

# Kanban:

## Objective:

*The objective of this assignment is to understand the concept of Kanban, its principles, and its implementation in project management to enhance workflow efficiency and productivity.*

To do	In Progress					Completed
	Plan	Design	Code	Test	Deploy	
Register/Login	Planned	Design	Code	Test		
Filter	Planned	Design	Code	Test		
Adding to cart	Planned	Design	Code	Test		

## Part 1: Understanding Kanban

### Introduction to Kanban

*Kanban is a visual workflow management method used to optimize the flow of work. Originating from the Japanese manufacturing system, it has been widely adopted in software development and other industries. The term "Kanban" means "visual signal" or "card" in Japanese.*

### Key Principles of Kanban

*Visualize the Workflow: Creating a visual representation of your workflow to identify bottlenecks and areas for improvement.*

*Limit Work in Progress (WIP): Setting limits on the number of tasks that can be in progress at any given time to ensure a smooth flow.*

*Focus on Flow: Continuously monitoring and managing the flow of work to ensure steady progress.*

*Make Process Policies Explicit: Clearly defining and communicating process rules to ensure everyone understands how work should be done.*

*Implement Feedback Loops: Regularly reviewing the workflow and processes to identify areas for improvement.*

*Improve Collaboratively, Evolve Experimentally: Encouraging team collaboration and experimentation to drive continuous improvement.*

### **1.3 Benefits of Kanban**

*Improved visibility of the workflow*

*Enhanced flexibility and responsiveness to changes*

*Increased efficiency and productivity*

*Better collaboration and communication within teams*

*Reduced cycle time and faster delivery of work*

## **Part 2: Implementing Kanban**

### **Setting Up a Kanban Board**

*A Kanban board is a visual tool used to manage and track the flow of work. It typically consists of the following columns:*

*Backlog: Tasks or work items that are planned but not yet started.*

*To Do: Tasks that are ready to be worked on next.*

*In Progress: Tasks that are currently being worked on.*

*Review/Testing: Tasks that are completed but need to be reviewed or tested.*

*Done: Tasks that are fully completed and no further action is required.*

## Creating a Kanban Board

*Choose a Platform: Kanban boards can be physical (e.g., a whiteboard with sticky notes) or digital (e.g., using tools like Trello, Jira, or Asana).*

*Define Columns: Set up the columns as described above, adjusting them as needed for your specific workflow.*

*Add Work Items: Create cards or sticky notes for each task and place them in the appropriate column.*

*Set WIP Limits: Define limits for how many tasks can be in each column at any given time to prevent overloading the team.*

*Track Progress: Move tasks across columns as they progress through the workflow, ensuring to respect WIP limits.*

## Example of a Digital Kanban Board Setup Using Trello

*Create a Board: Sign up for Trello and create a new board named "Project Kanban".*

*Add Lists: Create lists for each stage of your workflow (Backlog, To Do, In Progress, Review/Testing, Done).*

*Create Cards: Add cards for each task, with descriptions and due dates if needed.*

*Set WIP Limits: Use Trello's Power-Ups or other tools to set WIP limits for each list.*

*Monitor and Adjust: Regularly review the board, move cards as tasks progress, and adjust the process as necessary.*

## Part 3: Case Study

### 3.1 Scenario

*Imagine you are managing a software development project for a new mobile application. Your team consists of developers, testers, and a project manager. You decide to implement Kanban to improve workflow and ensure timely delivery.*

### 3.2 Implementation Steps

*Visualize the Workflow: Create a Kanban board with columns for Backlog, To Do, In Progress, Review/Testing, and Done.*

*Limit WIP: Set a limit of 3 tasks for the In Progress column to prevent overburdening the developers.*

*Focus on Flow: Track the progress of tasks daily, ensuring that tasks move smoothly from one column to the next.*

*Make Process Policies Explicit: Clearly define criteria for when a task can move from To Do to In Progress, and from In Progress to Review/Testing.*

*Implement Feedback Loops: Hold weekly review meetings to discuss what is working well and what can be improved.*

*Improve Collaboratively: Encourage team members to suggest improvements to the workflow and experiment with new practices.*

### 3.3 Outcome

*By implementing Kanban, your team is able to visualize the entire workflow, identify bottlenecks quickly, and manage work more effectively. The project sees an improvement in cycle time, with tasks being completed faster and more efficiently. The regular feedback loops and collaborative improvements lead to a more adaptive and resilient team.*

## Conclusion

*Kanban is a powerful tool for managing workflows and improving productivity. By visualizing work, limiting work in progress, focusing on flow, making process policies explicit, implementing feedback loops, and encouraging collaborative improvements, teams can achieve higher efficiency and better outcomes. Implementing Kanban requires commitment and regular review, but the benefits in terms of visibility, flexibility, and productivity make it a worthwhile endeavor for any team.*