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SRS Analysis

There is no fixed way to write a Software Requirement Specifications Document , as it's just the requirement analysis for the project or a task. So it can't be said a worthless as well as 100% perfect document considering the parameters of requirements.

The development of software starts with the requirements document, which is also used to determine eventually whether or not the delivered software system is acceptable. It is therefore important that the requirement specification contains no error and specifies the client's requirement correctly.

Further more, due to the nature of the requirement specification phase, there is a lot of room for misunderstanding and committing errors, and it is quite possible that the requirements specification does not accurately represents the client's needs. The basic objective of the requirement validation activity is to ensure that SRS reflects the actual requirements accurately and clearly. A related objective is to check that the SRS documents is itself of good quality.

Many different types of errors are possible , but the most common errors that occurs can be classified in four types : omission, inconsistency, incorrect fact, and ambiguity.

Omission: - is a common error in requirements. In this type of error, some user requirements are simply not included in the SRS The omitted requirement may be related to the behavior of the system, its performance, constraints or any other factor.

Inconsistency: - It can be due to contradictions within the requirements themselves or to incompatibility of the stated requirements with the actual requirements of the client or with the environment in which the system will operate.

Incorrect fact:- This error occurs when some fact recorded in the SRS is not correct.

Ambiguity: - This error occurs when there are some requirements that have multiple meanings, that is, their interpretation is not unique.

The Software Requirements Specification (SRS) is a communication tool between stakeholders and software designers. The specific goals of the SRS are:

- Facilitating reviews
- Describing the scope of work
- Providing a reference to software designers (i.e. navigation aids, document structure)
- Providing a framework for testing primary and secondary use cases
- Including features to customer requirements
- Providing a platform for ongoing refinement (via incomplete specs or questions)

The IEEE SRS is a strict format to maintain the document for the software requirements as the template , modeling , report format , specifications , objectives and sub-requirements. IEEE format helps to understand the SRS documentation in a specific or fixed way all world the world.

Reasons for the creation of SRS (Software Requirement Specification)

- SRS serves as an input our other all documents created in later stages of software development life cycle.
- It is a feedback to the customer.
- It's modularized the problem statement.
- It the bases of system design.
- It defines product scope.

Advantages of SRS

- It provides client a satisfaction as this is the first response to the client.
- It defines functional and non-functional requirement.
- It eliminates any confusion or misunderstanding on initial stage.
- It reduces development effort.
- It reduces the chances of requirement creep.
- It makes testing easier.
- It defines project scope.
- It provides the basis for plan charter, work load, dependencies, etc.

IEEE format helps to understand the SRS documentation in a specific or fixed way all world the world.
But It has certain drawbacks if we compare with other companies SRS like IBM and TCS which are as follows-

- The IEEE SRS contains unnecessary details that may not be used by the development team at all. For example, things like intended audience, references and reading suggestions may seldom be used by the developers.
- The IEEE SRS contains a lot of specifications which are overlapping. For example, scope and purpose more or less talk about similar things.
- Specifications like intended audience can be covered in purpose itself.
- The IEEE SRS does not contain a database design which is major component in the SRS's prepared by TCS and IBM.