

# A Case Study of Using SCRUM Framework to Teach OOP Concepts

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## Keywords

OOP Principles, SCRUM Principles, Software Development Process, Class Diagram, Activity Diagram.

## Abstract

Teaching OOP principles is considered challenging mostly because it requires new way of analyzing problem, designing the solution, and coding style which are all involved around classes, objects and the application of four pillar OOP concepts: encapsulation, abstract, inheritance and polymorphism. It can be easy for novice learners to learn theoretical object-oriented concepts but most of them find it difficult when it comes to model the real-world into objects and classes. Whereas, SCRUM is a popular AGILE framework used in industry to design and develop a complex and real-world software. This paper presents first the close connection between OOP principles and the SCRUM principles, then show a case study of using SCRUM framework to teach OOP concepts. Upon the completion of software implementation and by mixture of OOP & SCRUM principles, learners not only grasp the importance of all OOP principles but also the real-world software development process to meet the customer changing requirements.