LAB 5

Use of Kanban Board in Agile Project Management

Objective:

To understand the structure, purpose, and practical application of a Kanban board for visualizing work, improving workflow, and managing tasks within Agile project management.

Tools Used:

- **Trello / JIRA / Azure DevOps** (any Kanban-supporting tool)

- **Sticky notes** (for physical board setups)

- **Whiteboard or wall** (for physical Kanban boards)

- **Team collaboration tools** (e.g., Slack, MS Teams)

Theory:

A Kanban board is a visual management tool in Agile that helps track and optimize task workflows, promoting continuous delivery and process improvement.

Key Elements:

- **Columns:** Represent stages of the workflow (e.g., *Backlog*, *To Do*, *In Progress*, *Review*, *Done*)

- **Cards:** Represent individual tasks or user stories

- **WIP Limits (Work-in-Progress):** Restrict the number of tasks allowed in a column to prevent bottlenecks

Benefits:

- Visualizes workflow

- Improves efficiency and task prioritization

- Highlights delays and bottlenecks

- Enhances team collaboration and accountability

Procedure / Methodology:

1. **Create Board Columns:**
   Set up workflow stages — *Backlog*, *To Do*, *In Progress*, *Review*, *Done*

2. **Add User Stories/Tasks as Cards:**
   Each card contained a task title, description, assignee, and deadline.

3. **Set WIP Limits:**
   Restricted the *In Progress* column to a maximum of 4 tasks.

4. **Daily Updates:**
   During stand-ups, updated task statuses by moving cards across the board.

5. **Track Progress:**
   Monitored the movement of cards from *To Do* to *Done* while noting bottlenecks.

Observations / Results:

Column	# of Tasks	Status
Backlog	4	Planned for next sprint
To Do	3	Ready for development
In Progress	3	Actively being worked on
Review	2	Awaiting QA
Done	5	Completed in current sprint

WIP limit for *In Progress*: 3 — kept workload balanced
Review stage had 2 pending tasks, highlighting a minor QA bottleneck
Team managed to clear 5 tasks within the sprint

Sample Kanban Visualization:

Backlog	To Do	In Progress	Review	Done
Story X	Story A	Story D	Story J	Story F
Story Y	Story B	Story E	Story K	Story H
Story Z	Story C	Story G		Story I
Story M				Story L
				Story N

Conclusion:

The Kanban board proved highly effective in visualizing and managing sprint workflows. It helped the team:

- Maintain transparency and track task status at a glance

- Manage workload efficiently using WIP limits

- Quickly spot workflow slowdowns, particularly in the Review stage

Overall, the board improved sprint coordination, enhanced team accountability, and promoted smoother task delivery.