Agile development

**Agile software development** describes a set of principles for software development under which requirements and solutions evolve through the collaborative effort of self-organizing cross-functional teams.

The term agile was first coined for this in 2001, in the Manifesto for Agile Software Development (Agile Manifesto), and is usually written as Agile (with a capital A).

The Agile Manifesto introduces some common values and goals are as follow;

1. Individuals and interactions over process and tools.  
   (the interaction with peoples are much important instead, what’s the process and tools)
2. Working software over comprehensive documentation.  
   (they said we need working software instead of inclusive documentation )
3. Customer collaboration over contract negotiation.  
   (should cooperation with people instead of contract discussion)
4. Responding to change over following plan.  
   (we must respond to the change rather than we work on same as starting plan)

In last they said,. That is, while there is value in the items on the right, we value the items on the left more..  
( we can do better if we have right values, right items and better way of doing work )

The main concern is that our products are good and quickly served. So according to this purpose they introduce the agility. The main purpose of agile is they respond to change.

* Effective response to change
* Effective communication among all stakeholders  
  (it is necessary communication between all stakeholders (it include all developer that are work ,customers, and all those people that are involved ) )
* Drawing the customer onto the team.

(We must build a individual team of customers)

* Organizing a team so that it is in control of the work performed.

(We must develop a team in organize way so work perform in a controlled way )

* Rapid incremental delivery of software.

Some key assumptions of agile development are:

* Is derived by customer description of what is required.  
  (everything will be according to customer requirements instead of what we want)
* Recognizes that plan’s are short-lived
* Develops software iteratively with a heavy emphasis on construction activities
* Delivers multiple ‘software increments’
* Adapts changes occur

Principles of agile methodology

* Any agile software process in characterized in a manner that addresses a number of key assumptions about the majority of software project.
* Our highest priority is to satisfy the customer through early and continuous delivery of value software.
* Welcome changing requirements, even late is development agile processes harness change for the customer competitive advantage.
* Deliver working software frequently, from a couple of weeks to a couple of months, with a preference to the shorter time scale.
* Business people and developers must work together daily throughout the project.
* Build project around motivated individuals. Give them the environment and support they need, and trust them to get the job done.
* A most efficient and effective method of conveying information to and within a development team in face-to-face conversation.
* Working software is the primary measure of project.
* Agile processes promote sustainable development.
* Continuous attention to technical excellence and good design enhance agility.
* Simplicity- the art of maximizing the amount of work not done is essential.
* The best architecture, requirements and design emerge from self organizing teams.
* A regular interval, the team reflects on how to become more effective, then adjusts it behavior accordingly.

Key traits must exist among the people,

* Competence
* Common focus
* Collaboration
* Decision-making ability
* Mutual trust and respect
* Self- organization
* Problem-solving ability