Introduction to Agile Software Development

de **mathématique** et d'**informatique**

UFR

Université de Strasbourg

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What is Agile methodology?

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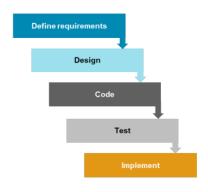- emphasizes continuous collaboration and improvement

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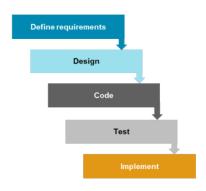- emphasizes continuous collaboration and improvement
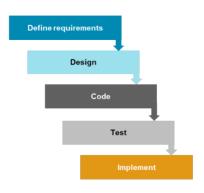
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- planning
- executing
- evaluating
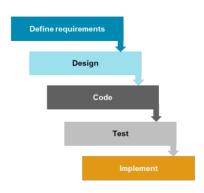
Agile vs Waterfall

Agile

6 — Track and Monitor
1 — Requirements
2 — Plan
3 — Design
4 — Develop
5 — Release

Agile development

Waterfall

Define requirements
Design
Code
Test
Implement

Agile vs Waterfall

Waterfall

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Design

Code

Test

Implement

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Agile vs Waterfall

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- Progress is measured by meeting project **milestones**
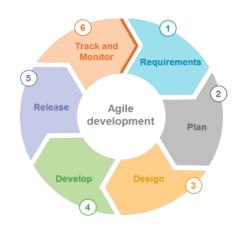
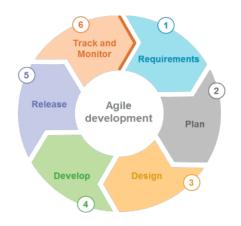**Waterfall**

Agile vs Waterfall

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- Rigidity can lead to **difficulties in responding to changes**

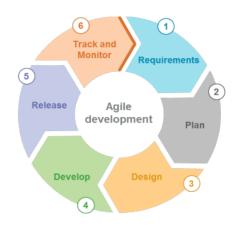Waterfall

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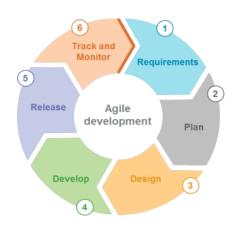- Suitable for projects with **well-defined requirements**
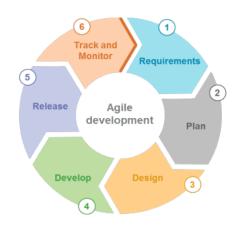
Waterfall

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- **Iterative** and incremental development

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- Embraces **flexibility** and customer collaboration
- **Adaptive approach** to changing requirements

General Agile guideline

https://agilemanifesto.org/iso/en/manifesto.html
the Agile Manifesto :

1. 4 values
   - Individuals and interactions over processes and tools
   - Working software over comprehensive documentation
   - Customer collaboration over contract negotiation
   - Responding to change over following a plan
2. 12 commandments of Agile development
3. Agile mindset:
   - Teamwork
   - Continuous Improvement
   - Collaboration
   - Adaptability
   - Frequent Delivery

The Agile Timeline

Antoine

Pros and Cons of the Agile Method

Antoine

Conclusion

Remain flexible, stay agile !

References

- https://www.youtube.com/watch?v=goJu-DFGJ0o
- https://www.youtube.com/watch?v=1evfn3qTYGM
- https://project-management.com/agile-project-management/