Software Engineering Group Project
Test Specification

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1 INTRODUCTION

1.1 Purpose of this Document

1.2 Scope

1.3 Objectives

2 TESTS

Test Ref	Req Tested	Test Content	Input	Output	Pass Criteria
001	FR1	Check that appropriate start screen is displayed when starting the game.	Start software.	Start screen containing options of starting new game or loading saved grid is displayed.	Start screen is displayed correctly.
002	FR1	Check that game is asking user for a name after choosing new game option.	Choose new game option.	Window with name box is displayed.	The game is asking user for a name at the beginning of the game.
003	FR1	Check that game is asking user for a name after choosing load cube option.	Choose load cube option.	Window with name box is displayed.	The game is asking user for a name at the beginning of the game.
004	FR1	Entering blank players name.	Choose blank name.	Blank player name is illegal.	Player name is rejected.
005	FR1	Entering the players name with illegal characters.	Choose player name: agl*	Player is told that name contains illegal characters.	Player name is rejected.
006	FR1	Entering to long players name.	Choose player name which contains more than 10 characters.	Player is told that name is too long, limit of the characters is 10.	Player name is rejected.
007	FR1	Entering to short players name.	Choose player name with less than 3 characters.	Player is told that name is to short, there must be more than 3 characters.	Player name is rejected.
008	FR1	Loading is not allowed if there are no saved grids.	Choose load past grid option with no previously saved grids.	Load option is not available.	Game cannot be loaded.
009	FR1	Check that all saved grids are displayed for user to choose from.	Choose load past grid option with some previously saved grids.	List of saved grids is displayed.	All saved grids are displayed on the list.
010	FR1	Check if the pause button stops the game	During the game press Pause Game button.	Game stops.	Pause Game button is work correctly.

011	FR1	Check that appropriate start screen is displayed (Game Paused) when Pause Game button is pressed.	During the game press Pause Game button.	Game Paused screen is displayed and containing options of resume, exit and settings.	Game Paused screen is displayed correctly.
012	FR1	Check that Resume button in the Game Paused screed is resume the game.	On the Game Paused screen choose Resume button.	Game is resumed.	Resume button is work correctly.
013	FR1	Check that Exit button in the Game Paused screen is exiting the game.	On the Game Paused screen choose Exit button.	Game is exited.	Exit button is work correctly.
014	FR1	Check if the End Game button ends the game.	During the game Press End Game.	Game is finished.	End Game button is work correctly.
015	FR2	Letters are generated randomly.	Start new game 3 times.	Grid is generated randomly 3 times.	Generated grids are not identical.
016	FR2	There is no more occurrences of each letter than allowed population.	Create new grid and count occurrences of each letter.	List of letters and corresponding number of occurrences.	Each letter is used less or as many times as allowed.
017	FR3	Previous scores and names of players are displayed while playing loaded grid.	Choose a past grid from the list and load it.	Names of previous players are displayed with matching scores.	Names are displayed against correct score.
018	FR4	Clock starts as soon as grid is displayed.	Start a game.	Clock displays time of the game left.	Clock displays 3 minutes when game is started.
019	FR4	Clock is updated as the time is passing.	Start a game and wait 10 seconds.	Time displayed on clock is decreasing as time is passing.	Displayed time is updated at least every second.
020	FR4	Game stops after 3 minutes.	Start a game and wait 3 minutes.	User is no longer able to create new words after 3 minutes.	Game stops correctly.
021	FR4	Clock stops counting the time while Pause Game button is pressed.	Start a game and during the game press Pause Game button.	Clock stops on time when Pause Button been pressed.	Clock stops counting the time.
022	FR4	Clock resumes counting the time	Start a game and press Pause Game button and then Resume button to resume the game.	Clock starts with time game been before Pause Game button.	Clock is back to counting the time.
023	FR4	Score of the player is noted when game is finished.	Finish the game.	Final score is displayed after 3 minutes from starting the game.	Correct score is displayed.

024	FR5	Score is saved if it is one of highest ever achieved.	Empty high-score table. Finish the game with score greater than 0.	Score is highest score ever achieved.	Score is saved in high-score table.
025	FR5	Check that end game screen is displayed correctly.	Finish the game.	End screen with options of starting new game, loading past grid or saving current game is displayed.	End screen contains all required elements.
026	FR5	Scores in high-score table are ordered correctly.	Add high-score table with different values. Achieve a score between highest and lowest in the table.	New score is added to the table between all higher and lower scores. All lower scores are moved one position down.	Scores are in correct order from highest to lowest.
027	FR6	User is prompted for filename when saving new game.	Finish new game and save it.	Message asking for filename and input box are displayed.	User is able to type in filename.
028	FR6	Check that game is saved in correct file.	Finish new game and save it.	Game data is stored in file specified by user.	New file with game data is created.
029	FR6	Check that game is saved in correct file.	Finish loaded game and save it.	Game data is stored in file that it was loaded from.	Data is added to old file. No new file is created.
030	FR6	It is impossible to save a new game in file that already exists.	Generate new grid and try to save it into file named test twice.	Filename is rejected. Player is asked to choose different filename.	Original file has not been altered.
031	FR6	Filename for saving the grid has to consist of at least one non whitespace character.	Try saving newly generated grid with name *space*	Filename is rejected. Player is asked to choose different filename.	File has not been created.
032	FR6	Filename for saving the grid can consist of maximum 20 characters.	Try saving newly generated grit with name Test Grid With Very Long Name.	Filename is rejected. Player is asked to choose different filename.	File has not been created.
033	FR6	Filename for saving the grid cannot contain any special characters.	Try saving newly generated grid with name Grid	Filename is rejected. Player is asked to choose different filename.	File has not been created.
034	FR6	Scores for specific grid are ordered from highest to lowest.	Load a grid, finish the game and save it.	Player name and score are saved between all higher and all lower scores in this grid file.	Scores are in correct order.

035	FR7	Check that 27 letters are generated when starting new grid.	Start a new game.	Cube contains of 27 blocks filled with one letter each.	There are no empty blocks or blocks containing more than one letter. *Exception* : *Qu*
036	FR7	Check that letters are displayed as 3 groups of 9 letters.	Start a new game.	Cube is represented by 3 planes consisting of 9 blocks each. Each block represents one letter.	Letters are grouped correctly.
037	FR7	Player can change the view as if the cube was seen from any of its faces.	Start a game. Change the view to each face.	There are 6 different views 1 for each of the faces.	Each face is displayed correctly.
038	FR8	Words can be selected with mouse.	Choose one letter with a mouse.	Letter is displayed in word creation window.	Selection is working properly.
039	FR8	Any block that has not been used yet can be chosen as first letter of a new word.	Start new game. Choose one letter and undo ?. Repeat with all other letters.	Each of the letters appear in word creation window when selected.	There is no letter that cannot be selected.
040	FR8	After first letter is selected only letter adjacent to last selected letter can be chosen.	Choose starting letter. Then choose letter that is adjacent to it.	Both letters are selected and displayed in word creation window.	User is able to choose adjacent letter.
041	FR8	After first letter is selected only letter adjacent to last selected letter can be chosen.	Choose starting letter. Then choose letter that is not adjacent to it.	Only starting letter is displayed in word creation window. Block with second letter is not available for selection.	User is not able to choose letter that is not adjacent to previous letter.
042	FR8	After submitting a word creation of new word starts.	Start a new game. Create a word and submit.	Word creation window is cleared. Next letter is a starting letter of a new word.	All letters that were not used in creation of previous word are marked as available again.
043	FR8	After choosing a letter all adjacent letters are marked as available for selection.	Choose middle letter in middle plane as starting letter.	All other letters are available for selection.	Letters are marked as selectable correctly in all planes.

044	FR8	After choosing a letter all adjacent letters are marked as available for selection.	Choose first letter in first plane.	The only available letters are: First plane: 2nd letter in 1st row, 1st and 2nd letter in 2nd row Second Plane: 1st and 2nd letter in both 1st and 2nd row Third plane: none	Letters are marked as selectable correctly in all planes.
045	FR8	Letters cannot be reused.	Create a word. Choose a block that has already been used.	Block is not available for selection.	Letter cannot be selected.
046	FR8	Words are recognized as legal or illegal correctly.	Create a word existing in used dictionary.	Word is accepted. Score for it is calculated and added to the total score.	Word is given associated score.
047	FR8	Words are recognized as legal or illegal correctly.	Create a word that does not exist in used dictionary.	Word is not accepted.	Word is given a score of 0.
048	FR9	The same word cannot be selected twice.	Create a word that has already been created.	Error message saying This word has already been created is displayed.	Word is rejected.
049	FR9	Words have to consist of at least one letter.	Choose no letter and submit the word.	Error message saying Word has to contain at least one letter is displayed.	Word is rejected.
050	FR9	Words have to consist of at least one letter.	Create a word that consists of exactly one letter.	Word is added to the list of created words and given associated score.	Word is accepted
051	FR10	Check that game score for each letter is calculated correctly.	Create a legal word.	Score for the word is calculated.	Score for the word is square of Scrabble score of the word.
052	FR11	Check that final game score is calculated correctly.	Finish game creating more than one word.	Total score is displayed on the end screen.	Total score is sum of scores for each word.

REFERENCES

[1] *Software Engineering Group Projects* JoggleCube Game Requirements Specification. C. J. Price SE.QA.CSRS. 1.0 Release.

[2] *Software Engineering Group Projects* Test Procedure Standards. C. J. Price SE.QA.06 2.0 Release.

DOCUMENT HISTORY

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0.1	N/A	2018-02-19	Initial creation	NAW21
1.0	N/A	2018-02-21	Adding entries to the test table	ALM82