

Extreme Programming: Best Practices, Tradeoffs, and Variants

One or Two Day Seminar^{*}

Seminar Description

Are you considering trying an agile method such as Extreme Programming? Are you concerned with the criticisms that have been made of XP and agile methods in general? Do you wonder if XP really fits your needs? Would you like to know what makes XP “agile”... and how far you can modify it and remain agile?

Extreme Programming and similar agile methods are disciplined processes that incorporate good engineering and management practices, albeit with extreme implementations tailored to a specific kind of environment. Agile methods are targeted towards a small-project environment with high requirements volatility. Many of the challenges to agile methods arise from considering how they would fit in different environments; the degree to which agile methods can be adapted without losing their emergent properties is passionately debated.

Extreme Programming is the best known and most widely used of the agile methods. The practices that comprise XP have been clearly stated for some years, and a variety of case studies have been published discussing the implementation and tailoring of those practices. Although the core set of XP “practices” is well known, they have evolved over time, and many new practices have been suggested as additions.

The XP practices have been practiced in some form for decades – the “extreme” modifier is Beck’s indication that XP is a set of good practices carried to an extreme implementation. One objective of this seminar is to discuss the antecedents of the XP variants and the alternatives that have been developed in other contexts. Pair programming, for example, can be considered an extreme implementation of peer reviews. Walkthroughs and inspections are variant forms of peer review. When implementing XP, most organizations tailor the XP practices. In some cases, alternatives have been adopted; in some cases, an XP practice has been abandoned.

This seminar will discuss both possible tailorings and reasons an XP practice might be either poorly implemented or not implemented at all. The tradeoffs inherent in adopting or adapting a practice is a focus of the discussion.

^{*} This seminar can be delivered over either one or two days. Longer seminars involve more case studies, exercises, and role plays, as well as a more in-depth study of the material. Shorter forms of this material can be presented also.

Topics include:

- principles of the Agile Alliance
- an overview of Extreme Programming
- the core set of XP practices
- variant XP practices
- interdependencies and tradeoffs in XP
- the case against XP
- common tailorings of XP

Who Should Attend

- Project managers who will be piloting XP
- Process experts who are studying the contributions of the XP community
- Software professionals who desire to use the best software engineering practices available

Course Prerequisites

There are no pre-requisites for this workshop. Experience in using XP can add to the exercises and discussions.

Course Objectives

After completing this seminar, participants should be able to:

- Understand the basics of agile methods and where they are most appropriate
- Describe the core set of XP practices
- Discuss variant XP practices
- Discuss the genesis of various XP practices
- Evaluate the tradeoffs and relationships for XP practices
- Determine tailorings for XP in a business context
- Describe case studies of XP including C3 and Code Science

Module Description

Module 1 – The Agile Alliance

- The Agile Manifesto
- Principles of agile software development
- Success factors for agile projects

Module 2 – An Overview of Extreme Programming

- The core XP practices
- Variant XP practices
- XP practice relationships

Module 2 – Tradeoffs in Implementing the XP Practices

- XP management practices
- XP design practices
- XP code and test practices

Module 4 – Tailoring the XP Practices

- XP practices that are rarely implemented
- Common XP tailorings

Module 5 – XP and Process Discipline

- Using XP in a CMMI context
- Cultural misfits with agility

Activities and Exercises

Activities and exercises include case studies, situational analyses, role playing, and interactive lecturing.