EXTREME PROGRAMMING (XP)

COURSE : SOFTWARE ENGINEERING

Submitted By
Name: Iffate Jahan Nilima
ID : IT-21063
3rd year 2nd semester

Submitted To
Mr. Ziaur Rahman
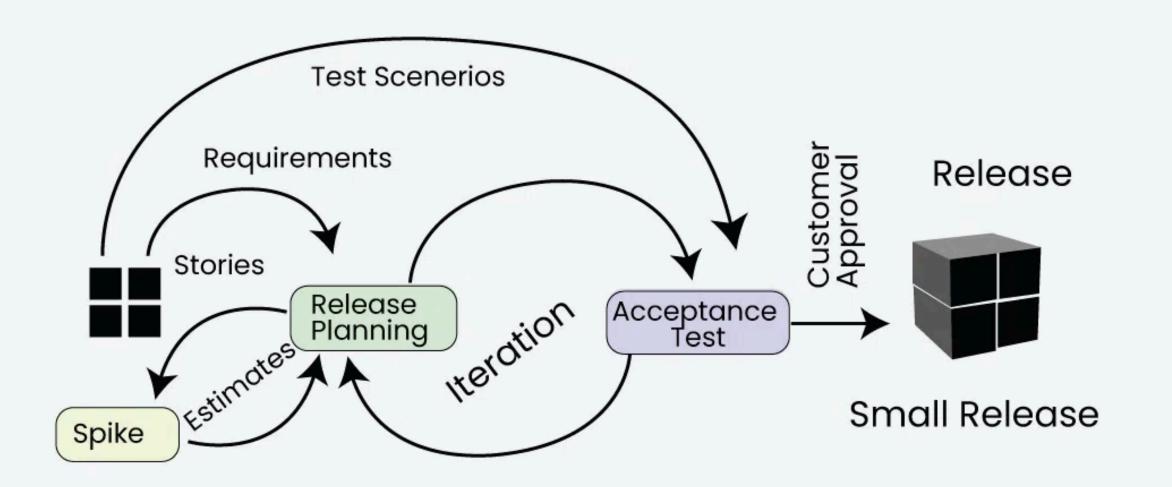Assistant Professor
Dept. Of ICT
Mawlana Bhashani Science and Technology Univeristy

INTRODUCTION

It is a software development methodology within Agile, focuses on improving quality and responsiveness to changing customer requirements.Introduced by Kent Beck in the late 1990s.

CORE VALUES OF XP

- **Communication**: Team members must communicate effectively.
- **Simplicity:** Build only what is necessary.
- **Feedback:** Get early and frequent feedback from stakeholders.
- **Courage:** Make tough decisions without fear.
- **Respect:** Foster mutual respect within the team.

PRINCIPLES OF XP

- Rapid and iterative development cycles.
- Frequent releases to gather user feedback.
- Embrace changing requirements even late in development.
- Test-driven development (TDD) ensures quality

Iterative Cycles

Frequent Releases

Embracing Change

Test-Driven Development

XP PRACTICES

- **Pair Programming**: Two developers work together on one task.
- **Continuous Integration**: Regularly merge code changes to avoid conflicts.
- **Test-Driven Development** : Write tests before coding.
- **Refactoring**: Continuously improve code structure without changing its functionality.
- **Small Releases**: Deliver software in small, frequent updates.

GOOD PRACTICES

XP WORKFLOW

- **Planning**: User stories and prioritization.
- **Design**: Keep it simple; often includes a metaphor for guidance.
- Coding: Pair programming, TDD, and adherence to coding standards.
- **Testing**: Continuous testing, both automated and manual.
- **Release**: Frequent, working software for feedback

ADVANTAGES AND CHALLENGES

Advantages

- High-quality code with minimal defects.
- Faster response to changes.
- Continuous customer involvement.
- Improved team collaboration.

Challenges

- Requires a highly disciplined team.
- May not suit large teams or projects with rigid requirements.
- Heavy reliance on customer feedback and availability.

CONCLUSION

XP focuses on adaptability, collaboration, and quality, making it ideal for dynamic projects that require continuous improvement and active stakeholder involvement.

THANK YOU