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## EXPERIMENT 3

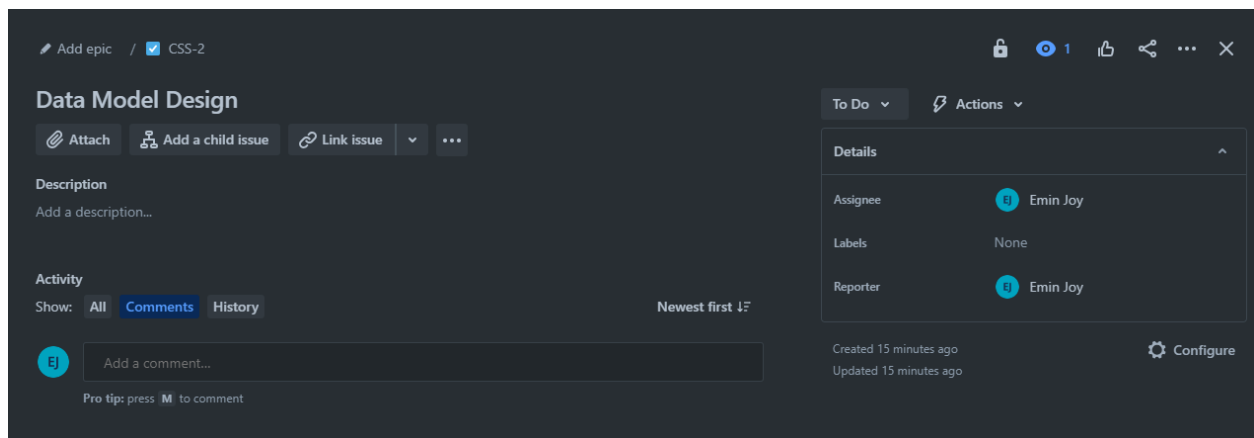
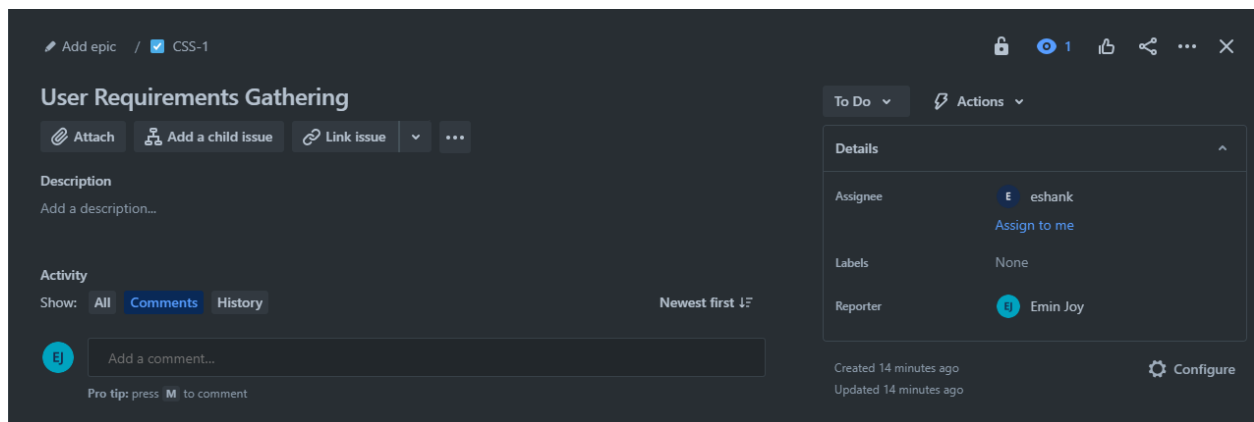
# COURSE SCHEDULING SYSTEM USING AGILE METHODOLOGY USING JIRA

### AIM :

Implement Course Scheduling System using KANBAN method on JIRA Tool.

1. Identify at least 5 Epics and 15 user stories from the specification document. Use your own research and interpretation. Link above stories to Epics.
2. Create Kanban project using free Jira account.
3. Enter backlog in JIRA (epics, stories and subtasks)

### CONTRIBUTION OF MEMBERS AND USER TASKS



Add epic / CSS-3

Conflict Resolution Logic

Attach

Add a child issue

Link issue

Description

Add a description...

Activity

Show: All Comments History

Newest first

EJ

Add a comment...

Pro tip: press **M** to comment

To Do

Actions

Details

Assignee

H hansel

Assign to me

LabelsNone

Reporter

EJ Emin Joy

Created 16 minutes ago

Updated 1 minute ago

Configure

Add epic / CSS-4

Scalability Planning

Attach

Add a child issue

Link issue

Description

Add a description...

Activity

Show: All Comments History

Newest first

EJ

Add a comment...

Pro tip: press **M** to comment

To Do

Actions

Details

Assignee

EJ Emin Joy

LabelsNone

Reporter

EJ Emin Joy

Created 17 minutes ago

Updated 17 minutes ago

Configure

TIMELINE

Timeline

EJ

Status category

Epic

	G	SEP	OCT
CSS-19 User Requirement Gathering			
CSS-20 Data Model Design			
CSS-21 Conflict Resolution Logic			
CSS-22 Scalability Planning			
CSS-23 Security Planning			
CSS-24 Test Cases Development			
CSS-25 UI Designing			
CSS-26 Performance Optimization			
+ Create Epic			

# KANBAN BOARD

CSS board

Q

EJ

TO DO 5

User Requirements Gathering

✓

CSS-1

Data Model Design

✓

CSS-2

Conflict Resolution Logic

✓

CSS-3

Scalability Planning

✓

CSS-4

Security Planning

✓

CSS-5

+ Create issue

IN PROGRESS 5

Develop Data Management Modules

✓

CSS-6

Implement Conflict Resolution Logic

✓

CSS-7

Design User Interface

✓

CSS-8

Integration with existing systems

✓

CSS-9

Performance Optimization

✓

CSS-10

TESTING 4

Testing Data Management Modules

✓

CSS-11

Test Conflict Resolution Logic

✓

CSS-12

Security Testing

✓

CSS-13

Integration Testing

✓

CSS-14

DONE 4 ✓

User Stories and Epics

✓

CSS-15

✓

Comprehensive Documentation

✓

CSS-16

✓

Final Performance Testing

✓

CSS-17

✓

User Testing

✓

CSS-18

✓

## **Postlab:**

### ***A) Compare and contrast the Kanban and Scrum methodologies in terms of flexibility, adaptability, and workflow management in different project scenarios.***

#### **1.Flexibility:**

Kanban: Extremely adaptable, ideal for erratic work, and capable of doing so fast in response to shifting priorities.

Scrum: Less adaptable due to defined sprint lengths; modifications sometimes put off until the following sprint.

#### **2.Adaptability:**

Kanban: Designed for continuous adaptation, allowing real-time changes to priorities and processes.

Scrum: Adapts during sprints, however large changes are usually postponed until the end of the sprint.

#### **3.Workflow administration:**

Kanban: Limits work-in-progress (WIP) and emphasises flow while visualising work on a board.

Scrum: Uses predetermined sprint lengths and a sprint backlog to manage work.

#### **4.Projects:**

Projects with dynamic or regularly changing needs and varied work sizes are best served by kanban.

Scrum: Focusing on organised planning and delivery, it is ideal for projects with predictable requirements and set deadlines.

### ***B) Analyze a Kanban board in JIRA and propose improvements to optimize the team's efficiency and productivity.***

#### **1. Examine the Kanban board in place:**

Make sure that the columns on the board appropriately depict the team's operations.

Check that the types of work items are properly categorised.

WIP limitations: Verify that each column's Work in Progress (WIP) limitations are established.

#### **2. Enhance WIP Capacity:**

WIP ceilings should be adjusted to avoid overworking or underusing team members.

#### **3. Track and evaluate metrics:**

To find bottlenecks and areas for improvement, monitor cycle time, lead time, and throughput.

4. Constant Development:

Review and modify the board and procedures frequently depending on data and team input.

5. Integration and Automation

Automate repetitive activities and integrate JIRA with other technologies to streamline work

***C) Evaluate the impact of Work In Progress (WIP) limits on a Kanban board and how it affects the team's throughput and cycle time.***

**Impact of WIP restrictions in Kanban**

1. Throughput

Encourage concentration and equitable workload distribution.

Identifying Constraints: Assists in locating and resolving process bottlenecks.

2. Cycle Period:

Reduced interruptions and more focused work result in shorter cycle times.

Increases task completion predictability and release planning predictability.

3. Excellence

Better quality assurance and fewer defects are possible with improved quality.

Fewer Interruptions: Reduces interruptions at work, improving consistency.

Impact of WIP restrictions in Kanban