**HandsPlus project**

**Software Test plan**

contents

1. Introduction：

1.1 Purpose

1.2 Definitions and Acronyms

1.3 Scope

1.4 Testing objective

2. Test items

2.1 functions to be tested

2.2 non-functions items to be tested

3. Test strategy

3.1. function Test

3.2. Performance Test

3.3. Security Test

3.4  Stress and Volume Test

3.5. Recovery Test

3.6 . Documentation Test

3.7 . User Acceptance Test

4. Test process

4.1 test plan schdual

4.2 implementation/suspension/completion criteria

5. Resouces and responsibilities

5.1 Resouces

5.1.1 hardware requirements

5.1.2 software requirements

5.2 responsibilities

6. Appendix

**1.Introduction：**

**1.1 Purpose**

The purpose of the Software Test Plan (STP) is to test the functionality and make sure that the requirements stated in the Software Requirement Specification are fulfilled.

**1.2 Definitions and Acronyms**

SRS   Software Requirements Specification

STP   Software Test Plan.

**1.3 Scope**

The handsplus is an application which allow its user to provide or get helps.

This application is developed just for students. Personal information is highly protected.

Besides safety, efficency is also important.

**1.4 Testing objective**

1.Define the activities required to prepare for and conduct System, Beta and User Acceptance testing.

2. Communicate to all responsible parties the System Test strategy.  Define deliverables and responsible parties.

3. Communicate to all responsible parties the various Dependencies and Risks

1. **Test items**
   1. **functions to be tested**
2. identify the identity of the user when he is registering.
3. After a new user registerd, add his information to the database
4. Show the information of a registerd user
5. One user want to offer a help, store this in the database and show this information to users who need this kind of help
6. One user can see the information that may help himself out
7. A user want to help another user, he can send a message to the him.
8. A user can review the users who have helped him and can give some commons.
   1. **non-functions items to be tested**
9. user’s information security
10. software safety.
11. Software efficiency

**3. Test strategy**

Software testing shall be performed throughout the development phases starting with unit  testing, integration, incremental testing, and finishing with system qualification testing. The  software shall be tested on the system requirements.

Program Unit Testing is performed by the developers on the Programming Team who implemented that particular program unit to verify that it performs according to its intended design.

A suite of automated tests will be developed to test the basic functionality of the  system and  perform regression testing on areas of the systems that previously had critical defects. The tool will also assist us by executing user scenarios thereby emulating several users.

A list of the various planned tests and a brief explanation follows below.

**3.1. function Test**

The function test focus on the behavior of thesystem. Its purpose is to verify that the outputs meets the functional requirements defined in the requirements document.

 For a same group of input data, compare the expected output to the actual output. According to the SRS, develop some test cases, do not need to consider the internel components of the software.

**3.2. Performance Test**

Performance test will be conducted to ensure that the payroll system’s time-sensitive requirements meet the user expectations.

This test will conduct in two situation: input normal amount of data, and input overload data. We can use the test cases in the function testing, just need some little changes.

**3.3. Security Test**

Security tests verify whether the system is security considering its data and access control etc.

In this system, only registed users can access to the information, only students can be a user of this application. According to the SRS, create different type of users, one of them are not student, verifty the data is correctly avaliabled of denied. In other cases, we should test whether this system can survive from external attacks.

**3.4  Stress and Volume Test**

There maybe some errors aroused when the server, client or database is overload. To discovery and test this part of data, we can use the stress and volume test.

The System will be stress tested using twice  the number of expected users . Meanwhile each user may have different action or they request the same thing in the same time.

**3.5. Recovery Test**

Recovery Testing ensures that the target-of-test can successfully recover from a variety of hardware or network malfunctions with undue loss of data or data integrity.

Recovery tests will force the system to fail in a various ways and verify the recovery is properly  performed. Such as power interruption of the server or client.

**3.6 . Documentation Test**

Tests will be conducted to check the accuracy of the user documentation. These tests will ensure that no features are missing, and the contents can be easily understood.

**3.7 . User Acceptance Test**

The purpose of these tests is to confirm that the system is developed according to the specified user requirements and is ready for operational use

**4.Testing process**

**4.1 test plan schdual**

|  |  |  |
| --- | --- | --- |
| Test process | description | time |
| Test requeriment review | Based on the SRS, developing what should be tested. |  |
| Test cases design | Design some cases to test the software |  |
| Test cases implementation | Implementing the test cases |  |
| Test result analysis | Analysis the test result.  output project problem report |  |
| Retesting when the developers fix the problems | Output the final test summary report |  |

**4.2 implementation/suspension/completion criteria**

|  |  |
| --- | --- |
| Implementation  criteria | hardware environment is appropriate , software is ready for operational use. |
| Suspension  criteria | Source code contains one or more critical defects, which seriously prevents or  limits testing progress.  exception and unexpected result appears in the testing progress |
| Completion criteria | fulfill the requirements in the requirement documents,  the actual output equal to the expected output. |

**5. Resouces and responsibilities**

**5.1 Resouces**

5.1.1 hardware requirements

PC

5.1.2 software requirements

**5.2 responsibilities**

In the chart below , listing the members involved in the testing process

|  |  |
| --- | --- |
| Project manager | Responsible for Project schedules,  project management. |
| Test leader | Ensures the overall success of the test cycles. |
| Tester | Responsible for performing the actual system testing.  Develop test cases. |

**6. Appendix**

Appendix A. Test case design.