



Module Four

Learning Objectives

By the end of this module, you will meet these learning objectives:

-  Create test cases based on user stories
-  Reflect on the importance of the tester on an agile development team

Module Overview

This module focuses on agile testing practices and not only the overall quality of final product deliverable, but maintaining high standards throughout the entire release cycle. From an agile perspective, the goal of a Scrum Sprint is for the team to produce a “done” Product Increment. The objective of the Sprint Review is to demonstrate a working increment for the purpose of getting feedback and updating the Product Backlog.

Module Four will show the difference between the waterfall model (in which testing is done in a sequential manner) and agile methodology (in which testing is done concurrently with development). This proactive approach requires a highly collaborative team because testing is involved from the very beginning, when working on understanding the requirements from the Product Owner. Quality Assurance (QA) then uses acceptance test-driven development, which helps the developers understand exactly what the work needs to provide to pass the test cases.

Continuous integration means there is constant testing going on throughout every sprint; it provides immediate feedback to developers on the quality of the code delivered. One major benefit of this is the ability to fail fast, which at first might not sound like a positive. However, it saves both time and money through the quick realization of what will not work. It also allows for more experimentation and can lead to more innovative deliverables. It might seem counterintuitive, but failing fast actually reduces the overall risk and leads to a better overall product. Scrum supports continuous integration through the three pillars: transparency, inspection, and adaptation. In addition, understanding Lean principles, such as the work from Takeuchi and Nonaka on Lean and the Toyota Production System (which helped define Scrum), will help us have a Lean mindset. A Lean mindset suggests that you address a defect immediately after it is identified, as opposed to storing defects to be fixed later.

In this module, you will investigate how Amazon implements agile principles in their work. You will also practice writing and revising test cases to be used for quality assurance. Finally, you will practice good team communication in the tester journal assignment.

Module at a Glance

This is the recommended plan for completing the reading assignments and activities within the module. Additional information can be found in the module Resources section and on the module table of contents page.

- 1** Review the Module Four resources.
- 2** Post your initial response to this week's discussion.
- 3** Complete the Module Four assignment.
- 4** Complete the Module Four journal.
- 5** Post peer responses to the discussion.