



# PES UNIVERSITY

Department of Computer Science & Engineering

**Software Engineering**

**UE23CS341A**

## Assignment 2 Submission

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## Lab 2: Agile Backlog Creation & Sprint Simulation in Jira

### Objective:

Use Jira to turn functional requirements into Agile backlog items, simulate a sprint, and analyse progress.

### Index:

1. Scenario-Self-Service Coffee Kiosk
2. Jira backlog with Epics and User Stories
3. Story point assignments
4. Sprint board (Active Sprint view)
5. Burndown Chart

### Scenario: Self-Service Coffee Kiosk

You are designing the software for a self-service coffee kiosk in a busy café. The kiosk must allow customers to:

1. Select a coffee (Espresso, Americano, Latte, Cappuccino).
2. Choose size (Small, Medium, Large).
3. Customize add-ons (Extra shot, Soy/Almond milk, Syrups).
4. Pay via credit/debit card or mobile wallet.
5. Print a receipt with order details and loyalty points added.

The kiosk screen should be responsive and straightforward. Customers must complete a single order in under 60 seconds. Password-protected admin mode allows café staff to refill ingredients, update prices, and view sales reports.

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## Jira backlog with Epics and User Stories:

The screenshot shows the Jira Backlog interface for the 'Coffee-Kiosk' project. The left sidebar navigation includes 'For you', 'Recent', 'Starred', 'Apps', 'Plans', 'Projects' (selected), 'Starred', '(Learn) Jira Premium b...', 'Recent', 'Coffee-Kiosk' (selected), 'CK board', 'Test', 'More projects', 'Teams', 'Projects', and 'More'. The main area displays the 'CK board' backlog under 'Backlog' tab. It shows three epics: 'Epic 1: Customer Ordering Experience', 'Epic 2: Admin Control Experience', and 'Epic 3: Payment Gateway Integration'. Under 'Epic 1', there are two user stories: 'CK-5 Story 1.2: Size Selection' and 'CK-4 Story 1.1: Coffee Selection'. A summary at the bottom indicates 2 of 2 work items visible with an estimate of 34 of 34. Below the backlog, a whiteboard section is visible with tasks like 'CK-11 Story 3.2: Print Receipt After Order' and 'CK-6 Story 1.3: Add-on Selection'. At the bottom, a toolbar provides options: '2 selected', 'Select all', 'Edit fields', 'Change status', 'Watch options', 'Delete', and a close button.

Epic	User Story	EPIC	Status	Estimate	Owner
No epic				0	
Epic 1: Customer Ordering Experience	CK-5 Story 1.2: Size Selection	EPIC 1: CUS...	TO DO	13	
Epic 2: Admin Control Experience	CK-4 Story 1.1: Coffee Selection	EPIC 1: CUS...	TO DO	21	
Epic 3: Payment Gateway Integration				0	

Backlog	Work Item	EPIC	Status	Estimate	Owner
CK-11 Story 3.2: Print Receipt After Order	EPIC 3: PAY...	TO DO	1		
CK-6 Story 1.3: Add-on Selection	EPIC 1: CUS...	TO DO	8		
CK-7 Story 2.1: Refill Ingredients	EPIC 2: ADM...	TO DO	3		
CK-8 Story 2.2: Update Prices	EPIC 2: ADM...	TO DO	2		
CK-9 Story 2.3: View Sales Report	EPIC 2: ADM...	TO DO	5		
CK-10 Story 3.1: Payment Gateway	EPIC 3: PAY...	TO DO	0		

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The screenshot shows the Jira CK board interface. The left sidebar lists projects, recent activity, and other Jira features. The main area displays the CK board backlog. The backlog is organized into sections: Epic, CK Sprint 1, and Backlog. CK Sprint 1 contains two stories: CK-5 Story 1.2: Size Selection and CK-4 Story 1.1: Coffee Selection, both assigned to EPIC 1: CUS... and marked as TO DO. The Backlog section lists ten more stories, each with its title, epic, status, priority, and assignee. A navigation bar at the bottom provides options for selecting all, editing fields, changing status, watching, deleting, and creating a sprint.

## Story Point Assignments:

This screenshot shows the CK Sprint 1 backlog with story point assignments. CK-5 Story 1.2: Size Selection is assigned 13 points, and CK-4 Story 1.1: Coffee Selection is assigned 21 points. Other stories in the backlog have lower point values, such as CK-11 (1), CK-6 (8), CK-7 (3), CK-8 (2), CK-9 (5), and CK-10 (0). The backlog also includes a whiteboard for planning and a section for creating sprints.

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## Sprint Board (Active Sprint view):

### Sprint 1:

The screenshot shows the Jira Sprint Board interface for the 'CK board' project. The sidebar on the left lists various Jira features like 'For you', 'Recent', 'Starred', 'Apps', 'Plans', 'Projects', 'Teams', and 'More'. The main board area displays three columns: 'TO DO' (2 items), 'IN PROGRESS' (2 items), and 'DONE' (0 items). The 'IN PROGRESS' column contains two stories: 'Story 1.2: Size Selection' and 'Story 1.1: Coffee Selection', both under the epic 'EPIC 1: CUSTOMER ORDERING EXPERIENCE'. A 'Complete sprint' button is visible at the top right of the board. The top navigation bar includes 'Search', '+ Create', 'See plans', and user profile options.

This screenshot is identical to the one above, showing the Jira Sprint Board for the 'CK board' project. It displays the same three columns ('TO DO', 'IN PROGRESS', 'DONE') with the same two stories ('Story 1.2: Size Selection' and 'Story 1.1: Coffee Selection') in progress. The top navigation bar and sidebar are also identical.

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The screenshot shows the Jira interface for the 'CK board' project. A modal window titled 'Complete CK Sprint 1' is displayed, indicating that the sprint contains 2 completed work items. The modal includes a 'Complete sprint' button and a 'Cancel' button. The background shows the sprint summary with two stories: 'Story 1.1: Coffee Selection' and 'Story 1.2: Size Selection', both labeled 'EPIC 1: CUSTOMER ORDERING EXPERIENCE'. The sidebar on the left shows the project navigation.

## Sprint 2:

The screenshot shows the Jira interface for the 'CK board' project, specifically the backlog view for 'CK Sprint 2' (2 Sep - 9 Sep). The backlog lists three epics: 'Epic 1: Customer Ordering Experience', 'Epic 2: Admin Control Experience', and 'Epic 3: Payment Gateway Integration'. Under each epic, there are one or more stories. For example, under Epic 1, there are stories like 'Story 1.3: Add-on Selection' and 'Story 3.1: Payment Gateway'. The backlog also includes a section for creating a whiteboard and a 'Create sprint' button. The sidebar on the left shows the project navigation.

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Jira

Search

+ Create

For you

Recent

Starred

Apps

Plans

Projects

Starred

(Learn) Jira Premium b...

Recent

Coffee-Kiosk + ...

CK board

Test

More projects >

Teams

Projects

... More

Give feedback on the n...

Projects / Coffee-Kiosk

CK board

Summary Timeline Backlog Active sprints Calendar Reports List Forms Goals

Search board PH Epic Quick filters Complete sprint

TO DO 3

Story 1.3: Add-on Selection  
EPIC 1: CUSTOMER ORDERING EXPERIENCE

CK-6 8 =

Story 3.1: Payment Gateway  
EPIC 3: PAYMENT GATEWAY INTEGRATION

CK-10 0 ^ =

Story 3.2: Print Receipt After Order  
EPIC 3: PAYMENT GATEWAY INTEGRATION

CK-11 1 ^ =

+ Create

IN PROGRESS

DONE

Pranav H pranavh2004@gmail.com

Profile Account settings Theme Open Quickstart Switch account Log out

Jira

Search

+ Create

For you

Recent

Starred

Apps

Plans

Projects

Starred

(Learn) Jira Premium b...

Recent

Coffee-Kiosk + ...

CK board

Test

More projects >

Teams

Projects

... More

Give feedback on the n...

Projects / Coffee-Kiosk

CK board

Summary Timeline Backlog Active sprints Calendar Reports List Forms Goals

Search board PH Epic Quick filters Complete sprint

TO DO 2

Story 3.1: Payment Gateway  
EPIC 3: PAYMENT GATEWAY INTEGRATION

CK-10 0 ^ =

Story 3.2: Print Receipt After Order  
EPIC 3: PAYMENT GATEWAY INTEGRATION

CK-11 1 ^ =

+ Create

IN PROGRESS 1

Story 1.3: Add-on Selection  
EPIC 1: CUSTOMER ORDERING EXPERIENCE

CK-6 8 =

DONE

Pranav H pranavh2004@gmail.com

Profile Account settings Theme Open Quickstart Switch account Log out

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The screenshot shows the Jira CK board interface for the Coffee-Kiosk project. The board is divided into three columns: TO DO, IN PROGRESS, and DONE. In the IN PROGRESS column, there are two stories: "Story 3.2: Print Receipt After Order" and "Story 3.1: Payment Gateway". Both stories are associated with EPIC 3: PAYMENT GATEWAY INTEGRATION. In the DONE column, there is one story: "Story 1.3: Add-on Selection" associated with EPIC 1: CUSTOMER ORDERING EXPERIENCE. The sidebar on the left shows recent projects, including "Coffee-Kiosk" which is currently selected.

The screenshot shows the Jira CK board interface after a sprint has been completed. A modal window titled "Complete CK Sprint 2" is displayed, stating "This sprint contains 3 completed work items. That's all of them - well done!" with a "Complete sprint" button. The board itself shows the same state as the previous screenshot, with stories in the IN PROGRESS and DONE columns. The sidebar on the left remains the same, showing recent projects.

Sprint 3:

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This screenshot shows the Jira Backlog view for the 'CK board' under the 'Coffee-Kiosk' project. The left sidebar includes links for 'For you', 'Recent', 'Starred', 'Apps', 'Plans', 'Projects', 'Teams', 'Test', and 'More'. The main area displays the backlog with the following structure:

- Epic:** CK Sprint 3 (3 work items)
  - CK-9 Story 2.3: View Sales Report (EPIC 2: ADMIN CONTROL EXPERIENCE)
  - CK-7 Story 2.1: Refill Ingredients (EPIC 2: ADMIN CONTROL EXPERIENCE)
  - CK-8 Story 2.2: Update Prices (EPIC 2: ADMIN CONTROL EXPERIENCE)
- Backlog:** (0 work items) - Your backlog is empty.

At the bottom, there are buttons for 'Edit fields', 'Change status', 'Watch options', 'Delete', and a 'Create' button.

This screenshot shows the Jira Active Sprints view for the 'CK board' under the 'Coffee-Kiosk' project. The left sidebar is identical to the previous screenshot. The main area displays the active sprint with the following tasks:

Category	Task	Status	Estimate	Owner
TO DO	Story 2.3: View Sales Report	EPIC 2: ADMIN CONTROL EXPERIENCE	5	=
IN PROGRESS	Story 2.1: Refill Ingredients	EPIC 2: ADMIN CONTROL EXPERIENCE	3	^
IN PROGRESS	Story 2.2: Update Prices	EPIC 2: ADMIN CONTROL EXPERIENCE	2	^
DONE				

A profile sidebar on the right shows 'Pranav H' (pranavh2004@gmail.com) with options for 'Profile', 'Account settings', 'Theme', 'Open Quickstart', 'Switch account', and 'Log out'.

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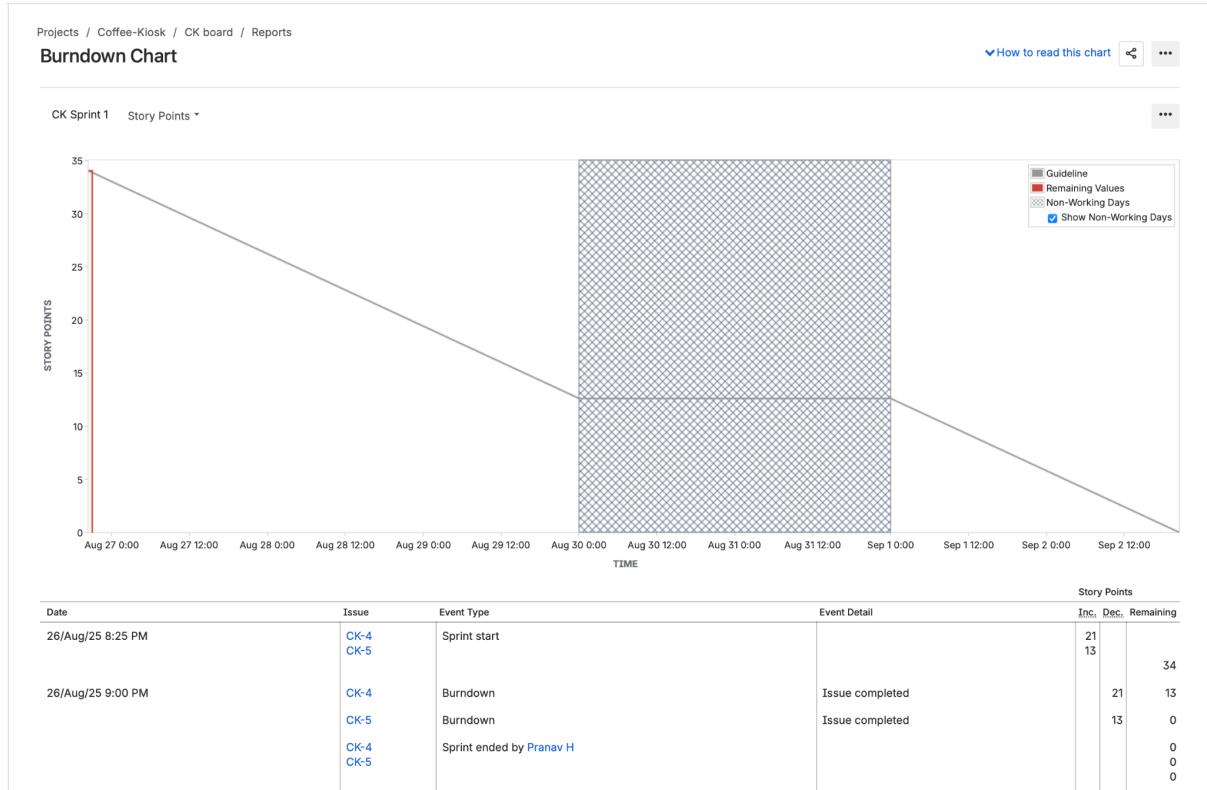
The screenshot shows the Jira interface for the 'Coffee-Kiosk' project. The top navigation bar includes 'Search', '+ Create', 'See plans', and a user profile for 'Pranav H'. The left sidebar lists 'For you', 'Recent', 'Starred', 'Apps', 'Plans', 'Projects' (selected), 'Test', 'More projects', 'Teams', 'Projects', and 'More'. The main area displays a Kanban board titled 'CK board' with three columns: 'TO DO', 'IN PROGRESS', and 'DONE'. Under 'IN PROGRESS', there are three items: 'Story 2.3: View Sales Report' (EPIC 2: ADMIN CONTROL EXPERIENCE), 'Story 2.1: Refill Ingredients' (EPIC 2: ADMIN CONTROL EXPERIENCE), and 'Story 2.2: Update Prices' (EPIC 2: ADMIN CONTROL EXPERIENCE). A modal window on the right says 'Complete sprint' with a button to 'Complete sprint'. The bottom right corner shows a user profile for 'Pranav H' with the email 'pranavh2004@gmail.com'.

This screenshot is similar to the previous one but shows the 'CK board' after a sprint has been completed. A large blue banner at the top says 'Complete CK Sprint 3'. Below it, a message states: 'This sprint contains 3 completed work items. That's all of them - well done!' A 'Complete sprint' button is visible. The rest of the interface is identical to the first screenshot, including the sidebar, board layout, and user profile.

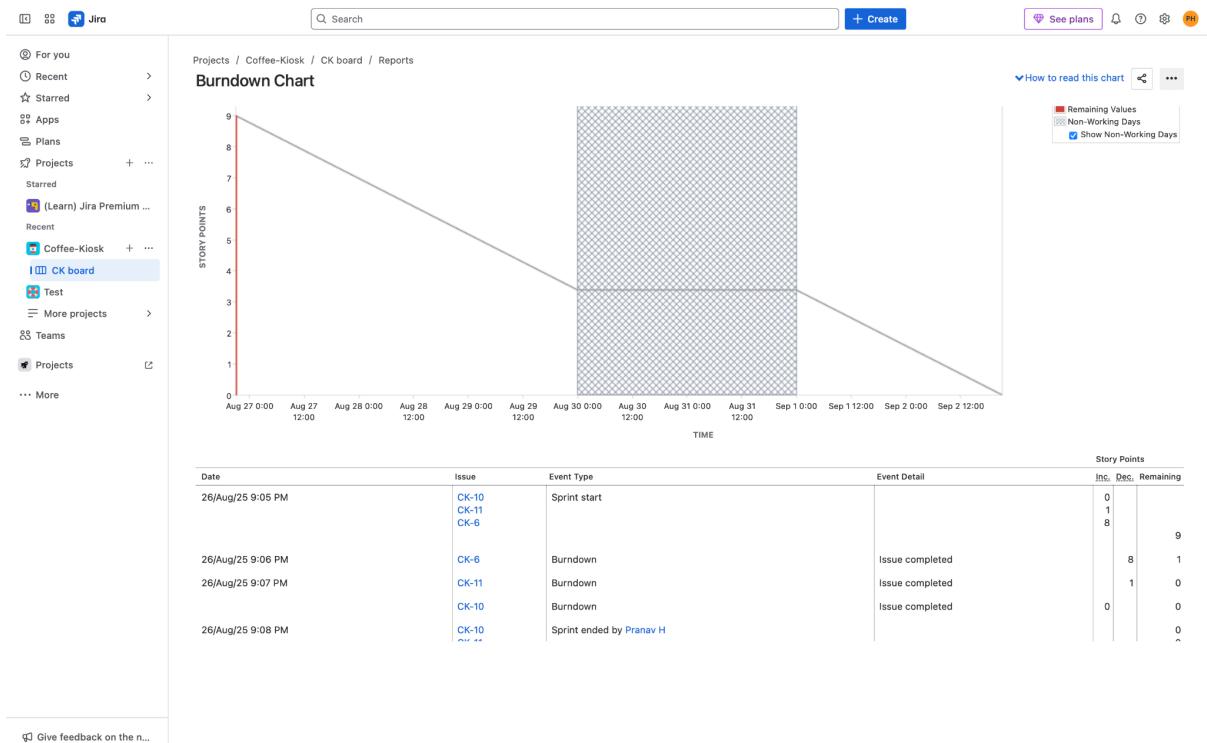
## Burndown Chart:

### Sprint 1:

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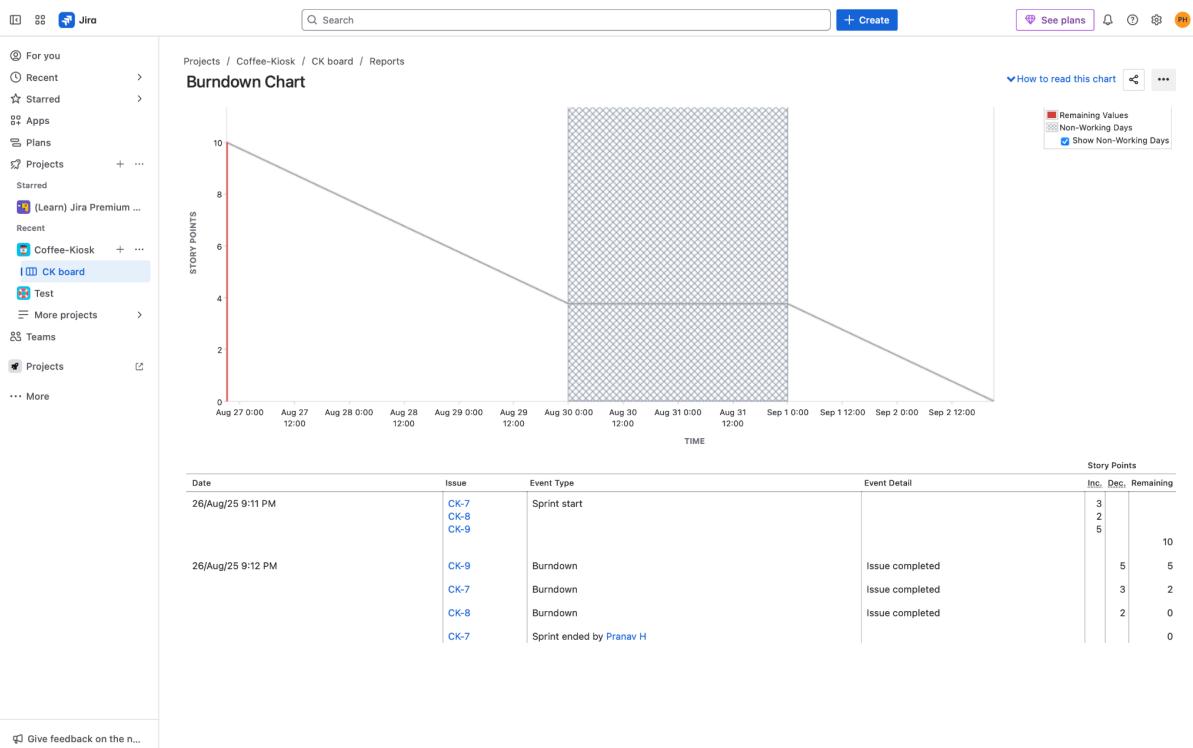


## Sprint 2:



## Sprint 3:

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## Reflection Questions:

1. Did your estimations reflect the actual effort?

Answer: The estimations were fairly close to the simulated effort, but there could be some discrepancies in actual cases. Smaller user stories such as Coffee Size Selection or Payment align well with the story points assigned. However, larger or more complex stories like Integration with Payment Gateway can take more effort than initially estimated. This highlights the importance of involving the team during Planning Poker to refine estimates and reduce bias.

2. Was your backlog well-prioritized?

Answer: Yes, the backlog was prioritized with customer-facing and high-value features first (e.g., Coffee Selection, Size Selection, and Order Customization). Backend and secondary features (like Admin Inventory Management) were scheduled for later sprints. This ensured that the most valuable customer experience was addressed first, which is consistent with Agile principles.

3. How did your simulated sprint align with your plan?

Answer: The sprint aligned closely with the plan. All stories selected for Sprint 1 were completed within the simulated time. Tasks moved through To Do → In Progress → Done as expected. In a real environment, we might face delays due to dependencies

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or unexpected challenges, but the simulation helps us practice the workflow and understand how progress is tracked.

4. What insights did the burndown chart give about your team's capacity?

Answer: The burndown chart showed that tasks were completed steadily after initial progress started. The simulated completion was slightly faster than the guideline, suggesting that we may have committed to fewer tasks than our actual capacity. In future sprints, we can commit to slightly more work. The chart also emphasized the importance of distributing work evenly across the sprint instead of completing a bulk of tasks toward the end.