

Swiss German University

Software Test Plan (STP)

Facebook Corporate Fans Builder

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Revision History

Date	Revision No.	Note	Author
19/11/2010	0.1	Document initialization	Muchlis, Bagus, Rheza
21/11/2010	0.2	Major Changes, Add appendix table	Rheza
21/11/2010 3:54 PM	0.3	Add Staffing and Training, some changes	Rheza

1. Test Plan Identifier

This document is referred as **STP-FCFB-2010**

2. Introduction

This Software Test Plan (STP) guidelines were derived and developed based on IEEE Standard for Software Test Documentation (829-1998).

Facebook Corporate Fans Builder (FCFB) is a Facebook platform application. This application is build using Facebook PHP official API. In this document, we will test application in our server and Facebook FBML test.

This document is designed to prescribe the scope, approach, resources, and schedule of all testing activities. The plan must identify the items to be tested, the features to be tested, the types of testing to be performed, the personnel responsible for testing, the resources and schedule required to complete testing, and the risks associated with the project plan.

2.1 Objectives

The objectives of this STP are:

1. To analyze, find, and report the bugs/errors of FCFB.
2. To improve reliability, integrity, and confidentiality the application.
3. To focus on the most important operational deliverables in this application.
4. To define the test tools and environment needed.
5. To define the sources of the information used.
6. To detail the activities schedule and its task to conduct the system test

2.2 Overview

Specific test plan components include:

- Purpose for this level of test,
- Items to be tested,
- Features to be tested,
- Features not to be tested,
- Management and technical approach,

- Pass / Fail criteria,
- Individual roles and responsibilities,
- Milestones,
- Schedules, and
- Risk assumptions and constraints.

2.3 Scope

The scope of testing will be performed at several conditions in the software development life cycle. As the product is constructed, testing is a dependent activity. Consequently, our test planning is a continuous activity synchronized with the system development life cycle.

2.4 Reference Material

Applicable Standards:

IEEE Standard for Software Test Documentation, IEEE Std. 829-1983.

Testing Methods:

http://en.wikipedia.org/wiki/Black-box_testing

http://en.wikipedia.org/wiki/White-box_testing

Application Specific Documentation:

Kesatria, Facebook Corporate Fans Builder Project Proposal.

Kesatria, Facebook Corporate Fans Builder Software Requirements Specification *version 0.2.1*, 19/11/2010.

Kesatria, Facebook Corporate Fans Builder Software Design Specification *version 0.3*, 29/10/2010.

Kesatria, Facebook Corporate Fans Builder User Manual Complete.

Kesatria, Facebook Corporate Fans Builder Installation Guide.

Definitions and Acronyms:

All definitions and acronyms are taken from <http://www.wikipedia.com/>

2.5 Definitions, Acronyms, and Abbreviations

A **Test Plan** is - A document detailing a systematic approach to testing a system such as a machine or software.

The **Institute of Electrical and Electronics Engineers** or **IEEE** (read *I-Triple-E*) is a non-profit professional association dedicated to advancing technological innovation related to electricity.

A **Software Requirements Specification (SRS)** - a requirements specification for a software system - is a complete description of the behavior of a system to be developed.

White-box testing (a.k.a. clear box testing, glass box testing, transparent box testing, or structural testing) is a method of testing software that tests internal structures or workings of an application as opposed to its functionality (black-box testing). An internal perspective of the system, as well as programming skills, are required and used to design test cases.

Black-box testing is a method of testing software that tests the functionality of an application as opposed to its internal structures or workings (see white-box testing). Specific knowledge of the application's code/internal structure and programming knowledge in general is not required.

3. Test Items

All items that involve the FCFB will be tested during the test. The version to be tested will be placed in the appropriate libraries by the configuration administrator. The administrator will also control changes to the versions under test and notify the test group when new versions are available.

The following documents will provide the basis for defining correct operations:

1. Facebook Corporate Fans Builder Project Proposal.
2. Facebook Corporate Fans Builder System Requirements Specification (SRS).
3. Facebook Corporate Fans Builder System Design Specifications (SDS).
4. Facebook Corporate Fans Builder Regular User Manual.
5. Facebook Corporate Fans Builder Admin User Manual.
6. Facebook Corporate Fans Builder Installation Guide.

The items to be tested as follows:

3.1 Program Modules

The program modules to be tested will be identified as follows:

Type	Library	Member Name
Source Code	SRC_LIB	Rheza Satria

3.2 Job Control Procedures

The control procedures for application programs, sorts, and utility programs will be identified as follows:

Type	Library	Member Name
Application Programs	SRC_LIB	Rheza Satria
Utility Programs	SRC_LIB	Rheza Satria

3.3 User Procedures

The user procedures specified in the Facebook Corporate Fans Builder Regular User Manual and Admin Manual will be tested.

3.4 Operator Procedures

The system test includes the procedures specified in the Facebook Corporate Fans Builder Installation Guide.

4. Features to be tested

There are two feature parts to be tested, admin and regular user. Below are the following features to be tested:

I. Regular User

- Friends Invitation
 - This function is used to send message to their friends and wait until their friends accept it. Users can invite their friends to join this application to get more points.
- Adding Point(s)

- If the invitation is approved and his/her friends are joined the application, he/she will get additional point.
- One invited get one point.
 - Each friend that user invited is joined the application will increase user point 1 point/person.
- Transfer user's points.
 - Every users can transfer their points to their friends
- Points just get for the one who give reference.
 - So if the user joined the page will not get point but the one who invited him/her will get it.
- Fans Automation
 - The user that joined this application will automatically be a fan of this application in the fans page.

2. Admin

- Login
 - Admin has to authenticate them self by put id and password to access the admin page. After that they can use the features.
- Log
 - Log use for manage the activity the application. Admin can look at this part and they can see every activity from here
- Add/minus points
 - Admin can add points to the users. They can increase and decrease users' point freely.
- Change Password
 - Change admin password

5. Features Not To Be Tested

First, it is skeptical to test the basic Facebook application API. Consequently, we do not test the Facebook API because it is out of our works. Although there are a lot bugs inside the Facebook API that we are using, but we try to minimize the bug occurrences by keeping eyes on Facebook's developer mailing list.

Second, we know that open source depends on community. MySQL, PHP, and its features are also having bugs. However, it is not our testing part to trace all bugs and to test all the features inside them.

6. Approach

All members will refer to this documentation to prepare all test design, case, and procedure specifications.

6.1 Integration Testing

The integration testing part will rely on the class diagram of our application. The following classes and functions will be tested are:

Class	Function
m_activity_log	m_activity_log
	get_all
	get_all_for_csv
	get_by_user_id
	get_count
	insert_new_point_transfer
	insert_new_point_withdraw_prize
m_admin	m_admin
	change_password
	change_login
m_app_user	m_app_user
	get_all_for_csv
	get_by_fb_user_id
	get_by_user_id
	get_count
	get_ref_by_user_id
	Increase_points
	insert_data
	point_hash
	reduce_points
	transfer_points
	update_data
	update_points
m_point_change_log	m_point_change_log
	get_all
	get_count
	insert_new
m_prize	m_prize

	add
	edit
	get_all
	get_single

6.2 Conversion Testing

The following conversion testing covered:

1. Admin password conversion to hash MD5 value. The MD5 value taken from admin password and salt.
2. CSV report data.
3. The transfer point must integer. For range, it cannot less than 1 and cannot more than the user point.

6.3 Interface Testing

In order to test the accuracy data input interface between regular user and admin. This system will include the two types of logs, user activity log and prize log. User activity log is a log to maintain transfer point and user invitation activities. Prize log used to maintain the redeem prize by user. The resulting of these logs is CSV file. This log can be daily filtered.

6.4 Security Testing

Facebook application platform is only provided a place to put our system. To ensure the validated user/the registered user, we need to save whose user has been granted the security perimeter for FCFB application. Meanwhile, the admin user has separate page and different way from regular user to do authentication and authorization. In admin page, it will attempt access without a proper password.

6.5 Performance Testing

The performance testing will be conducted to evaluate the fulfillment of system requirements. This will be done using black-box testing method. It will be performed by:

1. Trying to login as administrator, in administrator page.
2. Trying to load page in the Facebook application (For regular user).
3. Trying to get CSV data.

4. Trying to add new prize list.
5. Trying to delete current prize list.
6. Trying to update prize information.
7. Trying to update user point information.
8. Trying to see the user activity log.
9. Trying to see the prize log.
10. Trying to logout in administrator page.

6.6 Regression Testing

The regression testing is assumed that several iterations of the system test will be done in order to test program modifications made during the test period. It will be performed for each new version of the system is released. The objective of this regression testing is to detect, trace, and find unexpected impact resulting from the program modifications.

6.7 Constraints

A final implementation date of December 3, 2010 has been planned for the Facebook Corporate Fans Builder. It will be necessary to meet this date because code freeze will conduct at that day.

7. Pass / Fail Criteria

Fail Criteria:

1. If one of the features that need to be tested in the application does work.
2. Admin is not corresponded to the application.

Pass Criteria:

1. If all features on the section “Features to be tested” are working properly.
2. Client decisions.
3. Admin is corresponded to the application.

7.1 Suspension Criteria

In ability to convert the user information database, network error, Facebook API changes and bugs, MySQL bugs, and PHP bugs will cause suspension of all testing activities.

7.2 Resumption Criteria

Regression testing will be run after the suspension of testing has occurred.

7.3 Approval Criteria

Regression testing has done to an acceptable iteration. There are no bugs in library that we used.

8. Testing Process

8.1 Test Deliverables

The deliverables of this testing are:

1. To ensure all functions are working properly.
2. To improve reliability of FCFB application.
3. To decrease number of bug occurrences.
4. To fulfill client requirements.
5. To plan and schedule of this application.

8.2 Testing Tasks

Testing tasks include (For more detail see Appendix A):

1. Preparation of the test plan
2. Preparation of the test design specification (use case diagram, activity diagram, and other relate diagram)
3. Prepare the hardware test environment
4. Prepare the software test environment
5. Prepare the tools test environment
6. Prepare the security test environment
7. Prepare the publications test environment
8. Perform the test based on procedures
9. Resolve test incident reports
10. Prepare the test report
11. Repeat tasks 8-10 until all procedures are successful

12. Prepare the test summary report

8.3 Responsibilities

The responsible person to do software testing is client and our software tester. The software tester was responsible for managing, designing, preparing, and executing the test procedures.

8.4 Resource

Name	Roles
Martin Phineas	Project owner
Muhammad Rheza Satria Ta	Software Tester

8.5 Schedule

See Appendix A.

Hardware, software, test tools, security, and publication will be used for testing during the period from November 15, 2010 until November 3, 2010.

9. Environmental Requirements

In this section describes about hardware, software, security, tools, publications and risks and assumptions. These will also be our success factor to do testing.

9.1 Hardware

A laptop equipped with at least:

Processor

Intel Core 2 duo 2.1 Ghz.

Memory

DDR2 2x1 GB.

Hard Disk Drive

2 GB of free space.

Monitor

14.1 WXGA Display

Modem

802.11G Wireless

Ethernet card

Other

USB 2.0 slots

9.2 Software

Operating System

Windows 7, Windows Vista, Windows XP

Browser

Internet Explorer 8, Mozilla Firefox 3.x, Safari, Opera 10.x.

Other

FileZilla (FTP client).

9.3 Security

The security environments for testing this software are web domain, MySQL database, and our laptops. All security environments are protected using password. Also the security will be limited to existing controls.

9.4 Tools

The special tools to test are:

1. Adobe Dreamweaver CS5.
2. Eclipse for PHP.
3. Bug Tracker.
4. Notepad++.

9.5 Publications

IEEE Standard for Software Test Documentation, IEEE Std. 829-1983.

Kesatria, Facebook Corporate Fans Builder Project Proposal.

Kesatria, Facebook Corporate Fans Builder Software Requirements Specification *version 0.2.1*, 19/11/2010.

Kesatria, Facebook Corporate Fans Builder Software Design Specification *version 0.3*, 29/10/2010.

Kesatria, Facebook Corporate Fans Builder User Manual Complete.

Kesatria, Facebook Corporate Fans Builder Installation Guide.

Kesatria, Facebook Corporate Fans Builder Software Test Design.

Kesatria, Facebook Corporate Fans Builder Project Schedule Plan.

9.6 Risks and Assumptions

The risks and assumptions for this testing plan are:

- Bugs from Facebook API itself.
- Time deadline at code freeze is the way to fast
- The team member in sick condition
- Network server goes down immediately.
- Natural disaster
- Facebook server goes down/error.
- Our webserver is down / ISP problem.
- Our laptop suddenly crash.

And the solutions are:

- Team members have to maintain their condition.
- Test must be done starting from the basic crucial functional operation for FCFL application.
- Do a backup data every done the deliverables.

10. Staffing and Training Needs

10.1 Staffing

The following staff is needed to test this project.

10.1.1 Test Group

Software Tester	I
Software Developer	I
Project Manager	I
Quality Assurance	I

10.1.2 Customer

Project Owner	I
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10.2 Training

All team members must give train to t he project owner to explain the flow of FCFB system. Regular User Manual, Admin User Manual, and Installation Guide will be basis of this training.

11. Plan Approvals

Software Development & Tester	Date
<hr/>	<hr/>
Project Manager	Date
<hr/>	<hr/>
Quality Assurance	Date

Appendix A: Schedule

No.	Task	Predecessor tasks	Special skills	Responsibility	Effort	Finish date
1	Preparation of the test plan	Complete Facebook Corporate Fans Builder development plan	-	Software tester	5	21-11-2010
2	Preparation of the test design specification	Task 1	Knowledge of Facebook application	Software developer, Software Tester, Quality Assurance, Project Manager	8	23-11-2010
3	Prepare the hardware test environment	Task 2	Knowledge of hardware environment	Software Tester, Quality Assurance	1	25-11-2010
4	Prepare the software test environment	Task 3	Knowledge of operating system	Software Tester, Quality Assurance	1	25-11-2010
5	Prepare the tools test environment	Task 4	Knowledge of several developer tools	Software Tester, Software Developer	2	25-11-2010
6	Prepare the security test environment	Task 3-5	Knowledge of System Security	Software Tester, Quality Assurance	2	25-11-2010
7	Prepare the publications test environment	Task 6	-	Project Manager	2	26-11-2010
8	Perform the test based on procedures	Complete SDS, SRS, User Manual, Installation Guides	Knowledge of FCFB requirements	Software Tester	5	29-11-2010
9	Resolve test incident reports	Task 8	Knowledge of PHP	Software Tester	3	30-11-2010
10	Prepare the test report	Task 10	-	Software Tester	2	30-11-2010
11	Repeat task 8-10 until all procedures are successful	Task 10	-	Software Tester, Quality Assurance	4	1-12-2010
12	Prepare the test summary report	Task 11	-	Software Tester, Project Management	3	2-12-2010