



Planned-Agile Development with TDD and Peer Review

This seminar addresses the tension between planned estimates, project budgets and the reality of day-to-day software development by focussing on the core software developer tasks that revolve around:

- Test-Driven Development (TDD).
- Peer Review.

and includes discussion of applicable principles of object-oriented design (OOD), design and enterprise patterns, and programming idioms.

TDD implies writing the tests first then the code to satisfy each failing test. During initial coding and to rectify bugs found during integration and in-production, the developer must first write a failing test to replicate the error condition before fixing the code to remediate the fault.

The coded and derived deliverables are the input to and expected outcomes of the peer review process:

- Design Reviews are informal design sessions that allow others to suggest, comment on and review the detailed design of the unit or component with the focus on OOD and the interface contract in particular.
- Code inspections are formal code review sessions that allow other developers to read and comment on the coded implementation and corresponding unit tests.

The seminar includes a Case Study and Tutorial:

- Business case for the problem to be solved.
- User requirements to demonstrate elements of the requirements process.
- Estimation and planning techniques used to give confidence and improve predictability.
- Initial architecture, software analysis and use cases to involve participants in the software requirements process.
- TDD of one component to demonstrate and involve participants in the iterative approach taken by Agile software developers.

You may recognise some ideas from Karl Wiegers, *Software Requirements*, Martin Fowler and others, *Refactoring*, Robert Martin in OOD, Kent Beck and others in the XUnit, XP and Agile space, Boehm and Turner, *Balancing Agility and Discipline*.

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