**TESTING**

**MANUAL TESTING:** **Manual testing** is the process of manually [testing software](https://en.wikipedia.org/wiki/Software_testing) for defects. It requires a tester to play the role of an end user whereby they use most of the application's features to ensure correct behaviour. To guarantee completeness of testing, the tester often follows a written [test plan](https://en.wikipedia.org/wiki/Test_plan) that leads them through a set of important [test cases](https://en.wikipedia.org/wiki/Test_case).

**AUTOMATIC TESTING**

Automation testing helps to relieve the bulk of tedious and repetitive human tasks. These days the majority of the software made available on the internet is introduced in the form of web-apps. Users use browsers like Chrome, Firefox, etc. to use these web-apps. May be able to reduce or eliminate the cost of actual testing. A computer can follow a rote sequence of steps more quickly than a person, and it can run the tests overnight to present the results in the morning. However, the labor that is saved in actual testing must be spent instead authoring the test program. Depending on the type of application to be tested, and the automation tools that are chosen, this may require more labor than a manual approach. In addition, some testing tools present a very large amount of data, potentially creating a time consuming task of interpreting the results

**WHITE , BLACK AND GREY TESTING**: In white-box testing the tester is concerned with the execution of the statements through the source code. In black-box testing the software is run to check for the defects and is less concerned with how the processing of the input is done. Black-box testers do not have access to the source code. Grey-box testing is concerned with running the software while having an understanding of the source code and algorithms

**NEED FOR TESTING**

Testing is necessary in order to provide the facilities to the customers like the delivery of high quality product or software application which requires lower maintenance cost and hence results into more accurate, consistent and reliable results. High quality product typically has fewer defects.

1. Software testing is really required to point out the [**defects**](http://tryqa.com/what-is-defect-or-bugs-or-faults-in-software-testing/)and errors that were made during the [**development phases**](http://tryqa.com/what-are-the-software-development-life-cycle-sdlc-phases/).
2. It’s essential since it makes sure that the customer finds the organization reliable and their satisfaction in the application is maintained.
3. It is very important to ensure the Quality of the product. Quality product delivered to the customers helps in gaining their confidence.
4. Testing is necessary in order to provide the facilities to the customers like the delivery of high quality product or software application which requires lower maintenance cost and hence results into more accurate, consistent and reliable results.
5. Testing is required for an effective performance of software application or product.
6. It’s important to ensure that the application should not result into any [**failures**](http://tryqa.com/what-is-a-failure-in-software-testing/)because it can be very expensive in the future or in the later stages of the development.

**PROJECT BASE DEVELOPMENT**

**V-MODEL WRITING:** It is also known as Verification and Validation model. The V-Model is an extension of the waterfall model and is based on the association of a testing phase for each corresponding development stage. This means that for every single phase in the development cycle, there is a directly associated testing phase.

Under the V-Model, the corresponding testing phase of the development phase is planned in parallel**.** So, there are Verification phases on one side of the ‘V’ and Validation phases on the other side. The Coding Phase joins the two sides of the V-Model.

**TESTING APPLICATION**

**Application Testing** is a part of the Software**Application** Development process that is carried out for verifying the correctness and validating the functional features of the**application** being developed. Application Testing is defined as a software testing type, conducted through scripts with the motive of finding errors in software. It deals with tests for the entire application.It helps to enhance the quality of your applications while reducing costs, maximizing ROI, and saving development time. In Software Engineering, Application testing can be done in various categories like GUI, functionality, database (backend), load test, etc.For Application Testing, the testing lifecycles involve various phases which include requirement analysis, test planning, test analysis, test design, test execution & bug reporting, etc.