

# A STATISTICAL VIEW OF CORRECTNESS AT REQUIREMENT STAGE

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**Abstract:** Software quality shows crucial role in software development life cycle. Here we will be advocated that correctness have created positive impact on software process. In requirement stage, the correctness was accessing from the architecture issue, for example method correctness and attributes correctness. So correctness, experts are access the complete information from the software. This paper highlighted that detail parameters observation of SRS document at requirement stage. Detection of correctness issues provides to initialize software quality enhancement.

**Keywords:** Software quality, Correctness, Ambiguity, Completeness

## I. INTRODUCTION

Software analysis and design is reasonably new, and various affiliations are as of now attempting to introduce this style of progression [3]. Showing another headway approach is loaded down with correctness, especially if the affiliation or the solitary architects have little association with the new methodology [4]. One method for diminishing this correctness to use plan guidelines and measurements to study the as of late made frameworks. This paper considers the usage of interface many-sided quality issues for the examination of the idea of object-oriented layouts. Software multifaceted nature is one of the imperative factors that must be dictated by clear strategies or techniques that can be utilized in software generation, strength there are immense measures of software frameworks have been created in the course of the most recent three decades. Software intricacy must be assessed to ensure the Quality Assurance (QA) of software [5, 7]. The quality assurance process is fundamentally stressed over describing or picking standards that should be associated with the software development process or software thing [2].

## II. SRS PARAMETERS

A SRS limits the time and exertion required by designers to accomplish wanted objectives and furthermore limits the development cost [1]. A decent SRS characterizes how an application will connect with framework equipment, different projects and human clients in a wide assortment of true circumstances. Parameters, for example, modifiable, testability, completeness traceable, ambiguity, correctness, security and speed of recuperation from unfavorable occasions are assessed [9].



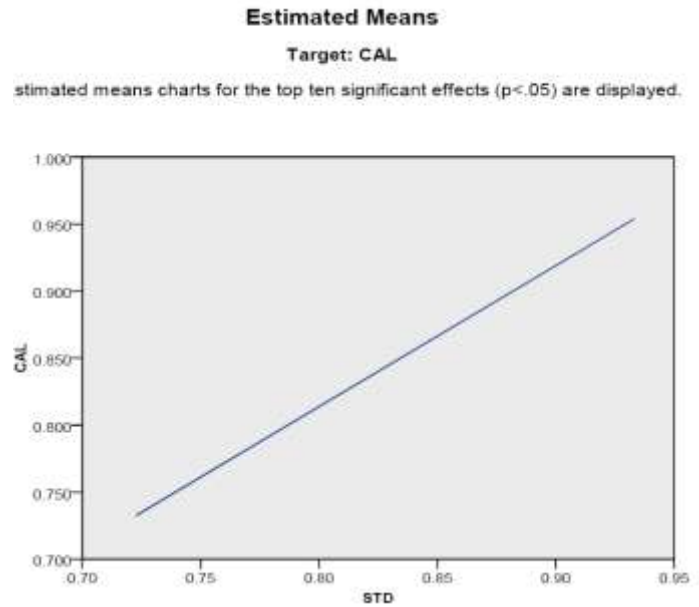
**Figure 1 SRS Quality Parameters**

## III. STATISTICAL IMPACTS

To develop an association between two objects in various perspectives, the specific effect of connection between outline measurements and SRS quality factor are being investigated on the commence of pertinent composition survey [6, 10]. It was watched from composing diagram that requirement stage and SRS quality factor (correctness) almost identified with one another. Studies use the correctness of system configuration to measure steadfastness of software. Software correctness dependably lessens the limit of object oriented plan. The made model 1 is being associated for evaluating correctness of SRS plan. Using Statistical contraptions the model's coefficients are figured. Subsequently, the numerous relapse conditions takes the going with structure: The Factors value have taken from [Fault Criteria At Design Stage With Cohesion Metrics] for model development. Table 1 demonstrates [Fault Criteria At Design Stage With Cohesion Metrics] the information processed for correctness display [8].

**Table 1 Table 2 Data Computation Table [Article 8]**

Project	Correctness	STD Correctness
P <sub>1</sub>	0.856	0.852
P <sub>2</sub>	0.763	0.723
P <sub>3</sub>	0.720	0.724
P <sub>4</sub>	0.867	0.861
P <sub>4</sub>	0.933	0.923
P <sub>5</sub>	0.729	0.727
P <sub>6</sub>	0.978	0.933



Model Term	Coefficient	Sig.	Importance
Intercept	-0.028	.722	
std_transformed	1.052	.000	1.000

#### IV. CONCLUSION

This statistical study implements the crucial factors of SRS at requirement stage and as a key issue to software system for producing high class reliable software. Correctness is clearly highly appropriate and important in the perspective of SRS. The graph presented the significance level is very high and grow the similar way. Statistical study illustrate that correctness value or index is very significance and acceptable. The graphical validation on the correctness concludes that proposed index is highly acceptable for SRS.

#### REFERENCES

1. Nugroho, M. R. V. Chaudron, E. Arisholm, Assessing UML design metrics for predicting fault-prone classes in a Java system, IEEE Working Conference on Mining Software Repositories, 2010.
2. Natasha Sharygina, James C. Browne, and Robert P. Kurshan, "A Formal Object-Oriented Analysis for Software Reliability: Design for Verification", 2011.
3. P. Jalote, An Integrated Approach to Software Engineering, 3rd Edition. Narosa Publishing House, India, 2005.

4. D. Pandey, U. Suman, and A. K. Ramani, “An Effective Requirement Engineering Process Model for Software Development and Requirements Management,” in Proceedings of the International Conference on Advances in Recent Technologies in Communication and Computing, 2010, pp. 287–291.
5. J. Siddiqi, “Requirement engineering: The emerging wisdom,” *IEEE Softw.*, vol. 13, no. 2, pp. 15-19, Mar. 1996.
6. D. Rubinstein, “Standish group report: There’s less development chaos today,” *Software Development Times*, vol. 1, 2007.
7. D. Mougouei & M. Almasi, “A Goal based Modeling Approach to Develop Quality Requirements of Fault Tolerant Quality Critical Systems”, *IEEE*, 2012.
8. Dr. Brijesh Kumar Bhardwaj, “Fault Criteria At Design Stage With Cohesion Metrics”, *International Journal of Innovative Knowledge Concepts*, Volume 7, Issue 2 February 2019.
9. Anshul Mishra, Devendra Agarwal and M. H. Khan, “Availability Estimation Model: Fault Perspective”, *International Journal of Innovative Research in Science, Engineering and Technology*, Vol. 6, Issue 6, June 2017.
10. Z. N. Khan, —Scholastic achievement of higher secondary students in science streaml, *Journal of Social Sciences*, Vol. 1, No. 2, pp. 84-87, 2005.