UI and UX Testing: Ready Reckoner

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One of the important points to note in UX testing is Accessibility. How usable is your website for people with special needs? Have you thought about this test idea?

**Learning:**

- Check for each one of the accessibility options
- Learn about the Accessibility standards
- Have a list of cases where companies are sued and had to pay a lot of compensation. These help in bug advocacy, especially if one of your competitors are in the list
- Learn about different tools available to test each of those options
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- Observe how people with special needs use your software
- If there is no one worried about Accessibility, make a strong case for inclusion in project plan
- Have a testing expert share their experiences of how they tested their software. You definitely don’t want to repeat the common mistakes

Resources:
http://www.w3.org/standards/webdesign/accessibility
http://www.globalaccessibilityawarenessday.org/participate.html
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Color Blindness
Few people are unaware that they are colorblind. This is one of the few areas which is highly mis-understood and to be tested.

Learning:

- A good test to test both software as well as the teams involved in project
- Understand the concept behind color blindness
- Have test data ready to test different types of color blindness
- This is to be included as part of Accessibility testing
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Resources:

http://www.color-blindness.com/coblis-color-blindness-simulator/
http://vischeck.com/
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Contrast
As seen in the screenshot, it is easy to differentiate good and bad contrast. The interesting point to note here is the aspect of color blindness and contrast together.

Learning:

- Do not be satisfied with your perception of contrast
- Look for standards and guidelines highlighting differences in contrast
- Understand basics of color like hue, saturation, intensity and brightness
- Be on the lookout for good design on websites and understand what makes them good
- Support your bugs on bad contrast with information on guidelines
Auto Focus

This is a very easy to miss and easy to find bug. As soon as you load a page which has a form or input fields, the first field must have a blinking cursor. The user need not click on the field to enter input.

Learning:

- Not all websites have this feature. Check if the first field is an input field or not.
- Sometimes, the first field could be search field at the top of the page
- Also check if ‘Caret Browsing’ is set to on. One might be fooled that auto focus is set while the blinking cursor could be because of Caret Browsing being set to On
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- Also check which field has the default focus by pressing tab and Shift+tab
- Do a refresh of the page and check if the focus is still on the first field
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**Back Button**
The power of back button is under estimated. Once logged in, click on Back button and observe. Try the same test once logged out.

Learning:

- If you are in between a workflow, what does clicking on back button do?
- Can the user navigate to the previous workflows using back and forward buttons?

Resources:

http://www.usabilitysciences.com/from-the-usability-lab-front-back-me-up
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Balanced Page
One of the reasons for unnecessary scrollbars is imbalance among elements on the page.

Learning:

- As seen in the screenshot, check out if the elements are placed evenly on either side of the horizontal and vertical axis
- What is your first impression about the page?
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- Color also plays a part along with chunks of text being placed
- Does your website follow a certain pattern in terms of balance or the elements are placed at random?
- One of the tips I regularly use to check page balance is to zoom out enough such that the white space stands out or the page elements overlap each other. This gives a fair idea of how the elements are stacked in terms of page balance
Button State

When the focus is on the button, does the state of the button change? This test idea is not restricted to buttons alone. The state must change for links and fields too. As seen in the screenshot, it is very clear that the button ‘Sign in’ has focus right now.

Learning:

- A good test to follow the button state test is to check if pressing Enter or Space is equivalent to clicking the button
- Pressing tab once the focus is on the button should change the focus to the next element which is clickable or editable
- The buttons should change state on mouseover too. This applies to links too
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**Tooltips**
It is easy to implement, provides users with additional information but missed often by programmers.

**Learning:**
- Check for consistency in terms of display of tooltips
- Do the tooltips appear for some and don’t for others?
- Are the tooltips correct? Nothing confuses more than having an incorrect tooltip for the button
- What is the case for tooltips? Is it sentence case or Is It Title Case?
- Beware of having a tooltip that reads the same text as on the button. What is the use of such a tooltip?
Block Flash
Not every user has Flash enabled. Some of them have not even installed the software. What if your software uses Flash and is dependent on the corresponding plug-in?

Learning:
- It is a good idea to enable and disable Flash plugin and test
- If the plugin is required, is the user warned?
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- Is he given instructions on how to enable the plugin?
- Is there a proper error message if the plugin is disabled?
- Are you aware of different ways to check if the plugin is disabled or enabled?
- Do you know of sites where you can check if other sites with Flash content are rendering correctly or not?
- Also, check if the page is dependent on a particular Flash version
Block Images
Some of the users block images to save data network. They might add exceptions to few sites.

Learning:
- Does your website have a lot of images? Are they really needed?
- What happens if you block images in the Settings and load your website?

- Try adding an exception to your website and check browser behavior
- This test can be combined with the Alt-text test for the images
- You can also use the ‘DownloadThemAll’ addon to download all images or use ‘Extended Status Bar’ addon to check the total count of images on website
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Block JavaScript
Many websites are JavaScript dependent and hence blocking JavaScript seems to be a good test idea.

Learning:
- Install a fresh instance of a browser and check the setting. Is JavaScript allowed or blocked by default?
- How will you check if JavaScript is disabled on the browser? Do you notify the user that JavaScript is essential for proper functioning of the website?
- Can you try adding an exception for your website and check the behavior? Do you have another website or source to isolate JavaScript problem to a specific website?
Block Popups
Do you see a red colored cross on the address bar on few sites? Are you annoyed that few websites throw popups without your permission?

Learning:

- Does your website display popups all of a sudden? Are popups the only way to convey the information? What if the user has blocked the popups?
- Just like images, JavaScript, include your website as part of exceptions and check
- Do you let the user know that popups need to be allowed
- Can you close the popups easily or they extend well beyond the screen width?
Tab Order

As seen in the screenshots, many websites have lot of elements on the page. If you are someone who is used to keyboard only, it is a bit difficult to navigate between fields unless pressing tab takes you to right field.

**Learning:**

- Ensure that the website is tested for navigation using Tab and Shift + Tab
- This is not restricted to just input fields but to labels and any other elements between input fields
- Shift + Tab should retrace the path followed by pressing Tab key
- Pressing tab should cycle the focus through all the fields. Focus should not stop at the last element
Breadcrumbs

Breadcrumbs help a user identify their current location within the whole website. The other purpose of the breadcrumbs is to quickly navigate between different links. It would be very difficult to navigate through the whole website without the breadcrumbs. It could lead to visiting the same links again or getting lost in the whole website.

Learning:

- How are the breadcrumbs displayed – partial text or complete links?
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- Do the breadcrumbs text expand once clicked. If there are many links, only the first and the last link is displayed with ... displayed in between. Does the ellipsis expand on clicking?
- Do the breadcrumbs take you to the right page?
- The breadcrumbs also save user’s time in achieving a goal
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**Color Cop**
An amazing tool to find the color values of any element on the website. For example, how can you be sure that the same logo is used across different pages on the same website?

**Learning:**
- Use this tool to check every major element and know its attributes
- Are we consistent in having the same element across pages?
- Do we have proof that the elements are actually the same?
Ellipsis
There are limits at most of the places and same applies to static text too.

Learning:

- As seen in the screenshot, once the text exceeds the length, ... must be displayed at the end of the text.
- A tooltip must be displayed on mouseover whenever there is a ...
- Resize the browser size to a smaller size and check which elements get truncated
- Do text overlap or there is enough space between elements separated by ...
Extended Status Bar
An addon I like the most is Extended Status Bar. Just enable and observe the power of it.

Learning:

- This is available for Firefox as an Addon. It is a quick test to identify any significant difference in page load speed.
- One can check the number of images, time taken for the page to load and also the speed. Also, check the speed at [www.speedtest.net](http://www.speedtest.net)
- Combine this test with the blocking elements test – images / JavaScript / Popups
- Test across different speeds, browser versions and product releases
Favicon

Some of my friends are addicts of having multiple tabs open. When I say multiple, it’s usually more than fifteen tabs. I realized the importance of Favicon when I had to work with many tabs open. The only attribute which helped me identify a website in this case was the Favicon.

Learning:

- Does your website have a Favicon? Is it crisp and consistent with the website logo?
- On mouseover, do we notice any text?
- Is the Favicon displayed when the site is bookmarked?
- Combine with View Source test and check if you can get access to root directory with all images on the website?
Pre-canned Text

No one likes making mistakes and people love websites that prevent users from making mistakes. An easy way to prevent users from making mistakes is to let them know about the website’s expectations.

**Learning:**

- By providing sample text or pre-canned text, we can let users know what is the accepted format of text
- With fields as simple as Date of Birth, there are different ways of entering the text. So, it’s a good idea to indicate to the user about the expectations
- Check across browser versions. Sometimes, the text extend out of the fields
When filing bugs, it is a good practice to include environment details. The site www.supportdetails.com provides all the relevant details on a single page. This can also be used to find differences between multiple environments. One can also email the details using this site.
Font

How do you recognize different fonts and font sizes on the same website. One of the ways is to use Inspect Element and notice the attributes.

Learning:

- If you are not comfortable checking using Inspect Element, try the WhatFont extension on Chrome.
- Inconsistent fonts on the website reduces the website’s credibility to a large extent
- Are you aware of the fonts used by your website? What about the font sizes?
- Learn a bit about typography including serif, font family, width, leading, tracking and kerning
Languages
Do you test your website for Internationalization? Do note that it is different from localization.

Learning:

- Change browser language and check if your website is supported
- Try making one of the languages as default language and check any inconsistent behavior on the website
- What if you add or remove languages once you set the default language?
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**GTmetrix.com**

One more addition to the quick tests list is verifying the performance of the website on GTmetrix.com.

**Learning:**

- Use this website to find a detailed report on the target website’s performance. One can download a detailed report for free too.
- One can work on the suggestions provided in the report to improve the website performance.
- Check out performance of
your competitors too. This can act as good data during bug advocacy to fix performance related issues.
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Tamper Data
A good addon to understand the requests sent and received by the browser. This can also be used to check if server side validation is present for your website forms.

Learning:

- Probable use cases of this addon: Security testing, Recognize multiple requests for the same action, server polling
- Check if sensitive data can be easily modified thereby incurring loss to company
- One can also check encoding and data compression
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**Measure It**

An addon by name ‘Measure It’ is useful to draw rulers on the webpage and identify the size of any region on the website. This can be used to check alignment, balance and consistency across the whole website.

**Learning:**

- Either you take the screenshot and identify the element’s parameters or use this addon to quickly identify the values.
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Toolbars
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This is to simulate the kind of users who have all kind of toolbars enabled and complain about your website. Though the screen resolution and size might be mentioned on the website, users tend to ignore that and have as many toolbars enabled.

**Learning:**

- Enable as many toolbars
- Have the Downloads bar displayed along with the Addons bar
- Check how your website is displayed with this limited screen size. This can be used as a good argument during meetings that the user can have the recommended screen resolution and still face problems
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Screen Resolution

If you are testing user interface, you must be aware of screen resolution and how it affects the display of elements on the webpage. Either use www.supportdetails.com to find out your screen resolution or http://www.screen-resolution.com/ to test your website on different screen resolutions.

Learning:

- Identify the supported screen resolutions before testing on various resolutions
- Include screen resolution details in your bug report. Also, zoom in and zoom out can be used to simulate different screen resolutions in a quick and dirty way. Other resource: http://www.w3schools.com/browsers/browsers_display.asp
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Screen Sizes
Are you aware of the screen sizes of different devices?
Use http://screensiz.es/ to understand

the differences in sizes based on different criteria. These include OS, device type, device model. Also, note the popularity
Validation
One can validate the input fields as soon as the user enters input or once the complete form is submitted.

Learning:
- As seen in the screenshot, even as I type, I get the notification that the password strength is weak. This helps me as I don’t have to repeat the exercise to know my password strength.
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- The on-field validation is highly helpful if you have a long form with complex input validation. No user would personally like to repeat data entry.
- Test for on-field validation across fields and browsers.
- Beware of tooltips indicating the validation rules, overlapping the fields itself. This makes it hard to read the validation notes and enter text at the same time.
- Combine this text with pre-canned text and autofocus test ideas.
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**Button Action**

How do you know if you clicked a button or not? How many times did you click?

**Learning:**

- A button should notify its state to the user if it’s clicked or not. Once a button is clicked, the button state must change.

- An example of a good button state change is highlighted in the screenshot. As soon as the ‘Check PNR’ button is clicked, the text changes to ‘Wait for PNR Enquiry’ thereby indicating to the user that the button was clicked and cannot be clicked again.
As testers, we might have to login with different accounts on the same browser. Do you logout every time and login with each account? Use Incognito mode to overcome this limitation.
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Learning:

- Test with different accounts on the same browser using Incognito mode
- Some users use Incognito mode quite often. How will your website behave? It is good to test once in this mode
- Combine this test idea with the extensions test idea. Some of the extensions can be blocked for Incognito mode
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**Remember Password**
Have you seen this flyout, especially in Firefox? Do you understand its significance?

**Learning:**

- Should this flyout appear every time you enter password? Does the screen where you enter password matter? Ask your security personnel in your organization.
- What happens if you click on Remember Password on one such screen? Can you add a setting that some websites need to be ignored.
- Is this a security threat to your application?
User Intervention

Have you ever wondered why there is ellipsis against few menu options and not for every option?

Learning:

- The ellipsis ... indicates that on accessing the menu option, user intervention is needed. For example, in the screenshot we see the ... against most of the options. Each of the options indicate that there will be a popup asking for user input.
- Are you taking care of including the ellipsis ... for appropriate options?
- Make sure that you do ask for user input once such an option is clicked.
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**View Source**

Have you seen few developers use view page source and debug the problem right there? As a tester, what can you look for?

**Learning:**

- Are there interesting comments left in the source?
- Can you read the source code and derive the logic itself? Can your competitor copy your IP just by reading the source code?
- Can you derive any test ideas by reading the source code?

- What are the hidden elements and what is the logic? Can you beat them through your tests?
Cache
Have you heard your programmer say ‘Clear cache and try once’. Do you understand the difference between cache and cookies?

Learning:

- Should we always clear cache? Are you aware of situations when cache must not be cleared?
- Which elements are stored as part of cache? Does the local storage limit play a part in cache storage?
- Do you know the shortcut to clear cache? How is Ctrl + Shift + Delete different from Ctrl + R (Specific to IE)?
Masked Password
This might be very hard to miss. Whenever you enter any password, it should be displayed as masked characters. There are options that have the option to view the password in clear text.

Learning:

- One should also not be able to copy paste passwords from the passwords field
- Decide which is important while masking passwords - security or usability.
- A good article on similar lines: [http://www.nngroup.com/articles/stop-password-masking/](http://www.nngroup.com/articles/stop-password-masking/)
Mouse Pointers
Have you ever visited the Mouse window in Control Panel?

Learning:

- I hate it when testers call the ‘Link Select’ mouse pointer as
‘Hand Icon’. Why not use the standard terminology? If others don’t understand, why not inform them?

- Increase your credibility by using the right terms - Normal Select, Busy, Link Select, and Move. Each of the mouse pointers have a specific meaning associated to them. Find out and understand the meaning
- Do you know of scenarios to get each of the mouse pointers on screen?
Session Files
One of my friends who is a programmer told me that all the static files like js, css need to have expiry date. While I find out how to use this test idea, you can ask your programmer too if it’s been implemented or not. Know the reason for its implementation or why it’s not implemented.
Session Timeout

I love this test idea and use this test idea just before going for lunch. I start an active session, lock the computer and go for lunch. When I return, I know the webpage behavior in case of session timeout. Test this idea on different pages. If the session timeout is configurable, change it to a lower value and test on most of the workflows. Pay extra attention to when there is a flyout or a popup.

How session timeout affects them?

```xml
<session-config>
  <session-timeout>60</session-timeout>
</session-config>
```

The element you want to edit in the `web.xml` file is:

The value within the `session-timeout` tag defines the length of time a user's session will exist, in minutes. After editing the `web.xml` file you will need to restart Confluence for your change to take effect.
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Colon

The screenshot highlights the right usage of colon and has a space after the colon.

Learning:

- Make sure that there is no space before the colon
- There is a space after the colon
- Do read more about colon here: http://grammar.quickanddirtytips.com/colon-grammar.aspx
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Links
There are very few websites without hyperlinks. What happens when you left click on them? Do they open in the same window or a new tab or window?

Learning:

- Does the linked page hinder user experience? Is there a better way to display the content present in the link?
- When the link is opened in a new tab, is the entire content displayed or just the corresponding frame?
- Is the link restricted to the right text or extends well beyond the intended text?
Spell Check
You mite have excellent content but what is the use if you have speling mistakes on your website? Did you notice that I made two mistakes in my previous sentence? Isn’t it awkward to find spelling mistakes in this modern age where one can simply run a tool to find the mistakes?

Learning:

- Copy paste the content to MS-Word and run Spell Check
- Beware of words that are spelled correctly but they don’t mean anything in the context of the sentence
- Check if the spell check language is set to English UK or US
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Console Error
It’s a good idea to have the console open and keep navigating through different screens on the website. The console errors are a good source of information about few bugs.

Learning:

- Include these errors in your bug report. These usually help the programmer understand the root cause sooner
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- Beware of highlighting the incorrect console errors for different errors. Make sure to clear all as soon as you start a new session. Do not let old errors mask new errors.
- Whenever you see errors in console, test the same workflows in different browsers. It could be very well browser specific.
- Combine this test with the next test idea – IE Script error.
Many sites display the script error, especially on IE and many testers seem to miss it. One of the reasons is that testers might not have enabled the setting to display a notification about every script error.

**Learning:**

- Enable the option and navigate through all the screens of the website
- Use the details in the script error in your bug reports
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as they seem to help the programmer find the exact cause of the bug

• It is ok to be aware of all script errors and ignore them as known errors due to this setting than to miss a bug as a result of the setting being disabled

• Combine this test with Inspect Element > Console Error test idea, especially on non-IE browsers.
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Keyboard Shortcuts
If your website supports keyboard shortcuts, check for two things to start with:

a. Do the shortcuts work as soon as the webpage is opened or do you need to click somewhere to bring focus on the webpage

b. Do the shortcuts clash with well-known shortcuts or browser shortcuts

Learning:

- Can the user customize the shortcuts?
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- Do the shortcuts use multiple combinations and are complex to remember?
- Do the shortcuts follow a pattern or are placed at random?
- Can the shortcut keys be pressed using one hand?
Unsaved Changes
No one likes to lose data. Why would it be different for your website users?

Learning:
Let users know that they have unsaved changes on the page when they navigate to different pages. Suppose you don’t warn and users move to different pages, they will soon realize that you don’t care about user data. This one action would make many users dislike your software.

Provide users option to backup data. At the same time, simple choices like the one mentioned in the screenshot can go a long way in retaining customers and increasing website credibility.
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One of the points to note in this test idea is that you should not overuse this feature. Suppose an user enters data and clicks on Cancel, displaying this popup adds to the user’s frustration. Understand the context in which the user is navigating across features. Also, decide if you need to provide users with option to Cancel the operation along with saving the unsaved changes.
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Resources

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