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Test Plan, Test Design Specifications and Test Cases

Version 1

CENG 408

Innovative System Design and Development II

SUMMER TRAINING
INFORMATION SYSTEM

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1. INTRODUCTION

1.1 VersionControl

| Version No | Description of Changes | Date |
|------------|------------------------|----------------|
| 1.0 | First Version | March 21, 2020 |

1.2 Overview

Features of Mind Garden specified in the SRS document will test the game. Buttons, and objects of the game will be tested.

1.3 Scope

This document contains the test plan of the use cases, test cases, and test design features.

1.4 Terminology

| Acronym | Definition |
|---------|--------------------------|
| GUI | Graphical User Interface |
| OPT | Options |
| RTM | Routine Mode |
| SGM | Select Game Mode |

2. FEATURES TO BE TESTED

Each section lists the main features to be checked and provides a brief overview of them all. At the end of this document there will be a Test Design Specification added for each major feature.

2.1 Graphical User Interface (GUI)

Graphical User Interface parts used in this project. We separated the GUI in 4 parts which are Main Menu, Options, Routine Mode, and Select Game Mode. These parts also have some common parts. GUI parts contain testing of GUI components such as objects, buttons, etc.

2.2 Options (OPT)

This part contains test cases and test plans for Options. Options contain buttons, sliders and checkboxes. The testing of these features will be expected from the participants. The testing of this requirement will come off later in this document.

2.3 Routine Mode (RTM)

This section includes test scenarios and test plans for Routine Mode. Routine Mode includes objects, pause and resume options. Participants must check whether the objects' buttons and mechanics work correctly. Testing these requirements will occur later in this document.

2.4 Select Game Mode (SGM)

This part contains test cases and test plans for Select Game Mode. Select Game Mode contains objects, pause and continue options. . Participants must check whether the objects' buttons and mechanics work correctly. The testing of these requirements will come off later in this document.

3. ITEM PASS/FAIL CRITERIA

3.1 Exit Criteria

- %100 of the test cases are executed
- %85 of the test cases passed
- All High and Medium Priority test cases passed

4. REFERENCES

[1] [Online]. Available: <https://github.com/CankayaUniversity/ceng-407-408-2019-2020-A-serious-game-to-improve-the-specific-fields-of-child-intelligence/wiki/Software-Design-Document>. [Accessed 21 March 2020].

[2] [Online]. Available: <https://github.com/CankayaUniversity/ceng-407-408-2019-2020-A-serious-game-to-improve-the-specific-fields-of-child-intelligence/wiki/Software-Requirements-Specification>. [Accessed 21 March 2020].

5. TEST DESIGN SPECIFICATIONS

5.1 Graphical User Interface (GUI)

5.1.1 Subfeatures to be tested

5.1.1.1 Play Routine Mode (GUI.SRTM_BTN)

Player enters the routine game mode by clicking the *Routine Mode* button.

5.1.1.2 Play Select Game Mode (GUI.SSGM_BTN)

Player enters the select game mode by clicking the *Select Game* button.

5.1.1.3 Quit Button (GUI.QT_BTN)

Player can close the game with selecting *Quit* button.

5.1.1.4 Pause Button (GUI.P_BTN)

If the player is in routine mode, he can stop the game with the *Pause* button.

5.1.1.5 Resume Button (GUI.RSM_BTN)

Player can resume game with selecting the *Continue* button.

5.1.1.6 Change Volume Setting Button (GUI.CVS_BTN)

Player can changes volume by selecting the *Volume Setting* button.

5.1.1.7 Music On/Off Button (GUI.MOF_BTN)

Player clicks the *Music On/Off* button and turns the music off and on.

5.1.1.8 Wardrobe Button (GUI.MWB_BTN)

Player clicks to access Mascot's wardrobe for clothing of Mascot.

5.1.1.9 Credits Button (GUI.CR_BTN)

Player clicks the *Credits* button and displays Role fields in the construction of the game.

5.1.2 Test Cases

| TC ID | Requirements | Priority | Scenario Description |
|-----------------|--------------|----------|--|
| GUI.SRTM_BTN.01 | 3.1.1 | H | Select “ Routine Mode “ button. After selecting, games wil be displayed. |

| TC ID | Requirements | Priority | Scenario Description |
|-----------------|--------------|----------|---|
| GUI.SSGM_BTN.01 | 3.1.2 | H | Select “ Select Game “ button. After selecting, game categories wil be displayed. |

| TC ID | Requirements | Priority | Scenario Description |
|---------------|--------------|----------|---|
| GUI.QT_BTN.01 | 3.1.3 | H | Select “ Quit “ button. After selecting, the game will be closed. |

| TC ID | Requirements | Priority | Scenario Description |
|------------------|--------------|----------|--|
| GUI.P_BTN .01 | 3.1.3 | M | Select “ Pause “ button. After selecting, the game will be paused. |

| TC ID | Requirements | Priority | Scenario Description |
|--------------------|--------------|----------|---|
| GUI.RSM_ BTN.01 | 3.1.3 | M | Select “ Resume “ button. After selecting game will continue. |

| TC ID | Requirements | Priority | Scenario Description |
|--------------------|--------------|----------|--|
| GUI.CVS_BT N.01 | 3.1.3 | L | Select “ Change Volume Setting “ button. After selecting, the volume of the game can be changed. |

| TC ID | Requirements | Priority | Scenario Description |
|--------------------|--------------|----------|---|
| GUI.MOF_ BTN.01 | 3.1.3 | L | Select “ Music On/Off “ button. After selecting, the music can be turned on or off. |

| TC ID | Requirements | Priority | Scenario Description |
|--------------------|--------------|----------|---|
| GUI.MWB_ BTN.01 | 3.1.4 | M | Select “ Wardrobe “ button. Player can change the appereance of mascot. |

| TC ID | Requirements | Priority | Scenario Description |
|-------------------|--------------|----------|--|
| GUI.CR_BTN .01 | 3.1.5 | L | Select “ Credits “ button. After selecting, role fields in the construction of the game will be displayed. |

5.2 Routine Mode (RTM)

5.2.1 Subfeatures to be tested

5.2.1.1 Interact with Objects (RTM.IO)

Player can interact with game objects.

5.1.2 Test Cases

| TC ID | Requirements | Priority | Scenario Description |
|-----------|--------------|----------|---|
| RTM.IO.01 | 3.1.7 | H | Touch any interactable game object to interact. |

5.3 Select Game Mode (SGM)

5.3.1 Subfeatures to be tested

5.3.1.1 Choose Category (SGM.CC)

Player can choose any category. Player can choose any game from chosen category.

5.3.2 Test Cases

| TC ID | Requirements | Priority | Scenario Description |
|-----------|--------------|----------|--|
| SGM.CC.01 | 3.1.7 | H | Press any category button to choose game category. |
| SGM.CC.02 | 3.1.7 | H | Press any game button to choose game. |

6. Detailed Test Cases

6.1 GUI.SRTM_BTN.01

| | |
|------------------------------|--|
| TC_ID | GUI.SRTM_BTN.01 |
| Purpose | Select “ Routine Mode “ button. |
| Requirements | 3.1.1 |
| Priority | High |
| Estimated Time Needed | 1 Minutes |
| Dependency | The game is executed. |
| Setup | The game need install in the device. |
| Procedure | [A01] Select “Routine Mode” button from main menu. |
| | [V01] “Routine Mode“ will be started. |
| Cleanup | Exit |

6.2 GUI.SSGM_BTN.01

| | |
|------------------------------|--|
| TC_ID | GUI.SSGM_BTN.01 |
| Purpose | Select “ Select Game Mode“ button Player can choose from different game modes. |
| Requirements | 3.1.2 |
| Priority | High |
| Estimated Time Needed | 1 Minutes |
| Dependency | Any mode need to be must be chosen. |
| Setup | Display the game modes. |
| Procedure | [A01] Select “Select Game Mode” button from main menu. |
| | [A02] Choose a game mode from the list. |
| | [V01] It was seen that the chosen game mode is started. |
| Cleanup | Exit |

6.3 GUI.QT_BTN.01

| | |
|------------------------------|---|
| TC_ID | GUI.QT_BTN.01 |
| Purpose | Select “ Quit Game “ button. |
| Requirements | 3.1.3 |
| Priority | High |
| Estimated Time Needed | Less than 1 minute |
| Dependency | Any mode should be running / Main Menu. |
| Setup | Exit button started to work. |
| Procedure | [A01] Select “ Pause “ button. |
| | [A01] Select “ Quit Game“ button. |
| | [V01] It was seen that the program was closed. |
| | [A03] Game started again. |
| | [A04] Clicked to the “Quit Game” from the menu. |
| | [V02] It was seen that the program was closed. |
| Cleanup | - |

6.4 GUI.P_BTN.01

| | |
|------------------------------|---|
| TC_ID | GUI.P_BTN.01 |
| Purpose | “Pause” the game. |
| Requirements | 3.1.3 |
| Priority | Medium |
| Estimated Time Needed | Less than 1 minute |
| Dependency | Any mode should be running. |
| Setup | Pause button started to work. |
| Procedure | [A01] Select “Options” button. |
| | [A02] Select “Pause” button |
| | [V01] It was seen that the game was paused. |
| Cleanup | Options menu |

6.5 GUI.RSM_BTN.01

| | |
|------------------------------|---|
| TC_ID | GUI.RSM_BTN.01 |
| Purpose | “Resume” the game. |
| Requirements | 3.1.3 |
| Priority | Medium |
| Estimated Time Needed | Less than 1 minute |
| Dependency | Any mode should be running and need to be paused. |
| Setup | Resume button started to work. |
| Procedure | [A01] Select “Options” button. |
| | [A02] Select “Resume” button. |
| | [V01] It was seen that the game was continued. |
| Cleanup | Options menu |

6.6 GUI.CVS_BTN.01

| | |
|------------------------------|--|
| TC_ID | GUI.CVS_BTN.01 |
| Purpose | Select “ Change Volume Setting “ button. |
| Requirements | 3.1.3 |
| Priority | Low |
| Estimated Time Needed | 1 Minute |
| Dependency | Any mode should be running / Main menu options. |
| Setup | The game’s volume need to be changed. |
| Procedure | [A01] Select “Options” button. |
| | [A02] Select “Change Volume Setting” button. |
| | [V01] It was seen that the game’s volume is changed. |
| Cleanup | Options menu |

6.7 GUI.MOF_BTN.01

| | |
|------------------------------|---|
| TC_ID | GUI.MOF_BTN.01 |
| Purpose | Select “Music On/Off “ button |
| Requirements | 3.1.3 |
| Priority | Low |
| Estimated Time Needed | Less than 1 minute |
| Dependency | Any mode should be running / Main menu options. |
| Setup | Continue button started to work. |
| Procedure | [A01] Select “Options” button. |
| | [A02] Select “Music On/Off “ button. |
| | [V01] It was seen that the game’s volume is muted or unmuted. |
| Cleanup | Options menu |

6.8 GUI.MWB_BTN.01

| | |
|------------------------------|---|
| TC_ID | GUI.MWB_BTN.01 |
| Purpose | Select “ Wardrobe “ button. |
| Requirements | 3.1.4 |
| Priority | Medium |
| Estimated Time Needed | 1 Minute |
| Dependency | Any mode need to be must be chosen |
| Setup | Display the outfit options of mascot. |
| Procedure | [A01] Select “ Wardrobe “ button. |
| | [A02] Choose a outfit from the wardrobe. |
| | [V01] It was seen that the Mascot is changed. |
| Cleanup | “Routine Mode” or “Select Game Mode” buttons. |

6.9 GUI.CR_BTN.01

| | |
|------------------------------|--|
| TC_ID | GUI.CR_BTN.01 |
| Purpose | Select “ Credits “ button. It shows credits. |
| Requirements | 3.1.5 |
| Priority | Low |
| Estimated Time Needed | 2 Minutes |
| Dependency | The game is executed. |
| Setup | The gameneed install in the device. |
| Procedure | [A01] Select “ Credits “ button. |
| | [V01] Display the “Credits”. |
| Cleanup | Exit |