BloodyFast
Test Report

Functionality

Test for – all the links in web pages, database connection, forms used for submitting or getting information from the user in the web pages, Cookie testing etc.

Check all the links:

- Test the outgoing links from all the pages to specific domain under test.
- Test all internal links.
- Test links jumping on the same pages.
- Test links used to send email to admin or other users from web pages.
- Test to check if there are any orphan pages.
- Finally, link checking includes, check for broken links in all above-mentioned links.

Test forms on all pages:
Forms are an integral part of any website. Forms are used for receiving information from users and to interact with them. So what should be checked in these forms?

- First, check all the validations on each field.
- Check for default values of the fields.
- Wrong inputs in the forms to the fields in the forms.
- Options to create forms if any, form delete, view or modify the forms.

So sign up flow should get executed correctly. There are different field validations like email Ids, User financial info validations etc. All these validations should get checked in manual or automated web testing.

Cookies Testing:

Cookies are small files stored on the user machine. These are basically used to maintain the session- mainly the login sessions. Test the application by enabling or disabling the cookies in your browser options.

Test if the cookies are encrypted before writing to the user machine. If you are testing the session cookies (i.e. cookies that expire after the session ends) check for login sessions and user stats after the session ends. Check effect on application security by deleting the cookies.

Validate your HTML/CSS:

If you are optimizing your site for Search engines then HTML/CSS validation is the most important one. Mainly validate the site for HTML syntax errors. Check if the site is crawlable to different search engines.

Database testing:

Data consistency is also very important in a web application. Check for data integrity and errors while you edit, delete, modify the forms or do any DB related functionality.

Check if all the database queries are executing correctly, data is retrieved and also updated correctly.

	Donor	Doctor	Staff
Link Check	Failed	Failed	Failed
Forms on all pages	Failed	Failed	Failed
Cookies	Failed	Failed	Failed
HTML/CSS	Passed	Passed	Passed
Database	Passed	Passed	Passed

Important issues found:

→ Donor

- Upon registering, the email field is not mandatory and can be left empty
- Clicking on the "Test Results" will redirect the user to the test results page of the Staff members. He will have the Staff navigation bar, but he cannot access any of the pages – Fixed
- Fields on the "My Information" page are not validated
- The donor can submit a donation form without answering the mandatory Required Information (the first Yes/No questions)

→ Doctor

- Pages not implemented: Pacients in Need, City Blood Stocks

- When the doctor fills in a request with information that is wrong, gets the "Request sent" message, but the browser returns an error message and the request is not saved

→ **Staff**

- Pages not implemented: Stocks - Fixed, City Stocks, Find Donor, Tests
- No validation on the appointment date(can be set in the past, not respecting the format etc.)
- When clicking on "Add/Remove from Stock" button without information filled in, "Error 404" error message is displayed

→ **General**

- The application crashes if the user disables cookies from the web browser

Compatibility

Browser compatibility:

Some applications are very dependent on browsers. Different browsers have different configurations and settings that your web page should be compatible with.

Test the web application on different browsers like Internet Explorer, Firefox, Netscape Navigator, AOL, Safari, Opera browsers with different versions.

OS compatibility:

Some functionality in your web application is that it may not be compatible with all operating systems. All new technologies used in web development like graphic designs, interface calls like different API's may not be available in all Operating Systems.

Hence test your web application on different operating systems like Windows, Unix, MAC, Linux, Solaris with different OS flavors.

Mobile browsing:

We are in the new technology era. So in future Mobile browsing will rock. Test your web pages on mobile browsers. Compatibility issues may be there on mobile devices as well.

Printing options:

If you are giving page-printing options then make sure fonts, page alignment, page graphics etc., are getting printed properly. Pages should fit to the paper size or as per the size mentioned in the printing option.

	Donor	Doctor	Staff
Browser	Failed	Failed	Failed
OS	Could not test	Could not test	Could not test
Mobile	Passed	Passed	Passed
Printing options	Passed	Passed	Passed

Important issues found:

→ General

- The application is not compatible with Safari, hence it is not compatible with Apple users
- Linux and macOS X compatibility could not be tested as we did not have the resources necessary for in-depth tests

Usability

Test for navigation:

Navigation means how a user surfs the web pages, different controls like buttons, boxes or how the user uses the links on the pages to surf different pages.

Usability testing includes the following:

- The website should be easy to use.
- Instructions provided should be very clear.
- Check if the instructions provided are perfect to satisfy its purpose.
- The main menu should be provided on each page.
- It should be consistent enough.

Content checking:

Content should be logical and easy to understand. Check for spelling errors. Usage of dark colors annoys the users and should not be used in the site theme.

You can follow some standard colors that are used for web page and content building. These are the commonly accepted standards like what I mentioned above about annoying colors, fonts, frames etc.

Content should be meaningful. All the anchor text links should be working properly. Images should be placed properly with proper sizes.

These are some of the basic important standards that should be followed in web development. Your task is to validate all for UI testing.

Other user information for user help:

Like search option, sitemap also helps files etc. The sitemap should be present with all the links in websites with a proper tree view of navigation. Check for all links on the sitemap.

“Search on the site” option will help users to find content pages that they are looking for easily and quickly. These are all optional items and if present they should be validated.

	Donor	Doctor	Staff
Test for navigation	**Passed**	**Passed**	**Passed**
Content checking	**Failed**	**Passed**	**Passed**
User information	**Failed**	**Failed**	**Failed**

Important issues found:

→ General

- The application does not have a "Search on the site" option
- A small spelling error can be noticed after the user has the "approved for donation" status: "**In** the morning before **the/your** blood donation, you may drink[...]"
- In the "Welcome,[username]" screen, a space before the name should be placed
- According to the documentation, the application is available for Romanian users, but the site is only available in English at the moment

Interface

This is done by verifying that communication is done properly. Compatibility of the server with software, hardware, network, and the database should be tested.

The main interfaces are:

- Web server and application server interface
- Application server and Database server interface

Check if all the interactions between these servers are executed and errors are handled properly. If database or web server returns an error message for any query by application server then application server should catch and display these error messages appropriately to the users.

Check what happens if the user interrupts any transaction in-between? Check what happens if the connection to the web server is reset in between?

	Donor	Doctor	Staff
Web server and application server interface	**Passed**	**Passed**	**Passed**
Application server and Database server interface	**Passed**	**Passed**	**Failed**

Important issues found:

→ **Staff**

- When clicking on "Add/Remove from Stock" button without information filled in, "Error 404" error message is displayed

Security

Following are some of the test cases for web security testing:

- Test by pasting internal URL directly into the browser address bar without login. Internal pages should not open.
- If you are logged in using username and password and browsing internal pages then try changing URL options directly. I.e. If you are checking some publisher site statistics with publisher site ID= 123. Try directly changing the URL site ID parameter to different site ID which is not related to the logged in user. Access should be denied for this user to view others stats.
- Try some invalid inputs in input fields like login username, password, input text boxes etc. Check the system's reaction to all invalid inputs.
- Web directories or files should not be accessible directly unless they are given download option.
- Test the CAPTCHA for automating script logins.
- All transactions, error messages, security breach attempts should get logged in log files somewhere on the web server.

The primary reason for testing the security of a web is to identify potential vulnerabilities and subsequently repair them.

- ✓ Network Scanning
- ✓ Vulnerability Scanning
- ✓ Password Cracking
- ✓ Log Review
- ✓ Integrity Checkers
- ✓ Virus Detection

	Donor	Doctor	Staff
Security – identify vulnerability issues	**Failed**	**Passed**	**Passed**

Important issues found:

→ Donor

- No email verification when signing up, there is a probability of spamming the server and bot users
- Captcha verification would be a plus

Performance

The web application should sustain to heavy load. Web performance testing should include:

- Web Load Testing
- Web Stress Testing

Test application performance on different internet connection speed.

Web **load testing**: You need to test if many users are accessing or requesting the same page. Can system sustain in peak load times? The site should handle many simultaneous user requests, large input data from users, simultaneous connection to DB, heavy load on specific pages etc.

Web Stress testing: Generally stress means stretching the system beyond its specified limits. Web stress testing is performed to break the site by giving stress and its checked as for how the system reacts to stress and how it recovers from crashes. Stress is generally given on input fields, login and sign up areas.

In web performance, testing website functionality on different operating systems and different hardware platforms is checked for software and hardware memory leakage errors.

Performance testing can be applied to understand the web site's scalability or to benchmark the performance in the environment of third-party products such as servers and middleware for potential purchase.

Connection Speed
Tested on various networks like Dial-Up, ISDN etc.

Load
i. What is the no. of users per time?
ii. Check for peak loads and how the system behaves
iii. Large amount of data accessed by user

Stress
i. Continuous Load
ii. Performance of memory, CPU, file handling etc..

	Donor	Doctor	Staff
Connection Speed			
Load			
Speed			

Important issues found: