How to Improve a Software Quality Assurance in Software Development-A Survey (Paper-1)

Big Data Validation and Quality Assurance – Issuses, Challenges, and Needs (Paper-2)

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Paper-1

To make a good reputation in software Industry, quality is an essential thing in any organization. It totally depends on that how much the customers are satisfied with the product. The target can be achieved only through proper standards and procedures. The big and renowned countries are making progress in this field day by day. The different organization is trying their best to develop quality software. For this purpose, they made standards but still there can be different issues, there are multiple reasons for less quality of software.

In this paper, different problems were addressed, corresponding to these issues; different techniques were elaborated and corresponding solutions are also defined which leads towards the quality of software. In the development of any kind of project, quality plays the most important role in the development. To achieve some good position and reputation in the IT, so organization really needs to give products that retain quality. A product quality can be corrected before the shipment of a product. Once the product has given in the hands of clients, then its correction takes a lot of money and time. Moreover, they need to give extra packages like warranty, replacement of products etc. Errors can be avoided if the proper quality plan which is made before practical is completely and properly followed all steps. If a business moves towards the launching of automated product then product quality must maintain for a business organization. The working on small projects then CMMI and ISO Models can be used for large projects but not for small ones because it takes the high cost for them. The quality problems are growing in different countries. They show a correlation between team and corporation among them [1].

If any error is pointed out then it is very difficult to find defects in design because all digital systems that are used, not continuous, variables are not enough to test those errors. Testing is the basic method to detect errors in the software, once the error is found then it is now possible to remove to maintain the quality. If error or issue is found, then it will tell how much budget they will require maintaining the quality. As early as the error is found, the budget will not touch the sky. If effective and carefully testing is done then errors can minimize and quality of software is increased [2]. The different types of testing techniques and methods are done, along with different models are associated which

guides what type of model can be used for what kind of product. These models also have few advantages and disadvantages. Whatever kind of testing is used, but it's really need it every phase of implementation of the quality plan. The errors could be of any type. The errors could be present in the documentation, code, design, even that in the plan. One testing technique might not be suitable for different techniques. It means different projects require different types of testing.

Figure 1 explains the total techniques which are used for QA.

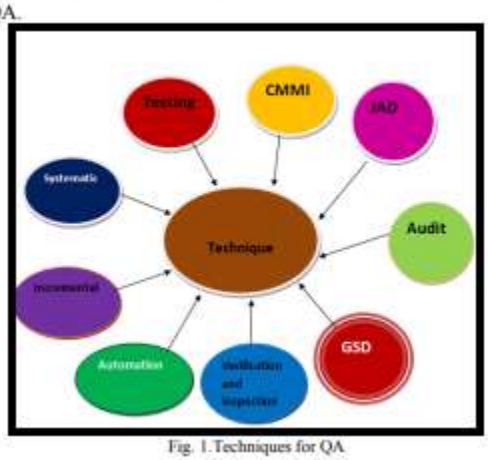

Fig. 1.Techniques for QA

Above figure explains the total techniques which are used for this paper. Following this technique, the developer should develop any software system to improve software quality.

Paper-2

With the fast advance of big data technology and analytics solutions, big data computing and service is becoming a very hot research and application subject in academic research, industry community, and government services. Nevertheless, there are increasing data quality problems resulting in erroneous data costs in enterprises and businesses. Current research seldom discusses how to effectively validate big data to ensure data quality. This paper provides informative discussions for big data validation and quality assurance, including the essential concepts, focuses, and validation process. Moreover, the paper presents a comparison among big data validation tools and several major players in industry are discussed. Furthermore, the primary issues, challenges, and needs are discussed.

With the increase of big data applications in diverse domain, Big Data computing and service is becoming a very hot research and application subject in academic research, industry community, and government services. According to IDC forecasting1 that the Big Data technology market will "grow at a 27% compound annual growth rate (CAGR) to $32.4 billion through "2017". Today, with the fast advance of big data science, analytics and technology, more and more researchers, businesses, and application professionals are able to use diverse data mining and machine learning algorithms, open-source platforms & tools, as well as cloud database technologies. This suggests that big data computing and application services bring new business opportunities and demands in people's daily life. Quality big data and service applications can help enterprises in problem identification, process improvement, productivity increase, efficient customization support, intelligent decisions, and optimized solutions.

Quality problems such as disorganized data management, poor quality sensors, un-reliable data collection systems, low-quality data collection and transform lead to business failures and economic losses. It has been estimated that erroneous data costs US businesses 600 billion dollars annually [3]. Therefore, big data quality validation and quality assurance becomes an important and critical issue in academic research topics and challenges for big data service applications and vendors. big data quality assurance refers to the study and application of various assurance processes, methods, standards, criteria, and systems to ensure the

quality of big data in terms of a set of quality parameters.

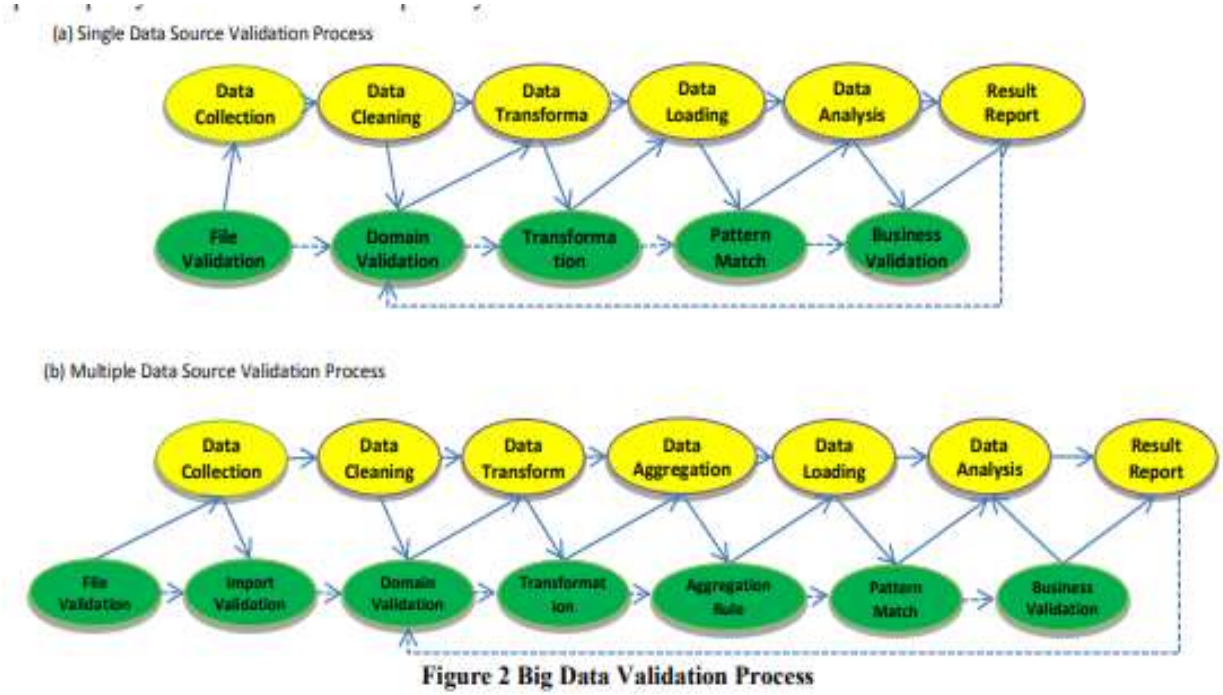

Figure 2 Big Data Validation Process

Above figure describes how to process dig data validation and control to quality of a software. For develop a big data analysis to create a software, a developer should follow that process.

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