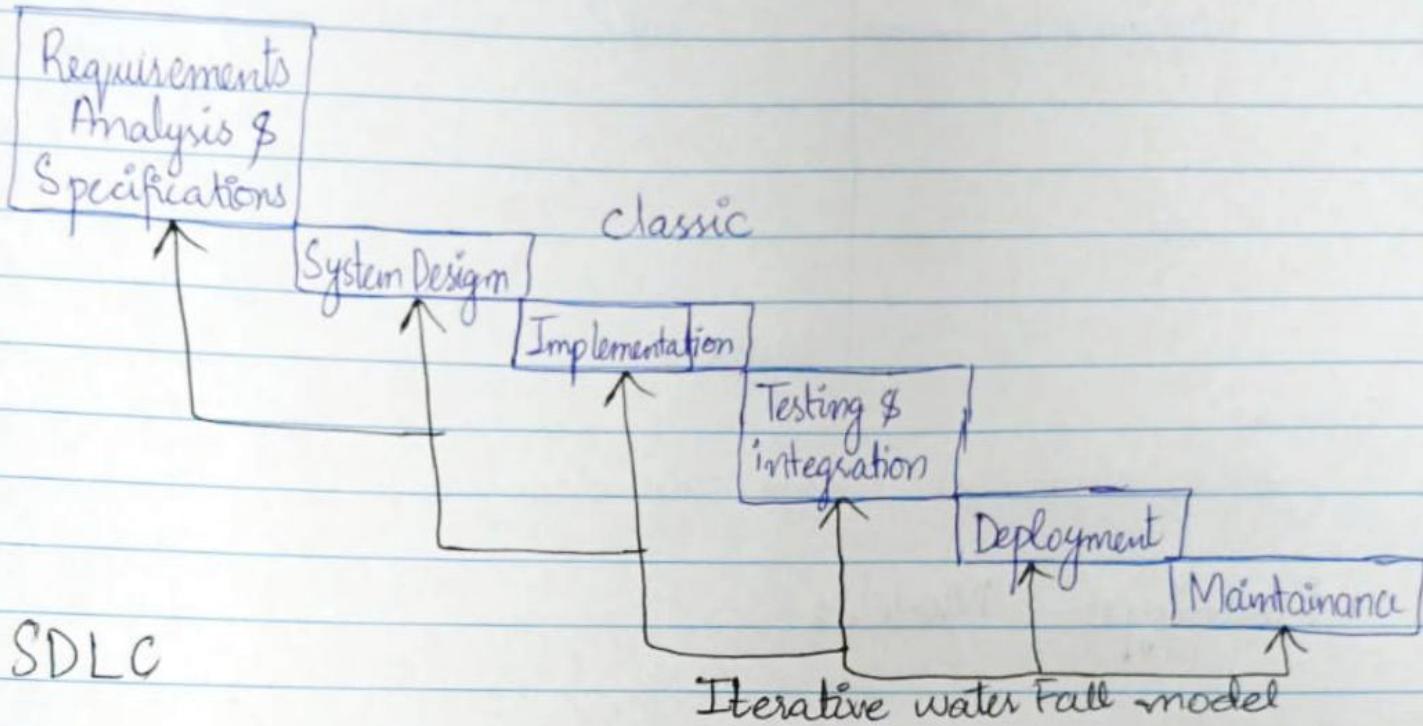




Feb 03, 2026

Process Models

WaterFall model:



V-Model:

Requirement Analysis

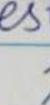
System Design

Program Design

Coding /
Implementation

Deployment / Maintenance

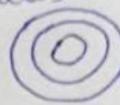
Customer's Feedback



Testing

Testing (unit Testing /
Integration testing)

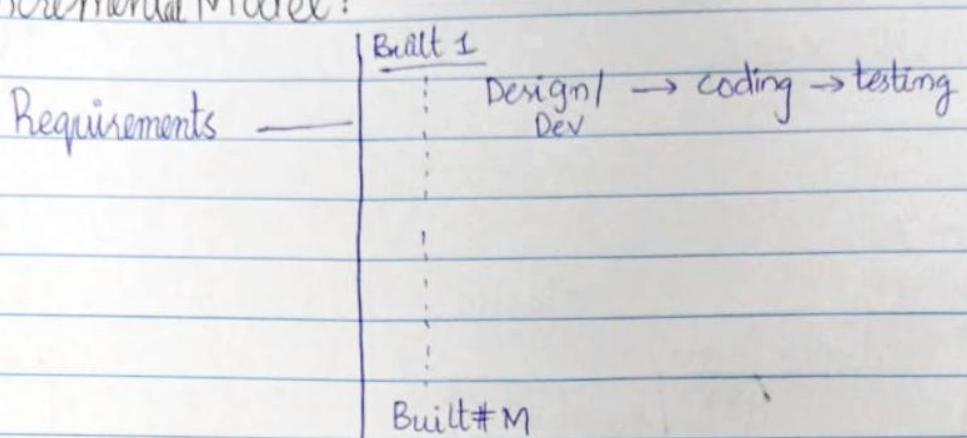
Builts → modules



wrapping on the
same model.



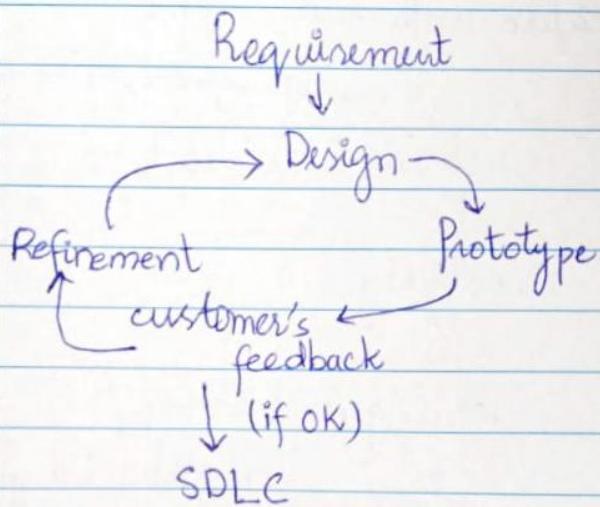
Incremental Model:



System

can be expanded, can have changes...

Prototype Model:



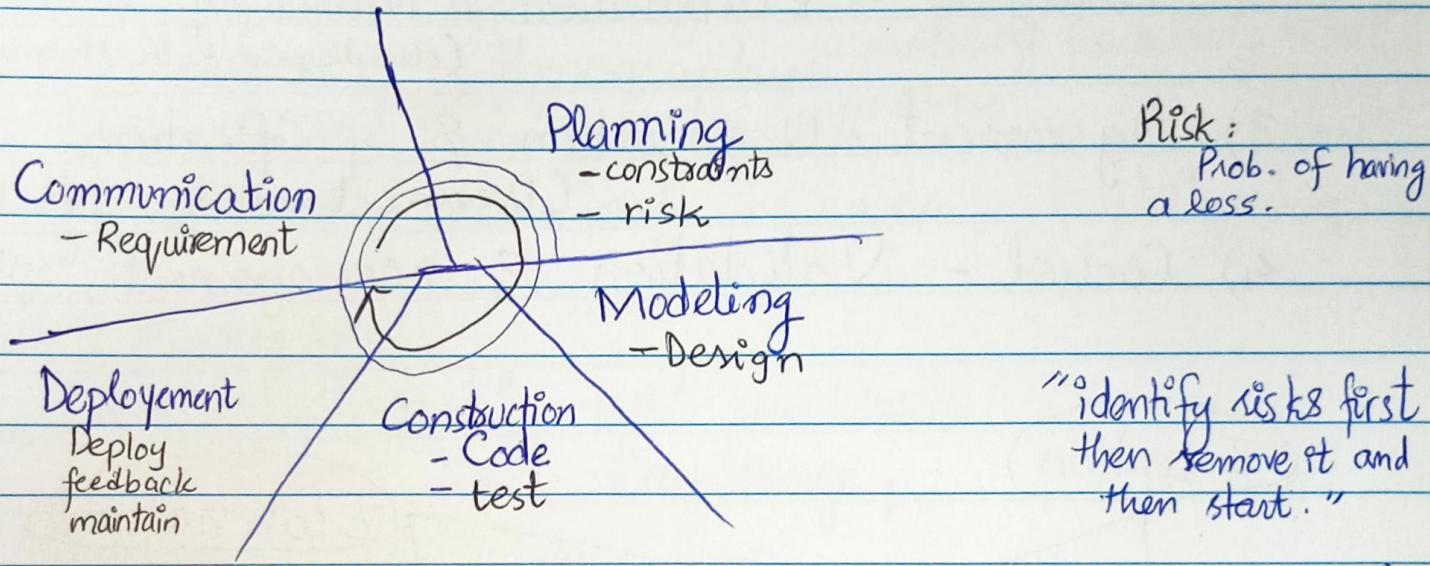
Feb 10, 2026

Spiral model (To eliminate risk)

mix of iterative, prototyping, waterfall.

ideal:

(3 - 4 spirals)



when to use: we don't want to task risk (larger projects)

constraints : time and resources.

Justify the use of spiral model

Prob. statements:

risks involved :

focused on architecture!
Lecture # 07 costly (resources used)

Unified Process Model

Feb 12, 2025

Phase: → is it can be done?

1) Discovery - Inception & Elicitation

2) Analysis - Elaboration & Modeling

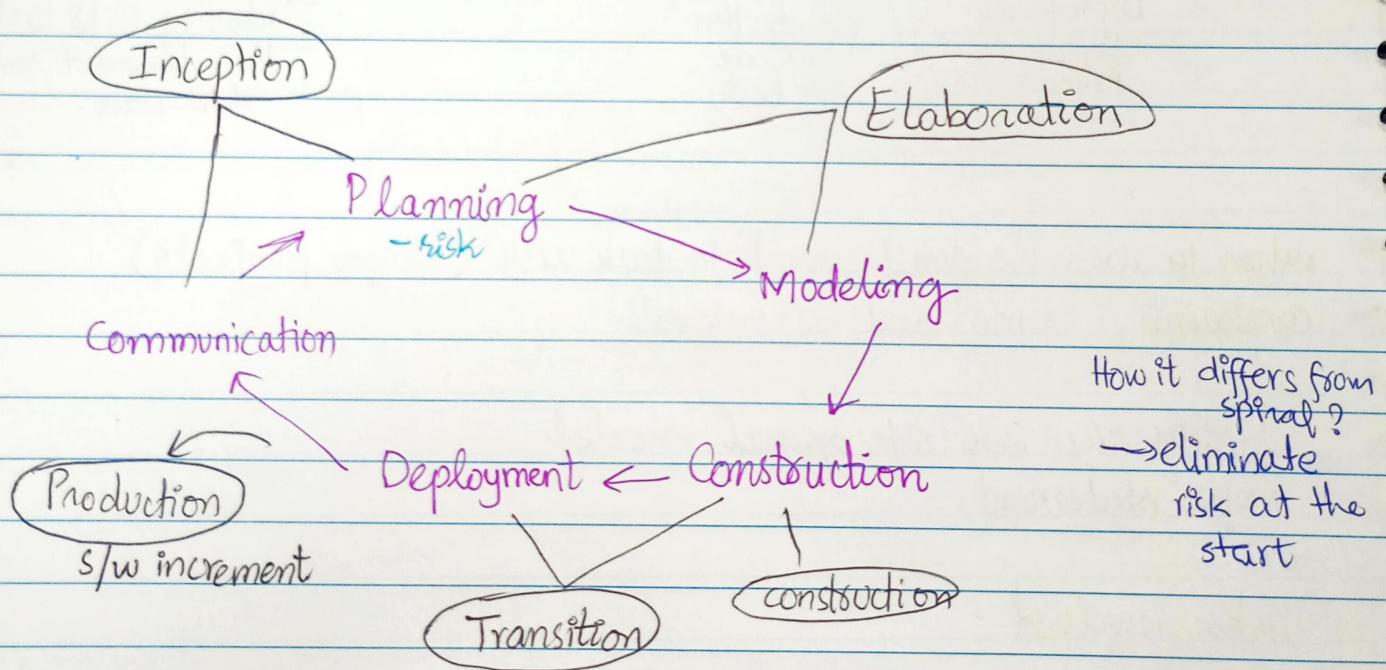
(class diagram, E/R diagram, DFDs etc.)

3) Agreement - Negotiation & Specification

(Document outline / SRS template)

4) Control - Validation & Management

↳ software requirement specification



(high risk + budget constraints)

when uncertain

→ Experimental & research based: Spiral.



* Elicitation techniques:

- 1) Direct: interviews, focus groups, requirement workshops, brainstorming.
- 2) Observation: Ethnography → monitoring for a long time?
- 3) Indirect: Surveys / Questionnaire, Document ^{Qualitative} ^{quantitative} Analysis
- 4) Iterative: Scenarios / use cases, Prototyping

Modeling Principles:

- Focus on 'what' not on 'how';
- Abstraction and layering;
- Minimize Coupling;
- Traceability;
- Maintain consistency.

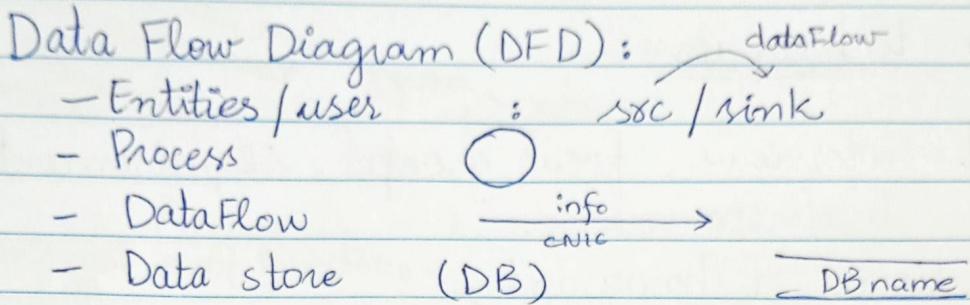
Scope creep

↳ Gold plating

(doing work more than required)

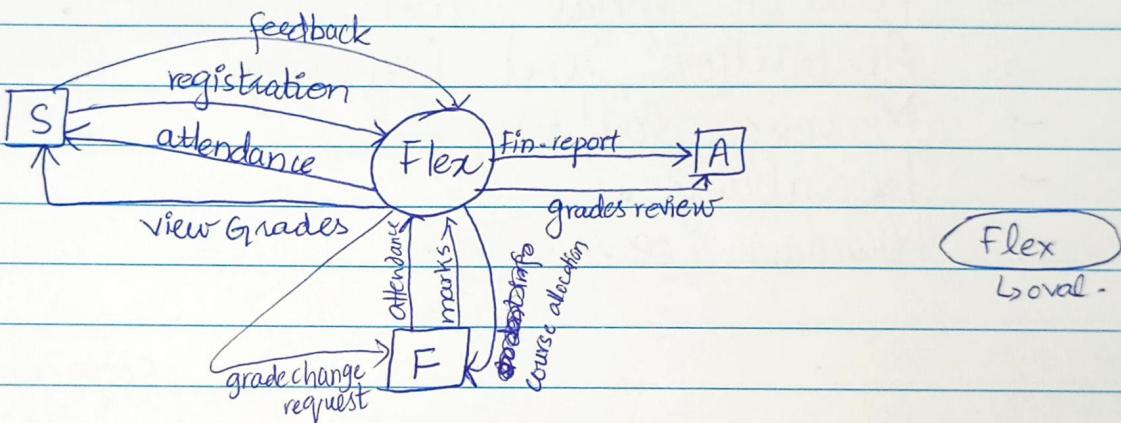


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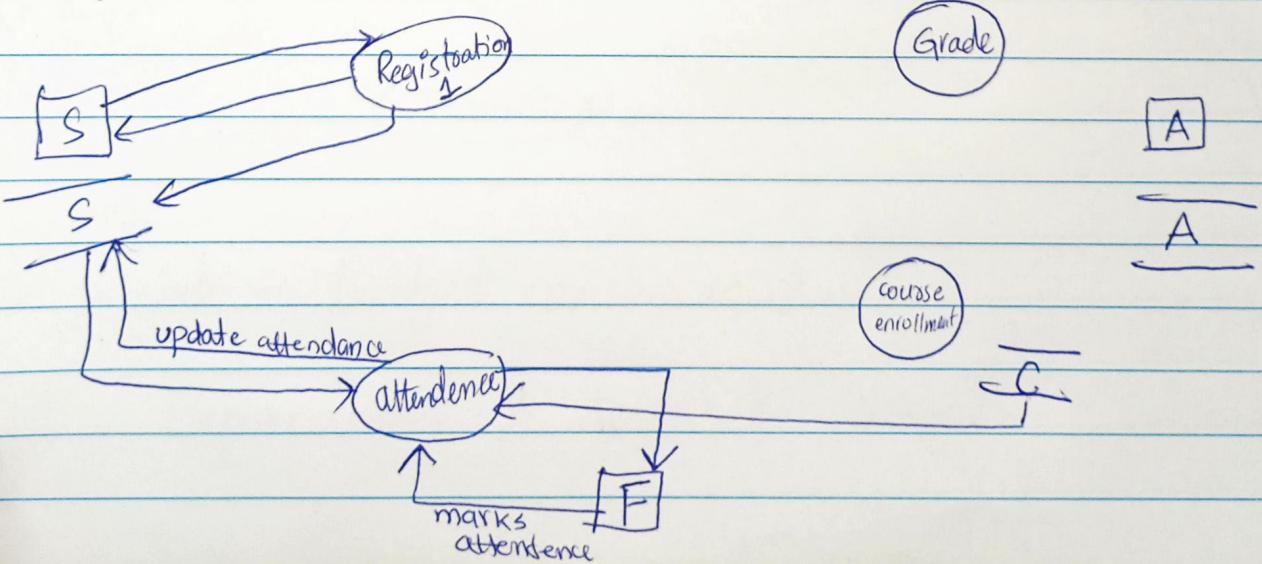


Entity can't direct access the DB or any other entity.

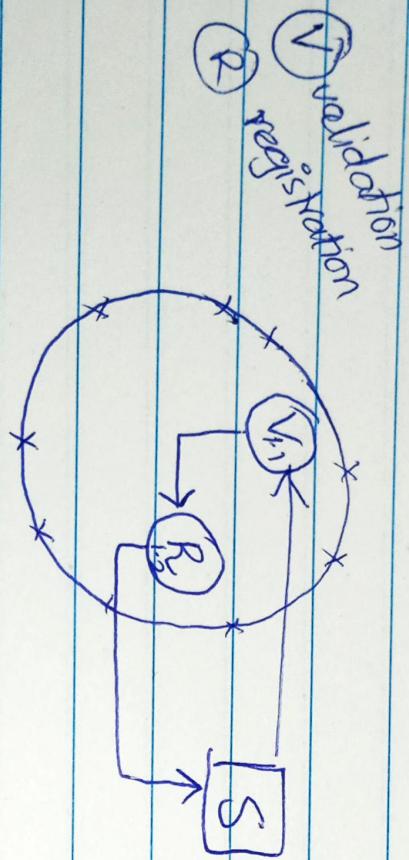
Level 0 : (system, entities & broad overview)



Level 1: Processes:



level 2 : Process is divided into subprocesses.



H.W: 1 Example

Submit in next
class.