Requirement Engineering Ep techniques (Book).

→ Req. Analysic Ep Specification
Boiler Plates, Avoid.

• Req. Analysis Techniques • Req. Negotiation.

we want to analysis in context of duplication, overlaping with another Req.

↳ Req. Interaction s:-1

① Interaction b/w Req. ② to highlight Req. ③ conflicts ③ to highlight Req. overlap
④ ① Req. Interaction ⑤ matrix shows ① how Req. interact with eachother ⑥ which can be constructed using spreadsheet

| | $R_1$ | $R_2$ | $R_3$ | ---- | $R_N$ |
|---|---|---|---|---|---|
| $R_1$ | | 0 | | | |
| $R_2$ | | | | | |
| $R_3$ | | | | | |
| : | | | | | |
| $R_n$ | | | | | |

If Req. is unique / diff we represent as 0:.

in book
0 = unique • overlap = 1000
• ~~capacity~~ conflicting:
= 1

Total 6 Req.

Comments on Interaction Matrix:- ∵ overlap: common thing b/w Req.

∵ Conflict: ↓ (finalize from stakeholders)

| | | n-1 R1 | n-2 R2 | n-3 R3 | R4 | R5 |
|---|---|---|---|---|---|---|
| n-1 | R1 | | 0 | 0 | 1 | 1000 |
| n-2 | R2 | 0 | | 0 | 1 | [illegible] → no. of days |
| n-3 | R3 | | | | | |
| n-4 | R4 | | | | | |
| n-5 | R5 | | | | | |

upper limit of interaction Matrix is 200 Req.

★ How to discuss & resolve conflicting & overlapping Req.?

If can be resolved using

**Requirement Negotiation:-**

Req. discussion

Req. Prioritization

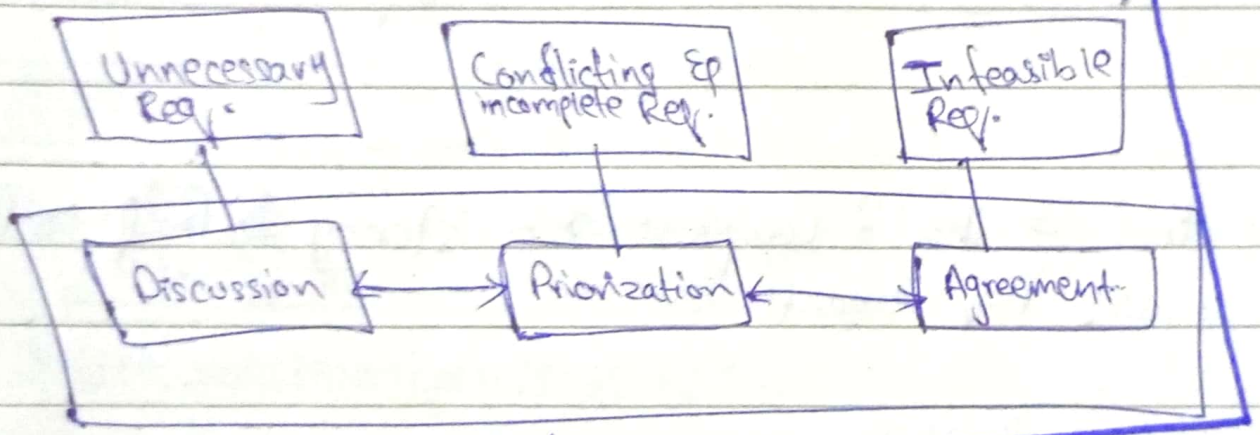
Req. Agreement

Discussion: Stakeholdess & Discuss your conflicting & overlapping Req.

Prioritization: Disputed Req. prioritize.

Aggreements.

Req. Negotiation Process.



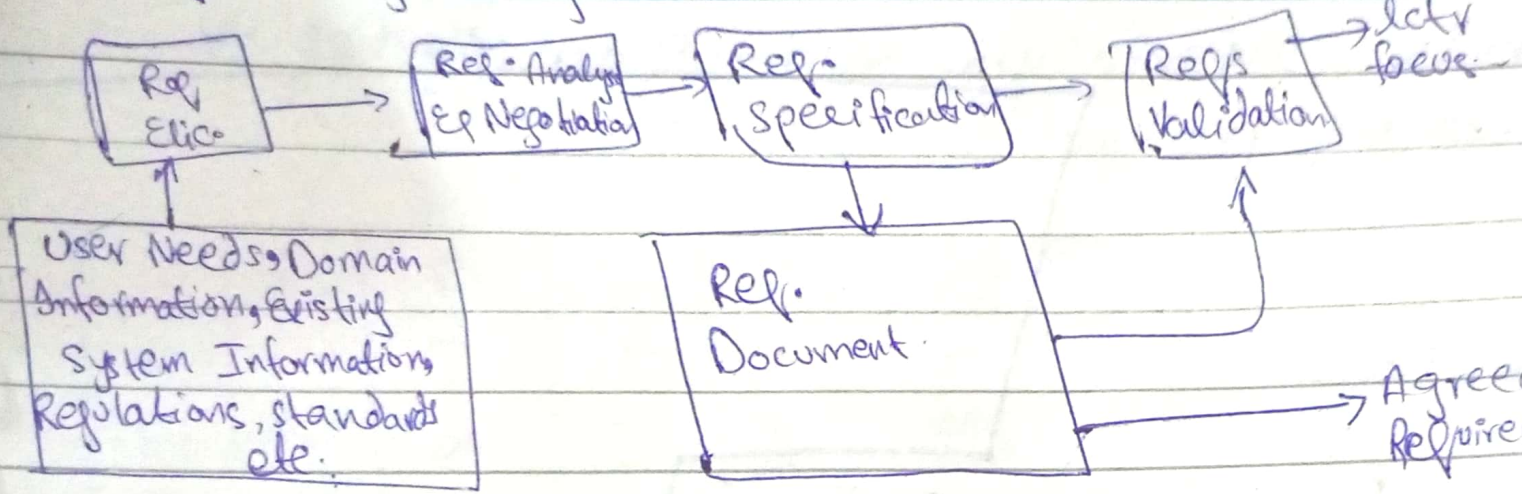

Requirement Negotiation

- face to face:-
- Add your stakeholders:-

Negotiation Meeting.

- Information stage
- Discussion stage
- Resolution stage = finalize Req.

# Reqs Engineering Process:-




* Validation Objectives

① Doc. should be acceptable ② Should Complete ③ Consistency ④ Req. conflicts

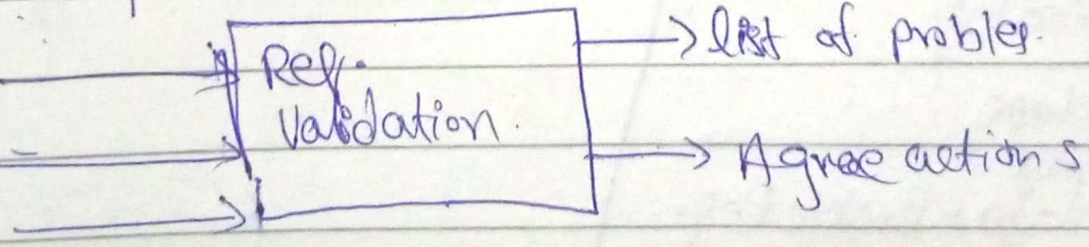
⑤ Technical errors ⑥ Ambiguous requirements:-

Analysis & Validation:-

↓ raw req. elicited from stakeholders

→ work on final draft of Req.

* Validation Inputs & Outputs:-

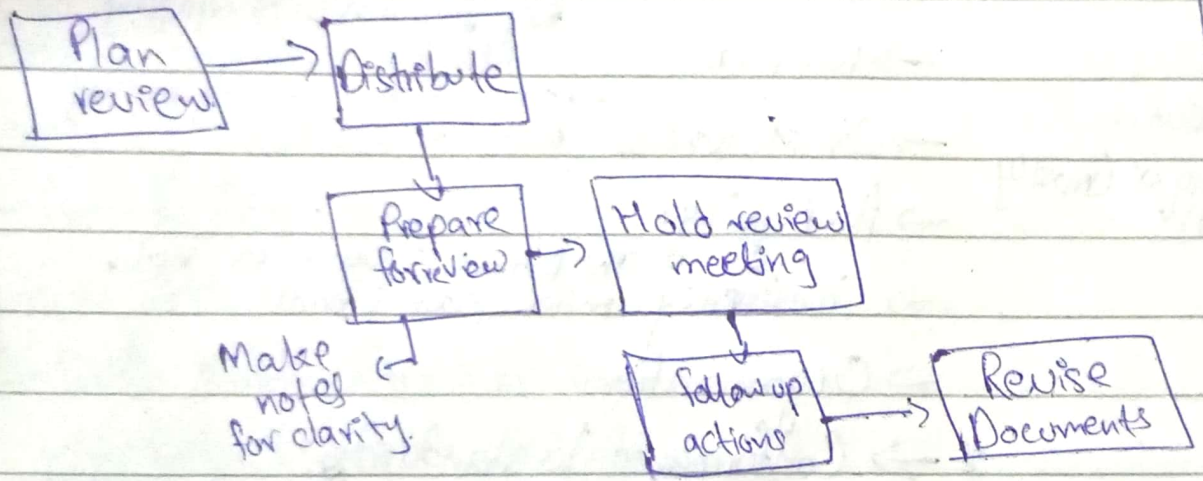


# Software Engineering | A good practice Guide (Book).

## Req. Reviews:-

A group of people read & analyze the Req.

Process:-




Pageno- line no- Req no- feedback:-

↳ Involve number of people

Receive document → checks structure (on standard or not) → document Completeness → check document against standards → Run auto matic checkers.

→ Report Problem

## Review Activities:-

→ Problem Actions:-

1- Req. clarification
2- Missing Information
3- Req. da conflict
4- Unrealistic Req (not feasible)

Source of that Req.

Negotiation (meeting) (stakeholders source)

Not be the part of document. Delete from document & inform the stakeholder.

Pre-review checking:-

→ find time slot on which all members visible (30 - 45 meeting time if greater than this than it is workshop):-

Vet (value edit text)

Req. validation → final draft → Req. document → conflicts → omissions → deviation from standards

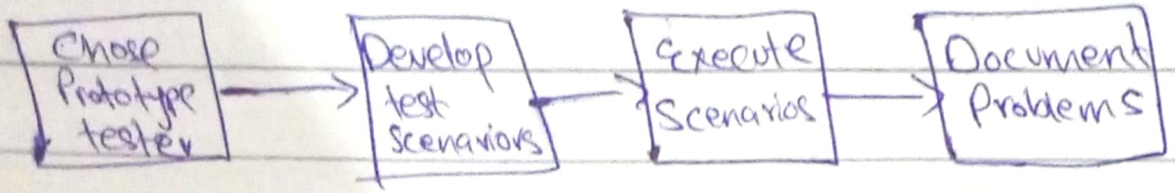
Validation Techniques:-
1- Review checklist.
2- Prototyping
3- Brain storming } for validation Technique (mostly used)
4- Storyboarding }
5- Expert reviews
6- Model validation
7- Requirement testing.

1- Review Checklists:- 1
→ Understandability:- read Req. check whether understandable or not.
→ Redundancy:- Req. duplication / overlapping check.
• check if there is any missing Req. or not
→ Completeness
→ Ambiguity:-
→ Consistency:- The format is same or not. boiler plate format
→ Organization:-
→ Conformance to standards:-
→ Traceability:- Backward → Req. Source stakeholder
Forward → Design inflection

★ Checklist Questions & Quality Attributes.
→ Req. is specified by a unique number & identify its stakeholder by that id.

Scanned with CamScanner

## Prototype for validation:-




Demographics: Region of users, educational background :-

Document Eg extend Prototype system.

Brain storming :-
→ having Experts:-
→ Group Activity:-
Story boarding :-
→ Stick small actions on Board:-
→ In Reqs (step by step actions performed by user stick to the board) (PPT, Eg different Apps used for storyboarding) for Req. Elicitation Eg Validation: