

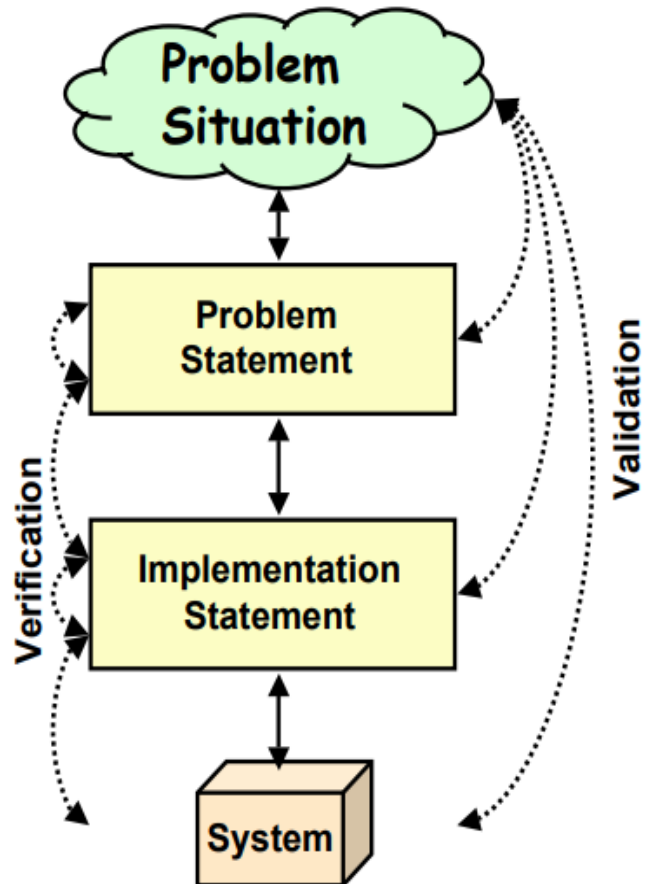
Verification and Validation

Validation:

- ↻ "Are we building the right system?"
- ↻ Does our problem statement accurately capture the real problem?
- ↻ Did we account for the needs of all the stakeholders?

Verification:

- ↻ "Are we building the system right?"
- ↻ Does our design meet the spec?
- ↻ Does our implementation meet the spec?
- ↻ Does the delivered system do what we said it would do?
- ↻ Are our requirements models consistent with one another?



Difference between software **Verification** and **Validation**:

Verification	Validation
Are we building the system right?	Are we building the right system?
Verification is the process of evaluating products of a development phase to find out whether they meet the specified requirements.	Validation is the process of evaluating software at the end of the development process to determine whether software meets the customer expectations and requirements.
The objective of Verification is to make sure that the product being develop is as per the requirements and design specifications.	The objective of Validation is to make sure that the product actually meet up the user's requirements, and check whether the specifications were correct in the first place.
Following activities are involved in Verification : Reviews, Meetings and Inspections.	Following activities are involved in Validation : Testing like black box testing, white box testing, gray box testing etc.
Verification is carried out by QA team to check whether implementation	Validation is carried out by testing
software is as per specification document or not.	team.
Execution of code is not comes under Verification .	Execution of code is not comes under Validation .
Verification process explains whether the outputs are according to inputs or not.	Validation process describes whether the software is accepted by the user or not.
Verification is carried out before the Validation.	Validation activity is carried out just after the Verification.
Following items are evaluated during Verification : Plans, Requirement Specifications, Design Specifications, Code, Test Cases etc,	Following item is evaluated during Validation : Actual product or Software under test.
Cost of errors caught in Verification is less than errors found in Validation.	Cost of errors caught in Validation is more than errors found in Verification.
It is basically manually checking the of documents and files like requirement specifications etc.	It is basically checking of developed program based on the requirement specifications documents & files.