

## Assignment-4

Q1) Explain the website experimentation concepts.

Ans) To maximize the performance of your website, your team will need to embark on running experiments to help gain a better understanding of your users and drive better.

- ↳ To ensure you maximize your experimentation efforts and move efficiently, it is critical to have a step-by-step process your team can follow.
- ↳ Before jumping in and experimenting for the sake of experimenting, first lay the groundwork by building out the process and template your team can use.
- ↳ The goal of running experiments, especially in the beginning, is simply to learn about your users and how the business can interact with them.
- ↳ It's common for experiments to not go as planned, especially when you're starting out or trying bold, new ideas.
- ↳ Even if these experiments fail, if you walk away with key user learnings that can be incorporated in the next sprint cycle, it's a win.



↳ Testing the website on low traffic is not sufficient but then at the beginning website will be running on low traffic only.

↳ Overall, running experiments to improve the user experience, boost business impact, and move the website in the right direction is always a good idea.

2) Explain the different types of web testing.

Ans ↳ It is a method of checking potential bugs before its made live is accessible to general public.

↳ web testing checks for functionality, usability, security, compatibility, performance of the web application or website.

• web application testing methodology

1) Functionality testing of a website

(i) Functionality testing of a website is a process that includes several parameters like user Interface (UI), APIs, database testing, security testing, client and server testing and basic website functionalities.

- It is very convenient and it allows both manual and automated testing.

(ii) web based testing activities includes.

• (a) Test all links.



- (b) Test forms
- (c) Test cookies
- (d) Test HTML & CSS
- (e) Test business workflow

(iii) Tools that can be used

- ↳ QTP
- ↳ IBM Rational
- ↳ Selenium

## 2. Usability Testing

(i) Usability testing has now become a vital part of any web based project.

- It can be carried out by testers like you or a small focus group similar to the target audience of the web applications.

(ii) Test the site navigation

- ↳ Menus, buttons or links to different pages on your site should be easily visible and consistent on all webpages

(iii) Test the content,

- ↳ Content should be legible with no spelling or grammatical errors.
- ↳ Images if present should contain an "alt" text.

(iv) Tools that can be used:

- ↳ Chalkmark, Clicktale, Clippy and Feedback Army



### 3) Interface Testing

(i) Three areas to be tested here are

↳ Application.

↳ web server

↳ Database server

(ii) Test system response when connection between the three layers cannot be established and appropriate message is shown to the end user.

(iii) Tools that can be used

↳ AlertFox

↳ Ranorex

### 4) Database Testing

(i) Database is one critical component of web application and stress must be laid to test it thoroughly.

(ii) Tools that can be used

↳ QTP

↳ Selenium

### 5) Compatibility Testing

(i) It ensures that web application displays correctly across different devices.

(ii) The rendering of web elements like buttons, text fields etc. changes with change in OS.



## (iii) Tools

↳ NetMechanic

## 6) Performance testing

(i) This will test website for its working under all loads. A

↳ web app response time

↳ stress test

↳ crash test due to peak load

(ii) Tools that can be used

↳ Loadrunner

↳ JMeter

## 7) Security testing

(i) It is vital for e-commerce website that store sensitive customer info like credit cards.

↳ Test unauthorized access

↳ Restricted files should not be downloadable

↳ check sessions are automatically killed

↳ check SSL certificate

## (ii) Tools

↳ Babel Enterprise

↳ BFBTestox

↳ CROSS

## 8) Crowded testing

(i) Testing when large number of people



use the web application then what happens and work accordingly

(ii) Tools

↳ People around us including self

3) Explain A/B testing in detail.

Ans - A/B testing is the act of running a simultaneous experiment between two or more variants of page to see which one performs the best.

- A/B tests, also known as split tests.
- In 1960s, marketplace started to see this kind of testing could help them understand the impact of their advertising.

#### • A/B testing terminology

1) Variant

↳ A term for different versions of pages.

2) Champion

↳ Two or more variants enters but only one leaves and the other one is a champion variant.

3) Challenger

↳ creating new versions to challenge the champion, hence is called challenger



- 4) Assigning traffic weight in an A/B test
- ↳ traffic weight is divided equally like if there are two variants the traffic is divided 50/50.
  - ↳ It is decided based on the number of variants.

### • A/B tests Procedure

- 1) Identify a problem
- 2) Analyze user data
- 3) Develop a hypothesis to test
- 4) Conduct the hypothesis testing
- 5) Analyze the data
- 6) Find new challengers for your champion

### • Areas to Evaluate using A/B testing

- 1) Targets like
  - ↳ Email campaigns, newsletters, design, color scheme, layout, CTA
- 2) Testing existing landing page
  - ↳ give your new variants a smaller percentage of traffic than the existing champion.
- 3) Landing page elements to be considered for testing
  - (i) Headlines
  - (ii) CTA



(iii) Hero shot

(iv) Forms

(v) Copy

(vi) Layout

4) Write down tips for A/B tester

Ans 1 Use representative samples of your users.

↳ If you're testing a website, you can use a number of automated testing tools to make sure that a random selection of people sees each version.

2) Maximize your sample size.

↳ The more people you test, the more reliable your results will be.

↳ This 100% agrees to a concept that 'statisticians' refer to as "statistical significance"

3) Avoid common mistakes

↳ It's tempting to create a pop-up button with a new font, a new text size, new button sizes, and new button colors.

↳ But the more new elements you add, the more muddled your results will be.



#### 4) Let the test end before making changes

↳ Because A/B tests let you see the effects of a change in real time, it's tempting to end the test as soon as you see results so you can implement a new version right away.

↳ However, doing so means your results are likely to be incomplete and are less likely to be statistically significant.

#### 5) Run tests more than once

↳ Even the best A/B testing software returns false positives because user behaviour is so variable.

↳ The only way to make sure your results are accurate is to run the same test again with the same parameters.

#### 6) See what works best

↳ A/B testing is an efficient & effective way to gauge your audience's response to a design or content idea because it doesn't disturb your user's experience or send out disruptive feedback surveys.