

Aim: To Study Agile Methodology and Test case Management using JIRA Tool & To Create Scrum Board for Scrum Master using JIRA Tool.

Theory:

Introduction to Agile Methodology

Agile methodology is an iterative approach to software development that focuses on flexibility, collaboration, and customer feedback. It follows principles from the Agile Manifesto, emphasizing working software, customer collaboration, and responsiveness to change. Agile methodologies include Scrum, Kanban, and Extreme Programming (XP).

Test Case Management in Agile

Test case management in Agile ensures that testing is integrated throughout the development process rather than being a separate phase. JIRA, a widely used project management tool, supports test case management through plugins like Zephyr and Xray. Key aspects include:

- **Creating Test Cases:** Test cases are written in JIRA to verify software functionality.
- **Executing Tests:** Test execution is tracked within sprints to ensure quality assurance.
- **Defect Tracking:** Bugs and defects are logged and linked to user stories.
- **Continuous Integration:** Automated tests can be integrated with JIRA for real-time tracking.

Creating a Scrum Board in JIRA

A **Scrum Board** in JIRA helps Scrum Masters manage sprint tasks efficiently. The process includes:

1. **Creating a New Scrum Project:** JIRA provides templates for Agile projects.
2. **Defining Backlog Items:** Product backlog items (PBIs) or user stories are added.
3. **Sprint Planning:** Tasks are assigned to sprints, ensuring proper workload distribution.
4. **Tracking Progress:** The board visually represents tasks in "To Do," "In Progress," and "Done" columns.
5. **Sprint Review & Retrospective:** After each sprint, progress is reviewed, and improvements are discussed.

By utilizing JIRA for Agile project management, teams improve efficiency, collaboration, and project transparency.

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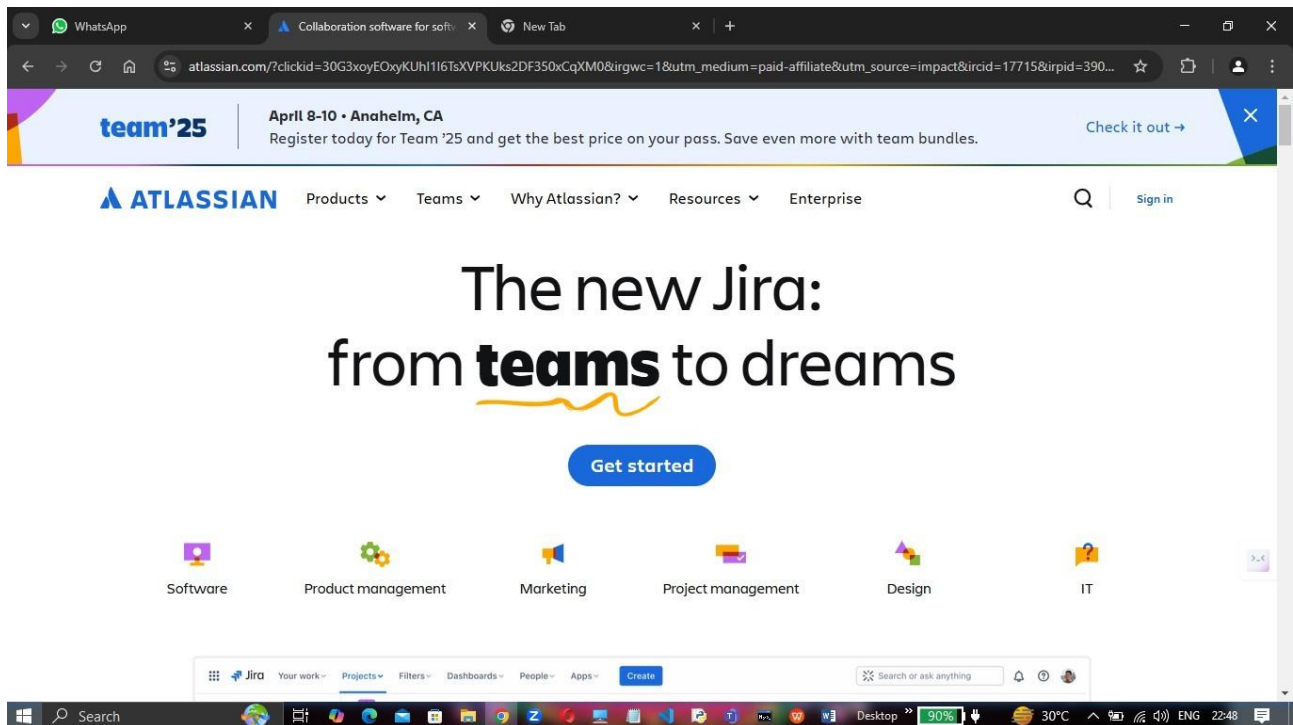
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➤ Implementation:

JIRA Account Creation:

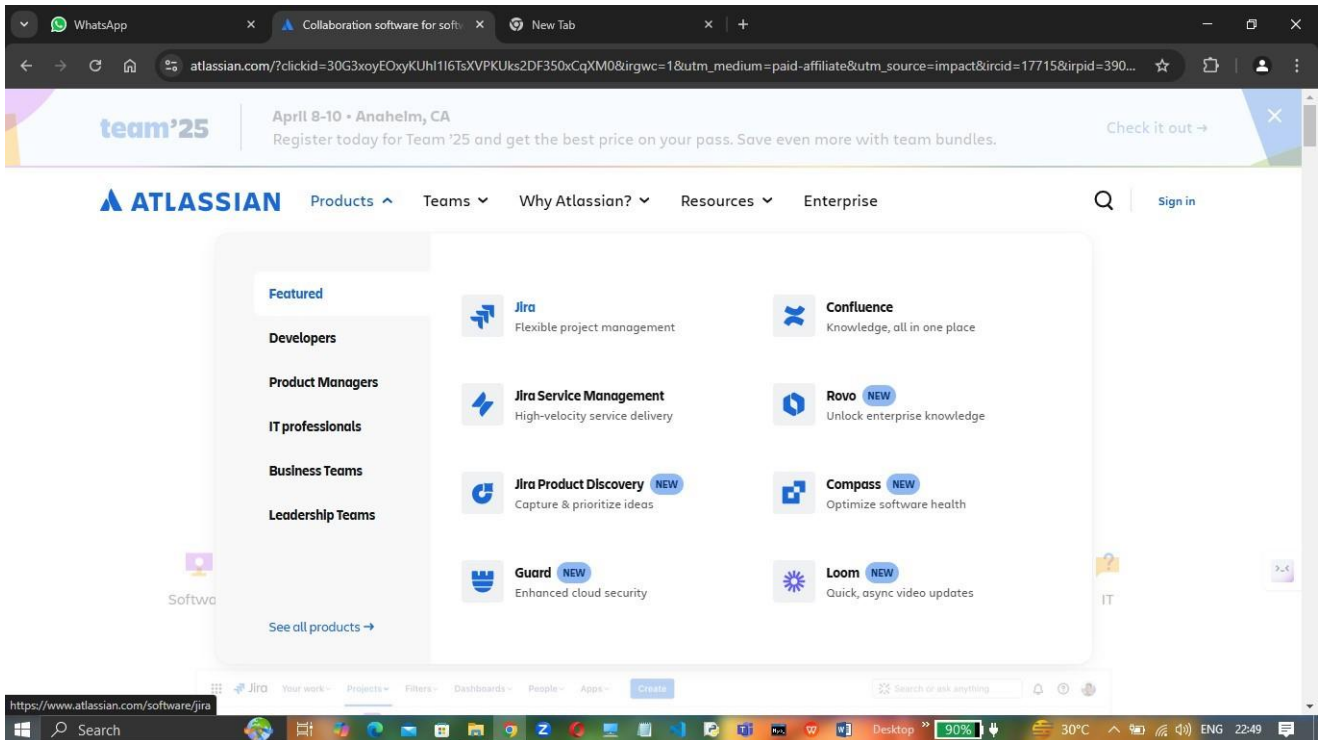
- 1) Open atlassian.com webpage
- 2) Select products and click on Jira Software
- 3) Click on “Get it free”



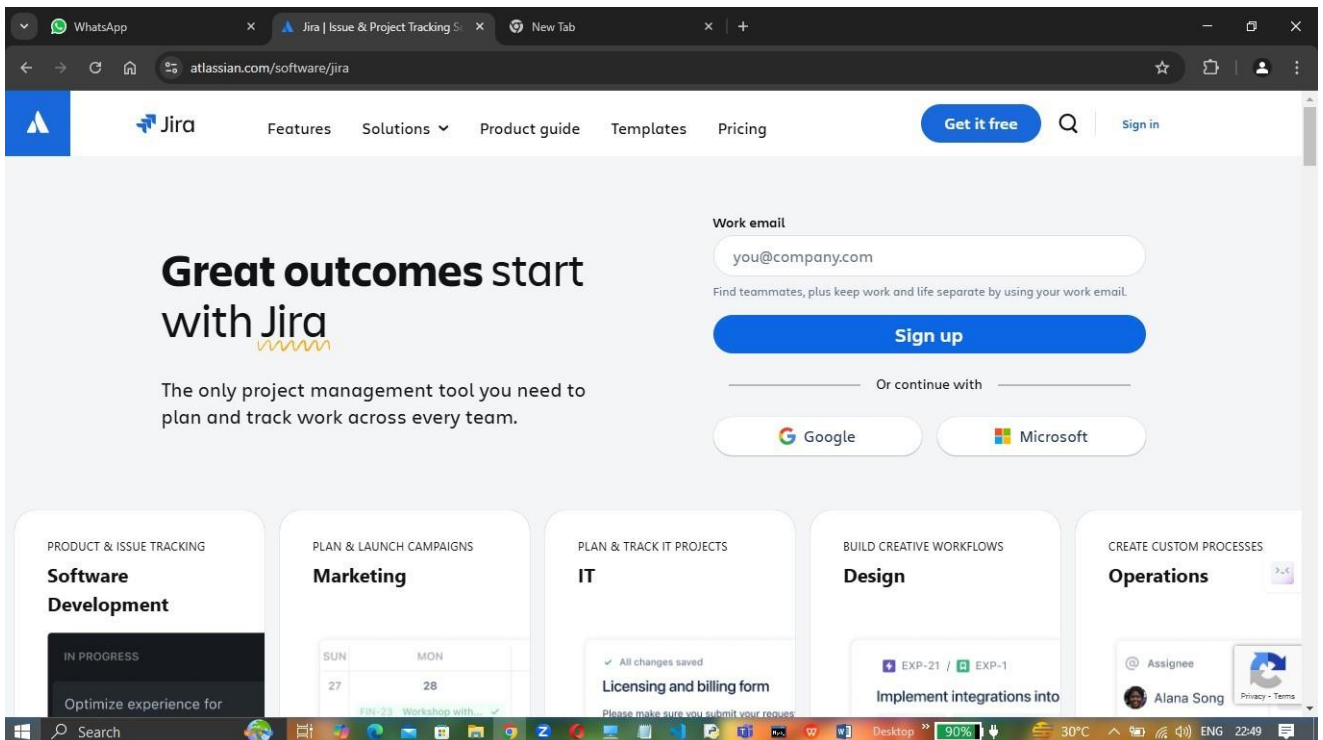
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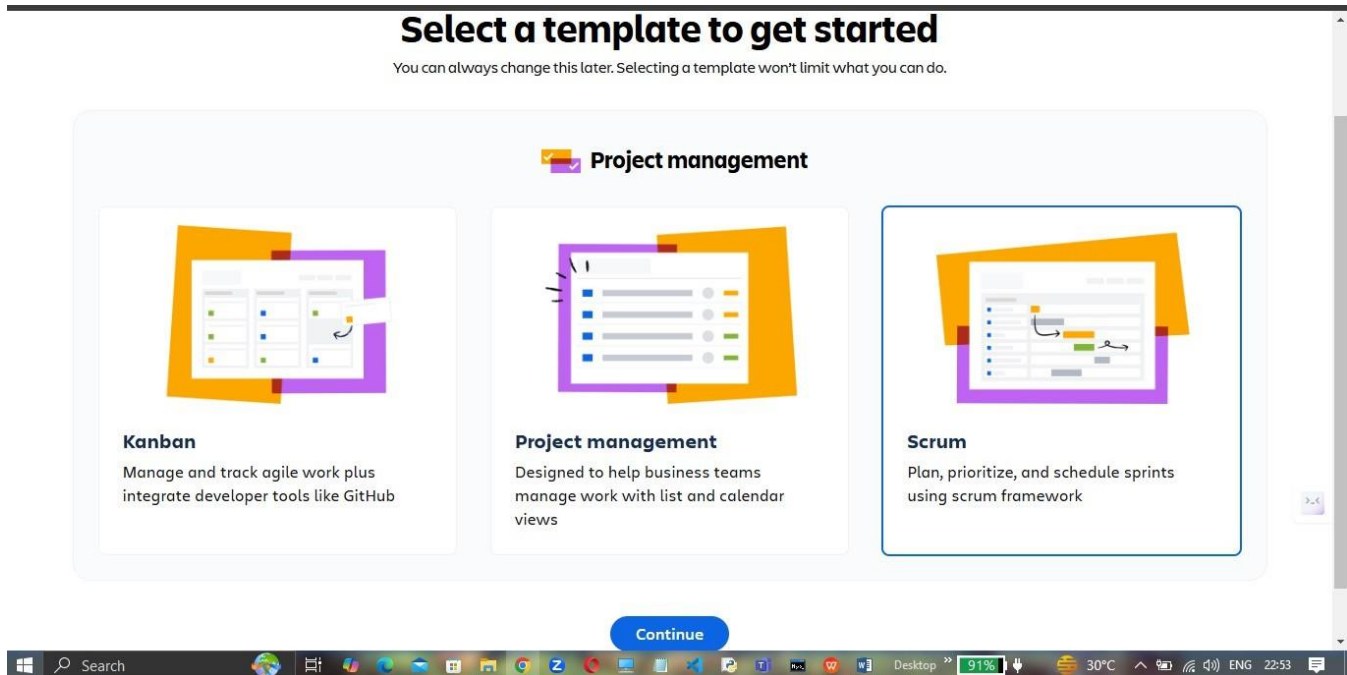
4) Select Continue with Google



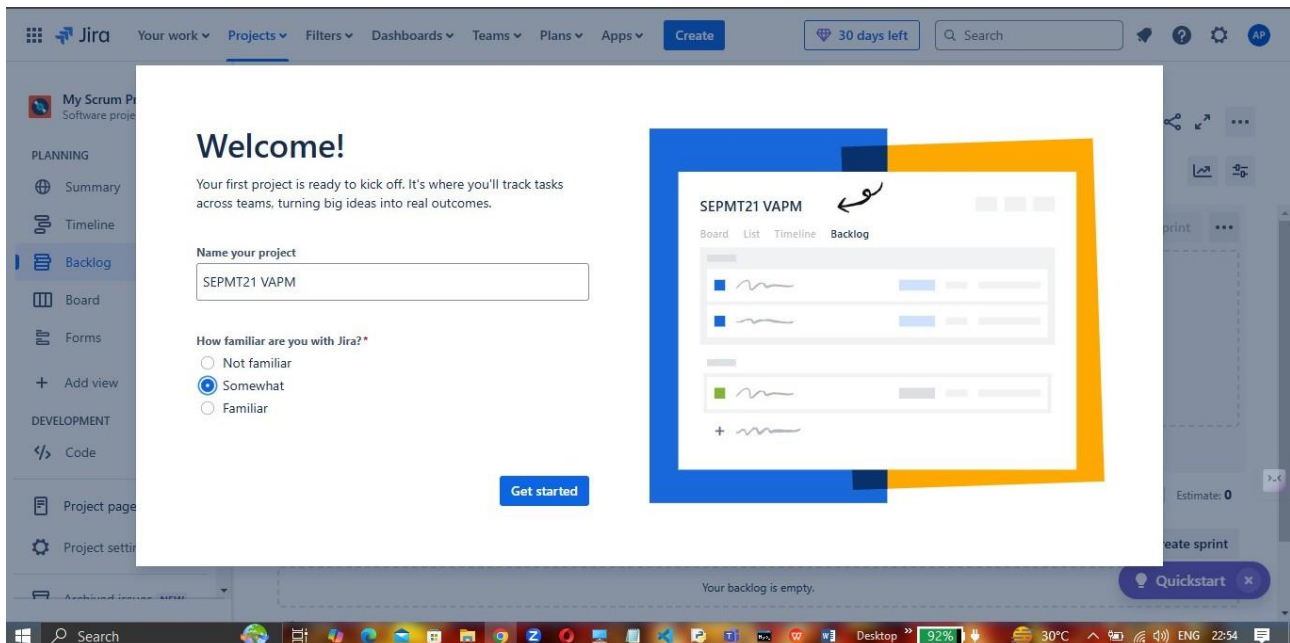
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6) Add project details

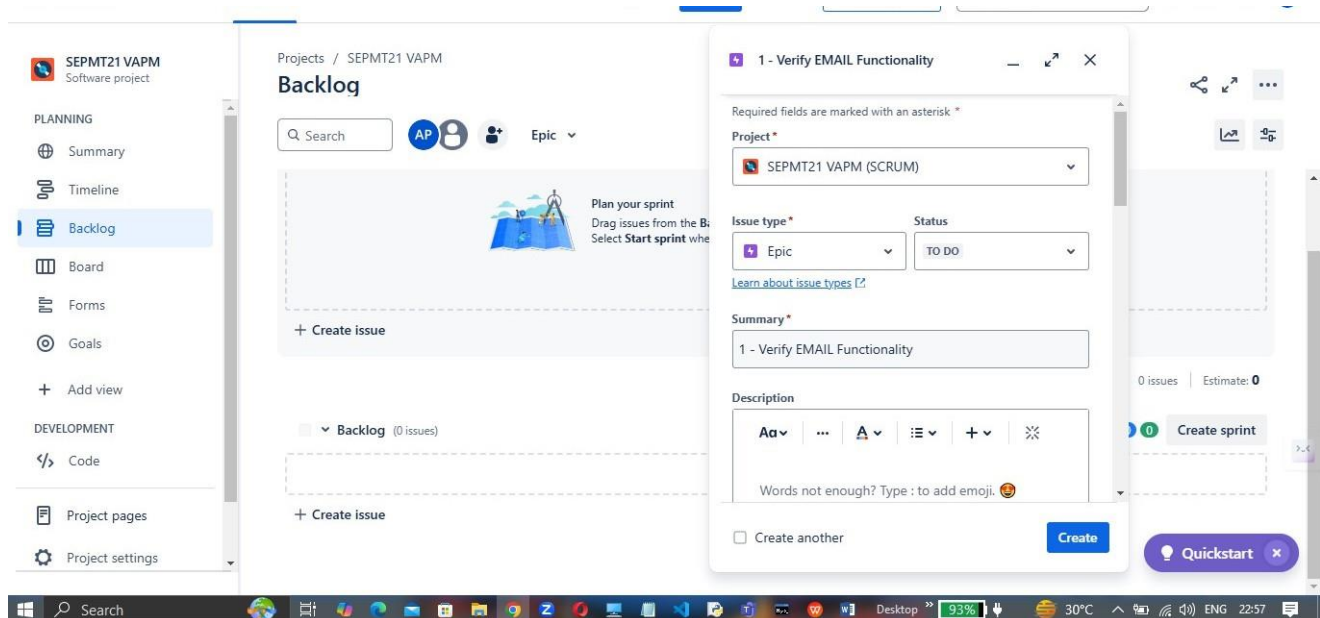
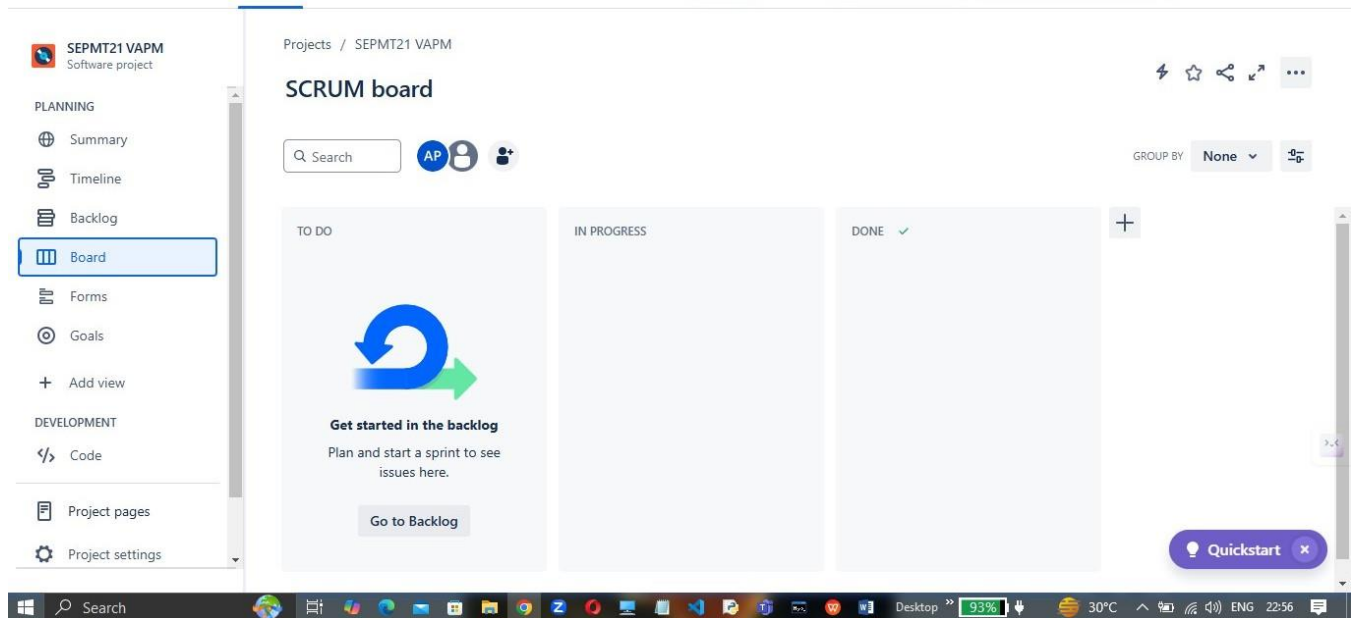


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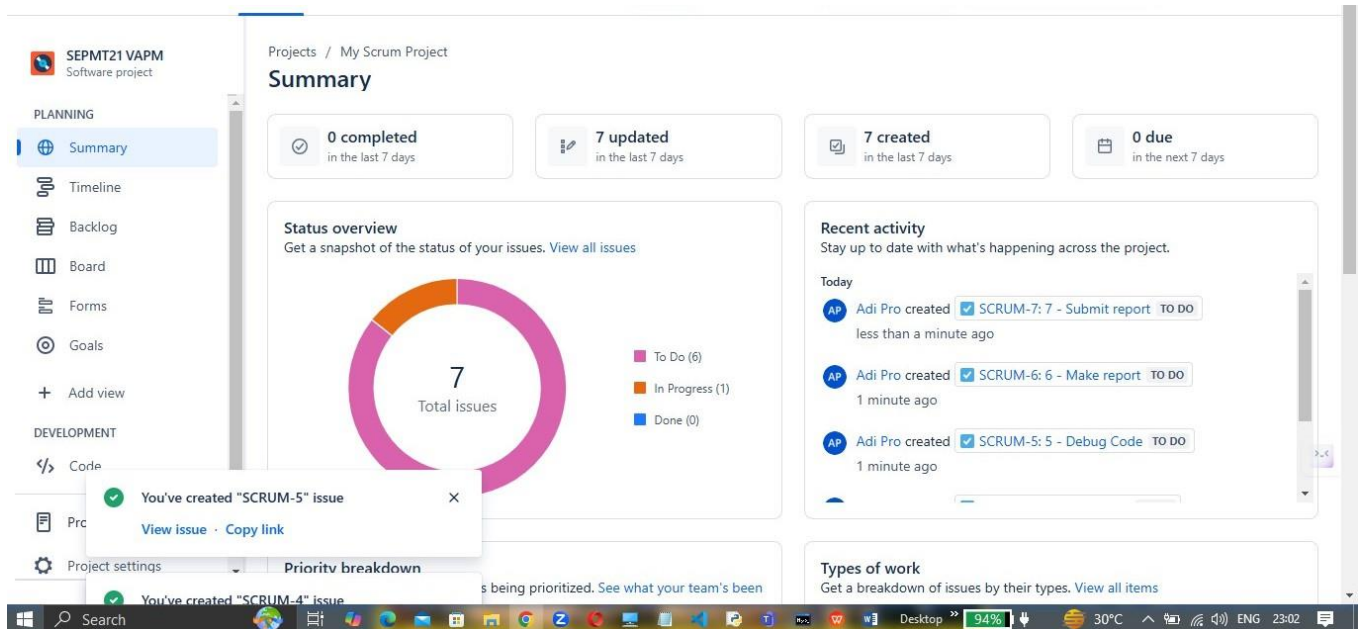
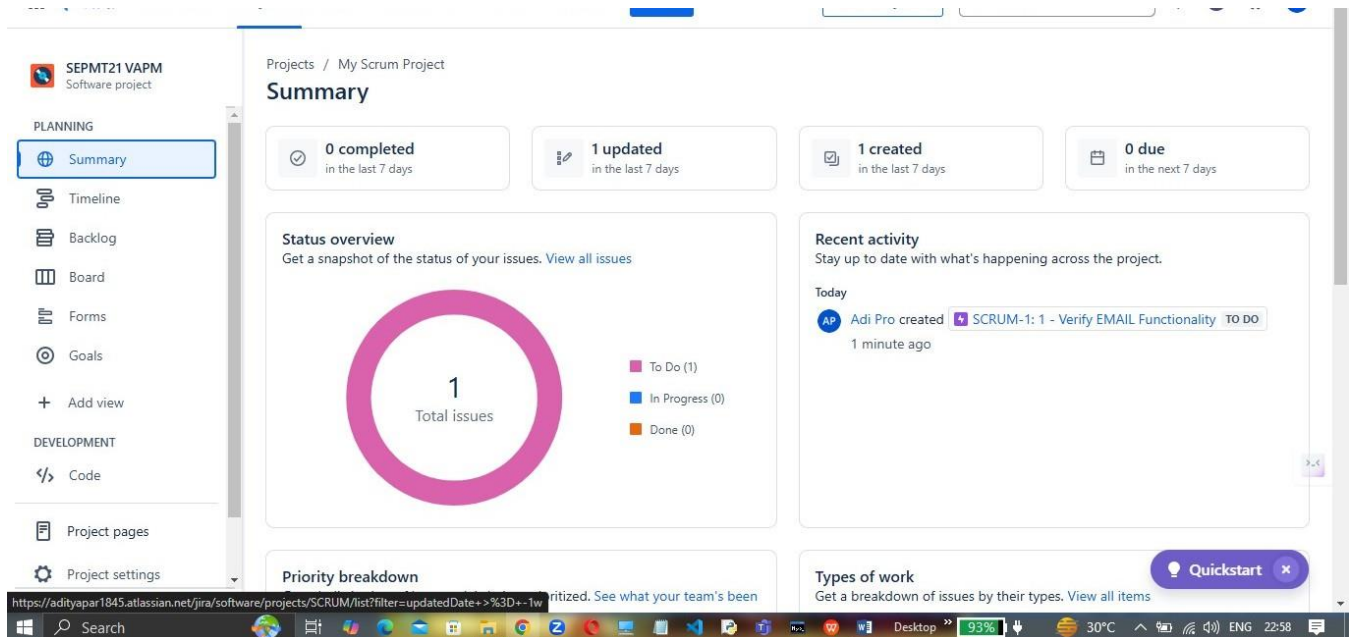
- 7) Implement Agile and Scrum using various features of JIRA tool such as sprints, timeline, scrum board, make a team and add members,etc



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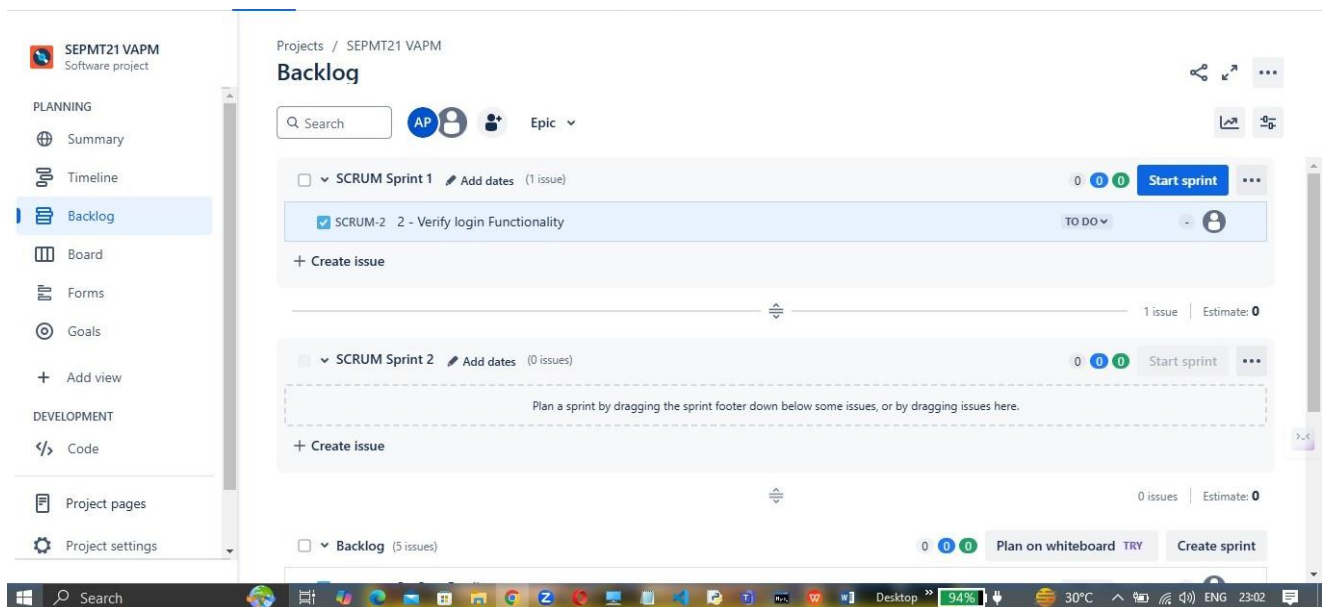
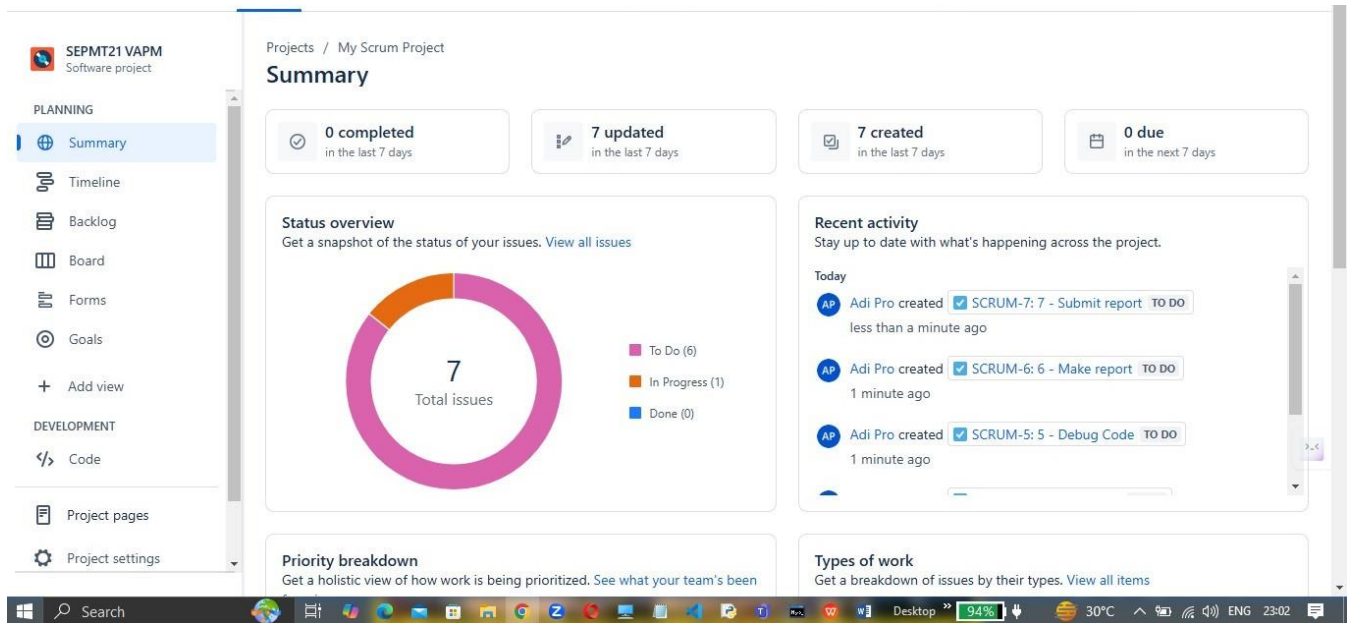
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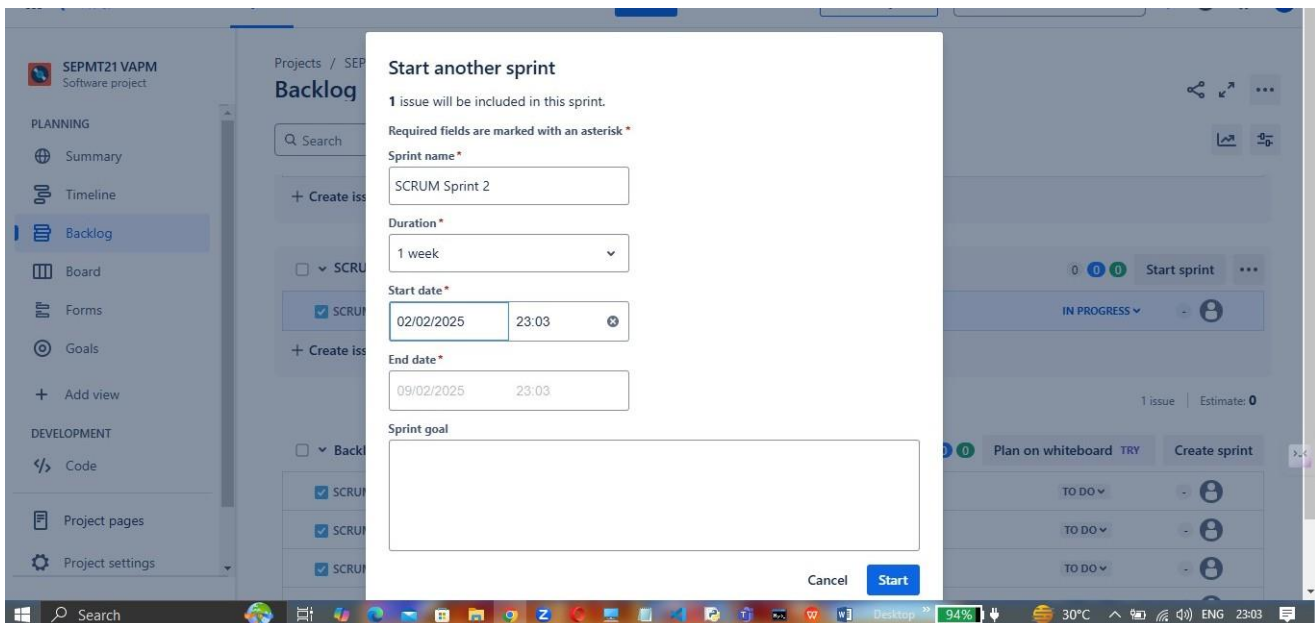
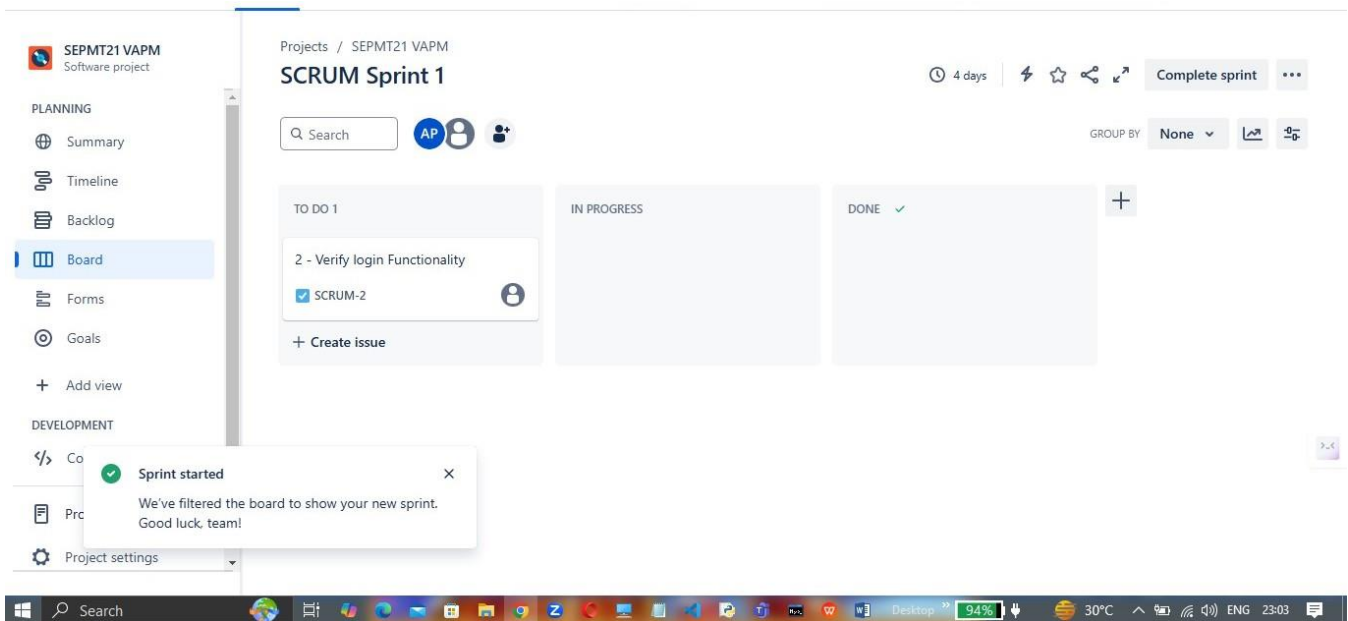
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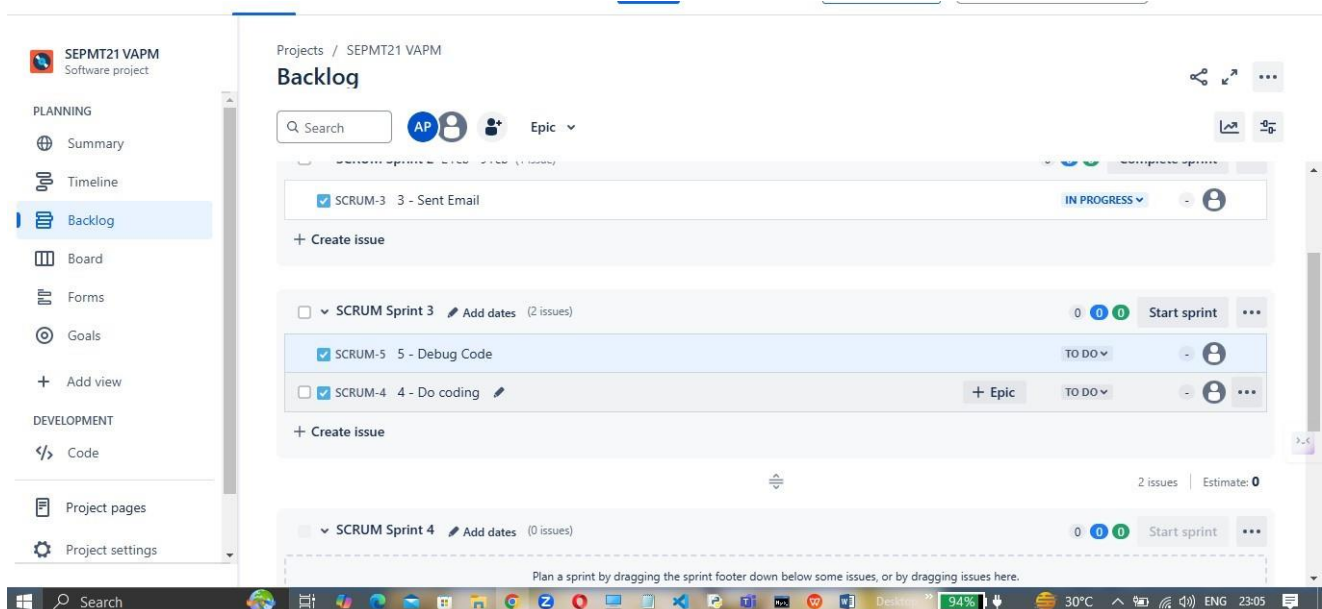
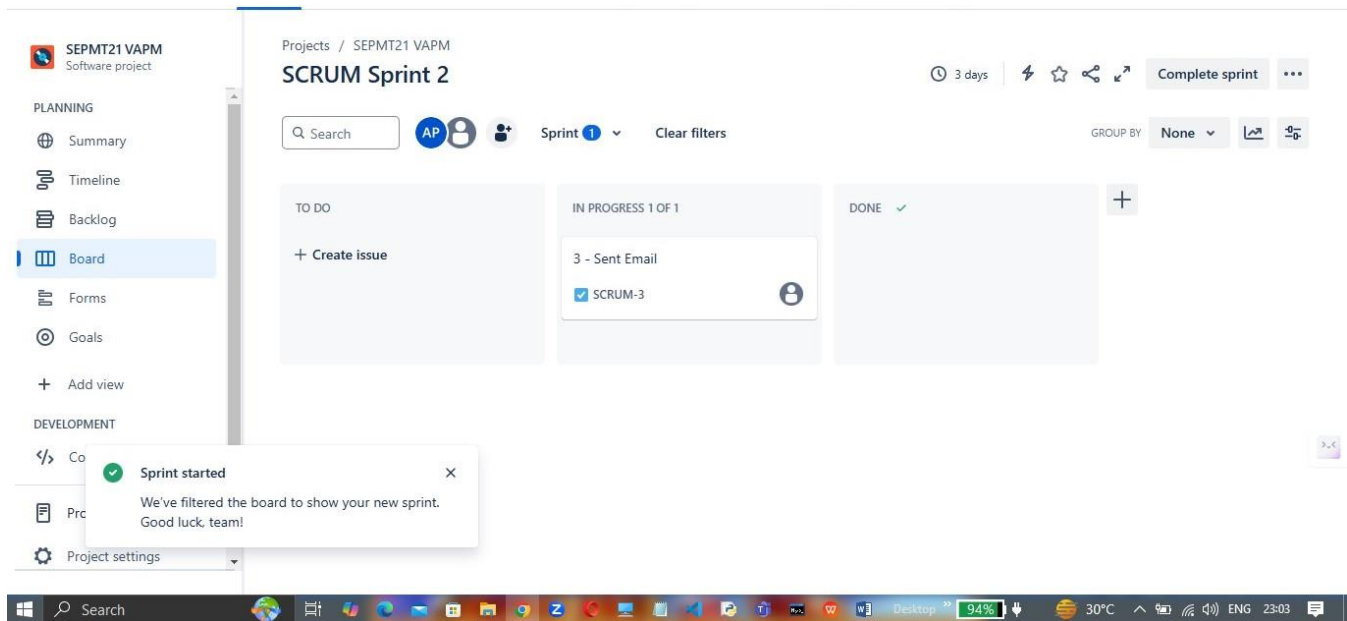
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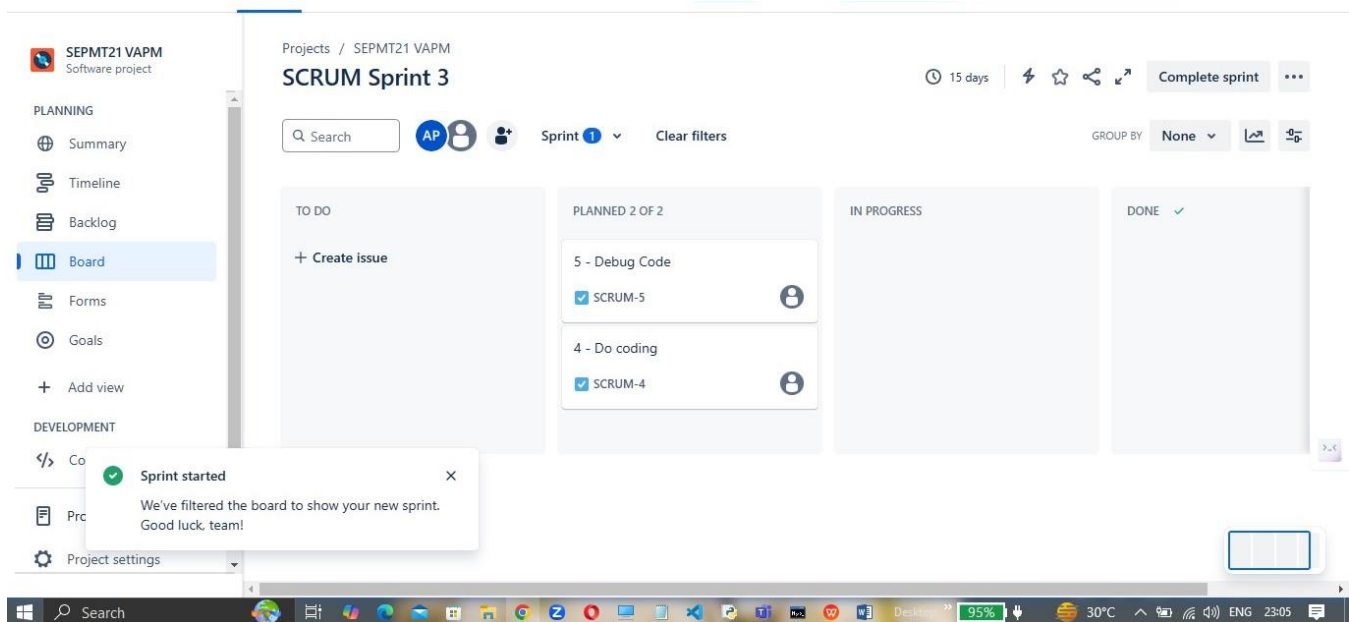
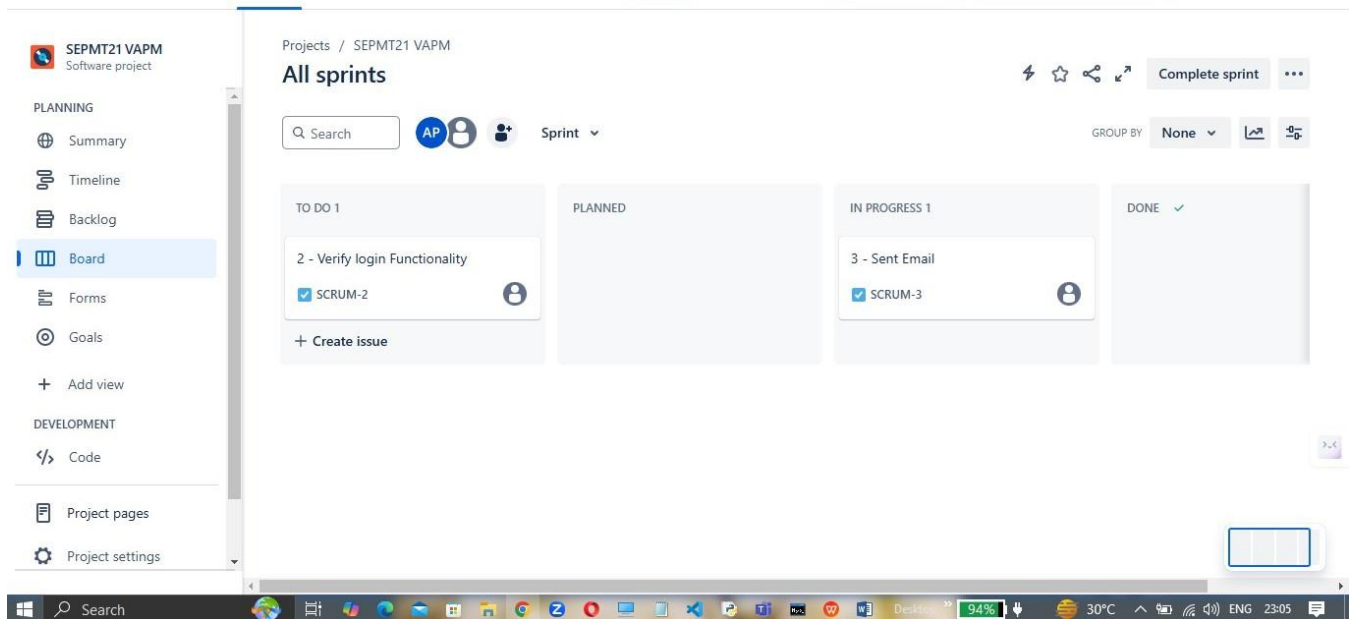
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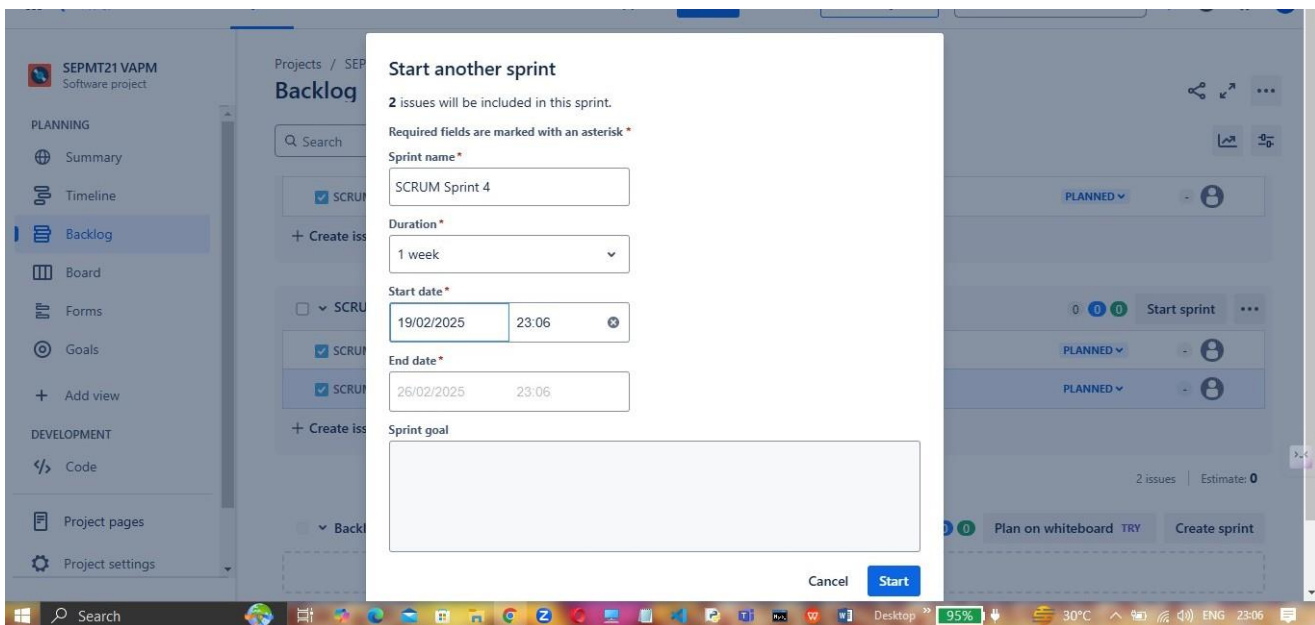
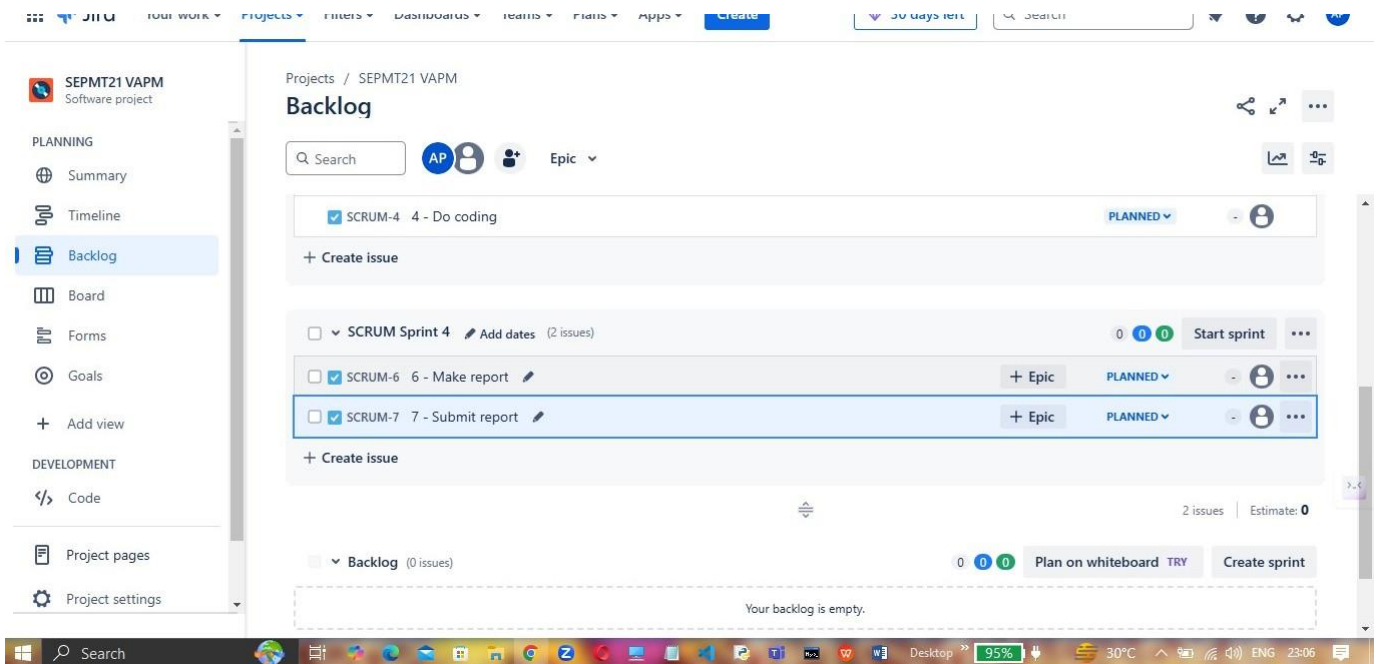
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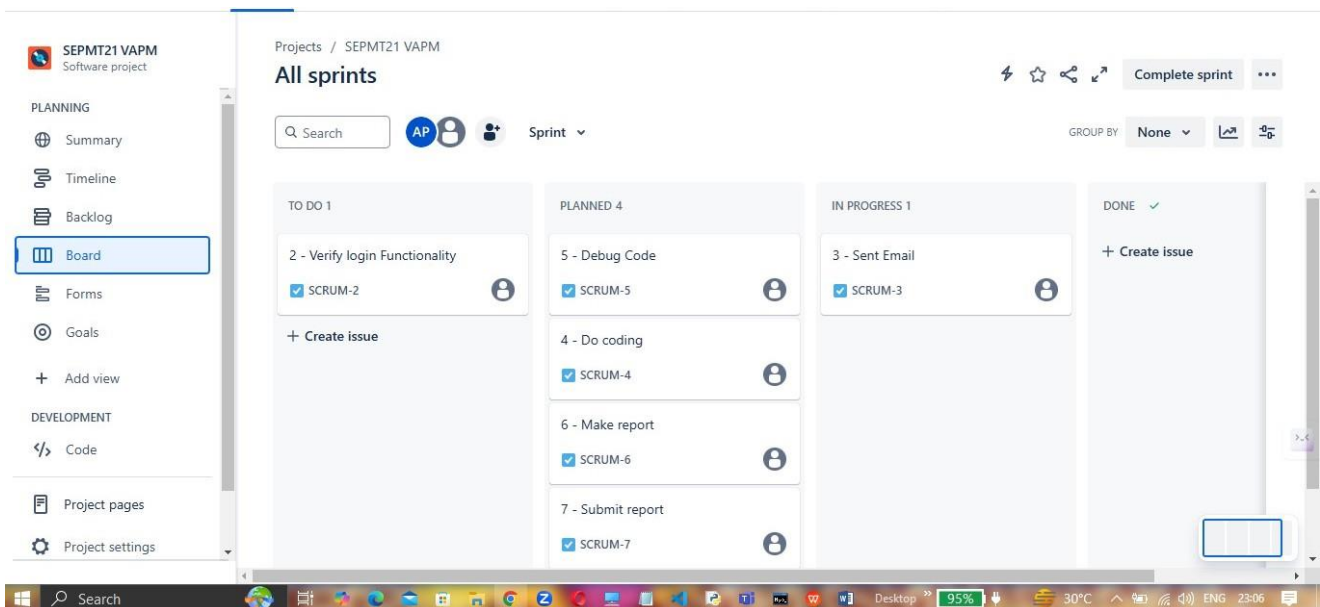
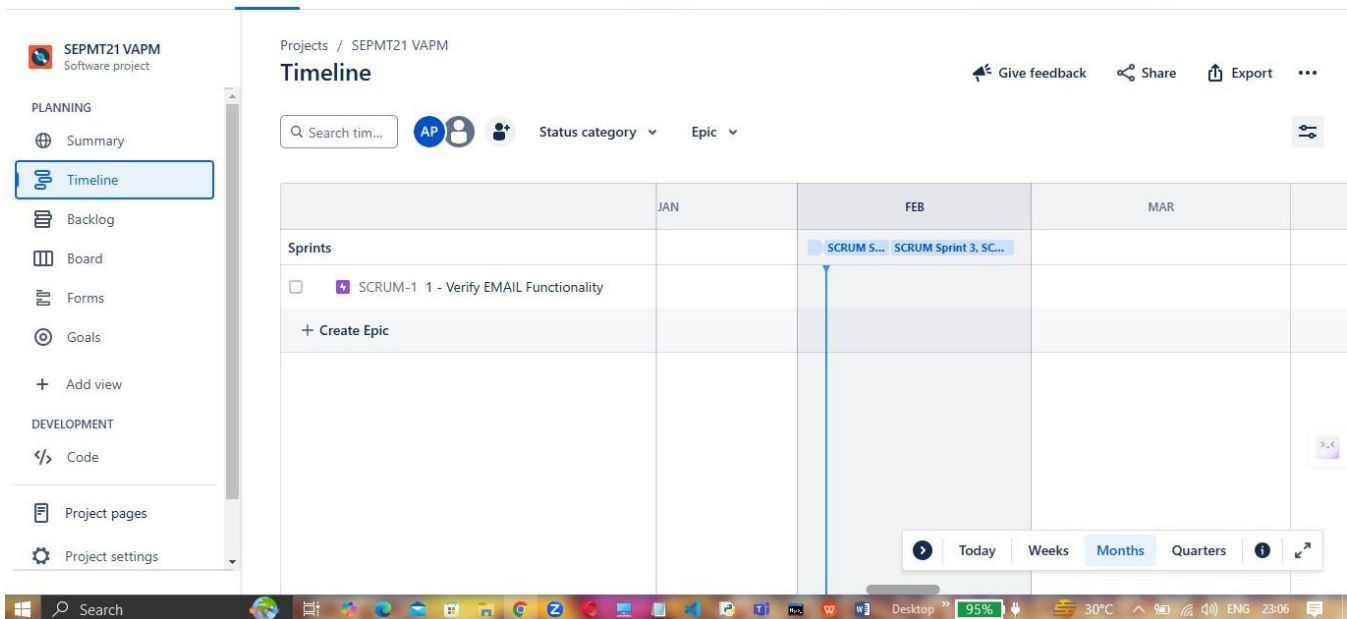
The screenshot shows the JIRA interface for a project named 'SEPMT21 VAPM'. The main view is the 'SCRUM Sprint 4' board. The left sidebar contains navigation options: Summary, Timeline, Backlog, Board (selected), Forms, Goals, and Add view. The board has four columns: 'TO DO' with a '+ Create issue' button; 'PLANNED 2 OF 4' containing two issues: '6 - Make report' (SCRUM-6) and '7 - Submit report' (SCRUM-7); 'IN PROGRESS' (empty); and 'DONE' (empty). A notification bubble states 'Sprint started' and 'We've filtered the board to show your new sprint. Good luck, team!'. The top right shows '15 days' remaining and a 'Complete sprint' button. The Windows taskbar at the bottom shows the system clock as 23:06.

The screenshot shows the 'Summary' page for 'My Scrum Project'. The left sidebar is the same as the previous image. The main content area includes: four summary cards at the top ('0 completed in the last 7 days', '7 updated in the last 7 days', '7 created in the last 7 days', '0 due in the next 7 days'); a 'Status overview' section with a donut chart showing 7 total issues (To Do: 1, Planned: 4, In Progress: 2, Done: 0); a 'Recent activity' section listing recent status changes and updates; and a 'Priority breakdown' section. The Windows taskbar at the bottom shows the system clock as 23:06.

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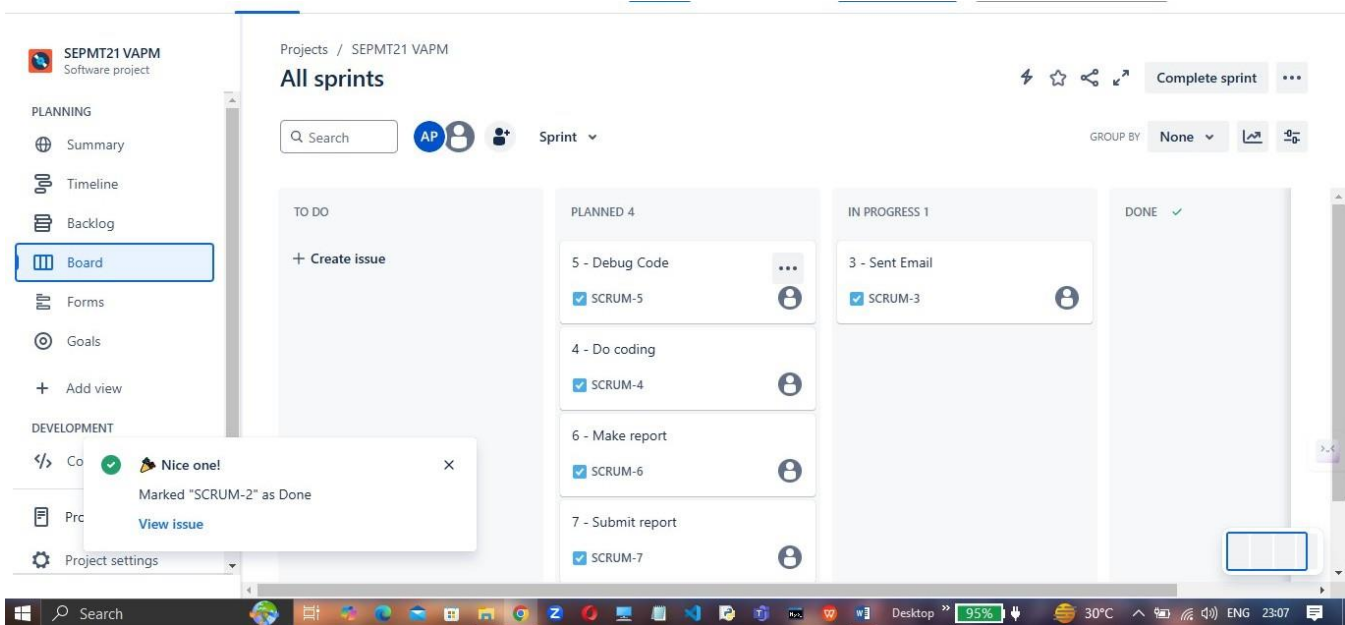
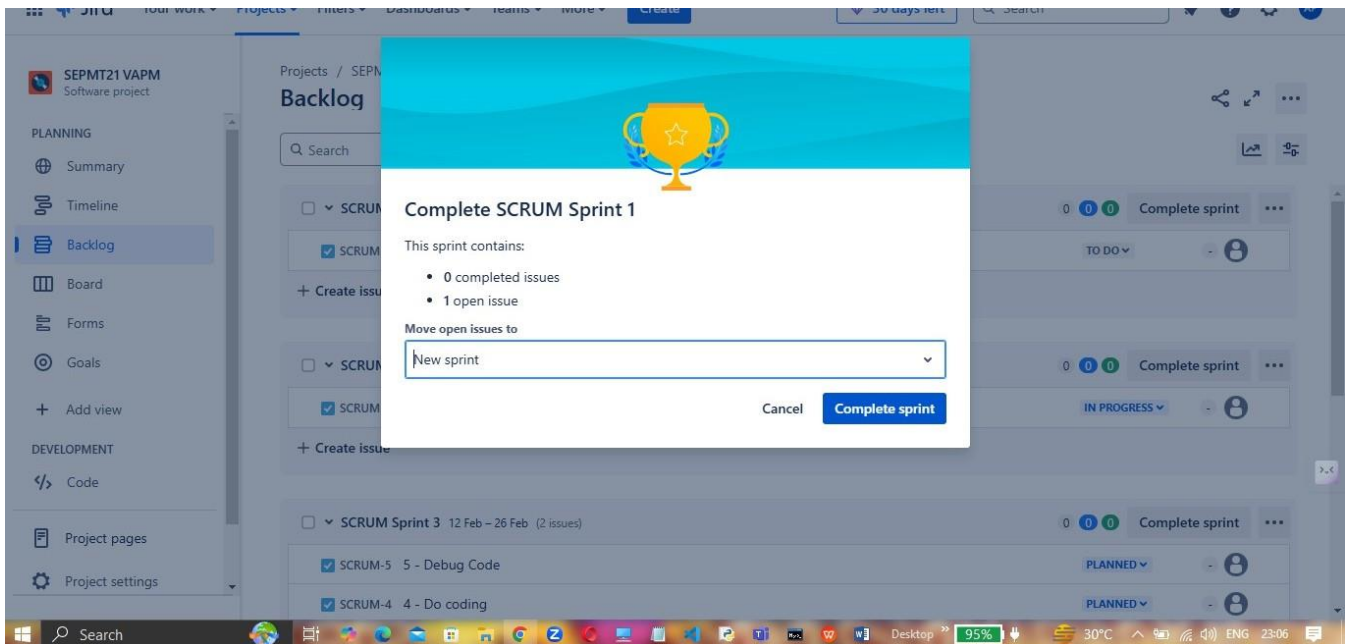
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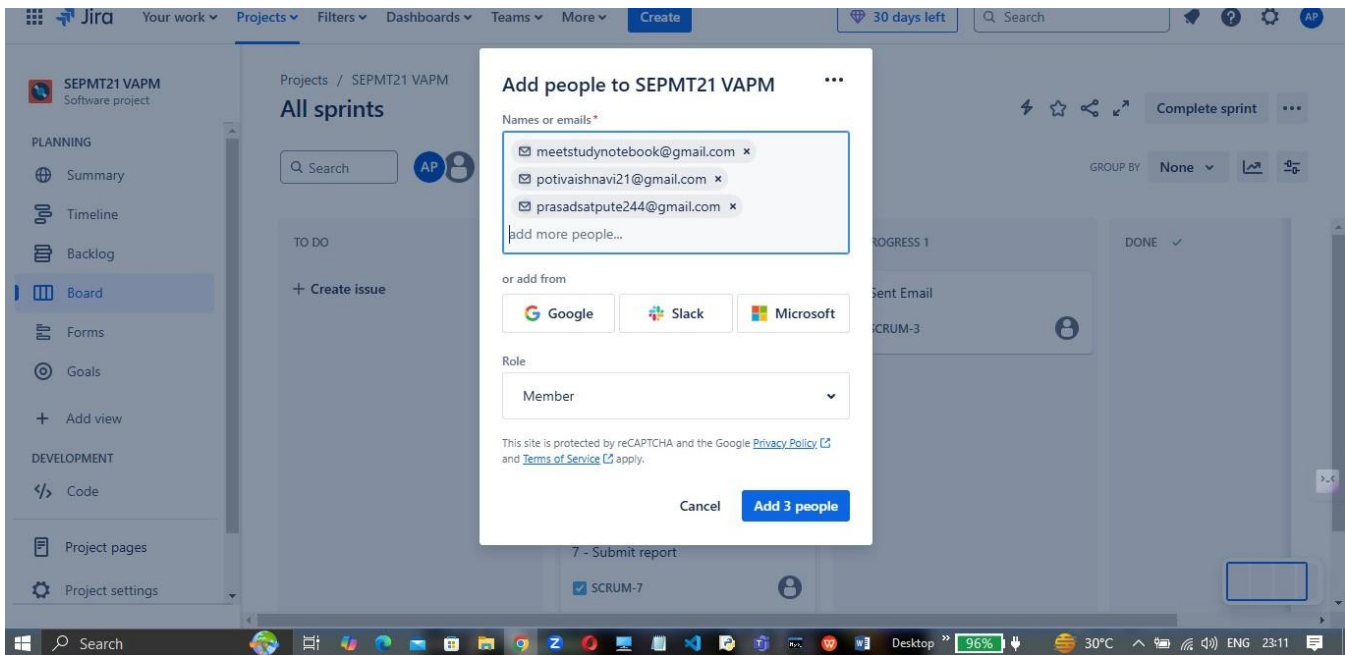
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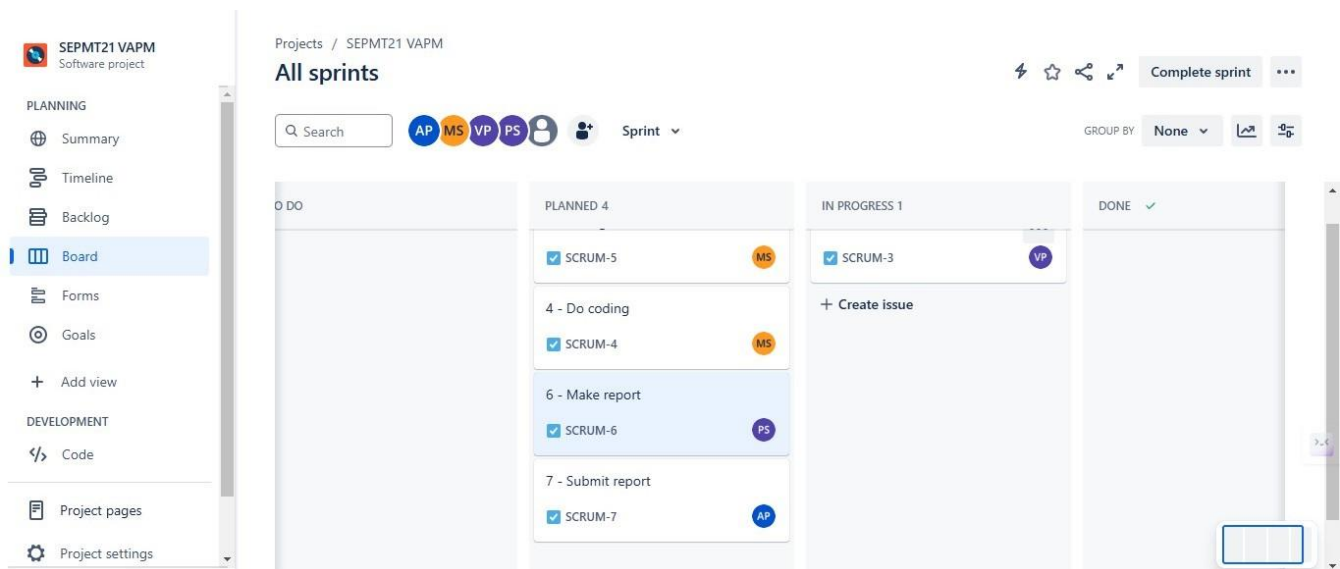
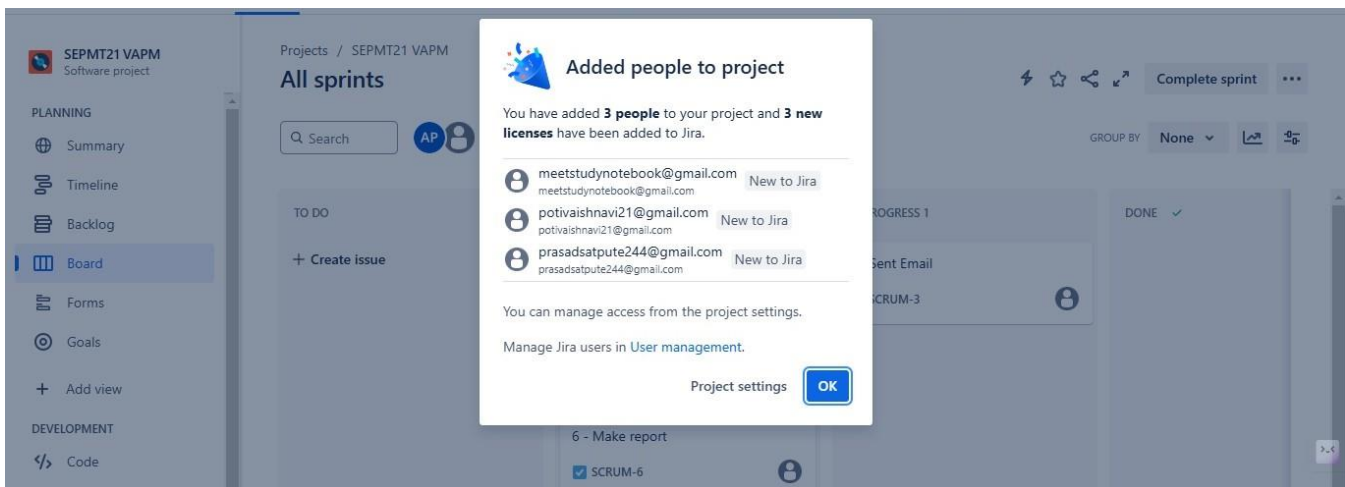
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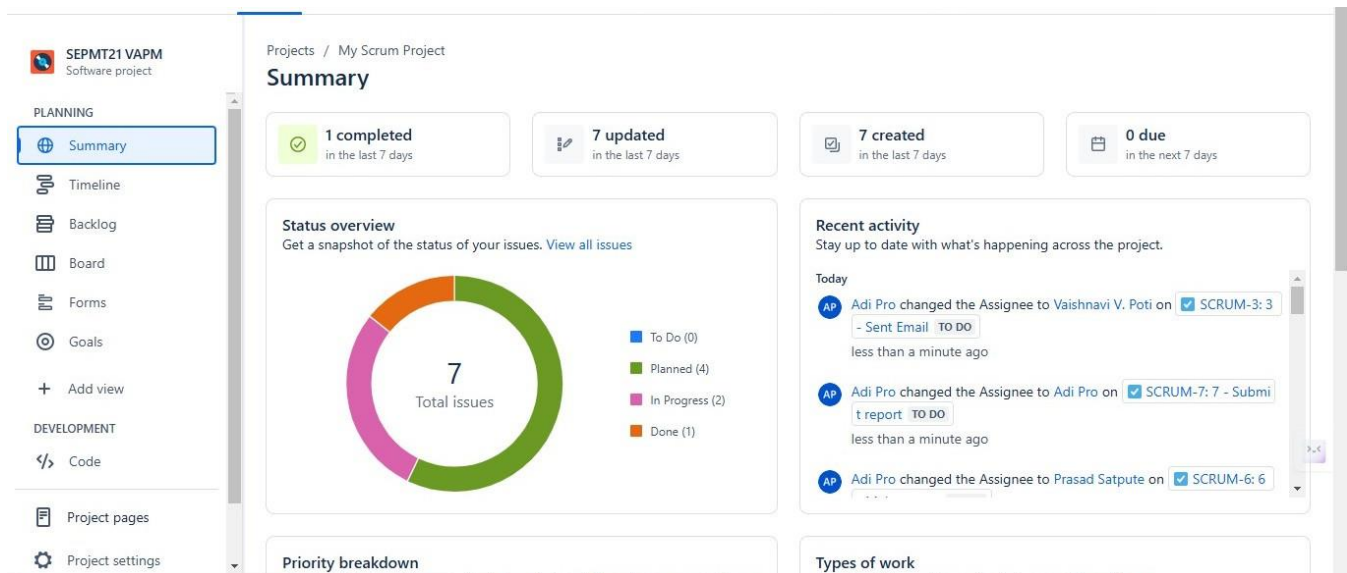
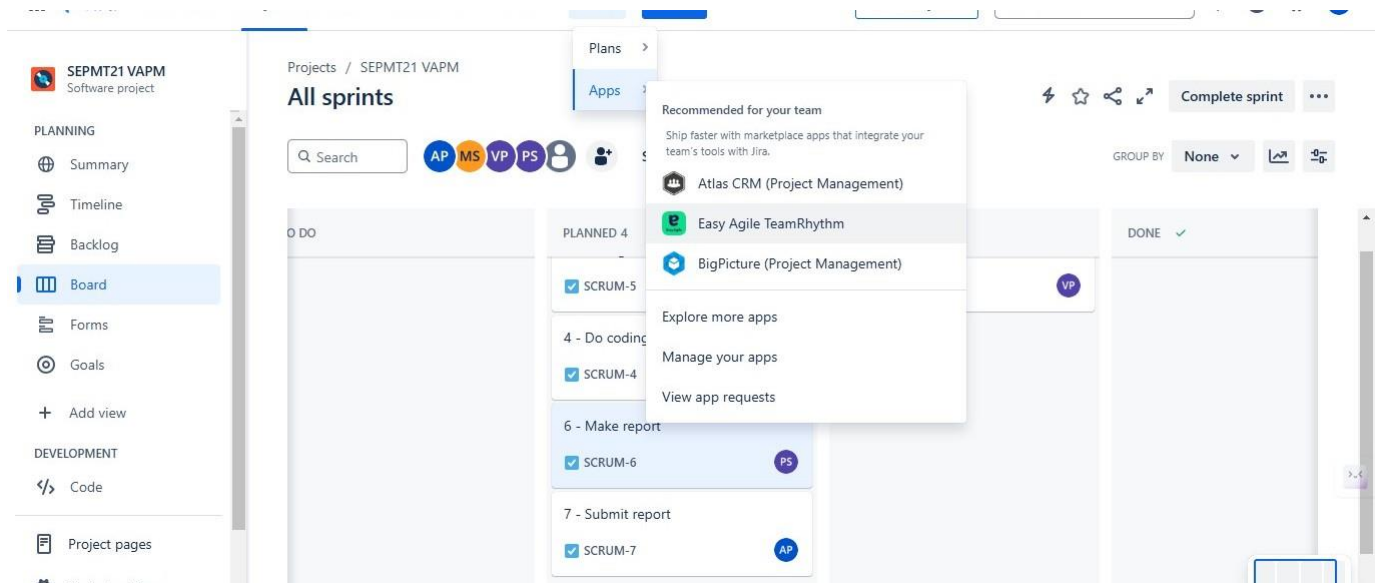
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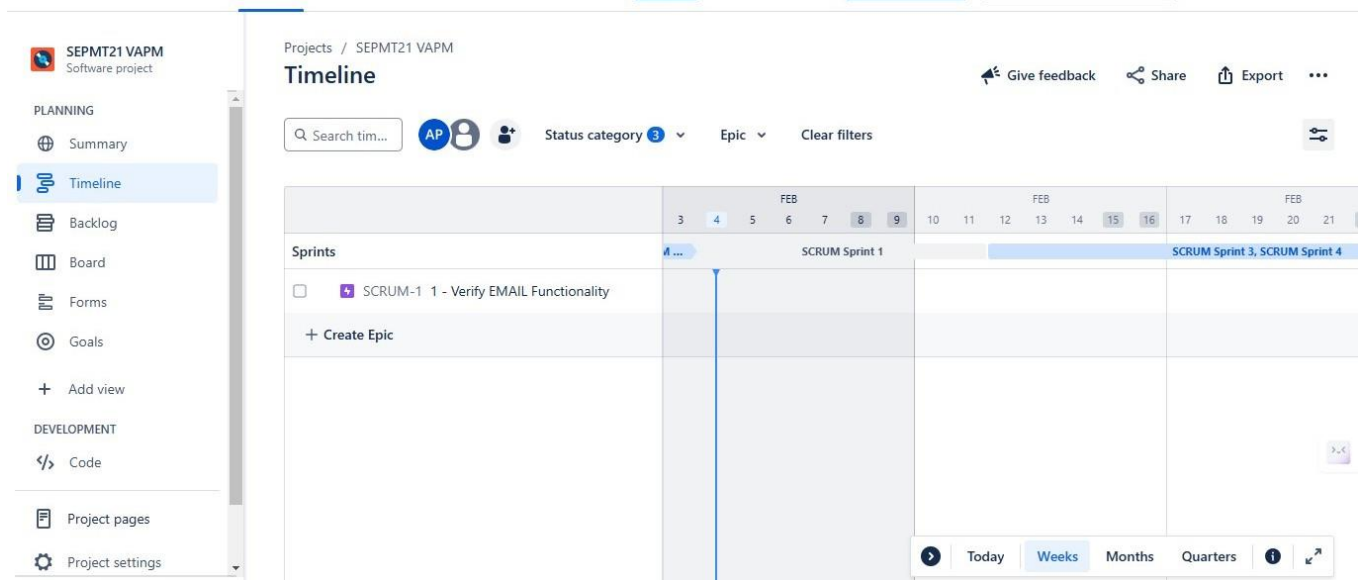
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SEPM DEMO

Plan

Summary

Timeline

Calendar

Program NEW

Teams

Releases

Dependencies

Plan settings

What are plans?

Plans / SEPM DEMO

Timeline

Give feedback

Unsaved changes

Warnings

TIMELINE

LIST

View settings

Issue

+ Create issue

Fields

#

1

SCRUM-1

1 - Verify EMAIL F...

Story - 6 issues

SCRUM-2

2 - Verify login F...

SCRUM-3

3 - Sent Email

SCRUM-5

5 - Debug Code

SCRUM-4

4 - Do coding

SCRUM-6

6 - Make report

SCRUM-7

7 - Submit report

Priority

Medium

Medium

Medium

Medium

Medium

Medium

Medium

Start date

04 Feb 2025

02 Feb 2025

12 Feb 2025

12 Feb 2025

19 Feb 2025

19 Feb 2025

Due date

11 Mar 2025

09 Feb 2025

26 Feb 2025

26 Feb 2025

26 Feb 2025

26 Feb 2025

Status

IN PROGRESS

DONE

IN PROGRESS

PLANNED

PLANNED

PLANNED

Progress (days)

SEPM DEMO

Plan

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Timeline

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Program NEW

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Story - 6 issues

SCRUM-2

2 - Verify login F...

SCRUM-3

3 - Sent Email

SCRUM-5

5 - Debug Code

SCRUM-4

4 - Do coding

SCRUM-6

6 - Make report

SCRUM-7

7 - Submit report

Priority

Medium

High

Medium

High

Highest

Medium

Medium

Start date

04 Feb 2025

02 Feb 2025

12 Feb 2025

12 Feb 2025

19 Feb 2025

19 Feb 2025

Due date

11 Mar 2025

09 Feb 2025

26 Feb 2025

26 Feb 2025

26 Feb 2025

26 Feb 2025

Status

IN PROGRESS

DONE

IN PROGRESS

PLANNED

PLANNED

PLANNED

Progress (days)

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Unsaved changes 4

Filters

Basic view

Warnings

TIMELINE

LIST

View settings

Issue

Create issue

Fields

#	Priority	Start date	Due date	Status	Progress (days)
Story – 6 issues					
<input type="checkbox"/> <input checked="" type="checkbox"/> SCRUM-2 2 - Verify login F...	High	04 Feb 2025	11 Mar 2025	DONE	
<input type="checkbox"/> <input checked="" type="checkbox"/> SCRUM-3 3 - Sent Email	Medium	02 Feb 2025	09 Feb 2025	DONE	
<input type="checkbox"/> <input checked="" type="checkbox"/> SCRUM-5 5 - Debug Code	High	12 Feb 2025	26 Feb 2025	IN PROGRESS	
<input type="checkbox"/> <input checked="" type="checkbox"/> SCRUM-4 4 - Do coding	Highest	12 Feb 2025	26 Feb 2025	IN PROGRESS	
<input type="checkbox"/> <input checked="" type="checkbox"/> SCRUM-6 6 - Make report	Medium	19 Feb 2025	26 Feb 2025	PLANNED	
<input type="checkbox"/> <input checked="" type="checkbox"/> SCRUM-7 7 - Submit report	Medium	19 Feb 2025	26 Feb 2025	PLANNED	

SEPM DEMO

Plan

Summary

Timeline

Calendar

Program NEW

Teams

Releases

Dependencies

Plan settings

What are plans?

Plans / SEPM DEMO

Calendar

Give feedback

Unsaved changes 4

Search issues

Project

Type

Status

Assignee

More +

February 2025

<

>

Today

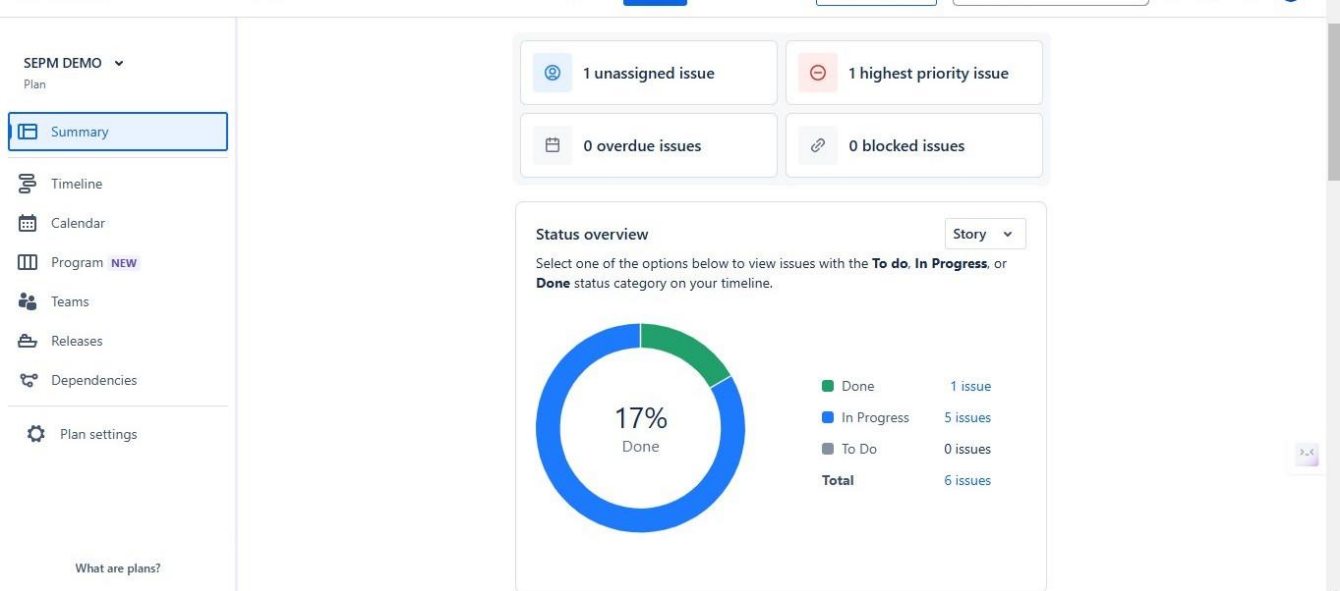
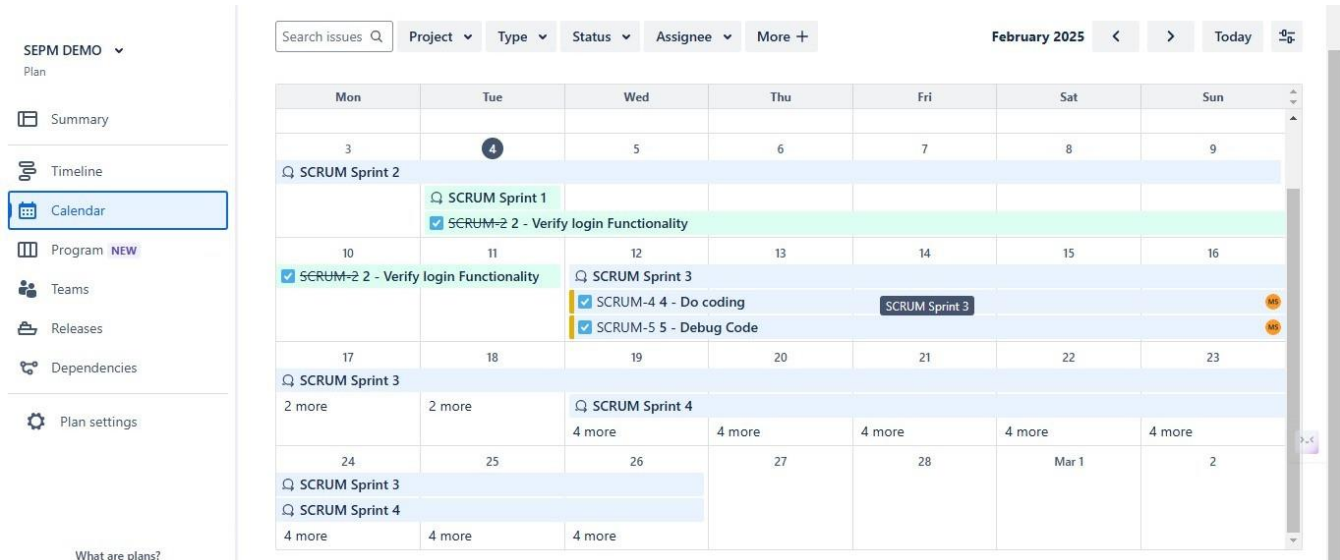
Calendar icon

Mon	Tue	Wed	Thu	Fri	Sat	Sun
27	28	29	30	31	Feb 1	2
SCRUM Sprint 2						
3	4	5	6	7	8	9
SCRUM Sprint 1						
SCRUM-2 2 - Verify login Functionality						
10	11	12	13	14	15	16
SCRUM Sprint 3						
SCRUM-2 2 - Verify login Functionality						
SCRUM-4 4 - Do coding						
SCRUM-5 5 - Debug Code						
17	18	19	20	21	22	23
SCRUM Sprint 3						

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The screenshot displays the JIRA Scrum Board for the project 'SEPMT21 VAPM'. The interface includes a left sidebar with navigation options: PLANNING (Summary, Timeline, Backlog, Board, Forms, Goals, Add view), DEVELOPMENT (Code), Project pages, and Project settings. The 'Board' view is selected. The main area shows the 'All sprints' view with a search bar and filters for team members (AP, MS, VP, PS) and a 'Sprint' dropdown. The board is organized into three columns: 'PLANNED 2', 'IN PROGRESS 2', and 'DONE 1'. Each column contains task cards with checkboxes and assigned team members. The 'DONE' column also shows a 'Complete sprint' button and a 'GROUP BY' dropdown set to 'None'. A small 'Issue' label is visible on the left side of the board.

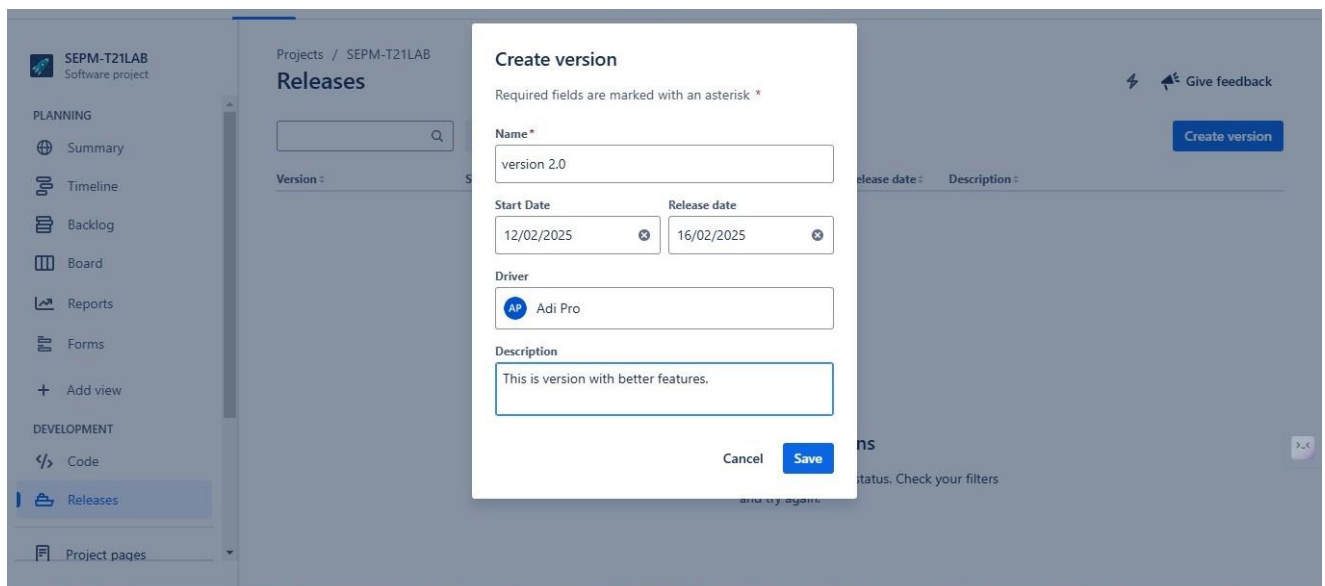
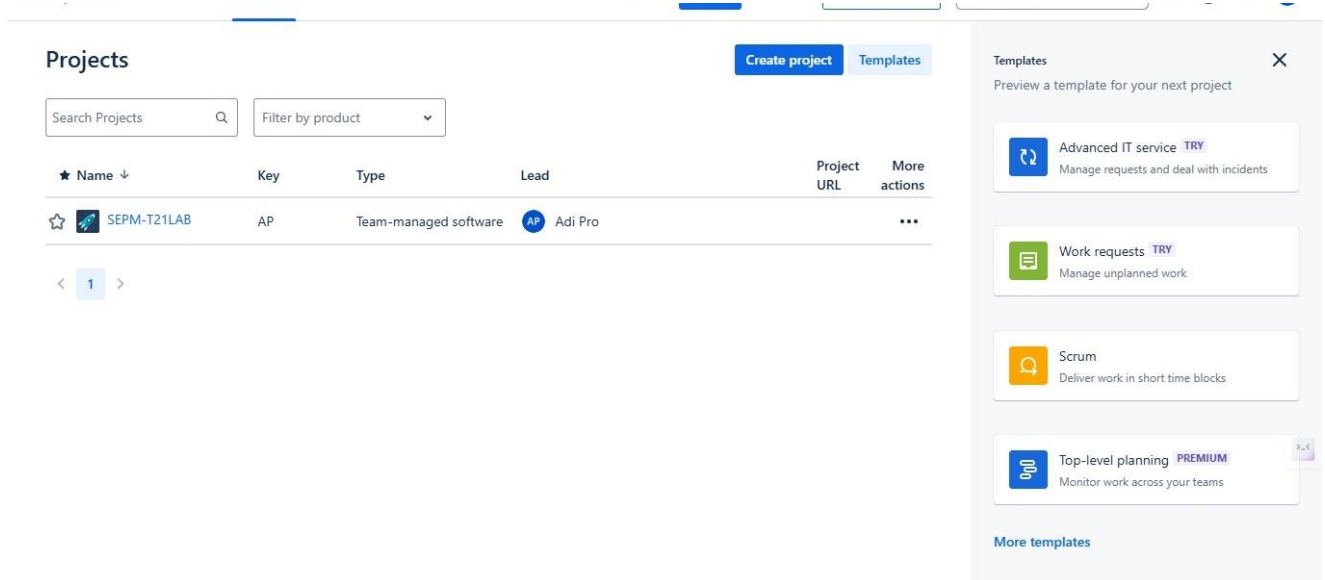
Column	Task	Assigned To	Status
PLANNED 2	6 - Make report	PS	SCRUM-6
	7 - Submit report	AP	SCRUM-7
IN PROGRESS 2	5 - Debug Code	MS	SCRUM-5
	4 - Do coding	MS	SCRUM-4
DONE 1	3 - Sent Email	VP	SCRUM-3

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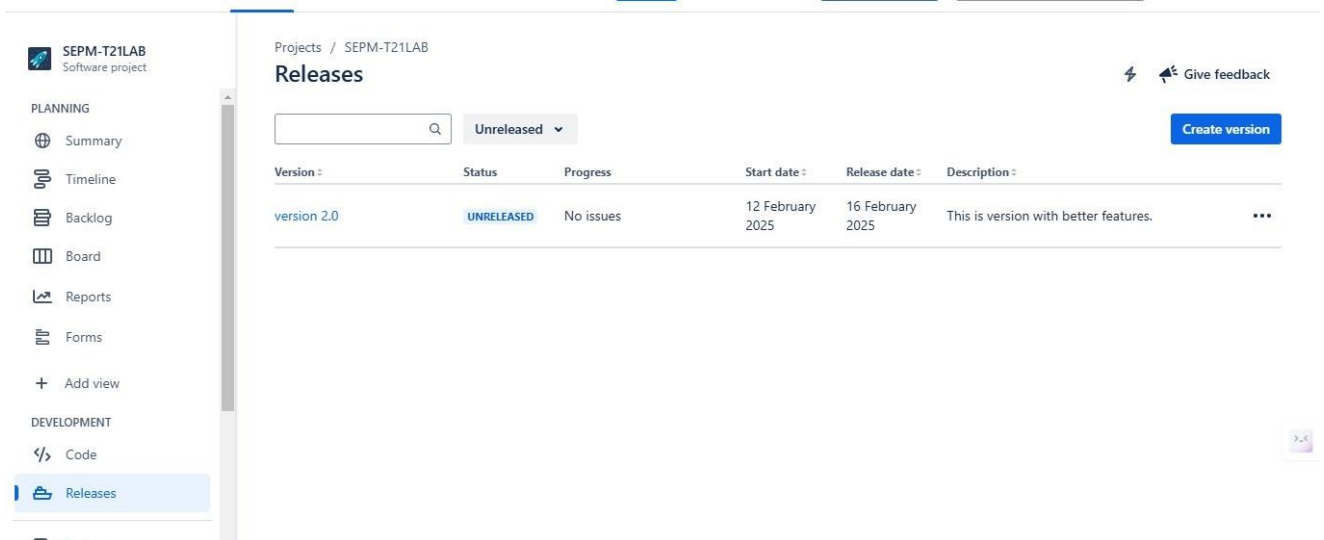
8) Version Creation



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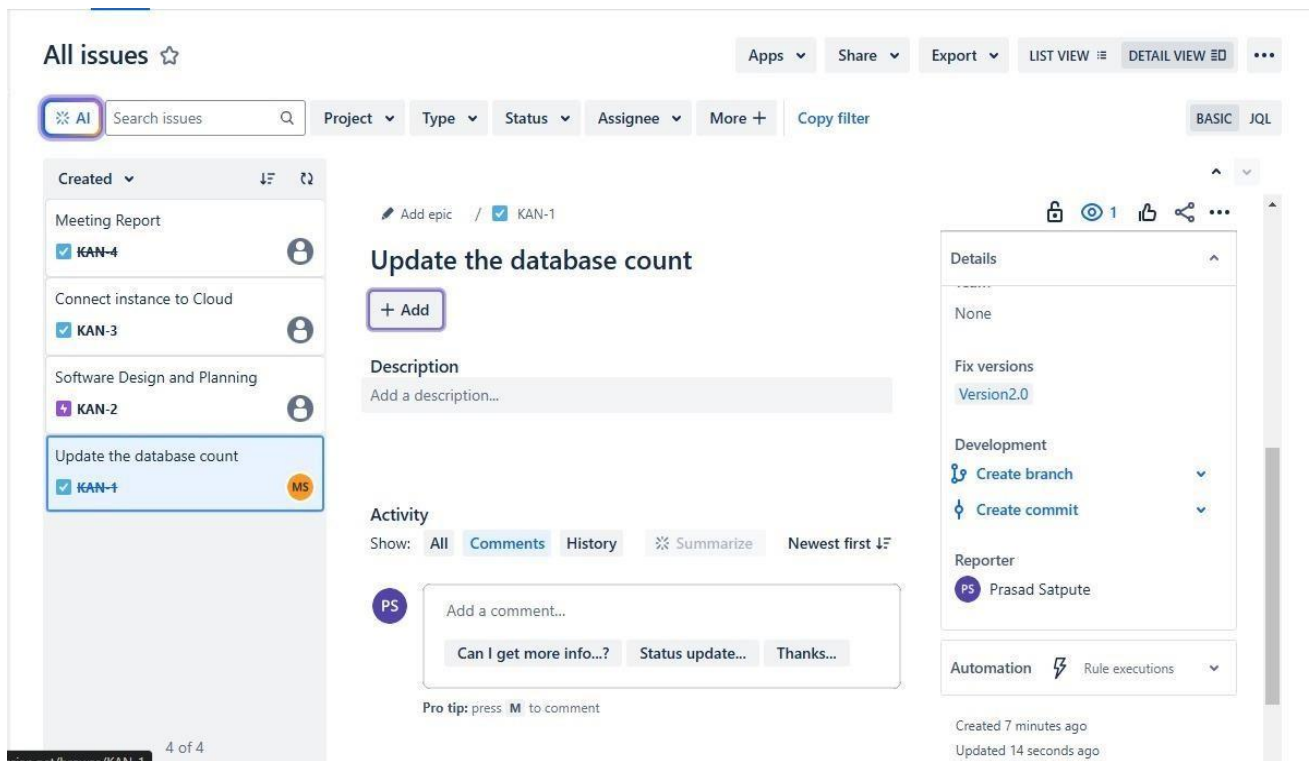
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The screenshot shows the JIRA Releases page for the project 'SEPM-T21LAB'. The left sidebar contains navigation options under 'PLANNING' (Summary, Timeline, Backlog, Board, Reports, Forms) and 'DEVELOPMENT' (Code, Releases). The main area is titled 'Releases' and shows a table of releases. A 'Create version' button is visible in the top right.

Version	Status	Progress	Start date	Release date	Description
version 2.0	UNRELEASED	No issues	12 February 2025	16 February 2025	This is version with better features.

9) Creating Issues for new Version



The screenshot shows the JIRA issue creation page. The left sidebar lists 'All issues' with a search bar and filters. The main area is titled 'Update the database count' and includes a 'Description' field, an 'Add' button, and an 'Activity' section. The right sidebar shows details for the issue, including 'Fix versions' (Version2.0), 'Development' (Create branch, Create commit), and 'Reporter' (Prasad Satpute).

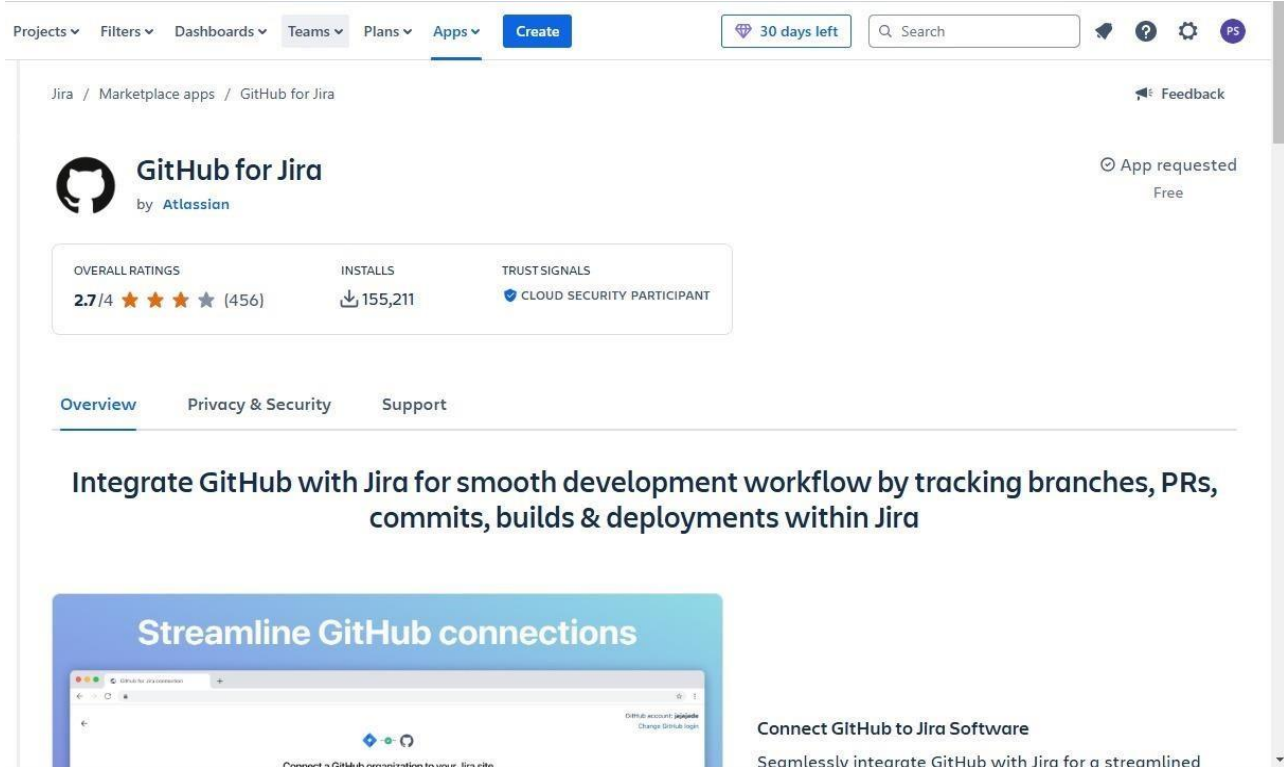
Issue Details:

- Issue Title: Update the database count
- Status: KAN-1
- Fix versions: Version2.0
- Development: Create branch, Create commit
- Reporter: Prasad Satpute
- Created: 7 minutes ago
- Updated: 14 seconds ago

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10) GitHub connection



GitHub Repo Link :- <https://github.com/shubhampandev78/SEPM-70-SHUBHAM/tree/main/EXP%2006%20%26%2007>

Conclusion: Thus, we have successfully implemented Agile Methodology and Scrum using JIRA tool.