Assignment No. 2

Q.1) What is regression testing? Explain in detail with a suitable example.

→ (1) Regression testing is a black box testing technique.

(2) It is used to authenticate a code change in the s/w does not impact the existing functionality of the product.

(3) It is making sure that the product works fine with new functionality, bug fixes or any change in existing features.

(4) There are mostly two strategies to regression testing:

a) to run all test and

b) always run a subset of tests based on a test case prioritization technique.

(5) There are two types of regression testing,

a) Regular regression testing.

b) Final regression testing.

(6) It is necessary to perform regression testing when,

a) A reasonable amount of initial testing is already carried out.

b) A good number of defect have been fixed.

c) Defect fixes that can produce side-effects are taken care of

This is the regular regression testing

(7) Final regression testing is done to validate the final build before release.

(8) Example:

Consider a product Y, in which one of the functionality is to trigger confirmation, acceptance and dispatched emails. It also needs to be tested to ensure that the change in the code not affected them. It ensures that any change in a product does not affect the existing module of product, verify that the bugs fixed and the newly added features not created any problem in the previous working version of the s/w.

Q2) What is automated test data generations s/w testing? Explain in detail with a suitable example.

→ ① The major feature of this testing that makes it more efficient than the other techniques is the speed, automated data generation technique produces data as in an expedited manner through analyzing large volume of data in a small-time interval.

② In this scheme, we use automated tools, there are many available in the market.

③ Pros:

a) The data sets generated by this scheme are highly accurate.

b) Data generation speed is very fast.

④ Cons:

a) The one demerit of this method is that it is a costlier method to implement.

b) The second one is that these tools take time to understand the system.

(5) In order to produce diverse type of data, you may utilize a variety of automated test data generating technologies. Below are some examples of such tools:

eg. DTM Test Data generator is a completely configurable problem that creates data, tables for db testing (load testing, performance testing, etc..) reasons.

Ques.3) Discuss in detail about the different challenges in automated testing.

→ (1) Test case prioritization: →

Due to shorter released cycle, a limited time left for the testing stage of product. As more and more tests are added, it becomes overloaded. Hence, it become more imp. to prioritize the test cases, especially during regression testing, to improve its efficiency.

(2) Communication and collaboration: →

Automation testing cannot function without collaboration. It certainly requires more communication among all stakeholders than manual testing.

③ Finding right testing Framework or Tool :—▷

A great automation test plan might not work out well due to wrong choice made in test framework or tool.

④ Finding the right skills :—▷

Just like automation cannot operate without tool, the tools cannot be operated without people with the right skills.

⑤ selecting a proper testing approach :—▷

Automation tests not simply require a right tool to create script but also need a correct testing approach. This is one of the biggest challenges for the test automation engineers.

Ques 4) What is class testing ? Explain in detail about object oriented integration and system testing.

—▷ * class testing :—▷

① It is the base of object oriented s/w testing.

② It involves three aspects : testing each method, testing the relation among class method and testing the inheriting relation betn class and subclass.

③ The class testing proces and test cases cannot be unified and mangged in a consistent and convenient way.

④ It focuses on the methods of generating test cases from the class specification.

* Object oriented integration & System testing :-

Integration testing is the collection of the modules of the sw where the relationship and the interfaces betn the different components are also tested. An integrator or integration tester must have programming knowledge unlike system testing. The need of integration testing is to make sure that your components satisfy the following requirement : Functional, performance and Reliability. The primary goal of this testing is to identify errors in the component configuration.

System testing, while developing a software or application product, it is tested at the final stage as a whole by combining all the product modules and this is called as System Testing. The primary aim of conducting this test is that it must fulfill the customer requirement specifications. It is also called end-to-end test. This test also classified into functional and non-functional requirement.

Ques.5) What is web testing ? Explain in detail with example.

→ (1) Web testing is a slw testing techniques to test web applications or websites for finding errors and bugs.

(2) A web application must be tested properly before it goes to the end-users.

(3) Testing a web application does not only means finding common bugs or errors but also testing the quality related issues associated with application.

(4) Basically there are four type of web based testing that are available and they are:

a) Static website testing
b) Dynamic website testing
c) E-commerce website Testing
d) Mobile-based web testing

(5) In web-based testing various areas have to be tested for finding potential errors and bugs, and steps for testing a web app are given below:

a) App functionality
b) Usability
c) Browser compatibility
d) Security
e) Load issues
f) Storage & database.

(6) Example:

There are various examples of consideration that

need to be checked while testing a web application. some of them are:

a) Do all pages are having valid internal and externals links or URLs?

b) whether the website is working as per the system compatibility?

c) what types of security does the website needed (if unsecured)?

d) As per user interfaces - does the size of displays are the optimal and the best fit for the website?