Software Engineering Sam Robbins

Agile Model

1 Manifesto

We are uncovering better ways of developing software by doing it and helping others do it. Through this work we have come to value:

- 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 Principles

- 1. Our highest priority is to satisfy the customer through early and continuous delivery of valuable software
- 2. Welcome changing requirements, even late in development. Agile processes harness change for the customer's competitive advantage
- 3. Deliver working software frequently, from a couple of weeks to a couple of months, with a preference to the shorter timescale
- 4. Business people and developers must work together daily throughout the project
- 5. Build projects around motivates individuals. Give them the environment and support they need, and trust them to get the job done
- 6. The most efficient and effective way of conveying information to and within a development team is face-to-face conversation
- 7. Working software is the primary measure of progress
- 8. Agile processes promote sustainable development. The sponsors, developers, and users should be able to maintain a constant pace indefinitely
- 9. Continuous attention to technical excellence and good design enhances agility
- 10. Simplicity the art of maximising the work not done is essential
- 11. The best architectures, requirements and designs emerge from self-organising teams
- 12. At regular intervals, the team reflects on how to become more effective, then tunes and adjusts its behaviour accordingly

3 User stories

Definition: User stories

User stories are part of an agile approach that helps shift the focus from writing about requirements to talking about them. All agile user stories include a written sentence or two and, more importantly, a series of conversations about the desired functionality

- Captures the spirit
- Ignores details
- Make sense to customer
- Delivers value to customer

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- End to end (full stack)
- Independent
- Testable
- Small (1-5 days) so easy to estimate

3.1 Behaviour Driven Development

Definition: Behaviour Driven Development

An agile process what supports and encourages collaborative development

Built on TDD (Test Driven Development) and ATDD (Acceptance TDD), plus:

- Where to start in the process
- What to test and what not to test
- How much to test in one go
- What to call the tests
- How to understand why a test fails