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## SE Assignment no 2

**Q.** Write detailed note on Kanban Process Model

**Ans:-** Kanban is a popular framework used to implement agile software development. It requires real time communication capacity.

• 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 enormously prominent among the agile software teams, but the kanban methadology of work dates back more than 50 years.

**Kanban for software teams**

• Agile software development teams today are able to leverage those JIT principle by matching the amount the work in progress to team's capacity.

• This gives teams more flexible planning options, faster output, clearer fous and transparancy throughout the development cyle.

• While the core principle of the framework are timeless and applicable to almost any industry software development items have particular sucess with agile practices.

## Kanban boards:

- The work of Kanban team revolves around a Kanban board, a tool used to visualize work and optimize the flow of work among the team.

- A basic Kanban board has a 3-step workflow - To Do, In Progress, & Done. However, depending on a team's size, structure & the objective the workflow can be mapped to meet the unique process of a particular team.

- The Kanban methodology relies upon full transparency of work and real-time communication of capacity, therefore the Kanban board should be seen as the single source of truth for the team's work.

## Kanban ~~boards~~ cards:

- In Japanese, Kanban literally means "visual signal" for Kanban's teams, every work item is represented a work as a Kanban separate card on board.

- The main purpose of representing work as a Kanban card on the board is to allow team members to track the progress of a work through its workflow in a highly visual manner.

- Kanban cards feature artificial information about particular work item giving the team full visibility into who is responsible for the item of work, a brief description of the jobs being done, how long that piece of work is estimated to take & so on

## Advantages Of Kanban :

1) **Planning flexibility** :- • A Kanban team is only focused on the work that's actively in progress. Once the team completes a work item, they pluck the next item off the top of the backlog. •

• The product owner is free to make any changes, to reprioritize work in the backlog without disrupting the team.

2) **Shortened time cycle** :-

• Cycle time is the amount of time it takes for a unit of work to travel through team's workflow.

• By optimizing cycle time, the team can confidently, forecast the delivery of future work.

• Overlapping skill sets leads to smaller cycle time.

• Shared skill means that team members can take on heterogenous work, which further optimizes time cycle.

3) **Fewer bottlenecks** :-

• Multitasking kills efficiency. The more work items in a flight at any given time, the more content switches, which hinders their path to completion.

• That's key tenant of Kanban is to limit the amount of work in progress (WIP)

4) • Visual metrics :- • Charts provide a visual mechanism for teams to ensure they're continuing to improve. When team can see data, its easier to spot bottlenecks in the process.

• Two common charts Kanban teams use are

a) Control chart shows the cycle for each issue as well as a rolling-average for team.

b) Cumulative chart. Shows no. of issues in each state.

5) Continuous Delivery :-

• Continuous delivery is the practice of releasing work to customers frequently, even daily or hourly.

• Kanban and is beautifully complement each other because both technique focus on the just-in-time (and one at-time) delivery of value.

• The faster a team can deliver innovation to market, the more competitive the product will be in the marketplace. And kanban focuses exactly on that, optimizing the flow of work out to customers.