DocNo: 001. H.1:1

Test Plan

Version 1.0

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**Document Language:**

English

Revision History

|  |  |  |  |
| --- | --- | --- | --- |
| **Date** | **Version** | **Description** | **Author** |
| 2015-11-20 | <1.0> | Finish the main structure of the document | 万成城 |
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**Key Word**

Chinese chess, test plan

**Digest**

This document is about the test plan of the whole project. It is the main reference for testing. It describes both the criteria and detailed test plan.

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# Introduction

## Purpose

This document is our test plan for the Chinese chess game, which illustrates the details for the test context, test scope, and test standard. It is the main reference for our testing. Therefore, the potential readers are testers and project manager.

## Background

After requirement analysis, system designing, and implementation, testing is on the schedule.

## Definition

1. Black box testing: A test method, which testers only pay attention to input and output.
2. White box testing: A test method, which testers know the inside instruction of test object.
3. Test script: A small teat program for testing to call unit or be called by unit.
4. Equivalence partition: A test method in black box testing. It uses a set of values selected, instead of many input value, which are dealt with in the same way.
5. Boundary designing: It is the extension of the equivalence partition; usually it is the boundary of equivalent class.
6. Unit testing: Test on the smallest unit, such as class, in the software.
7. Integration testing: Test on the combination of several units to check if they can work together.
8. Regression testing: In integration testing, some integration must be test again to check if they can work with other integrations.
9. System testing: Compared with requirement definition, look for some parts which are not coincident with the requirement.
10. Stress testing: Test if the system can afford heavy using stress.

## Reference

*“Object-oriented Software Engineering, Using UML, Patterns, and Java, Third Edition”*

byBernd Bruegge and Allen H. Dutoit

# Plan

## Project Overview

|  |  |
| --- | --- |
| Module | Function |
| Basic Logic | Manage the whole chess board and decide whether the game ends |
| Artificial Intelligence | Support a man-machine chess game |
| Network Connection | Support a man-man chess game |
| Game Mode | Support multiple game modes |
| 3D Effect | Support 3D movements of hoodles |

## Test Cases

## Basic Logic

|  |  |  |
| --- | --- | --- |
| Test Name | Action | Expect Result |
| Basic Logic 1 | Input a legal movement | Program goes well. |
| Basic Logic 2 | Input an illegal movement | No movement happens. |

## Artificial Intelligence

|  |  |  |
| --- | --- | --- |
| Test Name | Action | Expect Result |
| Artificial Intelligence 1 | Start a man-machine chess game | Program goes well. |
| Artificial Intelligence 2 | Start a machine-machine chess game | Program goes well. |

## Network Connection

|  |  |  |
| --- | --- | --- |
| Test Name | Action | Expect Result |
| Network Connection 1 | Start a man-man chess game with network | Program goes well. |
| Network Connection 1 | Start a man-man chess game without network | Turn to a man-machine chess game. |

## Game Mode

|  |  |  |
| --- | --- | --- |
| Test Name | Action | Expect Result |
| Game Mode 1 | Start a man-machine chess game with different modes. | Program goes well. |
| Game Mode 2 | Start a machine-machine chess game with different modes. | Program goes well. |

## 3D Effect

|  |  |  |
| --- | --- | --- |
| Test Name | Action | Expect Result |
| 3D Effect 1 | Start a man-machine chess game with different 3D-effects. | Program goes well. |
| 3D Effect 2 | Start a machine-machine chess game with different 3D-effects. | Program goes well. |

## Test Schedule

This test dates from December 15th to 31th.

### Conditions

1. 4 personal computers, and 1 server are involved.
2. 5 days to be used.
3. The whole team should participate in this test.

### Test References

1. Requirement document.
2. All program units and functions must be tested.

### Test Training

Null.

# Criteria

## Scope

The coverage rate of test cases must reach 100%.

## Defect Verified Rate Criteria

Defect verified rate must reach 100%.

## Coverage Rate Criteria

1. Coverage rate of sentences must reach 80%.
2. Coverage rate of test cases must reach 100%.
3. Coverage rate of requirement testing must reach 100%.

## Data Catalog

Data cataloged is maintained manually.

## Scale

## Test Ceasing Criteria

1. Integration testing has reached integration testing ceasing criteria, system.
2. System testing has reached system testing ceasing criteria.
3. The software passes validation testing, and generates validation test conclusion.

## Unit Test Ceasing Criteria

1. All unit test cases are accessed and finished.
2. Reach the coverage rate criteria of unit testing.
3. Unit function are consistent with design model.
4. All the defects have been verified, and the verified rate has reached the criteria.

## Integration Test Ceasing Criteria

1. Integration test cases have accessed and finished.
2. Reach the coverage rate criteria of integration testing.
3. Integration version function and capability are consistent with definition.
4. All the defects have been verified, and the verified rate has reached the criteria.

## System Test Ceasing Criteria

1. System test cases have accessed and finished.
2. Reach the coverage rate criteria of system testing.
3. System function and capability are consistent with requirement documents.
4. All the defects have been verified, and the verified rate has reached the criteria.