

Assignment No.-3

Q.① What do you mean by regression testing. explain in details?

Ans:

Regression testing is the process of testing the modified parts of the code and the parts that might get affected due to the modification to ensure that no new errors have been introduced in the software after the modification have been made.

Process of Regression testing → Firstly, whenever we make some change to the source code for any reasons like adding new functionality, optimization etc., then our program when executed fails in the previously designed test suits for obvious reasons.

After the failure, the source code is designed debugged in order to identify the bugs in the program. After Identification of the bugs in the source code, appropriate modification are made. Then appropriate test cases are selected from the ~~already~~ existing test suits which covers all the modification and affected parts of the source code. we can add new test cases if required.

Tools for regression testing →

→ most commonly used tools for regression testing

are:

→ Selenium

→ QTP (Quick Test Professional)

→ It ensures that no new bugs have been introduced after adding new functionalities to the system.

Q. (2) Explain OO system testing in details.

Ans: → Whenever large scale systems are designed, object oriented testing is done rather than the conventional testing strategies as the concepts of object-oriented system testing is way different from that of conventional ones.

→ This whole concept revolves around "class".

→ In object-oriented system, testing encompasses three levels, namely, unit testing, subsystem testing and system testing.

• Unit testing → In unit testing, the individual classes are tested. Unit testing is the responsibility of the application engineer who implements the structure.

- Subsystem testing → This involves testing a particular module or a subsystem and is the responsibilities of the subsystem team.

Subsystem tests can be used as regression tests for each newly released version of the system.

- System testing → System testing involves testing the system as a whole and is the responsibilities of the quality assurance team. The team often uses system test as regression test when assembling new release.

→ Object - oriented Testing Techniques →

- Grey-box Testing → The different types of test cases that can be designed for testing object-oriented programs are called ~~grey box~~ grey box test cases. Some important grey box testing are →

→ State model based testing → This encompasses a state coverage, state transition coverage and state transition path coverage.

→ Use case based testing → Each scenario in each use case is tested.

→ Class diagram based testing → Each class, derived class, associations and aggregations are tested.

→ Sequence diagram based testing → The methods in the message in the sequence diagrams are tested.

• Categories of System testing →

→ Alpha testing:- This is carried out by the testing team within the organization that develops software.

→ Beta testing → This is carried out by select group of co-operating customers.

→ Acceptance testing → This is carried out by the customers before accepting the deliverables.