

The Software Development Lifecycle with Agile

Software Development Lifecycle (SDLC)

a well-defined sequence of steps or phases in software engineering
to develop the intended product

Agile development cycle:

Key Principles

Our highest priority is to satisfy the customer through early and continuous delivery of valuable software.

Welcome changing requirements, even late in development.
Agile processes harness change for the customer's competitive advantage.

Deliver working software frequently, from a couple of weeks to a couple of months, with a preference to the shorter timescale.

Business people and developers must work together daily throughout the project.

Source: <https://agilemanifesto.org/principles.html>

Key Agile SDLC Phases



Phase 1: Requirements



Phase 2: Design



Phase 3: Development and Coding



Phase 4: Integration and Testing



Phase 5: Deployment



Phase 6: Post Implementation Review

Phase 1: Requirements

Requirements gathering determines:

Who uses the software product?

How is it used?

Data input?

Data output?

Feasibility

Work product: the Requirements Specification

Phase 2: Design

Design the software product:

Required components or modules

Relationships and dependencies between them

Data and tracking requirements

Work product: architectural plans and system design

Phase 3: Development and Coding

Implementation begins, based on:

The project plan

Requirements Specification

Designs

Any additional information

Phase 4: Integration and Testing



The following testing occurs:

Functional testing

Unit testing

Integration testing

System testing (end-to-end)

Acceptance testing

Non-functional testing

Phase 5: Deployment



The software product is moved to a production environment
for customer use (actual or demo)

All requirements may not be completed, but should be a working version

Phase 6: Post Implementation Review



Stakeholders, product owner, and development team review to determine progress in completing requirements, present ideas toward resolving issues

If all requirements for the product are satisfied, the product is released

If there is still more work to do, a new iteration begins