**Lab 5**
**Title*: Utilizing the Kanban Board**

**Objective:**
To explore the functionality of the Kanban Board in Agile project management, focusing on task visualization, limiting work-in-progress (WIP), and optimizing flow. The goal was to understand how Kanban promotes transparency, adaptability, and continuous delivery.

**Tools Used:**

- **Trello / Jira** – for digital Kanban board setup
- **Sticky Notes / Cards** – for representing tasks on a physical board
- **Markers & Labels** – to classify tasks and define swim lanes
- **Web Browser & Internet** – for accessing cloud-based Kanban tools

# Methodology:
The lab was conducted in the following phases:

# Step 1: Learning Kanban Fundamentals
Reviewed core Kanban principles:

- Visualize work processes
- Limit work in progress
- Manage and monitor flow
- Define process rules explicitly
- Continuously improve through feedback

## Step 2: Setting Up the Kanban Board

- Created workflow columns:
    - *To Do*, *In Progress*, *Testing*, *Done*
- Populated the board with sample user stories as task cards
- Assigned team members and set task deadlines

## Step 3: Applying WIP Limits

- Enforced a WIP limit of 2 tasks in the *In Progress* column

- Ensured no more than two tasks were handled concurrently
- Observed flow patterns and monitored for potential bottlenecks

## Step 4: Simulating Task Progression

- Ran a simulated sprint:
  - Tasks were moved sequentially from *To Do → In Progress → Testing → Done*
- Tracked flow efficiency and identified delays or idle states
- Discussed potential workflow optimizations and workload balancing

## Sample Task Card:

- **Title:** Implement Login API
- **Assignee:** John
- **Due Date:** June 24
- **Priority:** High

## Description:

- Develop a secure authentication endpoint
- Validate user inputs (email, password)
- Generate a session token on successful login
- Return appropriate error responses for invalid or missing data

## Results:

- Gained hands-on experience with task visualization using the Kanban board
- Noticed how limiting WIP enhanced focus and reduced task switching
- Understood the significance of real-time process improvements based on performance tracking

### Conclusion:
The Kanban Board proves to be an effective Agile tool for managing work visually, limiting overload, and enhancing delivery efficiency. This lab demonstrated how structured flow management and continuous refinement of the process can significantly boost team productivity and clarity in Agile workflows.