**Software Requirements Specification**

**for**

**Cross-Word Puzzle Game**

**نسحة 1.0**

**Version 1.0 approved**

**كتبت بواسطة**

**Prepared by Islam Ghretlli**

**Faculty of Information Technology,**

**Tripoli University**

**Apr. 15th 2018**

**Table of Contents**

**1.** **Introduction مقدمة 1**

1.1 Purpose الغرض من الوثيقة 1

1.2 Document Conventions 1

1.3 Intended Audience and Reading Suggestions 1

1.4 Product Scope نطاق المنتج 1

1.5 References المراجع 2

**2.** **Overall Description الوصف العام 2**

2.1 Product Perspective وصف المنتج 2

2.2 Product Functions وظائف المنتج 2

2.3 User Classes and Characteristics مستخدموا النظام وسلوكياتهم 2

2.4 Operating Environment بيئة التشغيل 3

2.5 Design and Implementation Constraints قيود التصميم والتنفيذ 3

2.6 User Documentation وثائق المستخدم 3

2.7 Assumptions and Dependencies الفرضيات والاعتمادية 3

**3.** **External Interface Requirements متطلبات الواجهات الخارجية 4**

3.1 User Interfaces واجهات الاستخدام 4

3.2 Hardware Interfaces واجهات الكيان المادي 4

3.3 Software Interfaces الواجهات البرمجية 4

3.4 Communications Interfaces واجهات الاتصال 4

**4.** **System Features عناصر النظام 5**

4.1 System Feature 1 مثلا(اضافة كتابعد) الميزة الاولى او الوظيفة الاولى في النظام 5

4.2 System Feature 2 (and so on) العنصر الثاني وهكذا 6

**5.** **Other Nonfunctional Requirements المتطلبات الاخرى (الغير وظيفية) 6**

5.1 Performance Requirements متطلبات الاداء 6

5.2 Safety Requirements متطلبات السلامة 7

5.3 Security Requirements متطلبات الامن 7

5.4 Software Quality Attributes متطلبات الجودة 7

5.5 Business Rules قوانين العمل 7

**6.** **Other Requirements متطلبات اخرى 7**

**Revision History المراجعات**

|  |  |  |  |
| --- | --- | --- | --- |
| **Name الاسم** | **Date التاريخ** | **Reason For Changes سبب التغيرات** | **Version النسخة** |
|  |  |  |  |
|  |  |  |  |

**Introduction مقدمة**

**Purpose الغرض من الوثيقة**

Word Puzzle Game V.1.0; The following describes the functional and non-functional requirements of a multi-category cross-word puzzle game.

**Document Conventions**

*None*

**Intended Audience and Reading Suggestions**

The following contains information useful to the project manager, developers, and testers.

**Product Scope نطاق المنتج**

A single player, cross-word puzzle game with multiple categories and randomized puzzles. A non-profit indie game for local distribution.

**References المراجع**

none

**Overall Description الوصف العام**

**Product Perspective وصف المنتج**

The document contains a description of the Word Puzzle game, proposed for the preliminary project of the subject Software Quality Assurance. Being a self-contained single player puzzle game.

**Product Functions وظائف المنتج**

1. Selectable categories.
2. Playable puzzle in the specified category.
3. Checking score history.

**User Classes and Characteristics مستخدموا النظام وسلوكياتهم**

Players who will be interacting with the game. Generally, the game should be understood by users of any age group; being able to start the game on their own; select the level; and understand how to play without explicit instruction. In addition, the knowledge contained within the levels should not exceed that of a 5th grader’s knowledge.

Provided the players are able to read and spell at a grade-schooler’s level; and are knowledgeable of the English language.

**Operating Environment بيئة التشغيل**

Android OS (Smartphones).

**Design and Implementation Constraints قيود التصميم والتنفيذ**

English language must be supported; the topic matter and language must abide by the video game content rating of “white” (ages 5 and above).

**User Documentation وثائق المستخدم**

A short “How to Play” tutorial will be provided at the start of a new game.

**Assumptions and Dependencies الفرضيات والاعتمادية**

None*.*

**External Interface Requirements متطلبات الواجهات الخارجية**

**User Interfaces واجهات الاستخدام**

The users will interact with the game via a GUI on a touchscreen mobile phone. Buttons should be provided to select a category, start a game and exit. Once a puzzle is generated, players should be able to click on any box to edit or insert a letter via the default phone keyboard.

The exit button should be available at all times (before and during gameplay).

A prompt should appear when exiting the game.

**Hardware Interfaces واجهات الكيان المادي**

Touch-screen.

**Software Interfaces الواجهات البرمجية**

*None.*

**Communications Interfaces واجهات الاتصال**

*None.*

**System Features عناصر النظام**

**4.1 Starting a game**

**Description and Priority الوصف والاولويات**

Beginning a game; high priority. Initial launching and running the game.

4.1.2 Stimulus/Response Sequences السينارو الخاص بهذا العنصر

- Upon booting successfully user is prompted to begin the game.

- if there is no user data cached of previous games the user is taken to category selection screen.

- if there is user data the user is offered the choice between starting a new game or resuming the existing game.

*- if they select to start a new game the old data is deleted and the user is taken to the category selection screen.*

*- else the old game data is loaded.*

**4.2 Selecting a category**

**Description and Priority الوصف والاولويات**

Select the category of puzzle; high priority. The game loads a puzzle from the existing pool of the selected category.

4.2.2 Stimulus/Response Sequences السينارو الخاص بهذا العنصر

- when a new game is being started the user is taken to a category selection screen.

- Upon button click, the game should load a puzzle based on the category selected.

**4.3 Loading a puzzle**

**Description and Priority الوصف والاولويات**

The actual puzzle loaded randomly from the available ready puzzles based on the category selected. High priority.

4.3.2 Stimulus/Response Sequences السينارو الخاص بهذا العنصر

- When the category is selected, the programming of the game should automatically load a random puzzle from the selected category.

**4.4 Playing the Puzzle**

**Description and Priority الوصف والاولويات**

The game-play of the actual puzzle; high priority. Players should be able to interact with the empty board with a text hint screen to guide them.

4.4.2 Stimulus/Response Sequences السينارو الخاص بهذا العنصر

- The players should be able to click anywhere on the board and have the keyboard appear to input a letter.

- if the spot on the board already contains a letter they may replace it.

- a hint guide is visible on screen for the duration of the gameplay.

**4.5 Winning a Game**

**Description and Priority الوصف والاولويات**

The method of winning the game; high priority. Upon successful completion of the board the player should win the game.

4.5.2 Stimulus/Response Sequences السينارو الخاص بهذا العنصر

- *each time a box is filled with a letter the game logic should run a win check.*

*- once all of the board is filled with the correct lettering the player should be prompted they have one the game.*

*- a time and date record should be added to history upon every successful completion of the game.*

*- once a game is won the player is taken back to the loading screen and the previous game data is deleted.*

**4.6 Exiting the Game**

**Description and Priority الوصف والاولويات**

Exiting a game; high priority. When clicked on, the exit button should allow for a player to leave the game safely after a warning.

4.6.2 Stimulus/Response Sequences السينارو الخاص بهذا العنصر

- The player should be able to choose to exit at any time.

- when clicked on, the exit button should display a warning sign.

- if the player chooses to cancel they should be taken to their previous point in the game.

- if the player chooses to proceed to exit the game data of the current game should be automatically saved for loading upon re-opening the game

**Functional Requirements المتطلبات الوظيفية للعنصر**

REQ-1: Players must be able to begin a new game.

REQ-2: Players must be able to resume an already started game.

REQ-3: Players must be able to exit the game at any given time.

REQ-4: Upon exiting the game, players must be prompted with a warning.

REQ-5: Players must be able to cancel exiting a game.

REQ-6: Players must be able to select a category for their puzzle.

REQ-7: Players must be able to click on any empty space to add a letter.

REQ-8: Players must be able to edit any filled space on the board.

REQ-9: At any transition in the game, players must be able to return to the previous menu.

REQ-10: Players must be able to review past scores and times.

REQ-11: Players must be able to clear the score history in-game.

REQ-12: Players must be prompted with a warning upon selecting to clear score history.

REQ-13: Players must be able to cancel clearing score history.

REQ-14: Players must be able to win a game upon correctly filling the entire board.

**Other Nonfunctional Requirements المتطلبات الاخرى (الغير وظيفية)**

**Performance Requirements متطلبات الاداء**

Upon sensory overload or crash, the game must prompt with a force-close window detailing the error that has occurred.

**Safety Requirements متطلبات السلامة**

No specific safety requirements needed.

**Security Requirements متطلبات الامن**

No specific security requirements needed.

**Software Quality Attributes متطلبات الجودة**

Upon starting the game it should not take more than 30 seconds for the GUI to load.

Players should be able to click multiple buttons sequentially without causing the game to crash.

Response time for the buttons should not exceed 3 seconds.

Loading time for the puzzle should not exceed 6 seconds.

Game should not crash spontaneously.

**Business Rules قوانين العمل**

Players should be able to access all in-game function of the game.

**Other Requirements متطلبات اخرى**

None.

**Appendix A: Glossary الاختصارات**

**قم بشح معنى اي اختصارات تم استخدامها في الوثيقة.**

*None.*

**Appendix B: Analysis Models نماذج التحليل**

None.

**Appendix C: To Be Determined List**

Source: http://www.frontiernet.net/~kwiegers/process\_assets/srs\_template.doc