

# AGILE SOFTWARE DEVELOPMENT

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## What Is Agile

Agile development is a phrase used in software development to describe methodologies for incremental software development.

# Agile Software Development

Agile software development is a conceptual framework for software engineering that promotes development iterations throughout the life-cycle of the project.

- Software developed during one unit of time is referred to as an iteration, which may last from one to four weeks.
- Agile methods also emphasize working software as the primary measure of progress

# Agile Manifesto



**Individuals and interactions** over  
processes and tools

**Working software** over  
comprehensive documentation



**Customer collaboration** over  
contract negotiation



**Responding to change** over  
following a plan

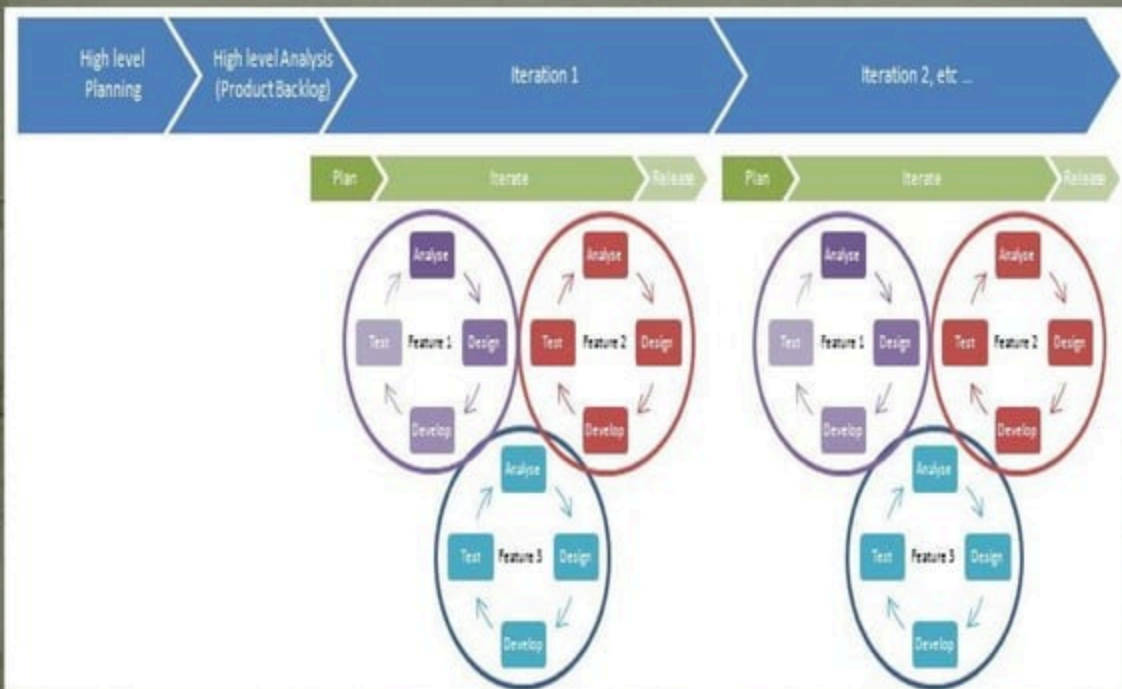
## Principles Of Agile

- Customer Satisfaction
- Working Software
- Measure Of Progress
- Late Changes Are Welcome
- Face\_To\_Face Communication
- Motivated Individuals
- Technical Excellence
- Simplicity
- Self\_organizing
- Regular Adoption

# Characteristics

- Modularity
- Iterative
- Time-bound
- Incremental
- People oriented
- Less defect
- Collaborative
- Motivating the team

# Agile Development



# Existing Agile Methods

- Extreme Programming (“XP”)
- Agile Unified Process
- Scrum

# Extreme Programming

- Most prominent Agile Software development method
- Prescribes a set of daily stakeholder practices
- “Extreme” levels of practicing leads to more responsive software.
- Changes are more realistic, natural, inescapable.

# Scrum

- Scrum is an Agile framework for completing complex projects. Scrum originally was formalized for software development projects, but it works well for any complex, innovative scope of work. The possibilities are endless. The Scrum framework is deceptively simple.

# Principles Of Scrum

- Welcome changing requirements, even late in development.
- Deliver Valuable Working Software frequently.
- Early visibility Self Organizing teams to Business.
- Product owners (Business) and developers must work together daily throughout the project, at a sustainable pace.
- Inspect and adapt.

# Agile Unified Process

- AUP is a simplified version of RUP

## Phases of AUP

- Inception
- Elaboration
- Construction
- Transition

# Disciplines of AUP

- Model
- Implementation
- Test
- Deployment
- Project Management
- Environment

# Advantages Of Agile Model

- Customer Satisfaction.
- People and interactions.
- Customers, developers and testers constantly interact with each other.
- Working software is delivered frequently.
- Face-to-face conversation.
- Close, daily cooperation between business people and developers.
- Continuous attention to technical good design.
- Regular adaptation to changing circumstances.
- Even late changes in requirements are welcomed

# Disadvantages Of Agile Model

- In case of some software deliverables, especially the large ones, it is difficult to assess the effort required at the beginning of the software development life cycle.
- There is lack of emphasis on necessary designing and documentation.
- The project can easily get taken off track if customer representative is not clear what outcome that they want.
- Only senior programmers are capable of taking the kind of decisions required during the development process. Hence it has no place for newbie programmers, unless combined with experienced resources.

# References

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