

Test Plan

Test cases are designed to strictly examine whether our user stories are completed at a high level. Once requirements are finalized in the inception checklist, our team held the test planning meeting on 5th April to decide how we would do to test our project. In the test planning meeting, every team member was fully engaged, and we put forward many brilliant ideas. As a result, the team decided to break down the testing process into three parts, with the first two sections concentrating on the two sprints' user stories, and the last one focusing on non-functional features of the system, such as performance, security and compatibility. In other words, at the end of each sprint there would be a corresponding testing step to examine the in this sprint. While at the end of the whole project, we would spend a week systematically testing the project, including function test, integration test and non-functional test.

In detail:

1. At the end of sprint 1, we would check the level of completion of the user stories belonging to this sprint, including u1-"forget password", u2-"third party login", u3-"delete sections"and u4-"reset account".
2. At the end of sprint 2, we would check the level of completion of the user stories belonging to this sprint, including u5-"delete photos and files", u6-"copy url to clipboard", u7-"email service", u8-"download pages in PDF format"and u9-"UI beautify".
3. Before we deploy our final project onto the cloud platform, we spend one week examining if there still exists any bugs. Firstly, we would go through each module, before testing the connection and data transportation among these modules. Then we would test compatibility of the project. That is, we would use Selenium to get/post requests to the server of our web application using different web browsers, namely Google chrome, Firefox and Safari. Next, we would check the performance of the system. Since the system is not required to have great scalability, we do not need to do the load test. So the team decided to only conduct the pressure test by using JMeter to create a thread group and simulate twenty threads concurrently to pull requests to our server. Lastly, security tests need to be done. In this step, we would focus on authentication and authorization. Besides, we also want to take methods that could defend SQL injection attacks into consideration.
4. Acceptance tests, including alpha test and beta test, would be conducted after all other tests. Acceptance tests are important because they are the last step to capture the quality of our product before final release. To be more specific, alpha test is an internal test that would be operated by the team members, while beta test would be done by end users outside the team. In this project, we would invite our friends to do the beta test.
5. Chengyu Zhang is responsible for managing the test plan, designing test cases, hosting test cases review meeting and generating test reports.

The following table lists tests we would conduct during the process:

Test Type	Test Name	Test Time
Function Test	User Story 1: Forget Password	Sprint 1
Function Test	User Story 2: Third Party Login	Sprint 1
Function Test	User Story 3: Delete Sections	Sprint 1
Function Test	User Story 4: Reset Account	Sprint 1
System Test	System Test of Sprint 1	Sprint 1
Alpha Test	Alpha Test of Sprint 1	Sprint 1
Beta Test	Beta Test of Sprint 1	Sprint 1
Function Test	User Story 5:Delete Photos and Files	Sprint 2
Function Test	User Story 6: Copy URL to the Clipboard	Sprint 2
Function Test	User Story 7: Email Service	Sprint 2
Function Test	User Story 8: Download Files in PDF Format	Sprint 2
System Test	System Test of Sprint 2	Sprint 2
Alpha Test	Alpha Test of Sprint 2	Sprint 2
Beta Test	Beta Test of Sprint 2	Sprint 2
Function Test	Integration Test	Last Week of Our Project
Function Test	Systematically Test	Last Week of Our Project
Compatibility Test	Google Chrome Compatibility	Last Week of Our Project
Compatibility Test	Firefox Compatibility	Last Week of Our Project
Compatibility Test	Safari Compatibility	Last Week of Our Project
Performance Test	Pressure Test: 20 Threads Concurrently 'get' Request	Last Week of Our Project
Performance Test	Pressure Test: 20 Threads Concurrently 'post' Request	Last Week of Our Project
Security Test	Authentication and Authorization	Last Week of Our Project

Security Test	Defend SQL Injection Attacks	Last Week of Our Project
System Test	System Test	After Other Tests Above
Acceptance Test	Alpha Test	After System Test
Acceptance Test	Beta Test	After Alpha Test

Table: Test Plan of Our Project