## **Kanban:**

Kanban is a popular framework used to implement agile and DevOps software development. It requires real-time communication of capacity and full transparency of work. Work items are represented visually on a kanban board, allowing team members to see the state of every piece of work at any time.

Kanban is an inventory control system used in just-in-time (JIT) manufacturing. It was developed by Taiichi Ohno, an industrial engineer at Toyota, and takes its name from the colored cards that track production and order new shipments of parts or materials as they run out. Kanban is a Japanese word that directly translates to “visual card”, so the kanban system simply means to use visual cues to prompt the action needed to keep a process flowing.

## **The Four Principles of Kanban:**

Below are the main Four core principles of Kanban:

* Start with what you have now: Kanban system suggests working incrementally and start with what you have currently. Since one of its practice is to improve continuously, you must improve the system gradually.
* Agree to Pursue Incremental, Evolutionary Change: Kanban recommends an incremental change in the process, and you must not make a big change in the process in one go.
* Respect the Current Process, Roles & Responsibilities: Once again, start with what you have now and change the process, role, and responsibilities in an incremental manner.
* Encourage Acts of Leadership at All Levels: Every individual can act as a leader and provide ideas to improve the efficiency of the overall Kanban system. You should not think that this is a management level activity, and even the youngest member of the team can act as a leader.

**Kanban in Software Testing Work:**

So how does Kanban in software testing actually work to accomplish these goals:

Applying Kanban in software testing starts by defining the steps in your workflow. These steps might be more generic, such as “Upcoming,” “In Progress,” and “Complete,” or more function-specific, such as “Test Plan,” “Test Design,” “Test Execution,” and “Test Reporting.”

Once you’ve defined the steps in your workflow, you need to create columns for each step. You can create this visual using a whiteboard or Kanban software.

**Kanban Workflow:**

* Kanban Workflow is a set of steps that helps teams to define explicit policies and principles in Kanban. It represents the rules and procedures while the work is going on across various stages of development and delivery cycles. Kanban workflow consists of step-by-step processes between starting and the delivery of a particular task.

The basic principal Kanban follows Is, “stop starting, start finishing”. With the help of WIP limits, it gets more work done. There are customizable Kanban workflows and states available in any modern tool like JIRA.

**Advantages and Disadvantages of Kanban :**

Kanban is categorized as an easy to learn methodology that improves overall workflow and minimizes the time cycle.

* Some of the major advantages that are listed within Kanban include:
* It is an increase in process flexibility, focused on continuous delivery, reduces the
* Wastes from the process, improves delivery flow, and reduces the time cycle of the process.
* Can Work in Many Different Industries and Easy to Use.
* **Some of the disadvantages of Kanban** include an outdated Kanban board.
* That can lead to issues in the development, can make the board overcomplicated,
* And lack of timing is another disadvantage because there is no timeframes associated with eachawkward-Doesn’t Show the Timeframes .
* Can Be Less Useful in a Dynamic Setting-The use of a Kanban board is ideal in a relatively stable kind of work environment where few changes come along to make life awkward.