Phase 2 testing plan

Prepared by:

Saajid Mohammed

February 18th, 2014

Revised and edited by:

Ben Stitt

February 20th, 2014

Table of contents:

1. – Introduction
2. – Objectives
3. – Testing phases
   1. - Unit testing
   2. - Integration testing
   3. - Performance and stress testing
   4. - Regression testing
   5. - Ease of use testing
   6. - Acceptance testing
4. – Testing feedback procedure
5. – Features to be tested
6. – Features not to be tested
7. – Dependencies
8. – Tools
9. – Approvals
10. – Introduction

The program to be tested is a full functioning offline version of a Chinese checkers game for Android, with the capability of playing against artificial intelligence. It contains four activities. The first activity has a button leading to the second. The second activity is a configuration screen for the game you wish to play. It contains the options to set the number of players, their names and whether or not a certain player is a computer opponent. It then launches the game activity that contains a canvas with the game board drawn on it and buttons to confirm a player’s move and undo a move. The last activity is a help menu that is accessible through the context menu of every activity, where the players would be able to view frequently asked questions and game information here.

1. – Objectives

Verify the current phase programming is functional and works consistently.

1. – Testing phases
   1. - Unit testing

* MainActivity
  + offlineActivityConfigurationButton
    - Verify clickabilty
    - Verify visibility
    - Verify proper methods are being called
* OfflineConfigurationActivity
  + offlineTwoPlayerButton
    - Verify clickabilty
    - Verify visibility
    - Verify displays 2 input fields are shown
  + offlineThreePlayerButton
    - Verify clickabilty
    - Verify visibility
    - Verify displays 3 input fields are shown
  + offlineFourPlayerButton
    - Verify clickabilty
    - Verify visibility
    - Verify displays 4 input fields are shown
  + offlineSixPlayerButton
    - Verify clickabilty
    - Verify visibility
    - Verify displays 6 input fields are shown
  + offlineRedPlayerNameEditText
    - Verify visibility
    - Verify accepts text
    - Verify proper error on no input
  + offlineRedPlayerTypeButton
    - Verify visibility
    - Verify proper default selection
    - Verify clickability
    - Verify proper on AI selection difficulty settings are produced
  + OfflineRed PlayerEasyButton
    - Verify visibility
    - Verify clickability
    - Verify proper default selction
    - Verify proper deselecting and selecting
  + OfflineRedPlayerMediumButton
    - Verify visibility
    - Verify clickability
    - Verify proper default selection
    - Verify proper deselecting and selecting
  + OfflineRedPlayerHardButton
    - Verify visibility
    - Verify clickability
    - Verify proper default selection
    - Verify proper deselecting and selecting
  + offlineGreenPlayerNameEditText
    - Verify visibility
    - Verify accepts text
    - Verify proper error on no input
  + offlineGreenPlayerTypeButton
    - Verify visibility
    - Verify proper default selection
    - Verify clickability
    - Verify proper on AI selection difficulty settings are produced
  + OfflineGreenPlayerEasyButton
    - Verify visibility
    - Verify clickability
    - Verify proper default selction
    - Verify proper deselecting and selecting
  + OfflineGreenPlayerMediumButton
    - Verify visibility
    - Verify clickability
    - Verify proper default selection
    - Verify proper deselecting and selecting
  + OfflineGreenPlayerHardButton
    - Verify visibility
    - Verify clickability
    - Verify proper default selection
    - Verify proper deselecting and selecting
  + offlinePurplePlayerNameEditText
    - Verify visibility
    - Verify accepts text
    - Verify proper error on no input
  + offlinePurplePlayerTypeButton
    - Verify visibility
    - Verify proper default selection
    - Verify clickability
    - Verify proper on AI selection difficulty settings are produced
  + OfflinePurple PlayerEasyButton
    - Verify visibility
    - Verify clickability
    - Verify proper default selction
    - Verify proper deselecting and selecting
  + OfflinePurplePlayerMediumButton
    - Verify visibility
    - Verify clickability
    - Verify proper default selection
    - Verify proper deselecting and selecting
  + OfflinePurplePlayerHardButton
    - Verify visibility
    - Verify clickability
    - Verify proper default selection
    - Verify proper deselecting and selecting
  + offlineBluePlayerNameEditText
    - Verify visibility
    - Verify accepts text
    - Verify proper error on no input
  + offlineBluePlayerTypeButton
    - Verify visibility
    - Verify proper default selection
    - Verify clickability
    - Verify proper on AI selection difficulty settings are produced
  + OfflineBluePlayerEasyButton
    - Verify visibility
    - Verify clickability
    - Verify proper default selction
    - Verify proper deselecting and selecting
  + OfflineBluePlayerMediumButton
    - Verify visibility
    - Verify clickability
    - Verify proper default selection
    - Verify proper deselecting and selecting
  + OfflineBluePlayerHardButton
    - Verify visibility
    - Verify clickability
    - Verify proper default selection
    - Verify proper deselecting and selecting
  + offlineYellowPlayerNameEditText
    - Verify visibility
    - Verify accepts text
    - Verify proper error on no input
  + offlineYellowPlayerTypeButton
    - Verify visibility
    - Verify proper default selection
    - Verify clickability
    - Verify proper on AI selection difficulty settings are produced
  + OfflineYellowPlayerEasyButton
    - Verify visibility
    - Verify clickability
    - Verify proper default selction
    - Verify proper deselecting and selecting
  + OfflineYellowPlayerMediumButton
    - Verify visibility
    - Verify clickability
    - Verify proper default selection
    - Verify proper deselecting and selecting
  + OfflineYellowPlayerHardButton
    - Verify visibility
    - Verify clickability
    - Verify proper default selection
    - Verify proper deselecting and selecting
  + offlineOrangePlayerNameEditText
    - Verify visibility
    - Verify accepts text
    - Verify proper error on no input
  + offlineOrangePlayerTypeButton
    - Verify visibility
    - Verify proper default selection
    - Verify clickability
    - Verify proper on AI selection difficulty settings are produced
  + OfflineOrangePlayerEasyButton
    - Verify visibility
    - Verify clickability
    - Verify proper default selction
    - Verify proper deselecting and selecting
  + OfflineOrangePlayerMediumButton
    - Verify visibility
    - Verify clickability
    - Verify proper default selection
    - Verify proper deselecting and selecting
  + OfflineOrangePlayerHardButton
    - Verify visibility
    - Verify clickability
    - Verify proper default selection
    - Verify proper deselecting and selecting
  + offlineGameActivityButton
    - Verify clickabilty
    - Verify visibility
    - Verify proper methods are being called
* OfflineGameActivity
  + offlineMoveResetButton
    - Verify clickabilty
    - Verify visibility
    - Verify proper methods are being called
  + offlineMoveDoneButton
    - Verify clickabilty
    - Verify visibility
    - Verify proper methods are being called
  + gameCanvas
    - Verify pieces are movable
    - Verify game hints are being displayed
    - Verify invalid moves are found
  + ResumeDialog
    - Verify is called at proper time
    - Verify visibility
    - offlineAcceptContinuationButton
      * Verify clickabilty
      * Verify visibility
      * Verify proper methods are being called
    - offlineDeclineContinuationButton
      * Verify clickabilty
      * Verify visibility
      * Verify proper methods are being called
  + EndofGameDialogDialog
    - Verify is called at proper time
    - Verify visibility
    - offlineGameEndToHomeButton
      * Verify clickabilty
      * Verify visibility
      * Verify proper methods are being called
    - offlineGameEndToNewButton
      * Verify clickabilty
      * Verify visibility
      * Verify proper methods are being called
  + Verify game is playable
* HelpActivity
  + Verify text is visible
  1. - Integration testing
* MainActivity and OfflineConfigurationActivty and HelpActivity
* Redo unit tests
* Verify transitions between activities are functional
* MainActivity and OfflineConfigurationActivty and GameBoardActivity and HelpActivity
* Redo unit tests
* Verify transitions between activities are functional
  1. - Performance and stress testing

N/A

* 1. - Regression testing

N/A. Modification were made on the activities that render the old test useless.

* 1. - Ease of use testing

A focus group shall be assembled and given access to the functioning application they will also be given a set of tasks to accomplish. Each member of the focus group shall then fill out an Ease of Use Testing Form (REPLACE\_APPENDIX\_<Ease of use testing feedback form>) . The forms will then be tallied and actions shall be taken in accordance with the results at the retrospective meetings.

* 1. - Acceptance testing

Criteria and this phase testing to be determined by team lead.

1. – Testing feedback procedure

At the end of each test phase or immediately following a failure of an in phase test, a Test Feedback Form (REPLACE\_APPENDIX\_<Test feedback form>) shall be generated. The feedback form will be generated as an issue on GitHub with the contents of the (REPLACE\_APPENDIX\_<Test feedback form>). Further action shall be determined on case bases. However failures for unit tests at the developer level are not required to generate a test feedback form, only passes specified in this document at the unit test phase are required to be documented with a test feedback form.

1. – Features to be tested

* MainActivity
  + Button functionality
  + Transition to OfflineConfigurationActivity
  + Transition to HelpActivity
* OfflineConfigurationActivity
  + Button functionality
  + Transition to OfflineGameActivity
  + Transition to HelpActivity
  + Transition to MainActivity
* OfflineGameActivity
  + Button functionality
  + Game playability
  + Popup Dialogs
  + Transition to HelpActivity
* HelpActivity
  + Button functionality
  + Transition back to activity called from

1. – Features not to be tested

N/A

1. – Dependencies

Availability of classes and modules for current phase.

1. – Tools

Eclipse

JUnit API

Android Testing API

1. – Approvals

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Project Role | Signature | Date |
| 1. Curtis Smith | Project Lead | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_ |
| 2. Peter Pobojewski | Deputy Lead | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_ |
| 3. Ben Stitt | Documentation Lead | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_ |
| 4. Saajid Mohammed | Test Lead | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_ |

APPENDICES

REPLACE\_APPENDIX\_<Test feedback form>

Test feedback form

Project: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Project Phase: \_\_\_\_\_\_\_\_\_\_\_\_\_ Test Phase: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_

Tester: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Pass\Fail\Extra Consideration Required: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Remarks (If fail what caused failure): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Test Output (If Applicable): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Action Taken: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Tester Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_ Project Lead Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Test Lead Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_ Project Lead Name: \_\_\_\_\_\_\_\_\_\_\_\_\_

Test Lead Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

REPLACE\_APPENDIX\_<Ease of use testing feedback form> Ease of use testing feedback form

Give each of the tasks a rating from 0 to 10 based on the difficulty of accomplishing the relevant tasks.

Task 1 Score: \_\_\_\_\_

Task Remarks: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Task 2 Score: \_\_\_\_\_

Task Remarks: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Task 3 Score: \_\_\_\_\_

Task Remarks: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Task 4 Score: \_\_\_\_\_

Task Remarks: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Task 5 Score: \_\_\_\_\_

Task Remarks: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Task 6 Score: \_\_\_\_\_

Task Remarks: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Task 7 Score:\_\_\_\_\_

Task Remarks: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

General Remarks: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_