ENGINEERING COLLEGE, AJMER

Date :

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Q.(1) What do you mean by varification and Validation in Software testing. Explain with Exa.

Ans:-

Verification → It is the process of evaluating the intermediary work products of a Software development lifecycle if we are in the right track of creating the final product. verification is a static testing.
It ensure that the system (Software, hardware, documentation and personnel) Compiles with an organization's standards and processes, relying on the revied or non-executables methods.

Validation → Validation is a process of evaluating the final product to check whether the software product is up to the mark or in other words products has high level requirment.
Validation is the dynamic testing validation means are we building the right product?

Example → Car production in factory.

→ In varification every phase of car production is check that it fullfill the requirments.

So, every phase of car production like building base of car, body, engine and painting check is verification.

→ In validation a complete car check and test for fullfillment of the requirment.

Q. (2) Explain Black-Box and white-Box testing in details.

Black-Box testing → Black-box testing is method in which the internal structure / design / implementation of the item being tested is not known to the tester.

In black-box testing major testing will be around inputs and expected outputs. A tester should be able to choose the valid test data carefully. In simple terms a tester can only see the actions of the AUT (Application Under Test). The tester need not known what actions are performed.

Example :- A simple example of black-box testing is a TV (television). As a user we watch the tv but we don't need to the knowledge of how the tv is build and how it works. We just need to know how to operate the remote control to switch on, switch off, chang channels, increase and decrease volume etc.
In the example The tv is our AUT, and remote is UI that we use to test.

White-Box Testing → White-Box testing is a Software testing method in which the internal structure / design / implementation of the item being tested is known to the tester. It also known as structural testing, and transparent testing. It is well suitable and recommended for algorithms testing.
The main objective of white-box testing is to test the application infrastructure. It is done at lower levels as it include unit testing, and integration testing. It requires programming knowledge, as it majorly focuses on code structure, paths, conditions and branches of a program or software.

The privarly goal of white-box testing is to focus on the flow of input and outputs through the software and strengthening the security of the software.

Example : A car mechanic should known the internal structure of the car engine to repair it.