Work Load Participation Index Form

for

Assignments & Project(s)

(To be Submitted/Attached with Every Assignment and Phases of Project)

(Date of Submission): March 5th 2020

Artifact/Document Type (e.g. Exam/Assignment #1/#2/#3, Project Phase 1/2): Assignment #2
Participation in his/her allocated task's completion

5= Full (as allocated) 4= Partial (slightly less) 3=Half (as allocated) 2/1=Little 0= No Participation

Student Number	*Student Name*	*Participation Index Value e.g. 5/4/3/2/1*	*Signature*
040946430	Thang Nguyen	5	
040953846	DIEP PHAM	5	
040950904	Mukta Debnath	5	
040951042	Ningxin Zhao	5	
040930563	Min Li	5	

*The **Project Leader** for this Group is:* Thang Nguyen

Signatures of Team/Project Leader: _____
Team Number/Name (if any) _____

***Note:** Team leader please briefly describe below if any group member(s) is/are not participating properly to justify learning and workload participation in the located task(s).*

Assignment 2

CST2234 – 303

System Analysis and Design

Winter 2020

Thang Nguyen (Leader)

Diep Pham

Min Li

Ningxin Zhao

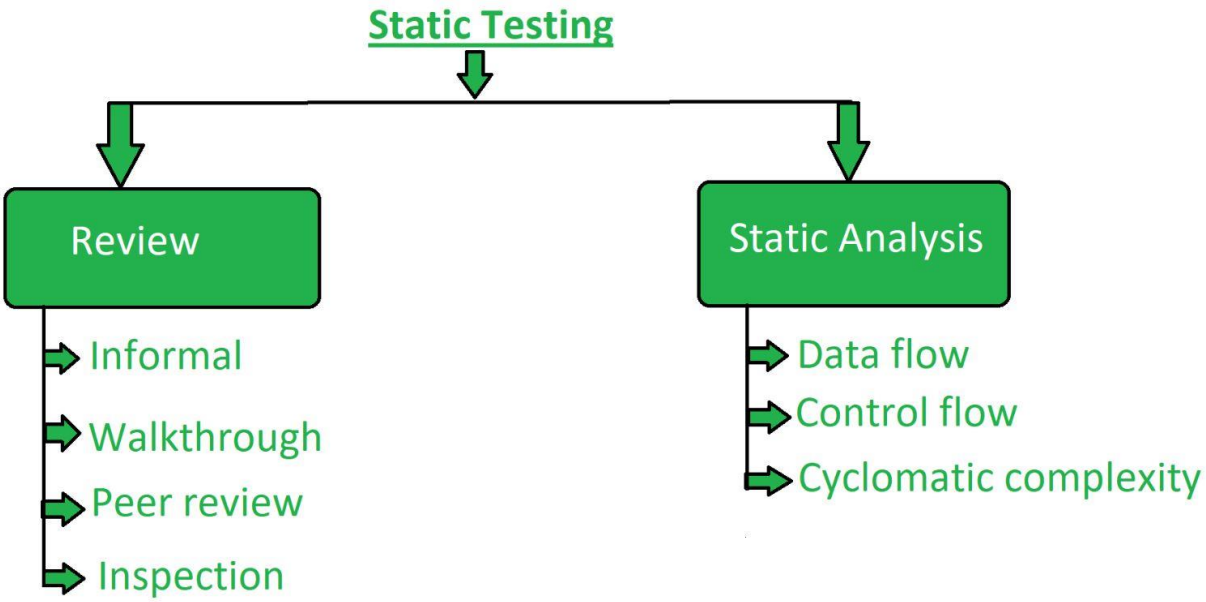
Mukta Debnath

There are multiple types of testing techniques and methods that can improve the quality of software products in all phases of UP. Whilst there are many of them, only handful of them can be mentioned in this assignment. Most of the testing techniques revolve around the development phase which is the most critical phase in any software development cycle. Here are some of them:

Static Testing (Best suited for: Inception Phase, Elaboration Phase, Development Phase)

"Static Testing is a type of testing which is executed without any code. The execution is performed on the documentation during the testing phase" [2]

Static Testing usually is the type of tests that try to find errors during the early stage of the development as it is easier to find sources of failures than failures themselves.

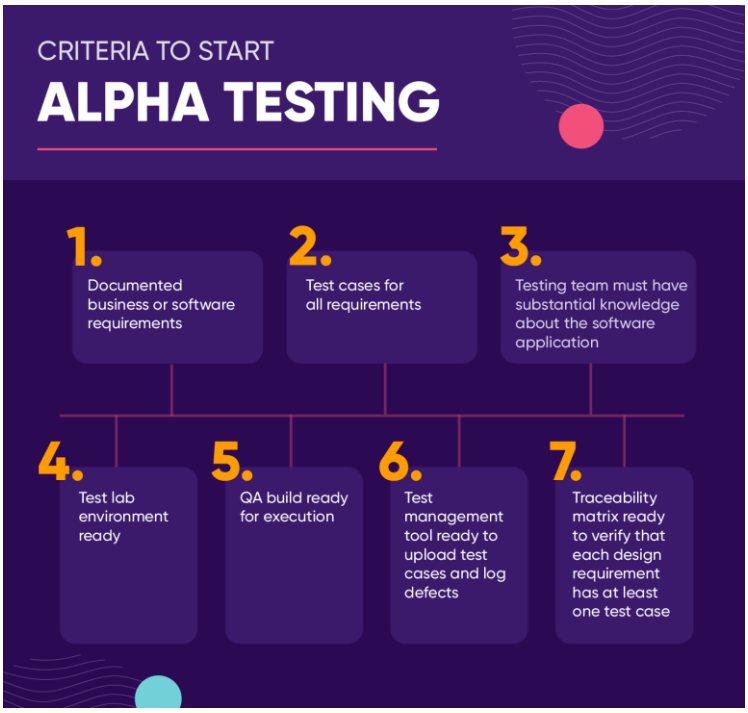


Static Testing Diagram [1]

- Alpha Testing (Best suited for: Development Phase)

Alpha testing refers to the method of testing that identifies all potential issues before the software is released into the market for the user.

Alpha testing is usually implemented at the end of the construction phase. The testing environment is usually on the developer's site, and so it is easier for developers to detect critical issues before moving on to the other software development phase. QA team must take every measure to ensure that the product is thoroughly tested, especially those which will be sent to the customers in near time.



Criteria to Start Alpha Testing [4]

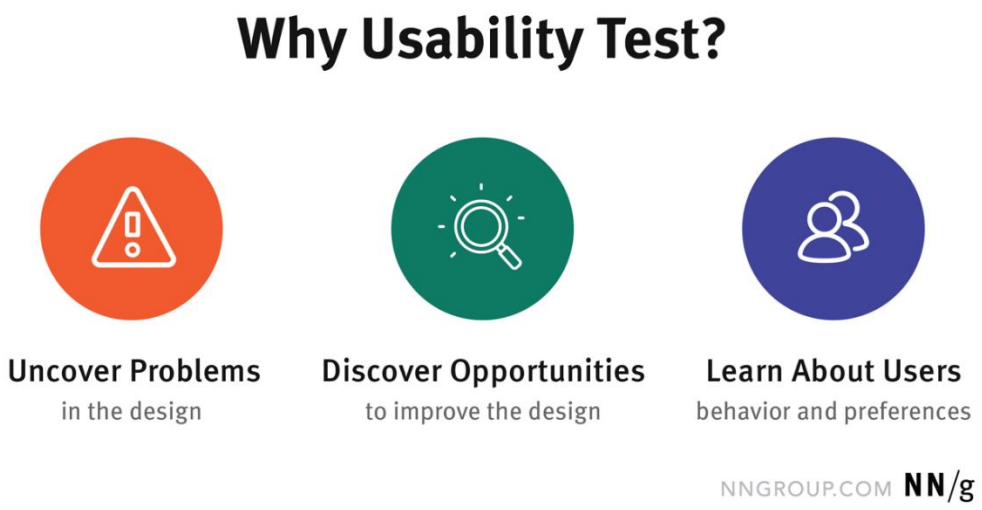
- **Ad-hoc Testing (Best suited for: development phase)**

Ad-hoc testing is when the QA and developers perform tests without planning or documentation. These kinds of tests are intended to be run only once because they are meant to be detected as you develop more through random approach. Because of its random nature, ad-hoc testing is mandatory during development phase.

Ad Hoc Testing Diagram [5]

- **Usability Testing (Best suited for: Inception Phase, Elaboration Phase, Development Phase and Deployment Phase)**

Usability Testing is the testing method that measure how easy a software product is to use from the user's point of view. The main difference between traditional testing and usability testing is that the testing is taken place with actual users of the product while traditional testing is conducted by any member of the development team. Usability testing allows the product to be tested in the most objective way

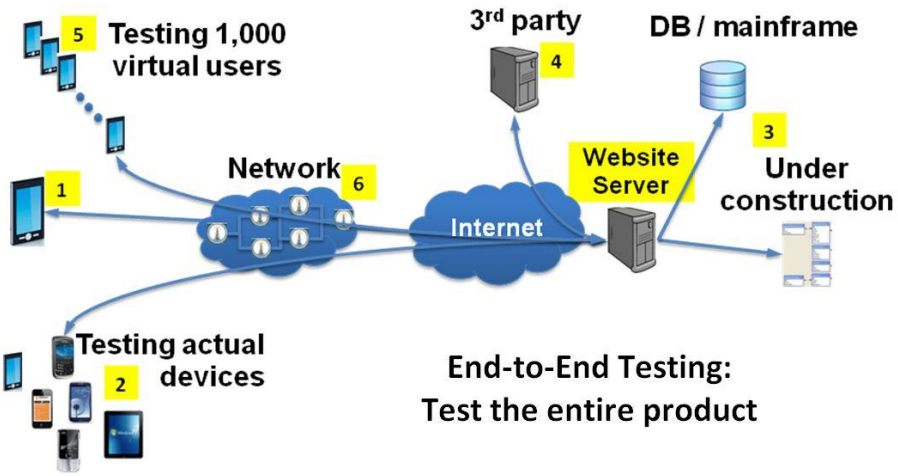


Why Usability Test [3]

- **End to end testing (Best suited for: Development Phase)**

End to end testing is similar to system testing which requires a complete application environment in a situation that resembles real-world use cases such as: interacting with database, calling other services' APIs, or interacting with other hardware or applications. End to end testing let developers test the whole product life cycle and ecosystem in the most comprehensive way.

End to end testing can include as many devices as the picture shown below:



End to end testing ecosystem [6]

- **Backward Compatibility Testing (Best suited for: Development Phase)**

The name says it all. Backward Compatibility Testing is a type of testing that tries to make sure the newly developed product works well with older version of the environment. This can go far as making sure your application run on the oldest environment available out there depending the number of users in the corresponding environments. Backward Compatibility Testing can improve any business model as it ensures that the product can support a large variety of environments which lead to higher user retention rate. For example, Backward Compatibility Testing for web application development must ensures that the application can run on all the browsers mentioned in the picture below

List of browsers requirements for compatibility testing [7]

References

1) “Software Testing: Static Testing.” *GeeksforGeeks*, 13 May 2019, www.geeksforgeeks.org/software-testing-static-testing/.

2) Rohit, et al. “Types of Software Testing: Different Testing Types with Details.” *Software Testing Help*, 10 Nov. 2019, www.softwaretestinghelp.com/types-of-software-testing/.

3) World Leaders in Research-Based User Experience. “Usability Testing 101.” *Nielsen Norman Group*, www.nngroup.com/articles/usability-testing-101/.

4) “Alpha vs. Beta Testing: How They Compare.” *CleverTap*, clevertap.com/blog/alpha-vs-beta-testing/.

5) “Adhoc Testing : Complete Guide.” *ProfessionalQA.com*, www.professionalqa.com/adhoc-testing.

6) “Why End to End Testing Is Required and How to Execute It?” *The Official 360logica Blog*, 17 July 2018, www.360logica.com/blog/end-end-testing-required-execute/.

7) “Compatibility Testing.” *ProfessionalQA.com*, www.professionalqa.com/compatibility-testing.