

Group Project JuggleCube - Test Specification Document

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1. INTRODUCTION

1.1. Purpose of this Document

The purpose of this document is to provide test requirements for the game. It identifies the user input, expected output and pass criteria for each test.

1.2. Scope

This document specifies the test requirements for the JuggleCube game. It indicates the main tests to be carried out.

This document should be read by all project members. It is assumed that the reader is familiar with QA Plan and QA Test Procedure Standards.

1.3. Objectives

The objective of this document is to provide test specifications to project members, so as to verify that all Functional Requirements are met, according to the Requirements Specification document.

1. TEST SPECIFICATION

| Test Ref | Req being tested | Test content | Input | Output | Pass Criteria |
|----------|------------------|--|---|--|--|
| SE-F-001 | FR1 | Check that the main page appears when the user presses “New Game” | Press the “New Game” button on the landing page | The main page containing the grids of letters, timer, list of correct words and score appears | The game loads with all of the required components |
| SE-F-002 | FR2 | Check that a new 3x3 grid of letters is generated when the user chooses a new game | User starts the game and selects “New Game” | A 3x3x3 grid of random letters should appear in the main page | The number of time a particular letter appears does not exceed the population amount |
| SE-F-004 | FR3 | Check that the user can select a previously generated grid of letters | User starts the game and selects “Load Game” | A list of previously saved games appears, along with the user name and the highest score achieved on these games | The current user can select any of these saved games and load them |
| SE-F-003 | FR2 | Check that a previously selected letter cannot be selected again | User selects the letters on the grids | The word should contain only the letters selected as they appear in the grid | A particular letter in the word can appear less or equal to the amount of times it appears in the grid |
| SE-F-004 | FR2 | Check that a previously selected letter cannot be selected again | User types the letters in the space provided | The word should contain only the letters selected as they appear in the grid | A particular letter in the word can appear less or equal to the amount of times it appears in the grid |
| SE-F-005 | FR4 | Check that the timer starts correctly when the user starts a new game | User starts a new game | The main game page should appear and the countdown starts immediately | The user cannot make further input when the countdown is over and his/her score is noted |

| Test Ref | Req being tested | Test content | Input | Output | Pass Criteria |
|----------|------------------|--|--|--|--|
| SE-F-006 | FR4 | Check that the timer starts correctly when the user starts a loaded game | User starts a loaded game | The main game page should appear and the countdown starts immediately | The user cannot make further input when the countdown is over and his/her score is noted |
| SE-F-007 | FR5 | Check that the user can save a game after completing it | User enters his/her name after completing a game and selects "Save Game" on the end screen | The start menu appears | The game is saved along with name and score of the user if that score is among the 10 best |
| SE-F-008 | FR5 | Check that the user can start a new game after completing a game | User completes a game and selects "New game" on the end page | The main game page appears with a newly generated grid | The user can start a new game |
| SE-F-009 | FR5 | Check that the user can load a saved game after completing a game | User completes a game and selects "Load Game" | The list of previously saved games appears, along with their highest score | The user is able to load a saved game the same way as he/she would on the start page |
| SE-F-010 | FR6 | Check that the user can type the file name to save a new game | User selects the area to enter the file name with the cursor | The game accepts the input from the user | The user is able to type the file name to save a game |
| SE-F-011 | FR6 | Check that the user can save a new grid | User completes the new game | The game prompts the user to enter his/her name and a file name to save the game | The user is then allowed to enter the file name |

| Test Ref | Req being tested | Test content | Input | Output | Pass Criteria |
|----------|------------------|---|---|---|---|
| SE-F-012 | FR6 | Check that the game accepts only legal characters when saving a new grid | User saves the game with file name "Game1" | The user is brought back to the start menu | The grid, name and score of the user is saved on the same file |
| SE-F-013 | FR6 | Check that a user cannot save a game with file name containing special characters | User saves game using file name "G@m€!" | An error message appears informing the user that special characters are not allowed | The file names of the saved games should not contain any special characters |
| SE-F-014 | FR6 | Check that a file name should be entered to save a game | User leaves the name field blank and presses save | The game is not saved | The game will not save until the user inputs legal characters |
| SE-F-015 | FR6 | Check that the user's name and score is saved if he/she plays a loaded grid | User completes a loaded game | The game prompts the user to enter his/her name | The name and score of the user is saved in the same file as the loaded game, in an order of highest to lowest score |
| SE-F-016 | FR7 | Check that the game displays 3 grids of 9 nine letters | User starts a new or loaded game | The main page is displayed | The game appears to the user as 3 groups of 3x3 grids, containing 27 letters |
| SE-F-017 | FR7 | Check that the user can change the view of the cube | User changes the view | The grids positions are changed | The user can change his/her view of the grids according to his/her position |
| SE-F-018 | FR8 | Enter a legal four-letter word with at least one letter with a value of more than 1. Check that it is | User types the word and presses the "Add word" button | The word appears in the word list | The game accepts a word that the user types |

| Test Ref | Req being tested | Test content | Input | Output | Pass Criteria |
|----------|------------------|---|---|---|--|
| | | accepted and the score is calculated correctly | | | |
| SE-F-019 | FR8 | Enter a four-letter illegal word. Check that the word is not accepted and an error message is displayed | User types the word and presses the “Add word” button | The word is cleared from the input area and an error message is displayed | The game does not accept the illegal word |
| SE-F-020 | FR8 | Check that the word entered by the user consists of letters that are adjacent to each other in the grids | User types a four-letter legal word, consisting of three letters that are adjacent to each other and a forth one which is not | The forth letter is ignored and does not appear in the input area | All letters that are not adjacent to the previously selected one are not accepted. To clear the input are, the user must press the “Clear word” button |
| SE-F-021 | FR8 | Check that the word entered by the user does not contain special characters | User types a four-letter word, consisting of three letters that are adjacent to each other and a forth one which is a special character | The forth character is ignored and does not appear in the input area | The game does not accept special character from the user |
| SE-F-022 | FR8 | Check that the only letters that are adjacent to each other can be used to make a word. User selects letters which are adjacent to each other | User selects the letters | The selected letter is highlighted as well as the letters adjacent are highlighted in a different color | The letters selected are highlighted and the adjacent letters are also highlighted in a different color to help the user know which letters are adjacent |
| SE-F-023 | FR8 | Check that the game unselects all previously selected grids if the user selects a grid that is not adjacent to the one he previously selected | User selects three adjacent letters and selects a forth one that is not adjacent | All the previously highlighted grids are unselected and only the currently selected grid is highlighted | The game unselects the previously entered letters and highlights only the last one selected |

| Test Ref | Req being tested | Test content | Input | Output | Pass Criteria |
|----------|------------------|---|--|--|---|
| SE-F-024 | FR8 | Check the word selected by the user is legal | User selects a legal four-letter word and presses “Add word” | The word along with its corresponding score appears in the word list | The game check that the word entered is legal and then calculates its score |
| SE-F-025 | FR8 | Check if the word selected by the user is illegal | User selects and illegal four-letter word and presses “Add word” | An error message appears informing the user that the word does not exist | The game checks if this word does not appear in the dictionary |
| SE-F-026 | FR9 | Check that an error message is displayed if no word is entered and the “Add word” button is pressed | No word is input and the “Add word” button is pressed | A message appears, prompting the user to enter a word | The error message displays correctly |
| SE-F-027 | FR9 | Check that the word the user enters/selects are adjacent to one another in the proper order | User enters/selects letters that are adjacent | The word appears in the list | The word made should only contain letters that are adjacent to one another |
| SE-F-028 | FR9 | Check that once a letter is selected for a word, it cannot be selected twice for that same word | Letters are selected only once | The word appears in the list | The game should prevent the user from selecting/entering a letter twice for the same word |
| SE-F-029 | FR9 | Check that once a letter is selected for a word, it cannot be selected twice for that same word | A letter is selected twice for same word | The letter cannot be selected | The game prevents the letter from being selected twice |
| SE-F-030 | FR9 | Check that a particular word cannot be submitted twice | A word is submitted for second time | The game displays an error message, mentioning that this has already been submitted before | The game does not allow two similar word from being submitted twice, even if it can be composed in several ways |

| Test Ref | Req being tested | Test content | Input | Output | Pass Criteria |
|----------|------------------|---|---------------------------|---|---|
| SE-F-031 | FR10 | Check the score for one word is calculated properly | A legal word is submitted | The calculated score for this word appears next to it | The score of the word is the square of the scrabble score for that word |
| SE-F-032 | FR11 | Check that the total score is calculated properly | The user completes a game | The total score appears | The total score is the sum of the scores for each legal word the user has submitted |

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[2] Software Engineering Group Projects – General Documentation Standard. C. J. Price
SE.QA.02 Version: 2.1

[3] Software Engineering Group Projects – Test Procedure Standards. C. J. Price
SE.QA.06 Version: 2.0

DOCUMENT HISTORY

| <i>Version</i> | <i>CCF No.</i> | <i>Date</i> | <i>Changes made to document</i> | <i>Changed by</i> |
|----------------|----------------|-------------|--|-------------------|
| 1.0 | N/A | 2018-02-25 | Creation of document | Jty |
| 1.1 | N/A | 2018-03-06 | Addition of test specification | Mai15 |
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