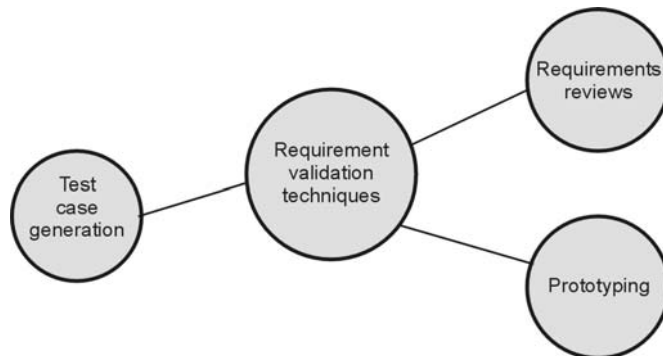**Requirement Validation**

Requirement validation is a process in which it is checked that whether the gathered requirements represent the same system that customer really wants.

- In requirement validation the requirement errors are fixed. Requirements error costs are high so validation is very important. Fixing a requirements error after delivery may cost up to 100 times the cost of fixing an implementation error.

- Requirement checking can be done in following manner

  1. **Validity :** Does the system provide the functions which best support the customer's needs?

  2. **Consistency :** Are there any requirements conflicts ?

  3. **Completeness :** Are all functions required by the customer included ?

  4. **Realism :** Can the requirements be implemented according to budget and technology ?

  5. **Verifiability :** Can the requirements be checked ?

Requirements validation techniques

1. Requirements reviews : Requirement review is a systematic manual analysis of the requirements.

- The requirement review should be taken only after formulation of requirement definition. And both the customer and contractor staff should be involved in reviews.

- Reviews may be formal (with completed documents) or informal.

- Good communications should take place between developers, customers and users. Such

a healthy communication helps to resolve problems at an early stage.

2. Prototyping : The requirements can be checked using executable model of system.

3. Test-case generation : In this technique, the various tests are developed for requirements. The requirement check can be carried out with -

- **Verifiability** : Is the requirement realistically testable ?

- **Comprehensibility :** Is the requirement properly understood ?

- **Traceability :** Is the origin of the requirement clearly stated ?

- **Adaptability :** Can the requirement be changed without a large impact on other requirements ?