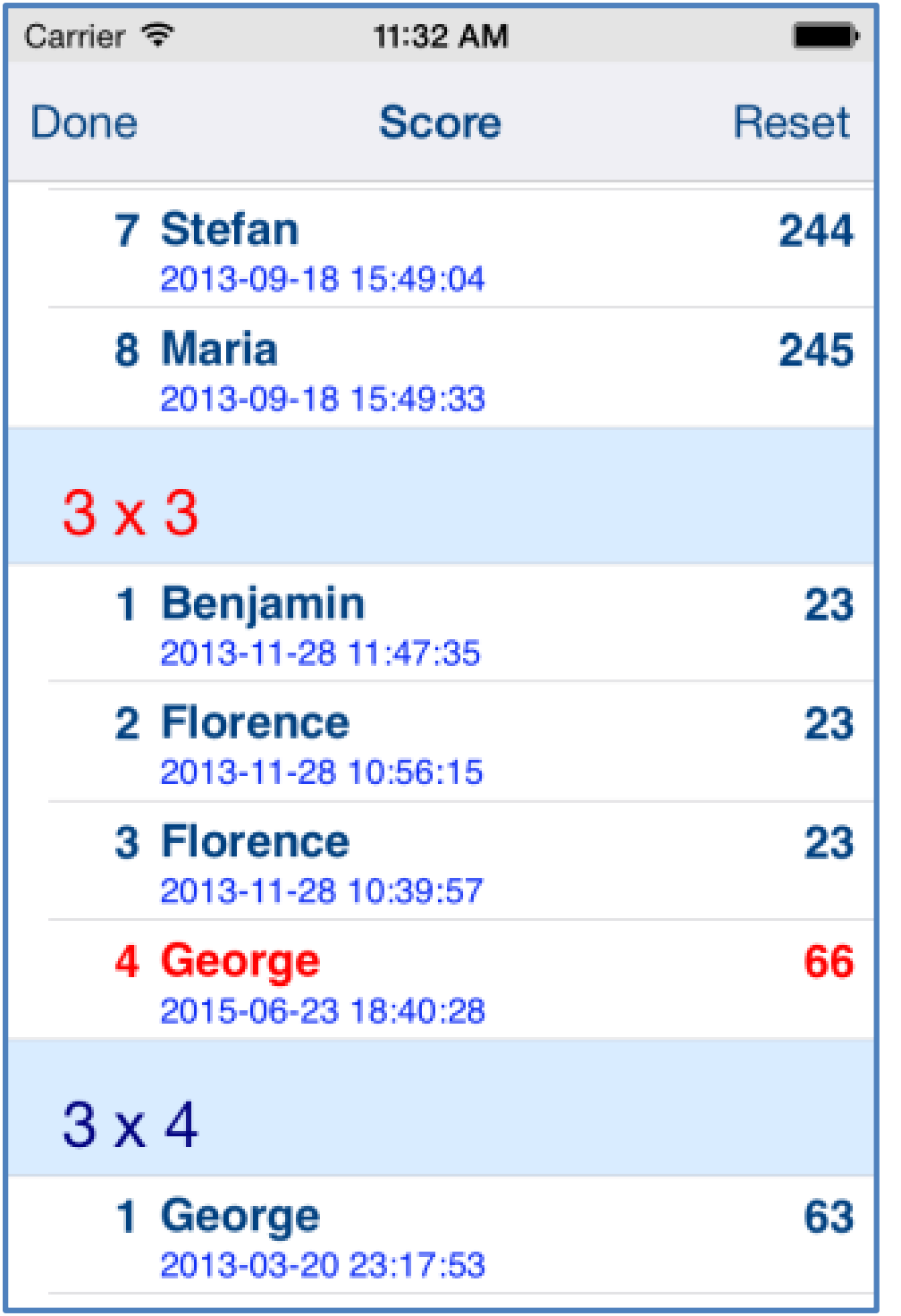
10. Score view

Show contents of score database, game results are sorted by game dimension and score. Date and time of game, player name and score is shown. Latest game type and result is shown in red color.


Carrier
11:32 AM
Done
Score
Reset
7 Stefan
244
2013-09-18 15:49:04
8 Maria
245
2013-09-18 15:49:33
3 x 3
1 Benjamin
23
2013-11-28 11:47:35
2 Florence
23
2013-11-28 10:56:15
3 Florence
23
2013-11-28 10:39:57
4 George
66
2015-06-23 18:40:28
3 x 4
1 George
63
2013-03-20 23:17:53

Here is detailed description of controls available from statistics view:



Terminate view. Instead tapping on button you can use gesture - swipe to the right.



Opens “Reset score view”.

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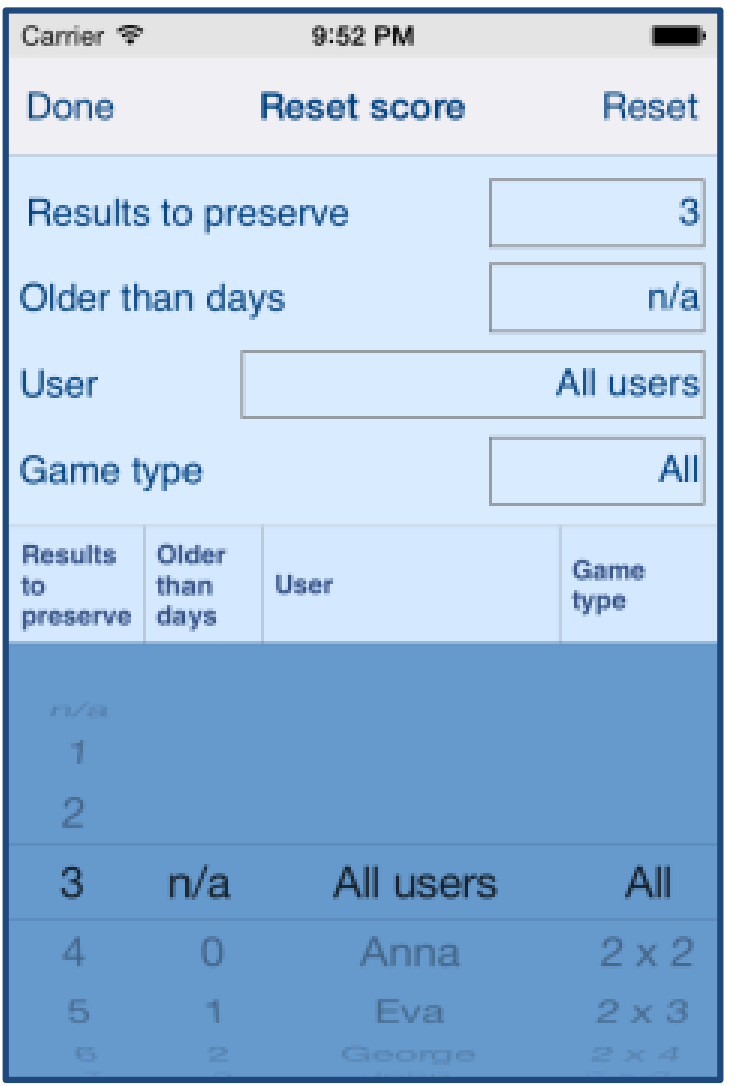
11. Reset score view

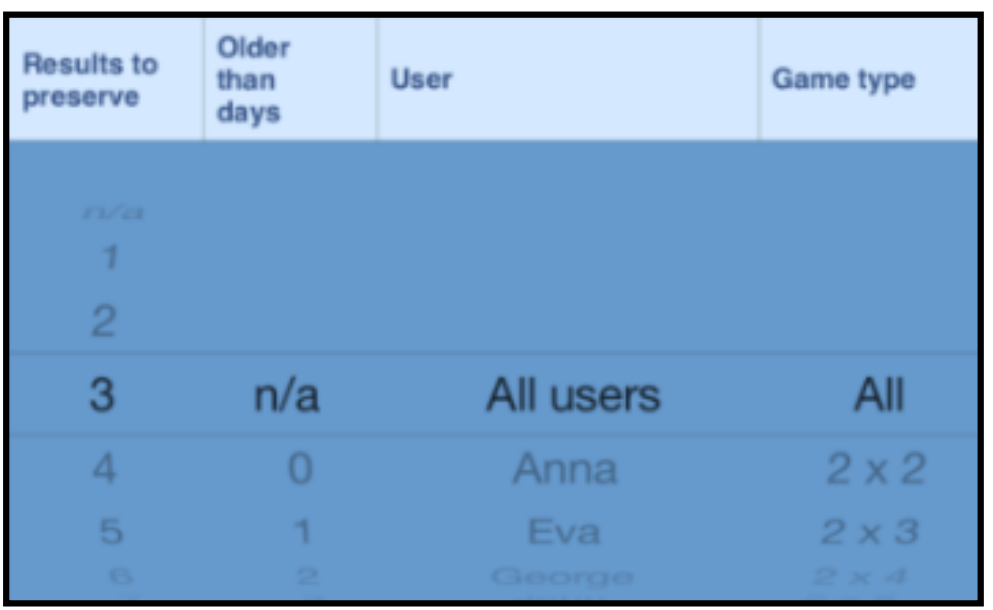
This view allows to cleanup of score database by deleting of some scores.



Here is detailed description of controls available from statistics view:

Done

Terminate view. Instead tapping on button you can use gesture - swipe to the right.



Picker for defining what should

be deleted during resetting:

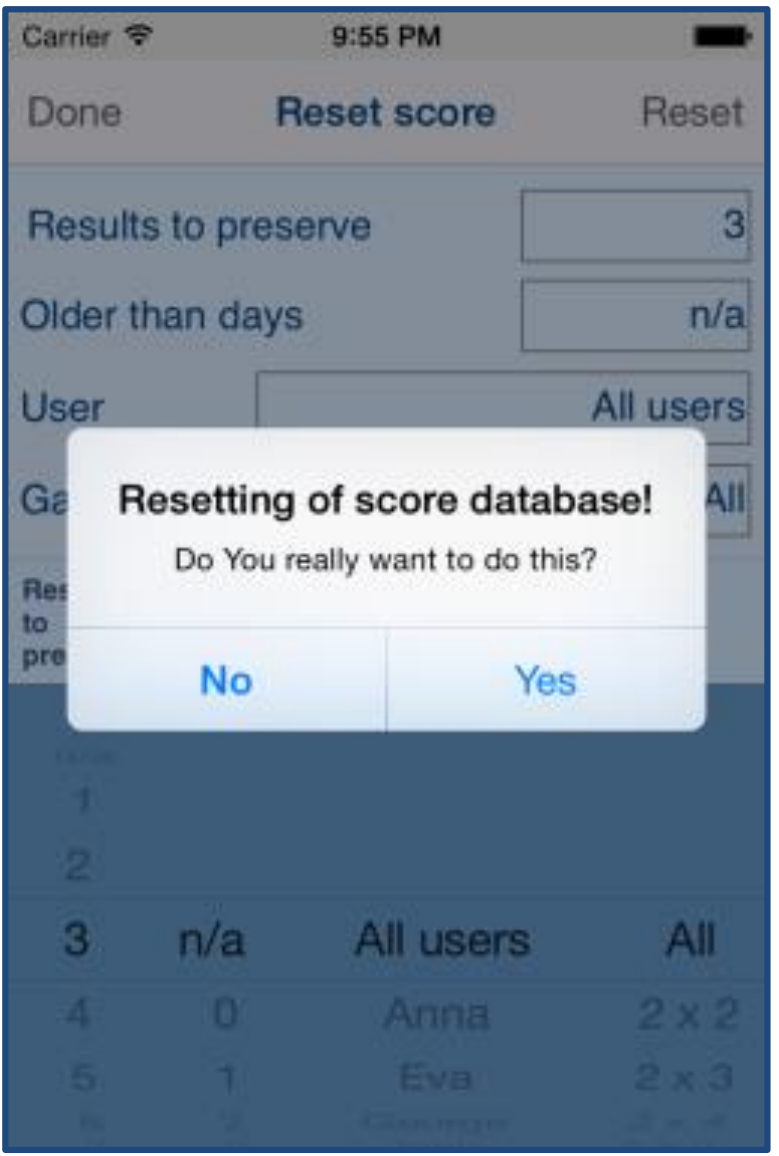
- “Results to preserve” – number of results for game type to preserve – not delete.
- “Older than days” – remove results older than selected number of days
- “User” – remove results for all users or only for selected user.

“Game type” – remove results for all game types or only for selected type.

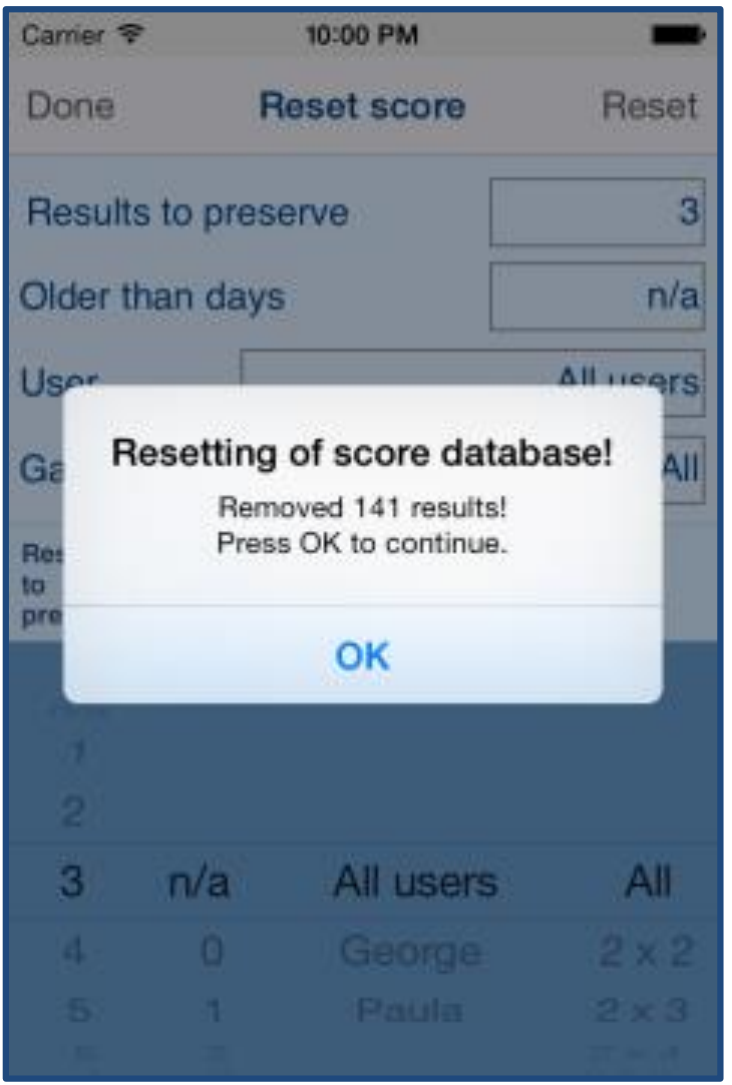


Performs resetting of scores

according to selection from picker. When tapped the following will be shown:



When you confirm resetting by selecting “Yes” the following information will be shown:



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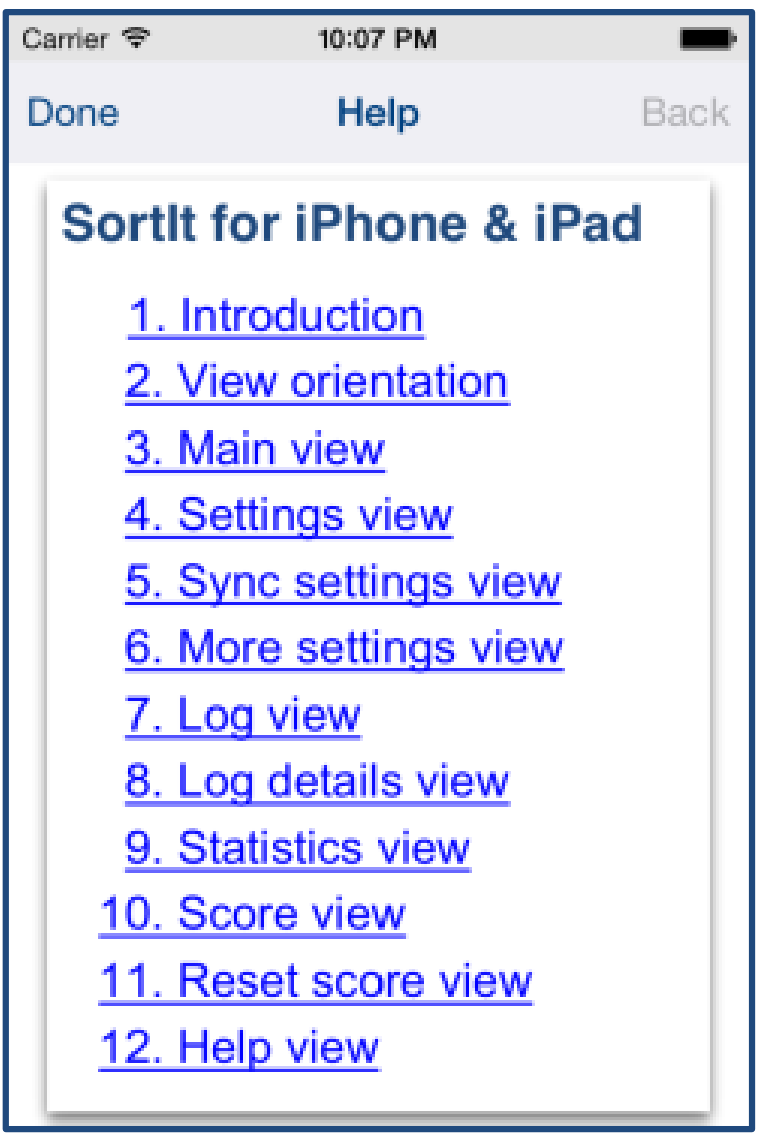
12. Help view

This view shows user guide for app.



The only controls available here are:



Terminate view. Instead tapping on button you can use gesture - swipe to the right, when you navigate in help. When you navigate to external links, swipe to right has same effect as taping “Back” button.
Tapping “Done” button will always terminate Help view.



Navigate to previous page in help or external web pages accessed

through links. When you navigate to external links, swipe to right has same effect as taping “Back” button.

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