

CS408 Project Test Plan

Members: Jingzhou Wang, Shirley Fu, Dan Luo, Wenya Zhu, Jay Cha

Defect No.	Defect Description	Defect Severity	Type of Higher-Order Testing	Test Case No. OR Description
1	Login as admin, choose "Grade Test" and select a user. Nothing happens, but just simply refreshed the page.	2	Facility Testing	Grade_Test 001
2	Login as admin and choose "Grade Test". It shows a lot of Notice.	3	Usability Testing	Grade_Test 002
3	Login as admin, choose "edit existing user", after select the existing user and click "modify user", there is no response from the website	2	Facility Testing	Functionality 003
4	Login as admin and choose "Edit Existing User". It shows a lot of Notice.	3	Usability Testing	Edit_Existing_Users 002
5	Admin pages can be accessed through different urls without proper logins	3	Security Testing	Typing " http://10.192.121.112:808/OnTheExamLine/adminPage.php?accessor=admin " redirects to admin page.
6	User pages can be accessed through different urls without proper logins	3	Security Testing	Typing " http://10.192.121.112:808/OnTheExamLine/userOption.php?username=(username) " redirects to corresponding user page.

	Users can see the source code of the website		Security Testing	
7	Login as admin, choose "Review Client Answers" and select a user. Nothing happens, but it just simply refreshed the page.	2	Facility Testing	Grade_Test 001
8	Login as admin, choose "modify existing test", there shows a lot of warning messages which reflects the error of their backend codes.	3	Usability Testing	Functionality 20
9	Login as admin, choose "modify existing test", after select an existing test and click the submit button, the web stays in the same page.	2	Facility Testing	Functionality 20
10	Login as admin, choose "Review Performance" Terrible layout shows up, information display is unclear.	3	Usability Testing	Functionality 040
11	login as admin, admin page showed. Unclear display of the information and selection usage on the main page	3	Usability Testing	Log in 003
12	Login as admin and choose " Review Test statistics" Select the test and select the test. nothing happens	3	Facility Testing	Functionality 046
13	Login as admin, choose "change chapter name", after select an existing chapter and click the select chapter button, the web stays in the same page.	2	Facility Testing	Functionality 33
14	Server breaks down after	1	Stress Testing	See the images

	total of 1,700 connections with 4 different trials			below.
15	Difficult to press a submit button for users have to move the scrolls right in order to find a button	3	Usability Testing	Submit buttons are centered on the last option. Therefore if the last option is more than 100 characters, users have to scroll sideways to manage the submission.

```

→ wrk-master wrk -t12 -c400 -d30s http://10.192.121.112:808/OnTheExamLine/userOption.php?userName=zakels
Running 30s test @ http://10.192.121.112:808/OnTheExamLine/userOption.php?userName=zakels
12 threads and 400 connections
  Thread Stats   Avg      Stdev     Max   +/-  Stdev
    Latency    222.82ms  223.18ms   1.99s   90.56%
    Req/Sec    72.73    65.94   417.00   77.54%
  19657 requests in 30.10s, 24.84MB read
  Socket errors: connect 155, read 0, write 0, timeout 151
Requests/sec:    653.10
Transfer/sec:    844.97KB
→ wrk-master wrk -t12 -c500 -d10s http://10.192.121.112:808/OnTheExamLine/userOption.php?userName=zakels
Running 10s test @ http://10.192.121.112:808/OnTheExamLine/userOption.php?userName=zakels
12 threads and 500 connections
  Thread Stats   Avg      Stdev     Max   +/-  Stdev
    Latency    518.28ms  484.43ms   2.00s   78.33%
    Req/Sec    38.75    32.67   270.00   81.29%
  2750 requests in 10.10s, 3.35MB read
  Socket errors: connect 251, read 0, write 0, timeout 9
Requests/sec:    272.36
Transfer/sec:    340.22KB
→ wrk-master wrk -t12 -c400 -d30s http://10.192.121.112:808/OnTheExamLine/userOption.php?userName=zakels
Running 30s test @ http://10.192.121.112:808/OnTheExamLine/userOption.php?userName=zakels
12 threads and 400 connections
  Thread Stats   Avg      Stdev     Max   +/-  Stdev
    Latency    178.97ms  120.73ms  955.40ms   71.15%
    Req/Sec   166.59    91.14   410.00   63.07%
  4944 requests in 30.10s, 6.25MB read
  Socket errors: connect 155, read 0, write 0, timeout 1
Requests/sec:    164.25
Transfer/sec:    212.53KB
→ wrk-master http://10.192.121.112:808/OnTheExamLine/adminPage.php?accessor=admin
min
zsh: no such file or directory: http://10.192.121.112:808/OnTheExamLine/adminPage.php?accessor=admin
→ wrk-master wrk -t12 -c400 -d30s http://10.192.121.112:808/OnTheExamLine/adminPage.php?accessor=admin
Running 30s test @ http://10.192.121.112:808/OnTheExamLine/adminPage.php?accessor=admin
12 threads and 400 connections
  Thread Stats   Avg      Stdev     Max   +/-  Stdev
    Latency     0.00us    0.00us    0.00us    nan%
    Req/Sec     0.00     0.00     0.00    nan%
  0 requests in 30.03s, 0.00B read
  Socket errors: connect 155, read 0, write 0, timeout 0
Requests/sec:     0.00
Transfer/sec:     0.00B
→ wrk-master wrk -t24 -c800 -d30s http://10.192.121.112:808/OnTheExamLine/adminPage.php?accessor=admin
unable to connect to 10.192.121.112:808 Operation timed out
→ wrk-master

```

Higher-Order Testing Resource:

<http://diranieh.com/Testing/HigherOrderTesting.htm>

Usability Testing

Usability testing is assessing the program's user-friendliness and identifying operations that may be difficult for the users. The following represents some items that may be tested for usability:

1. Has the UI been tailored to the intelligence, educational background and environmental pressures of the end user?
2. Are the outputs of the program (especially errors) meaningful and easy to understand?
3. Do all screen exhibit conceptual integrity and uniformity of syntax, conventions, format, style and abbreviations?

Security Testing

Security testing verifies that only authorized users have access to allowable features. The purpose of security testing is to devise test cases that subvert the program's security checks. One way to devise such tests is to study known security problem in similar systems and generate test cases that attempt to demonstrate similar problems in the system you are testing.

Web-based applications often need a higher-level of security testing that do most applications, especially in e-commerce systems.

See [Security](#) chapter in Distributed Design.

Performance Testing

Performance testing measure how long each task takes, under normal and peak conditions, to ensure that the system responds within the specified time constraints.

See [Performance](#) chapter in Distributed Design.

Volume Testing

Volume testing is subjecting the program to heavy volumes of data. For example, a trading system would be given a very huge number of trades to process. The purpose of volume testing to show that the program cannot handle the volume of data specified in its objectives.

Stress Testing

Stress testing is forcing the system to operate with an unreasonable load while denying it the resources needed to process that load. The goal is to push the system beyond the limits of its states requirements to find potentially serious bugs. Stress testing should not be confused with volume testing. For example, if the software under test was Microsoft Word, then a volume test would be to load a 10,000-page document, while a stress test would be to open 50 normal documents (say 10-20 pages) under low memory conditions.

Stress testing is often common with web-based applications. Here you want to ensure that your application and hardware can handle some volume of concurrent users. You could argue that you may have millions of users accessing the system at the same time, but this is not reasonable.

Therefore, you need to understand the intended audience when designing a stress test.