**What is Web Testing?**

Web Testing in simple terms is checking your web application for potential bugs before its made live or before code is moved into the production environment.

During this stage issues such as that of web application security, the functioning of the site, its access to handicapped as well as regular users and its ability to handle traffic is checked.

**Web Application Testing Checklist:**

Some or all of the following testing types may be performed depending on your web testing requirements.

**1. Functionality Testing :**

This is used to check of your product is as per the specifications you intended for it as well as the functional requirements you charted out for it in your developmental documentation.Testing Activities Included:

**Test** all **links** in your webpages are working correctly and make sure there are no broken links. Links to be checked will include -

* Outgoing links
* Internal links
* Anchor Links
* MailTo Links

**Test  Forms** are working as expected. This will include-

* Scripting checks on the form are working as expected. For example- if a user does not fill a mandatory field in a form a error message is shown.
* Check default values are being populated
* Once submitted , the data in the forms is submitted to a live database or is linked to an working email address
* Forms are optimally formatted for better readability

**Test  Cookies** are working as expected. Cookies are small files used by websites to primarily remember active user sessions so you do not to log in every time you visit a website. Cookie Testing will include

* Testing cookies (sessions) are deleted either when cache is cleared or when they reach their expiry.
* Delete cookies (sessions) and test that login credentials are asked for when you next visit the site.

**Test HTML and CSS** to ensure that search engines can crawl your site easily. This will include

* Checking for Syntax Errors
* Readable Color Schemas
* Standard Compliance.Ensure standards such W3C, OASIS, IETF, ISO, ECMA, or  WS-I are followed.

**Test business workflow**- This will include

* Testing your end - to - end workflow/ business scenarios which takes the user through a series of webpage's to complete.
* Test negative scenarios as well , such that when a user executes an unexpected step , appropriate error message or help is shown in your web application.

**Tools that can be used**: QTP

**2. Usability testing:**

Usability testing has now become a vital part of any web based project. It can **carried out by testers** like you **or a small focus group** similar to the target audience of the web application.

**Test** the site **Navigation**:

* Menus , buttons or Links to different pages on your site should be easily visible and consistent on all webpages

**Test** the **Content**:

* Content should be legible with no spelling or grammatical errors.
* Images if present should contain and "alt" text

**3.Interface Testing:**

Three areas to be tested here are - Application , Web and Database Server

* **Application:** Test  requests are sent correctly to the Database and output at the client side is displayed correctly. Errors if any must be caught by the application and must be only shown to the administrator and not the end user.
* **Web Server**: Test  Web server is handling all application requests without any service denial.
* **Database Server:** Make sure queries sent to the database give expected results.

**Test system response** when **connection between the three layers** (Application, Web and Database) **can not be established** and appropriate message is shown to the end user.

**4.Database Testing:**

Database is one critical component of your web application and stress must be laid to test it thoroughly. Testing activities will include-

* Test if any errors are shown while executing queries
* Data Integrity is maintained while creating , updating or deleting data in database.
* Check response time of queries and fine tune them if necessary.
* Test data retrieved from your database is shown accurately in your web application

**Tools that can be used**: QTP

**5. Compatibility testing.**

Compatibility tests ensures that your web application displays correctly across different devices. This would include-

**Browser Compatibility Test**: Same website in different browsers will display differently. You need to test if your web application is being displayed correctly across browsers , javascript , AJAX and authentication is working fine. You may also check for Mobile Browser Compatibility.

The rendering of web elements like buttons , text fields etc changes with change in **Operating System**. Make sure your website works fine for various combination of Operating systems such as Windows , Linux , Mac and Browsers such as Firefox , Internet Explorer , Safari etc.

**Tools that can be used**: NetMechanic

**6.Performance Testing:**

This will ensure your site works under all loads. Testing activities will include but not limited to -

* Website application response times at different connection speeds
* Load test your web  application to determine its behavior under normal and peak loads
* Stress test your web site to determine its break point when pushed to beyond normal loads at peak time.
* Test if a crash occurs due to peak load , how does the site recover from such an event
* Make sure optimization techniques like gzip compression , browser and server side cache enabled to reduce load times

**Tools that can be used**: Loadrunner, JMeter

**7. Security testing:**

Security testing is vital for e-commerce website that store sensitive customer information like credit cards.Testing Activities will include-

* Test unauthorized access to secure pages should not be permitted
* Restricted files should not be downloadable without appropriate access
* Check sessions are automatically killed after prolonged user inactivity
* On use of SSL certificates , website should re-direct to encrypted SSL pages.

**8.Crowd Testing:**

You will select a large number of people (crowd) to execute tests which otherwise would have been executed a select group of people in the company. Crowdsourced testing is an interesting and upcoming concept and helps unravel many a unnoticed defects