**Assignment 5**

**1. Various level of testing?**

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| Level | Summary |
| [Component](http://softwaretestingfundamentals.com/unit-testing/)  [Testing](http://softwaretestingfundamentals.com/unit-testing/) | A level of the software testing process where individual units/components of a software/system are tested. The purpose is to validate that each unit of the software performs as designed. |
| [Integration Testing](http://softwaretestingfundamentals.com/integration-testing/) | A level of the software testing process where individual units are combined and tested as a group. The purpose of this level of testing is to expose faults in the interaction between integrated units. |
| [System Testing](http://softwaretestingfundamentals.com/system-testing/) | A level of the software testing process where a complete, integrated system/software is tested. The purpose of this test is to evaluate the system’s compliance with the specified requirements. |
| [Acceptance Testing](http://softwaretestingfundamentals.com/acceptance-testing/) | A level of the software testing process where a system is tested for acceptability. The purpose of this test is to evaluate the system’s compliance with the business requirements and assess whether it is acceptable for delivery. |

**2. AUT** : AUT means Application under test. After the designing and coding part in software development life cycle the application comes for testing then at that time the application is stated as "application under test".

**3. UAT** : In software development, user acceptance testing (UAT) - also called beta testing, application testing, and end user testing - is a phase of software development in which the software is tested in the "real world" by the intended audience

**4. Difference between Unit testing, component testing and Integration testing.**

The Unit Testing involves testing of individual programs, modules, or components to demonstrate that the program executes as per the specification and it validates the design and technical quality of the application. In Unit Testing, the Called Components (or Communicating Components) are replaced with Stubs, Simulators, or Trusted Components. Testing Stubs or Drivers are used to simulate the behaviour of interfacing modules. 

The Component Testing is like Unit Testing with the difference that all Stubs and Simulators are replaced with the real objects. Here a Unit is a component, and integration of one or more such components is also a Component.   
  
Whereas Integration Testing is the test process which begins after two or more programs components have been successfully unit tested. It is conducted by the development team to validate the interaction or communication/flow of information between the individual components that will be integrated

**5. Types of Acceptance Testing**

**Alpha Testing** normally takes place in the development environment and is usually done by internal staff – long before the product is even released to external testers or customers. Alpha Testing can also be done by potential user groups, but the important thing here is that it takes place in the development environment.  
The feedback – collected from the alpha testers – is then used to fix certain issues or bugs and improve the usability of the product.

**Beta Testing**, also known as “field testing”, takes place in the customer’s environment and involves some extensive testing by a group of customers who use the system in their environment. These beta testers then provide feedback, which in turn leads to improvements of the product.

**6. Difference between Bug, Defect and Error**

Bug:  
An Error found in the development environment before the product is shipped to the customer.

Bug: Simply Bug is an error found BEFORE the application goes into production. A programming error that causes a program to work poorly, produce incorrect results, or crash.  An error in software or hardware that causes a program to malfunction.  
  
Defect:  
[Defect](http://softwaretesting-guideline.blogspot.in/p/defect-reporting.html) is the difference between expected and actual result in the context of testing. Defect is the deviation of the customer requirement. An Error found in the product itself after it is shipped to the customer. Defect is an error found AFTER the application goes into production. Simply defect can be defined as a variance between expected and actual. Defect is an error found AFTER the application goes into production.  
  
Error: It the one which is generated because of wrong login, loop or due to syntax. Error means normally arises in software Error means to change the functionality of the program.

**7. Influence of test scope**

a. Complexity of project

b. Use of supporting tools

c. Environment setup

d. Coding

e. learning and training

**8. Black Box Testing VS White Box Testing**

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|  | Black Box Testing | White Box Testing | |
| 1 | In this testing knowledge of programming is not necessarily essential. | In this form of testing knowledge of programming is must means it is essential. | |
| 2 | Normally independent software testers are responsible for doing Black Box Testing. | Normally software developers are responsible for doing White Box Testing. | |
| 3 | In this form of testing Knowledge of implementation is not required. | In this form of testing Implementation knowledge is required. | |
| 4 | In Black Box Testing, testers may or may not be technically sound. | Normally software developers are involved in this testing, but if it is performed by software testers, then testers should be technically sound. | |
| 5 | In this sort of testing testers mainly focuses on the functionality of the system. | In this sort of testing developers mainly focuses on the structure means program/code of the system. | |
| 6 | This testing is done by testers. | This testing is mostly done by developers. | |
| 7 | This type of testing always focuses on what is performing/ carried out. | This type of testing always focuses on how it is performing/ carried out. | |
| 8 | In Black Box Testing no knowledge regarding internal logic of code is needed means no need of programming is necessary. | In White Box Testing knowledge regarding internal logic of code is needed means need of programming is mandatory. | |
| 9 | Other names of this testing include means synonyms ofblack box testing are testing regarding functionality means[Functional testing](http://testingbasicinterviewquestions.blogspot.in/2012/01/what-is-functional-testing-explain-it.html), Behavioral testing, and Opaque-box/ Closed-box testing that is the reason why in this testing no knowledge of programming is needed. | Other names of this testing include means synonyms of white box testing are testing regarding code means Structural testing, Glass-box/ Clear-box testing, Open-box testing/ Transparent-box testing, Logic-driven testing and Path-oriented testing that is the reason why in this testing knowledge of programming is needed. | |
| 10 | Black box testing means functional test or external test. | | White box testing means structural test or interior test. |
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