CSE 317
Class - 03 | 12-01-2025

Integration
↳ Testing individual modules
↳ Then integrate all modules and perform a system testing

Development — 100$
New System — 40$ ← cost effective হবে
Existing System — 60$
with updates

Q When an existing system is deprecated and a new system is developed? and why?

↳ This is migration

#CASE TOOLS

<from PDF>

Computer Aided Software Engineering

CASE Tools

Types of CASE Tools
↳ Upper CASE → 1st 3 STEPS of SDLC
↳ Lower CASE → last 4 STEPS
↳ Integrated CASE
↳ সবের ভিতর সব

SDLC → full software delivery দেওয়া হয়

→ heavy documentation
→ budget fix, time: usually long

#The Agile Approach

Max industry level Software Development → Agile

Team Members 5–8 avg. 7

* incremental delivery → called "sprint"
* collaboration
* continual learning

↓

learning the users need as ~~we~~ we go

↓

implement new technologies on the fly

↓

Easy to Understand

HARD to Master"

flexible application and fast delivery

↓

Proper transparent communication

↓

no unnecessary documents

↓

users are directly involved (user-centric feedback in every step/phase of development

low budget

↓

short time/ flexible timing

↓

always delivers the best quality software

Based on:

- Values (believes)
- Principles (how they act and think)
- Core practices (what they do daily)

Values of Agile

1. Communication
2. Simplicity
3. Riskier features are implemented later (Courage)
4. Feedback

Max sprint duration
↳ 1/2 weeks (max 4 weeks)

Principles of Agile

1. Deliver software frequently
2. Embrace change
3. Work with customers regularly
4. Keep a ~~stu~~ sustainable pace
5. Improve continuously

Core Practices

1. Work in short cycles
2. Daily meetings
3. Tests frequently
4. Collaborate as a team

Agile Team

"The show must go on"

Every developer can do multifunctions

Team Transparency meets collaboration

Adjustable Resources

1. Time
2. Cost
3. Quality (ensuring best quality)
4. Scope

5 Stages of Agile Development

1. Exploration
2. Planning
3. Iterations of first release
4. Productionizing
5. Maintenance

"agile development demands skillful developers"

"agile development is user-centric"

"SCRUM" — has official guide; easy to understand; will be elaborated in next class

When to use SDLC, Agile, UML?

from PDF

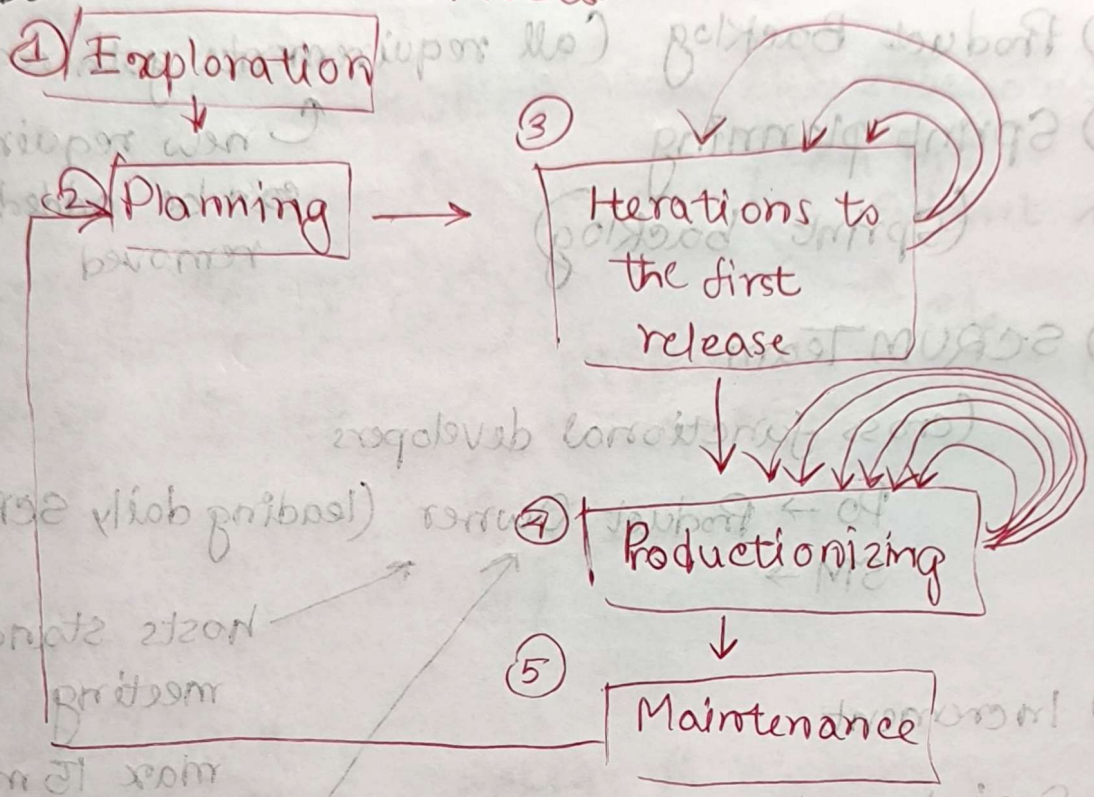
90% Agile Development follows SCRUM

Where to use agile?

- user-centric development (E-commerce)
  - time and budget is flexible
  - fast software delivery.

Planning of SDLC ↓

Agile Project Development Process



Phases elaboration

↳ from PDF

Planning

↳ Customer decides what the development should tackle first.

Iterations

↳ continuous feedback from the customer and → daily meetings

Maintenance

↳ riskier customer suggestions may be considered

↳ team members may be rotated on or off the team

SCRUM

① Product Backlog (all requirements gathered)

② Sprint planning
(Sprint backlog)

↳ new requirements can be added or removed

③ SCRUM Team
(cross functional developers
PO → Product Owner (leading daily SCRUM)
SM →

hosts stand-up meeting
max 15 minutes

④ Increment

⑤ Sprint review

⑥ Sprint retrospective

↓
reviewing the previous sprint

Team leader of projects
↓
Management
Communication
Daily Meeting