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## Introduction :

*Developed in 2001, the agile software development methodologies were based on the most revered agile manifesto that laid down the principles and core practices. Before understanding the agile methodologies definition, it is pertinent to know what agile is.*

*Agile is a set of techniques followed by a team to administer a project or plan by dividing it into various stages with continuous collaboration with customers. There is constant monitoring at every phase of the software development of the project. The agile methodology advantages are that both the development plus testing actions are parallel and synchronized, unlike the conventional waterfall methodology.*

## The definition of AgileMethodology

*The agile methodology is one of the most straightforward ways to turn a concept and various requirements into workable software solutions. The Agile methodology is an iterative and incremental approach to software development that emphasizes continuous planning, understanding, updating, team collaboration, development, and delivery. The agile method is broken down into individual teams' models, allowing for more adaptability to changes.*

*The agile process begins with customers specifying the end uses of the final product and the types of problems the final product seeks to solve. It is guided by the ideals of giving value and engaging with stakeholders. This activity aids the project development team address and clarifying the customer's expectations and requirements.*

*The selected teams prepare and work on a comprehensive process that includes planning, implementation, and evaluation as soon as the project begins. Errors are resolved at the project's intermediate stage because the development process is iterative. This method allows the final supplied product to better match the customer's needs.*

*There are various types of agile methodology available in the market to suit every project's wants. Although there are different agile methodologies, everything is based on the main principles in the agile manifesto.*

*Therefore, every framework or behavior that adapts these principles is named Agile, and, notwithstanding the different types of agile methodologies a team implements, the agile methodology benefits can be copiously apprehended only with the collaboration of all the involved parties.*

*The below agile methodologies list comprises of famous types of agile methodology that one can opt from:*

*1) Kanban*

*Originating from the Japanese language, the translation of the word 'Kanban' is "visual board or signboard" and is connected to the concept of "just in time"! Initially, the Kanban concept was introduced as a lean manufacturing system and slowly drove its way to agile software development teams. This method uses visual methods for developing and managing projects.*

*Projects through Kanban are overseen with the help of the Kanban Board, which is divided into columns to depict the process flow of the software development. This helps in increasing visibility teams as the teams can see the progress through every stage of development and prepare for the upcoming tasks to deliver the product "just in time"!*

*This method requires thorough interaction and transparency to enable the team members to be equipped with the right stage of the development at any time and have a cohesive flow of work at all times.*

*2) Scrum*

*One of the most popular agile methodology examples is the agile scrum development methodology, which is depicted by various cycles of development. Similar to Kanban, Scrum breaks down the development phases into stages or cycles called 'sprints'. The development time for each sprint is maximized and dedicated, thereby managing only one sprint at a time.*

*Scrum and agile methodologies focus on continuous deliverables, and thus this method lets designers adjust priorities to ensure that any incomplete or overdue sprints get more attention.*

*Scrum Team has exclusive project roles such as a scrum master and a product owner with constant communications on the daily scrum where the activities are harmonized to devise the best way to implement the sprint.*

**3) Extreme Programming (XP)**

*Extreme Programming (XP) is a methodology that emphasizes teamwork, communication, and feedback. It focuses on constant development and customer satisfaction. Similar to scrum, this method also uses sprints or short development cycles. This is developed by a team to create a productive and highly efficient environment.*

*Extreme Programming technique is very supportive in a situation of constant and varying demands from the customers. It motivates the developers to accept changes in the customer's demands, even if they pop-up in an advanced phase of the development process.*

*In Extreme Programming, the project is tested from the initial stages by collecting feedback that progresses the output of the system. This also presents a spot check to implement easily any customer requirements.*

**4) Crystal**

*Introduced by Mr. Alistair Cockburn, one of the monumental persons in formulating the Agile manifesto for software development, Crystal is a group of smaller agile development methodologies comprising of Crystal Yellow, Crystal Clear, Crystal Red, Crystal Orange, and more. Each has its peculiar and exclusive framework that is characterized by factors such as system criticality, team size, and project priorities. Depending on the nature of the project or system criticality such as Comfort (C), Essential Money (E), Discretionary Money (D), and Life (L), the kind of crystal agile methodology is chosen.*

*Similar to other methodologies of Agile, Crystal also addresses prompt delivery of software, regularity, less administration with high involvement of users, and customer satisfaction. The Crystal family advocates that each system or project is inimitable and necessitates the solicitation of diverse practices, processes, and policies to achieve the best results, earning the name of the most lightweight methods of agile methodology*

**Feature Driven Development (FDD)**

*Feature Driven Development (FDD) was first introduced in 1997 by Jeff De Luca when he worked on an application development project for the largest Singapore bank. FDD is an incremental process for software development and is a method of agile development to develop software. FDD integrates a variety of widely-respected best practices into an integrated whole. These practices are guided by the client-valued functional (feature) standpoint. The primary purpose of FDD is to provide real-time, functional software quickly. The benefit of FDD is that it can scale for large teams thanks to the idea of 'just enough design initially' (JEDI). Thanks to its feature-centric design process, it's a fantastic method to control rapid, incremental, and complex projects. It is comprised of five fundamental tasks:*

*Development of an overall model*

*Building of a feature list*

*Planning by feature*

*Designing by feature*

*Building by feature.*

*6) Dynamic Systems Development Method (DSDM)*

*To address the need for a standard industry charter for the swift delivery of software, the Dynamic Systems Development Method (DSDM) was developed. DSDM gives a comprehensive structure that is defined and modified to create a plan, execute, manage, and scale the procedure of software development. Based on a business-driven approach and eight principles, the DSDM believes that modifications to the project are always expected, and quality with timely delivery must never be negotiated.*

*Conclusion*

*A dynamic approach is required in choosing the right agile methodology among the different types of agile methodology. The advantages and disadvantages of agile methodology must always be considered to choose the framework for one's business to entice talent and convey remarkable digital experiences in this aggressively competitive market.*