

SOFTWARE ENGINEERING

Requirement Analysis & Understanding the sys. from an Analyst.

The person who is responsible to listen to the clients and documenting the understanding so as the client & the development teams would be able to work further on that project. This person is known as Analyst or System Analyst.

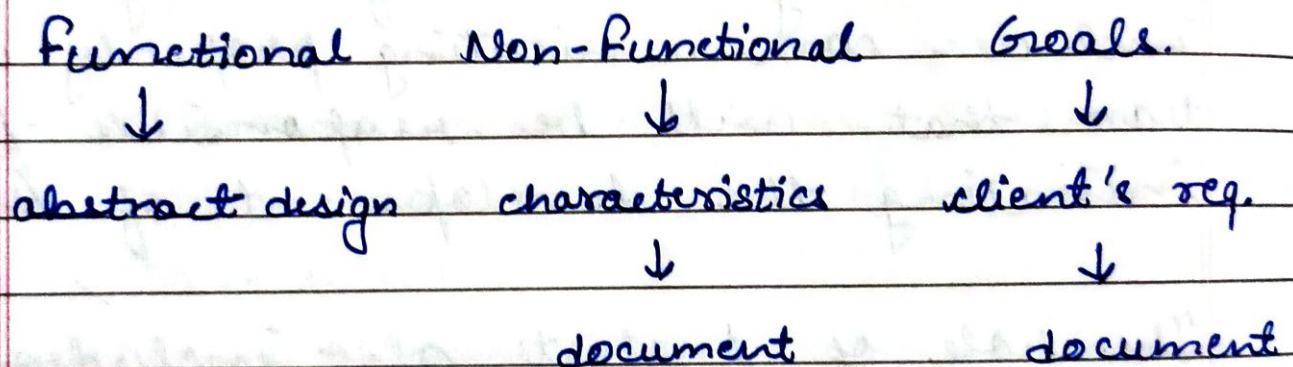
Other than collecting the requirements & documenting, the role of analyst also includes communicating properly with the team that will be responsible for initiating the development of the project.

The role of analyst also includes identifying & eliminating issues related to anomalies, inconsistency and incompleteness that may have arisen during the interaction with the client or the development team members.

SRS → by Analyst → Sys. Req. Specification

This document prepared by the system analyst is the initial part of SRS (Software Requirement Specification). The imp parts of SRS documents are:

- i) functional requirement of the system
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 coding part
- ii) Non-functional " " " "
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 ↳ compatibility / characteristics
- iii) Goals for implementation
 ↓
 ↳ client's requirement



Properties of SRS document

- i) Concise: The SRS must be consistent, complete and unambiguous. It shouldn't contain any irrelevant information that may lead to error.

- ii) Well-Structured: The doc. must be well-structured such ~~as~~ that it should be easy to understand & modify.
- iii) Black-Box View: The doc. is not supposed to contain any tech. details (including designing, coding, testing or deployment details). Under this property, the SRS will describe external visible behaviour of the system.
- iv) Conceptual integrity: The user can easily understand & implement the instructions written in SRS.
- v) Verifiable: The information present in SRS must be correct & accepted.
- vi) Response to undesired events: SRS must mention actions & response that need to be initiated when the sys. will face exceptional conditions.

Decision Tree

A decision tree gives a graphic view of the processing logic involved in decision making & the corresponding action taken. The edge of a decision tree represents condition & the leaf nodes represents the actions. The actions are performed depending on the outcome of the testing condⁿ. eg - you are supposed to develop a library automation system which should support the following:

- i) new-member, ii) renew, iii) cancellation

→ Options for new member

Decision

When the new-member option is selected, the software asks the details about the member (name, add, contact no. etc).

Action

If proper information is entered, the membership record is created & the payment details (membership charge &

security deposit) are printed.

→ Renew membership

Decision

If the renew option is chosen then the software asks for member's name & membership no. to check the validity of the member.

Action

If the membership is valid then the expiry date is updated & annual membership charge is printed. Otherwise, an error message is displayed.

→ Cancel membership

Decision

If the cancel membership option is selected then the software ask for member's name & membership no. for processing.

Action

The membership is cancelled, membership record is deleted & membership fee is returned.