

**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.

## Software Engineering & Project Management Lab

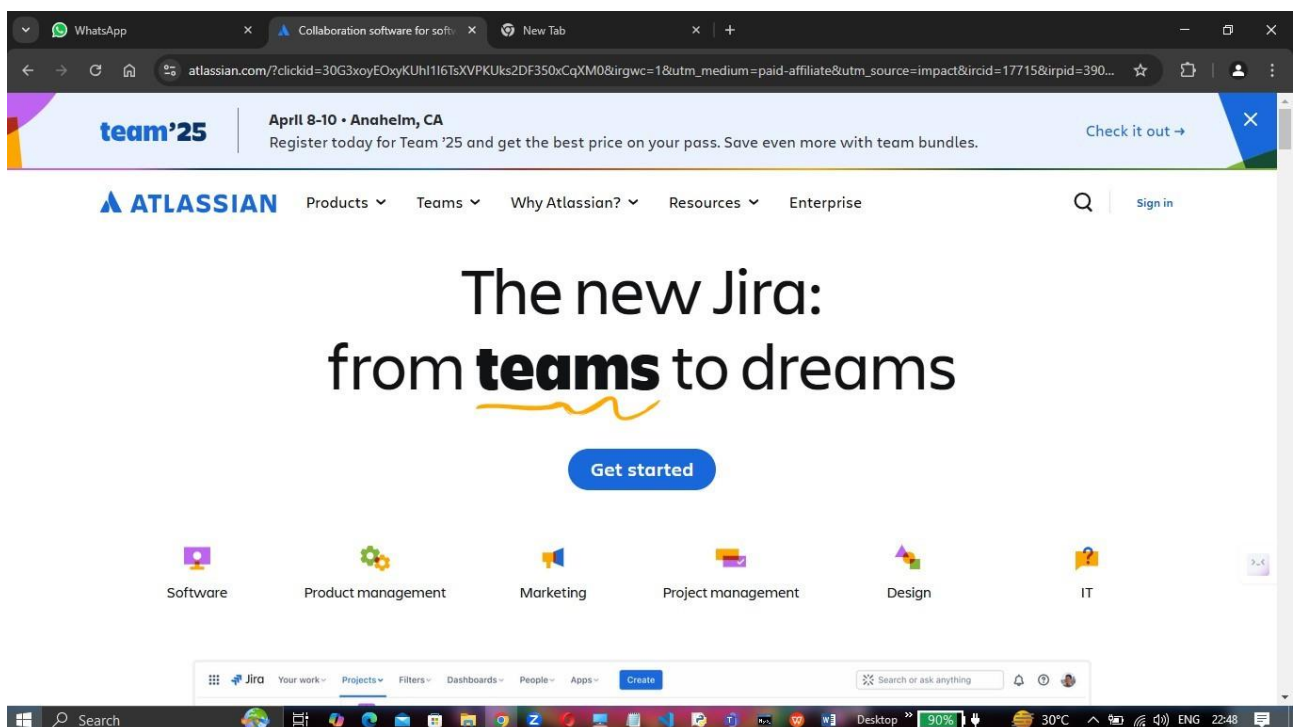
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#### ➤ Implementation:

JIRA Account Creation:

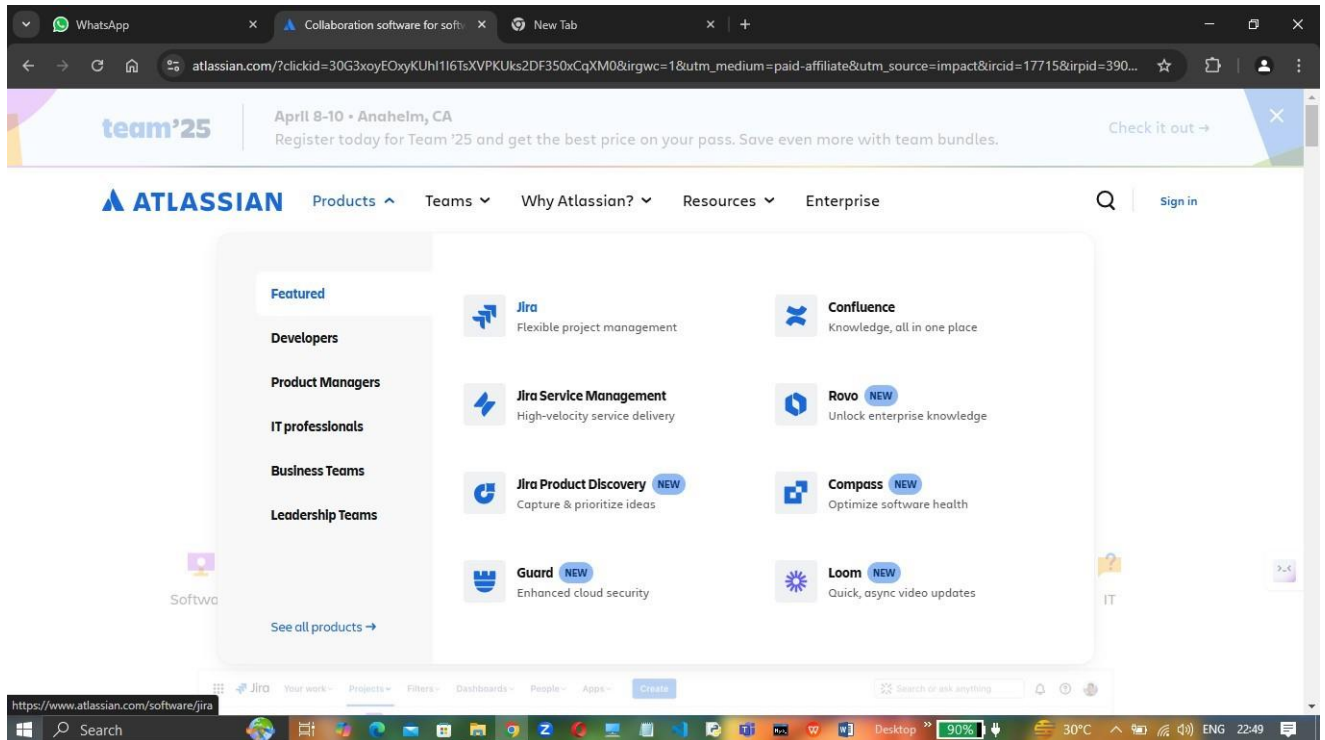
- 1) Open atlassian.com webpage
- 2) Select products and click on Jira Software
- 3) Click on “Get it free”



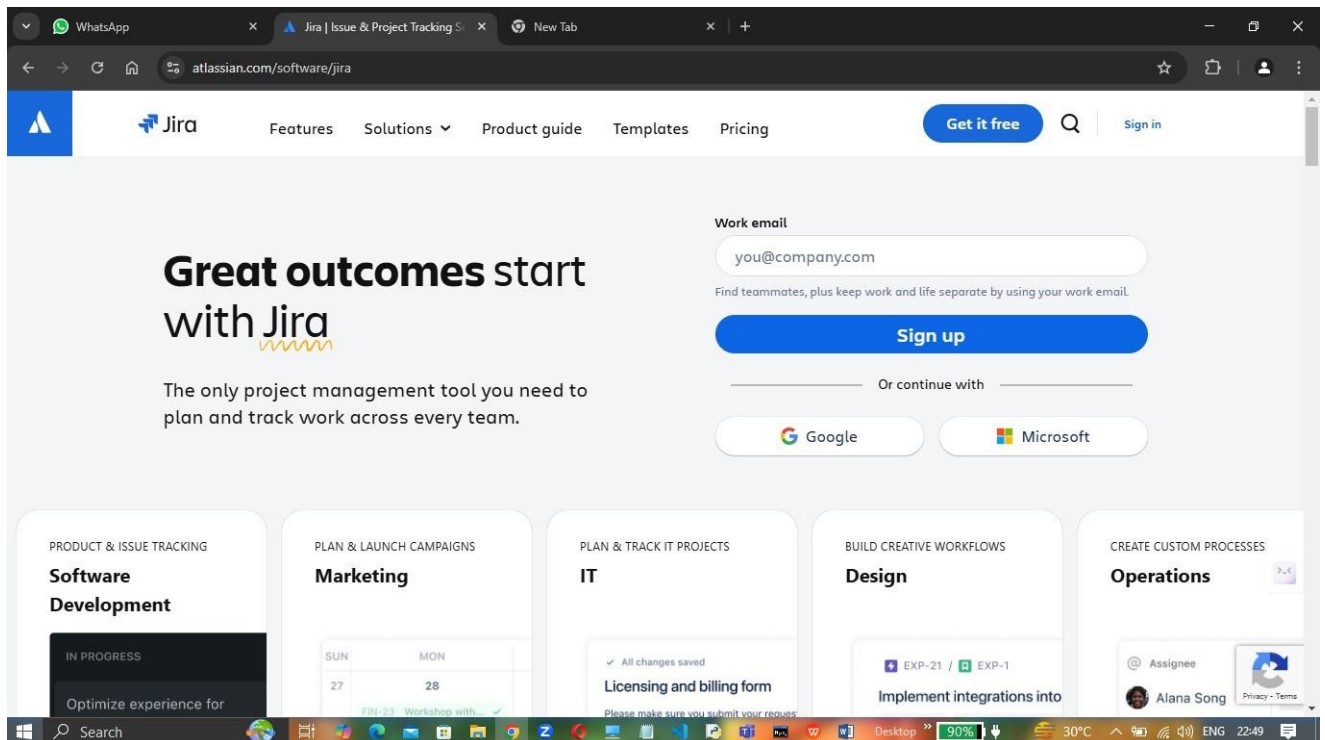
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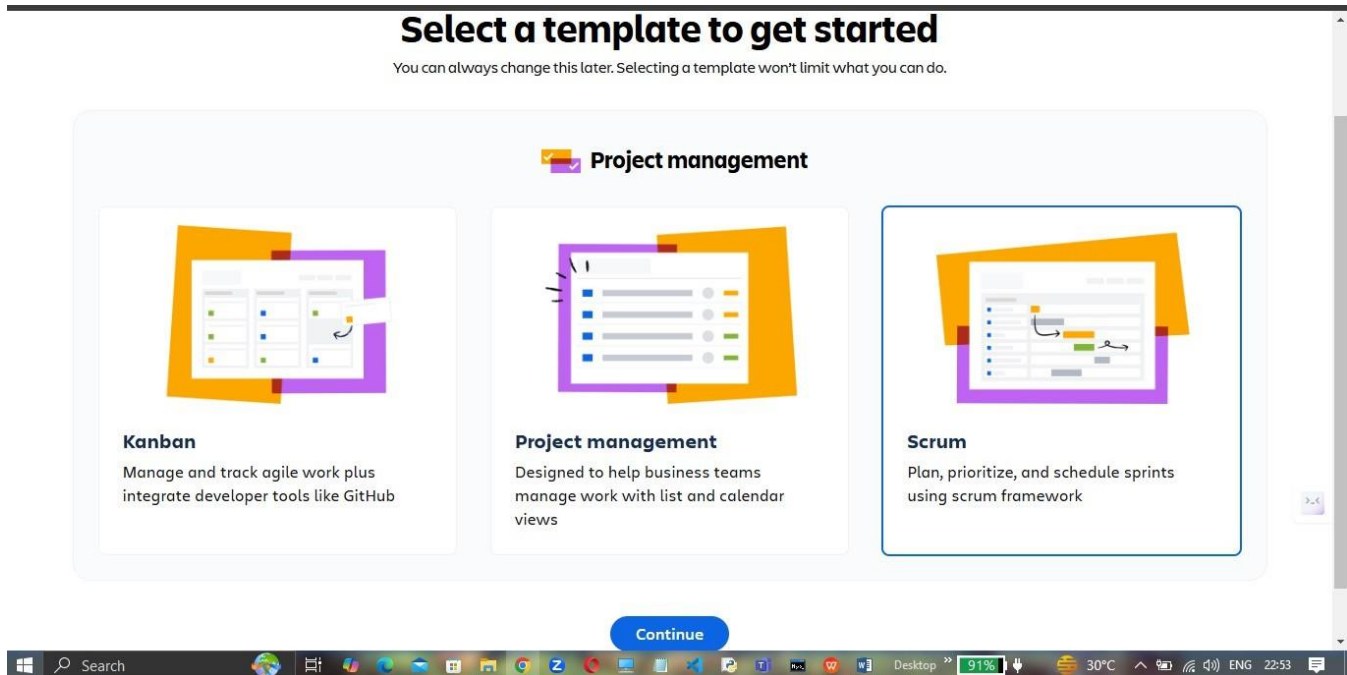
### 4) Select Continue with Google



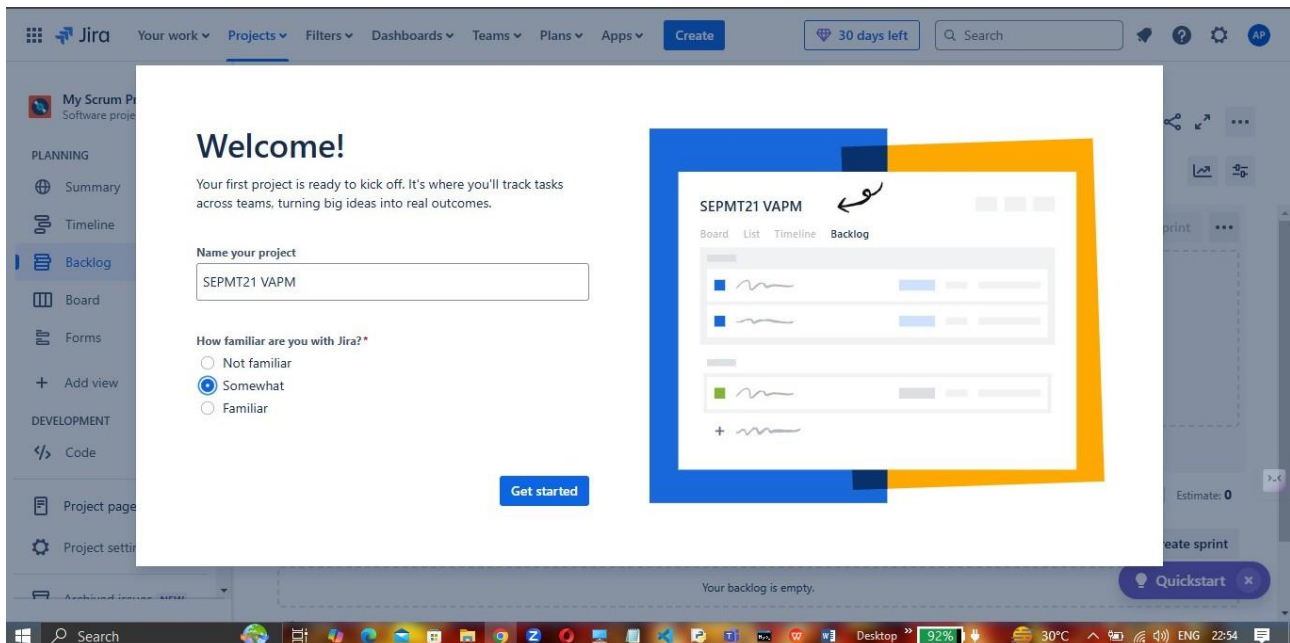
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### 6) Add project details

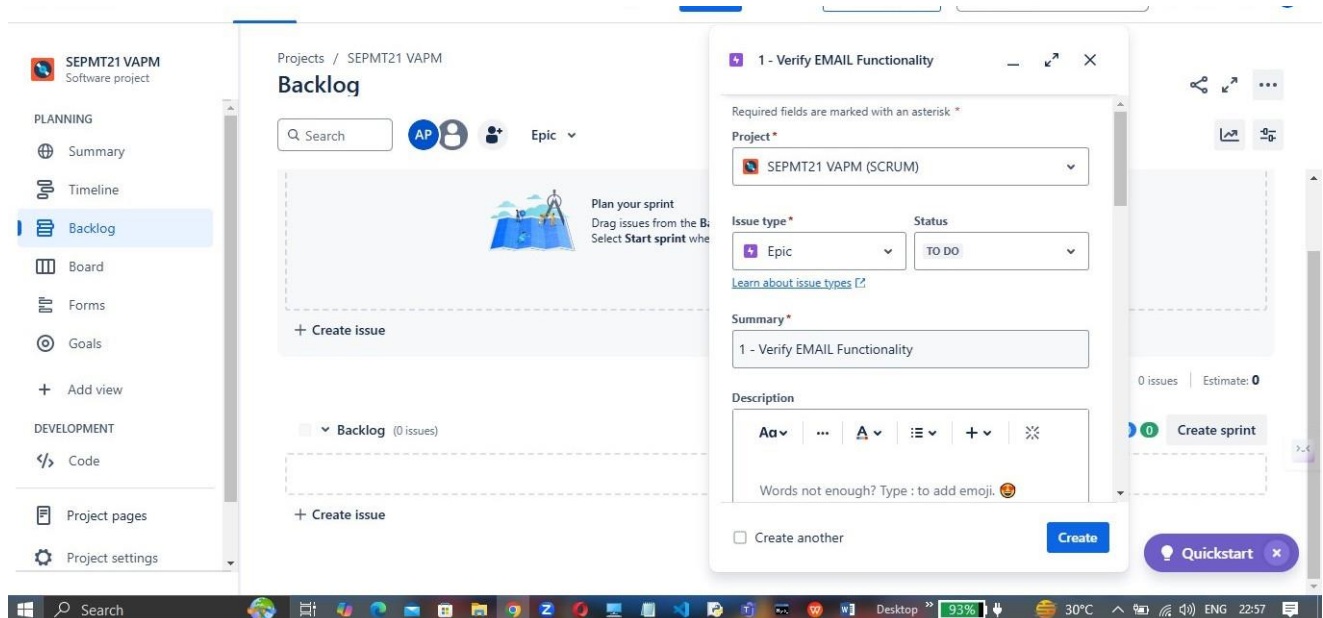
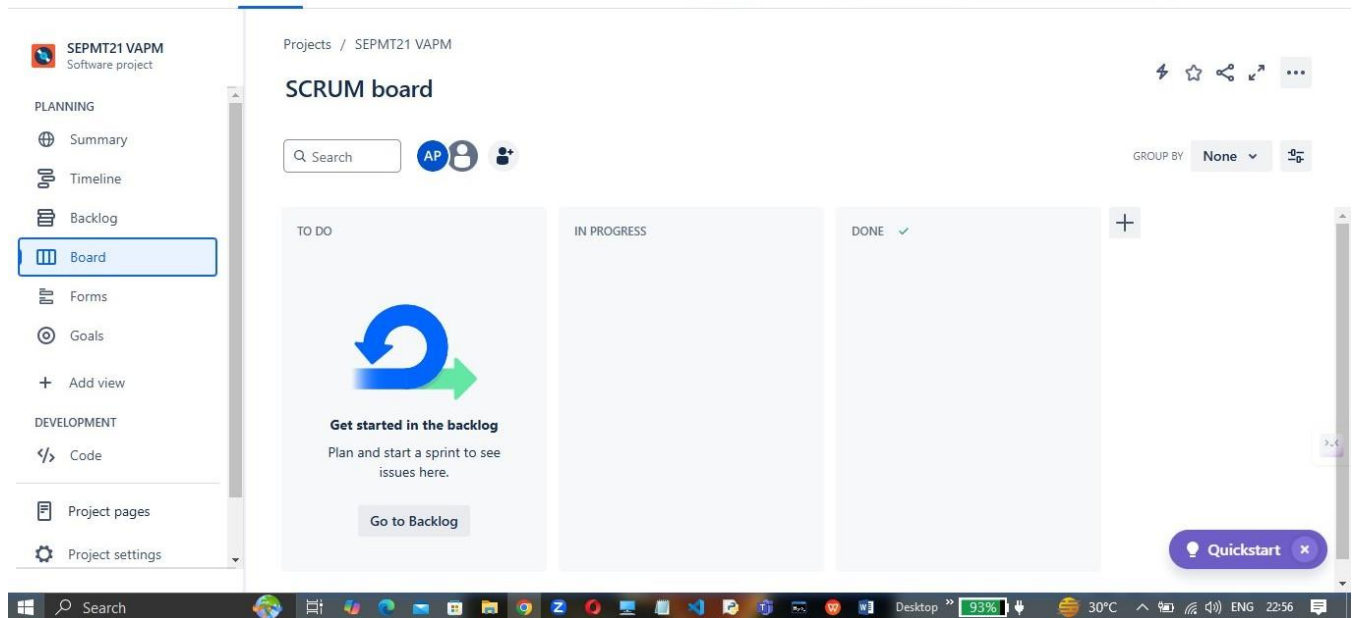


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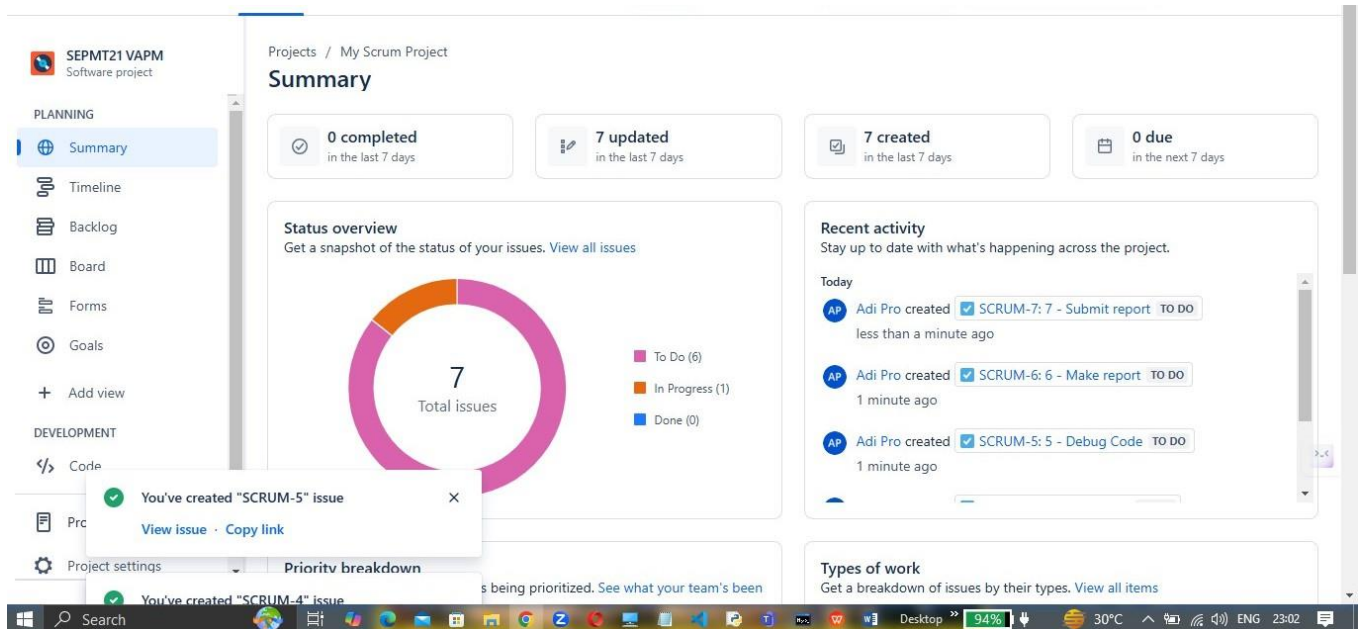
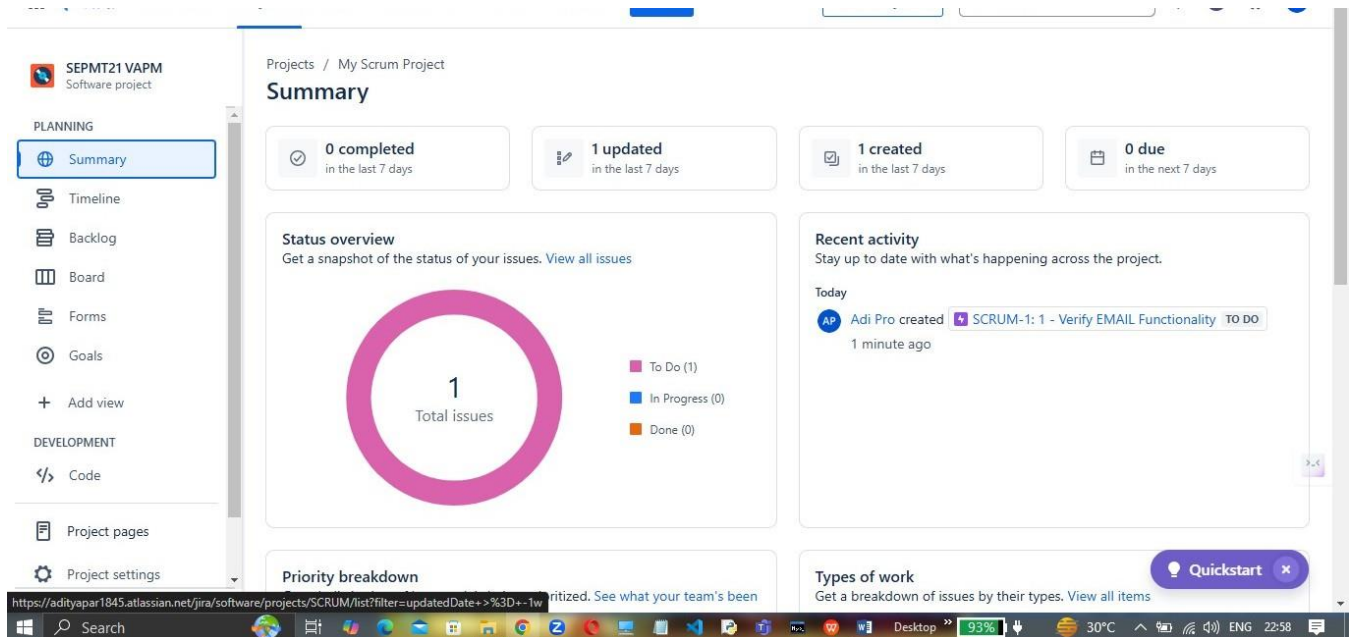
- 7) Implement Agile and Scrum using various features of JIRA tool such as sprints, timeline, scrum board, make a team and add members,etc



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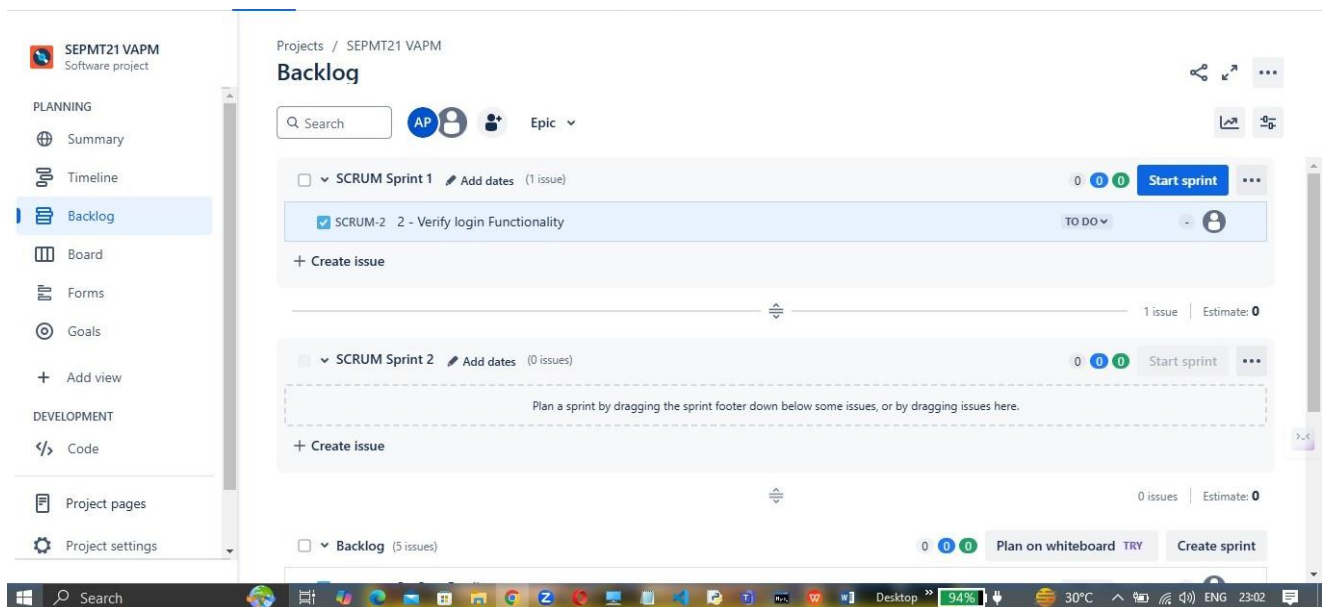
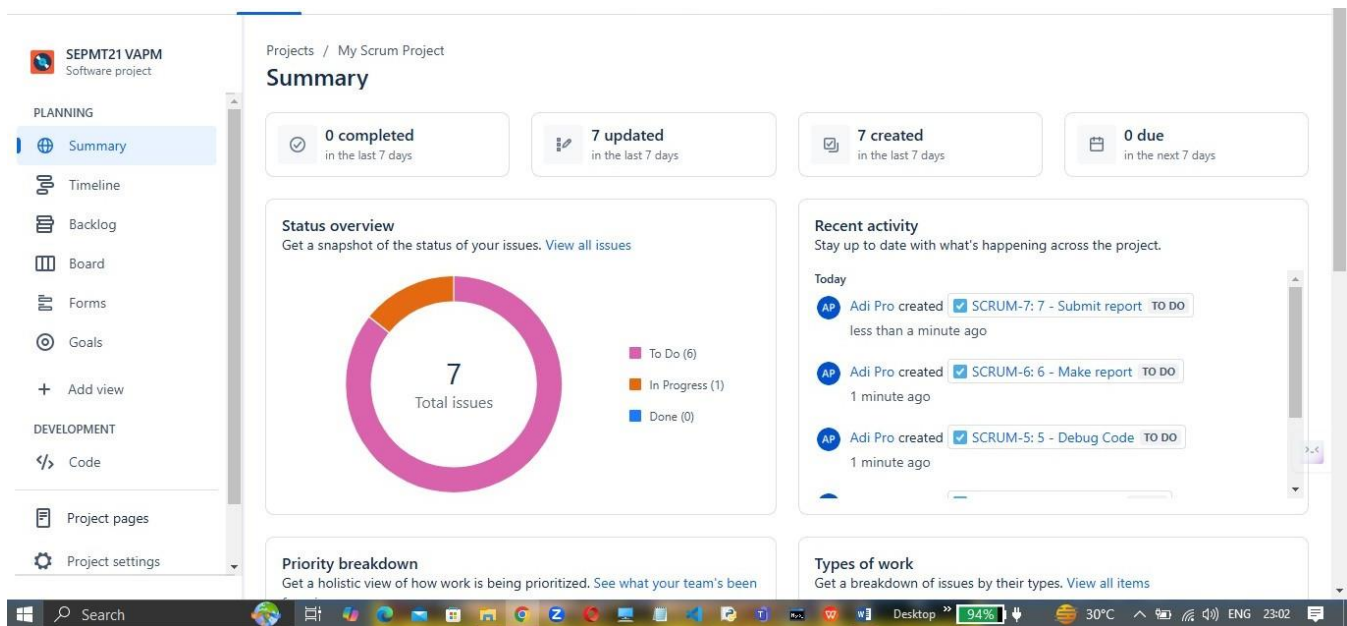




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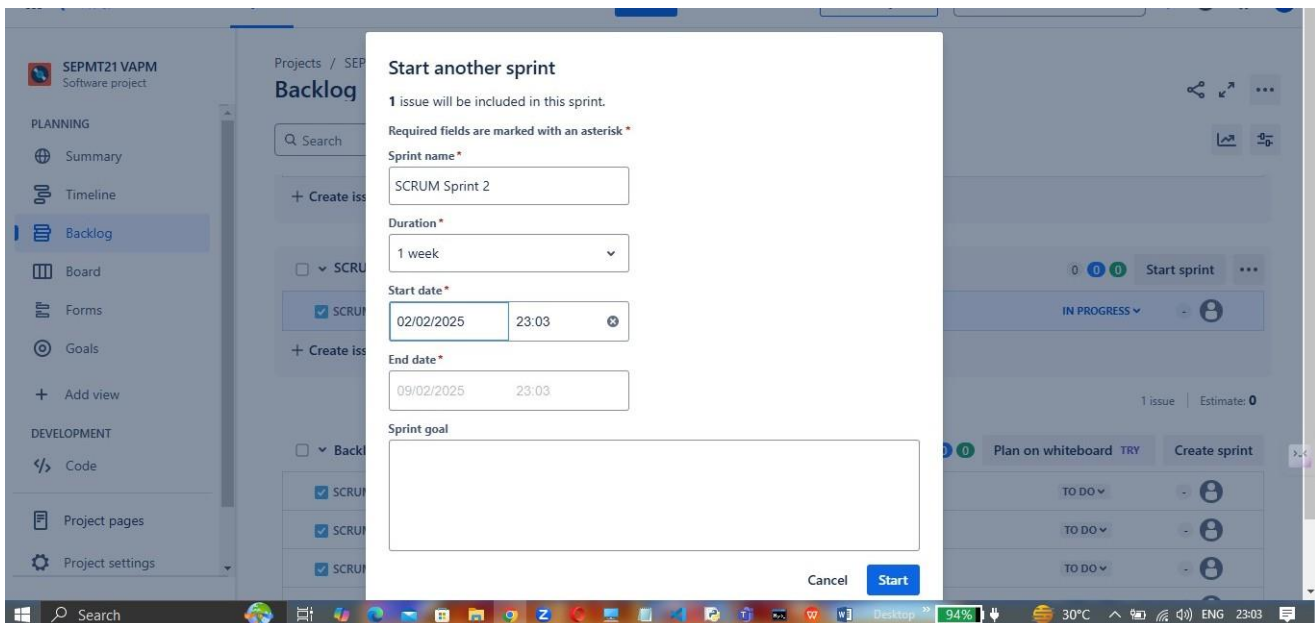
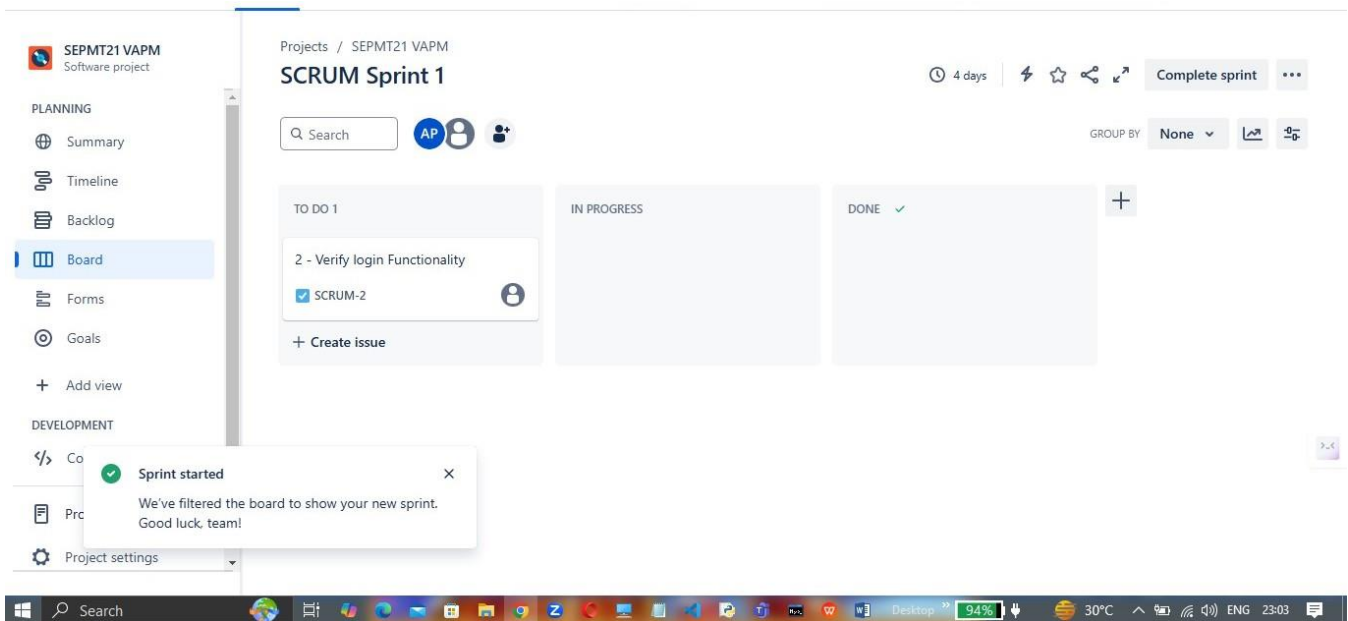
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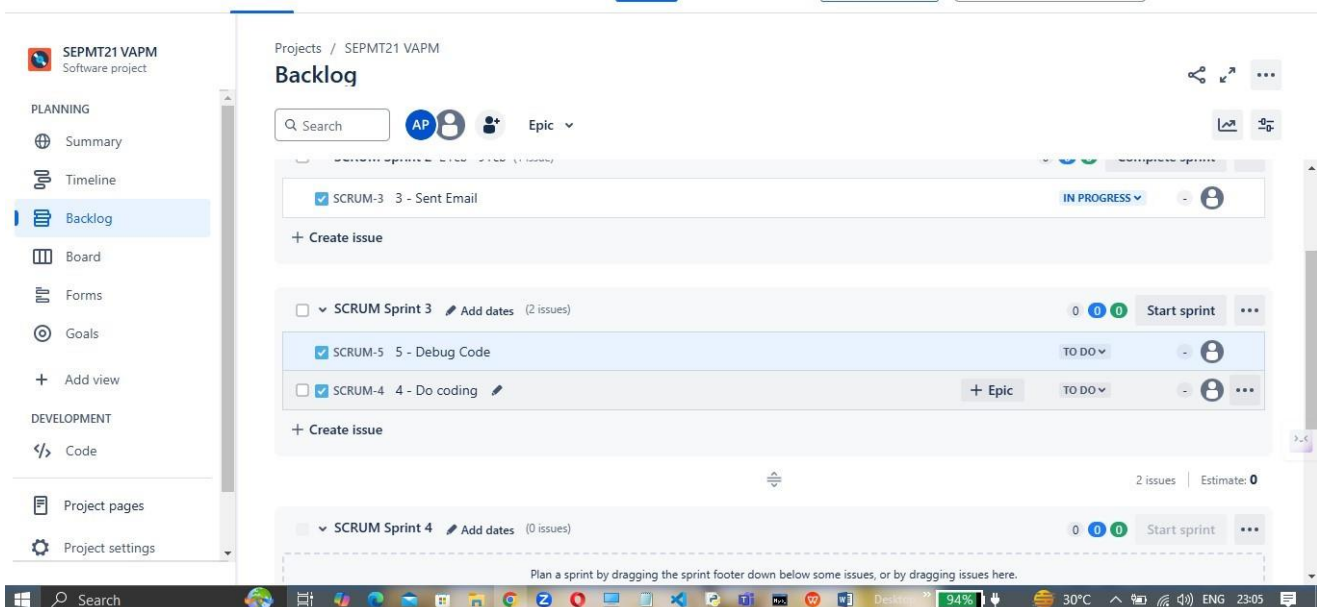
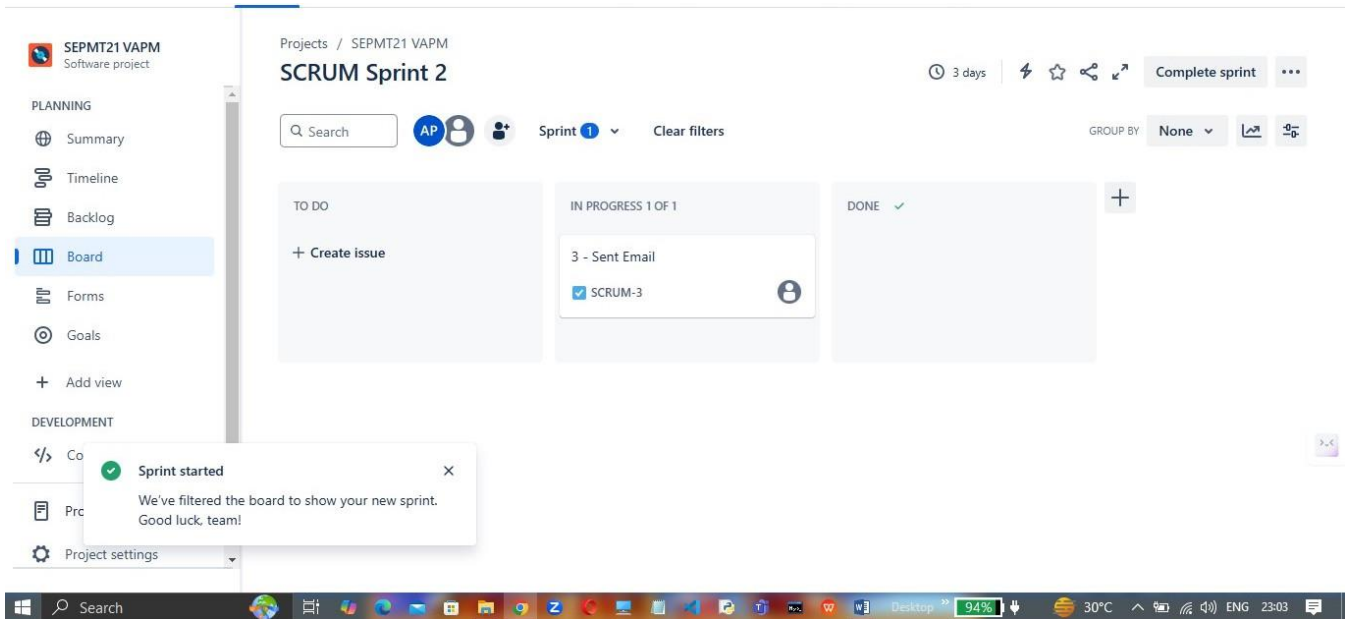




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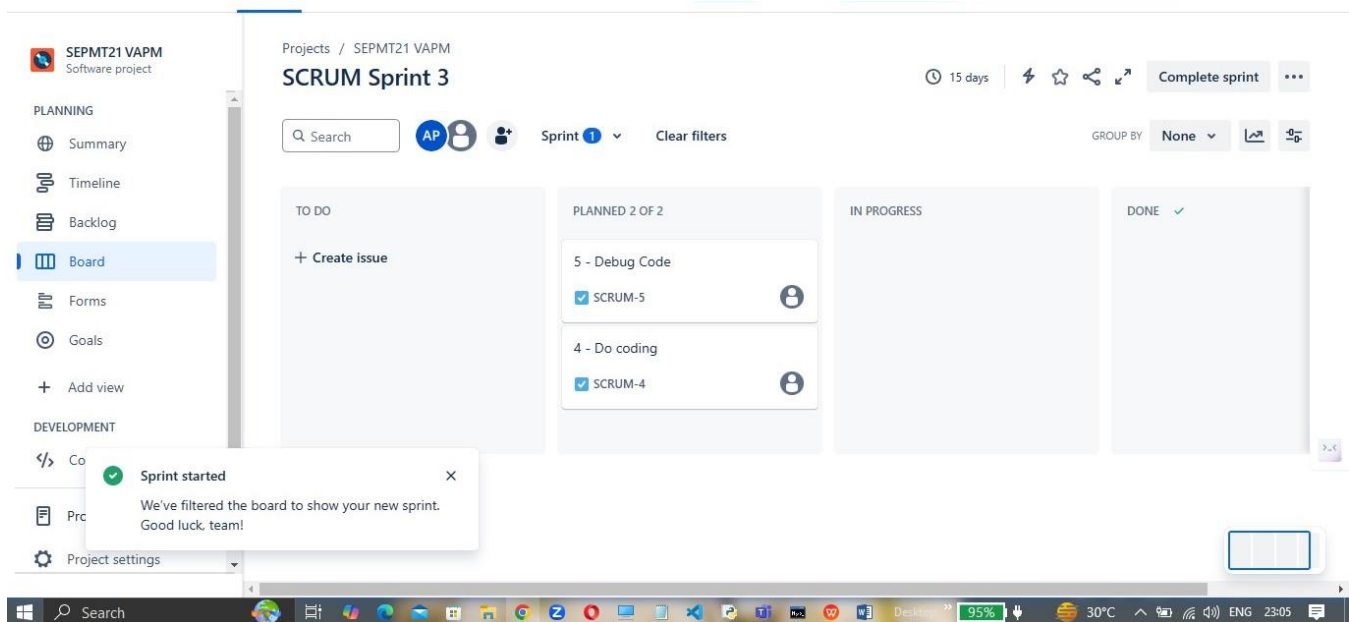
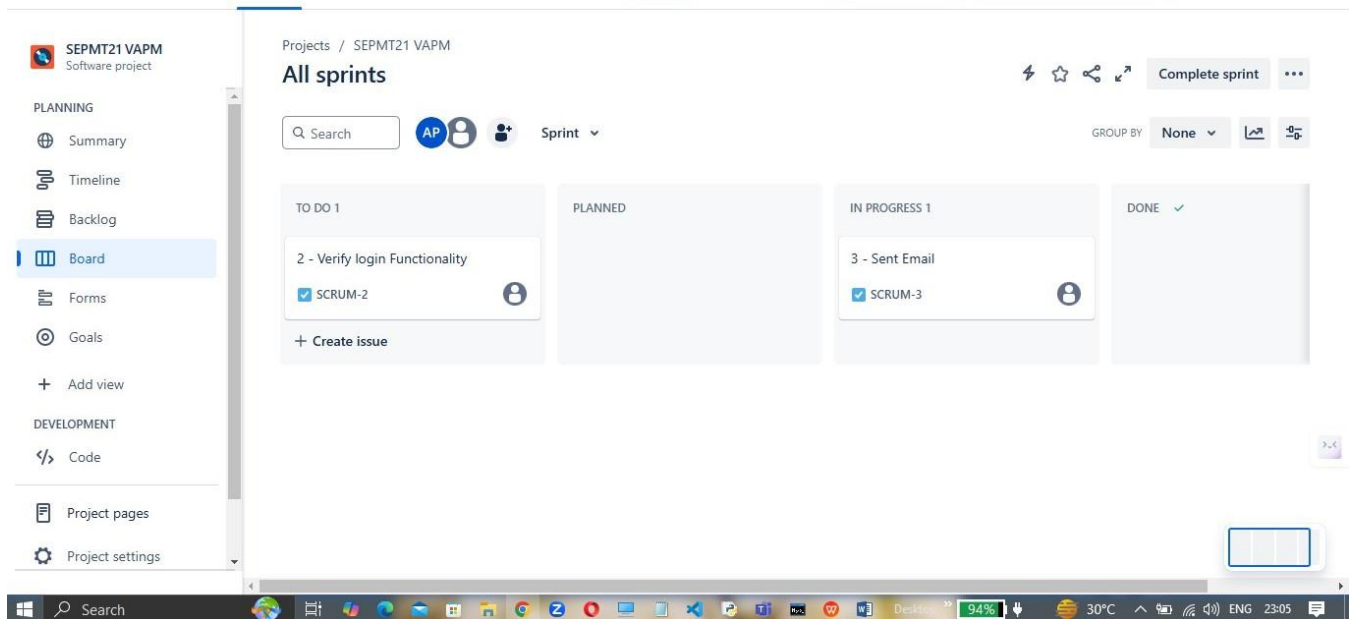
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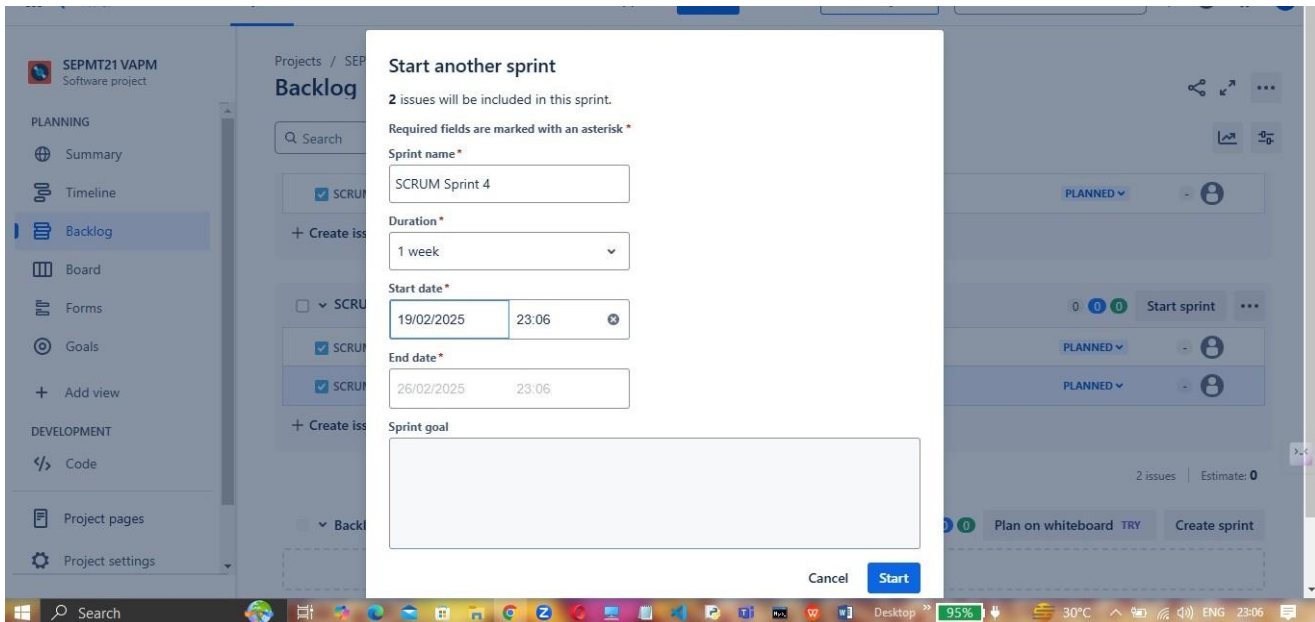
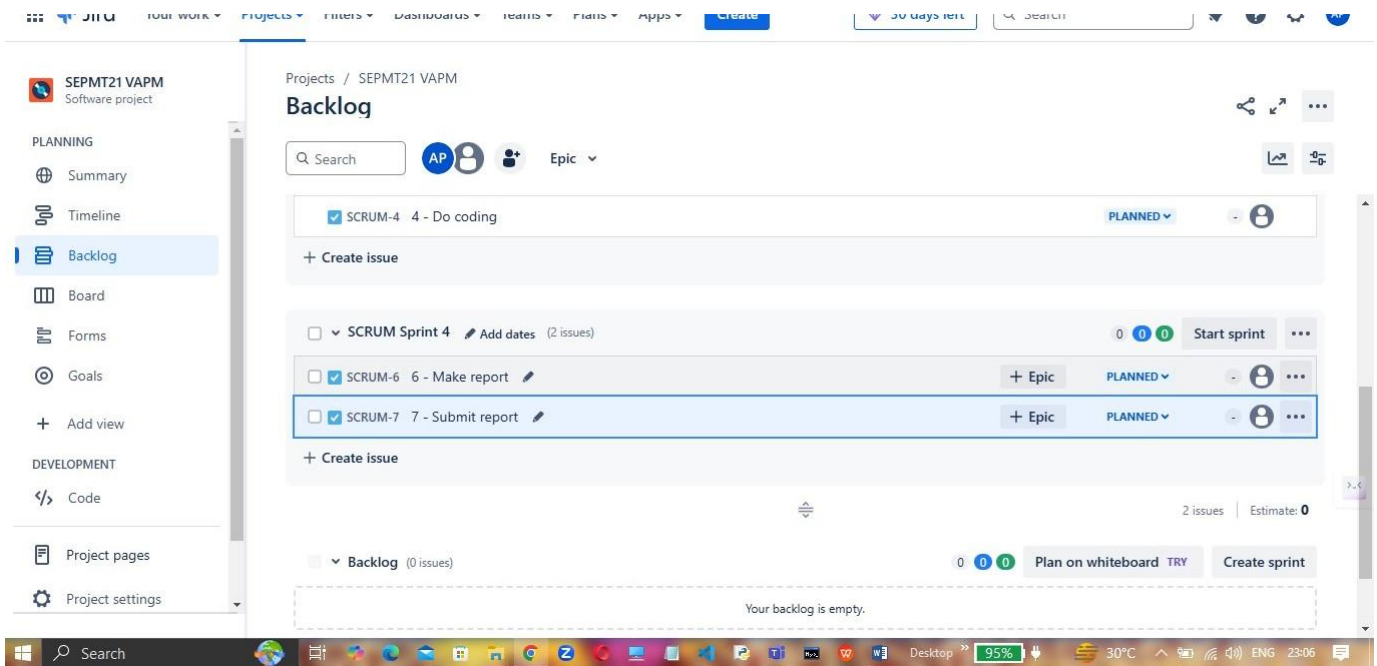
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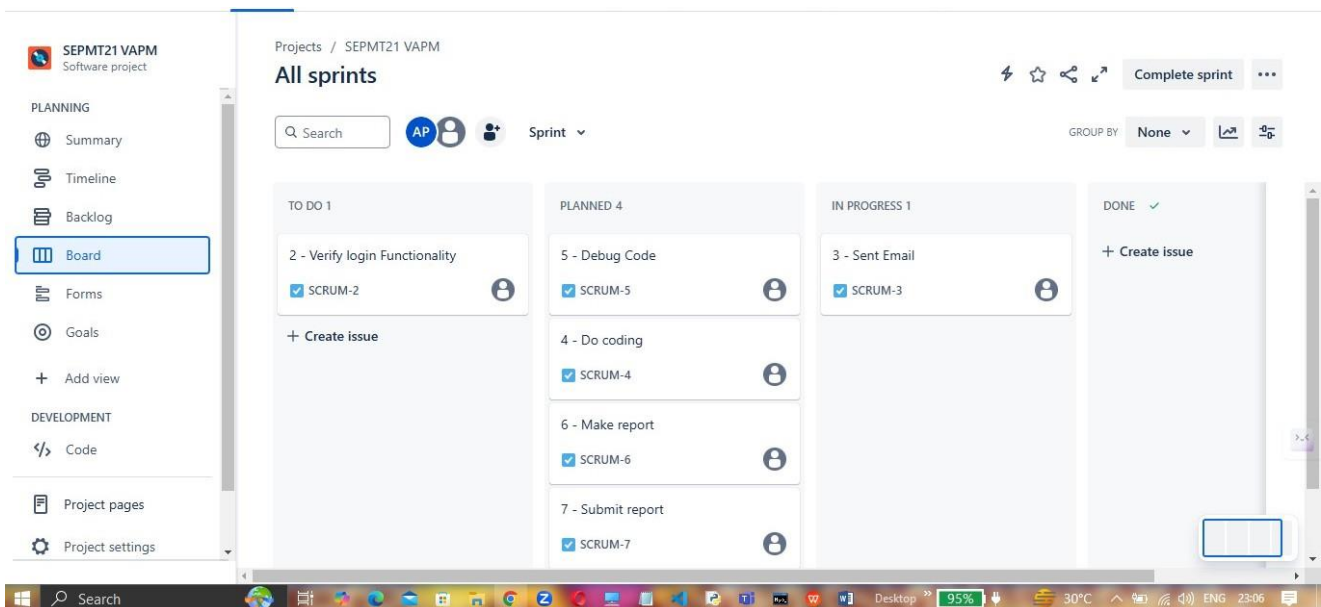
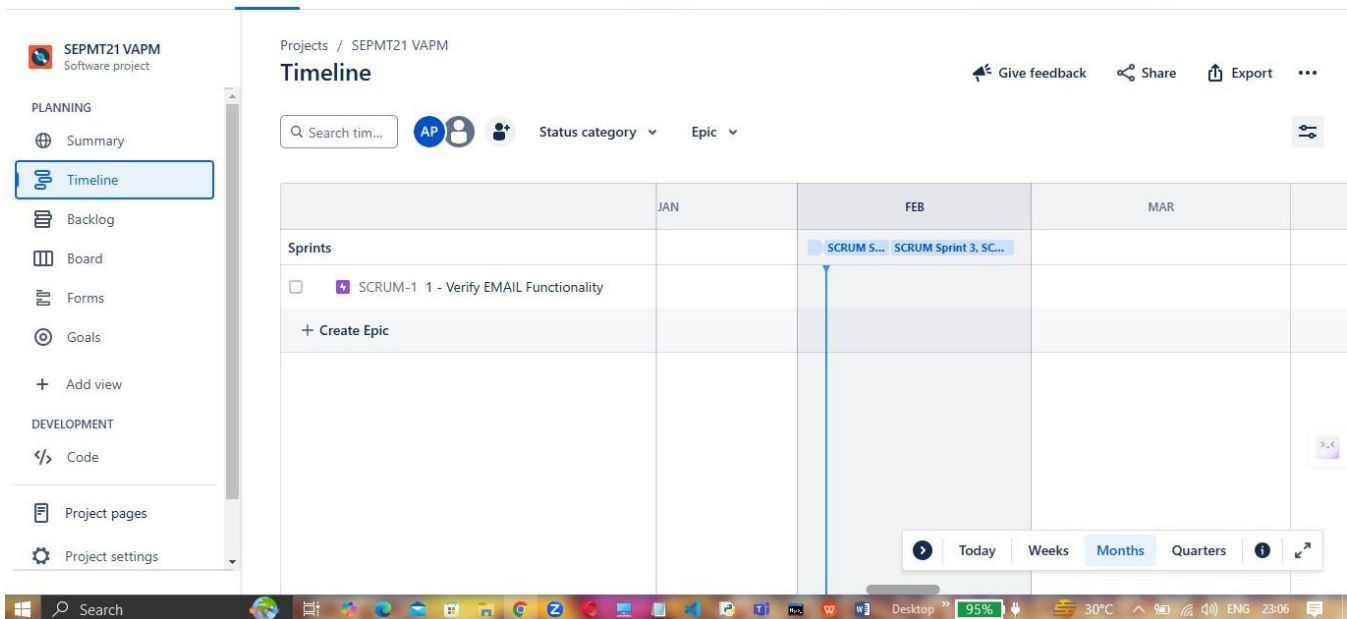
The screenshot shows the JIRA Scrum Board for the project 'SEPMT21 VAPM'. The board is titled 'SCRUM Sprint 4' and has a 15-day duration. The left sidebar shows the project navigation menu with 'Board' selected. The main board area is divided into four columns: 'TO DO', 'PLANNED 2 OF 4', 'IN PROGRESS', and 'DONE'. The 'PLANNED' column contains two issues: '6 - Make report' (SCRUM-6) and '7 - Submit report' (SCRUM-7). A notification bubble in the bottom left corner states 'Sprint started' and 'We've filtered the board to show your new sprint. Good luck, team!'. The bottom of the screen shows a Windows taskbar with various application icons and system status indicators.

The screenshot displays the JIRA Summary page for the project 'SEPMT21 VAPM'. The page provides a high-level overview of the project's status. At the top, four summary cards indicate: '0 completed in the last 7 days', '7 updated in the last 7 days', '7 created in the last 7 days', and '0 due in the next 7 days'. The 'Status overview' section features a donut chart showing the distribution of 7 total issues: 1 To Do (orange), 4 Planned (green), 2 In Progress (pink), and 0 Done (blue). The 'Recent activity' section lists recent updates, including status changes for issues SCRUM-7 and SCRUM-6. The bottom of the page shows a Windows taskbar with various application icons and system status indicators.

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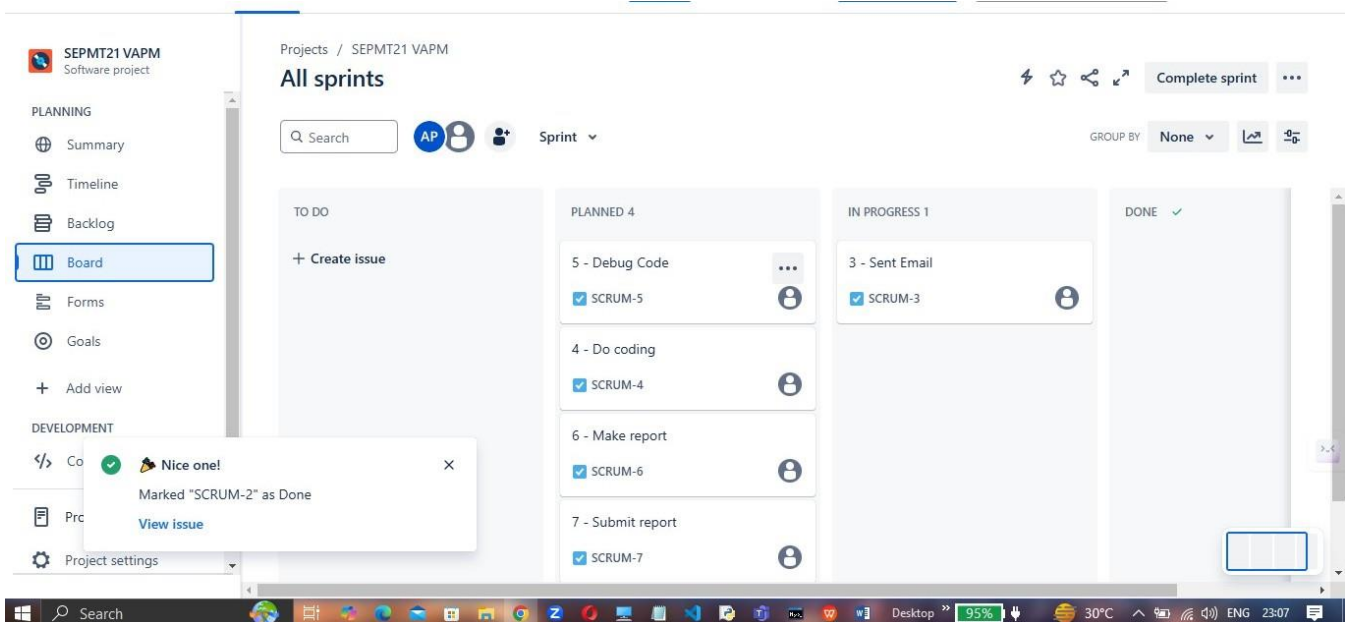
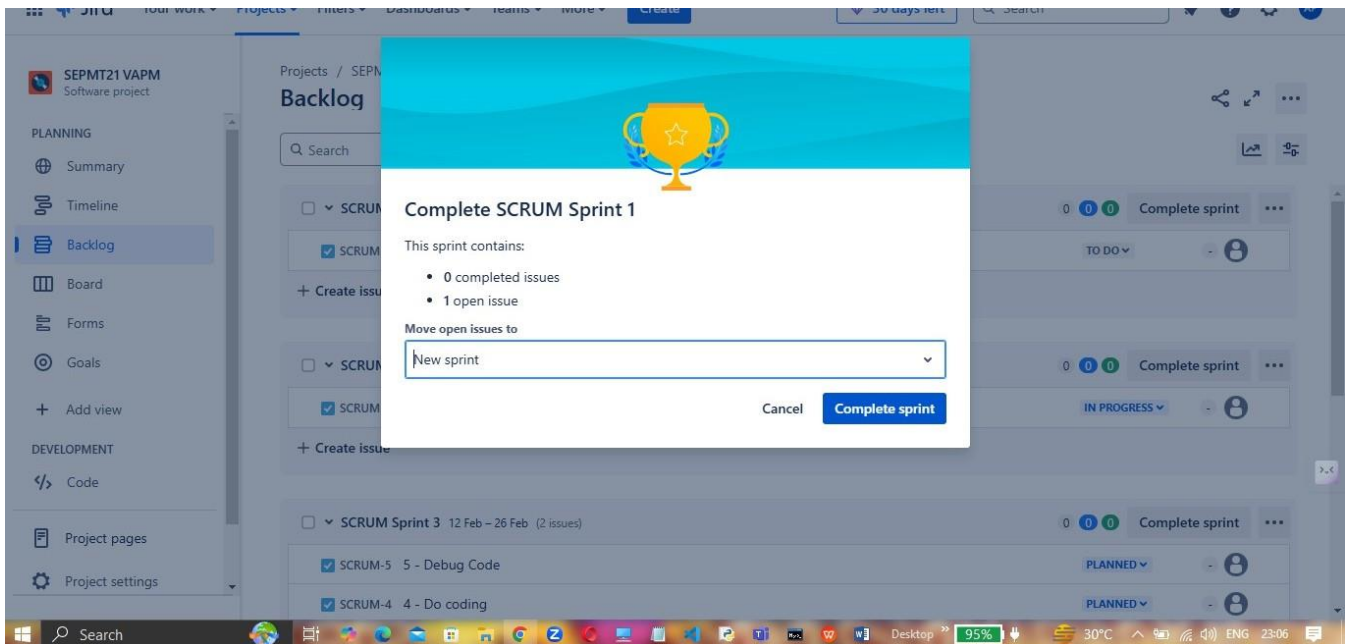
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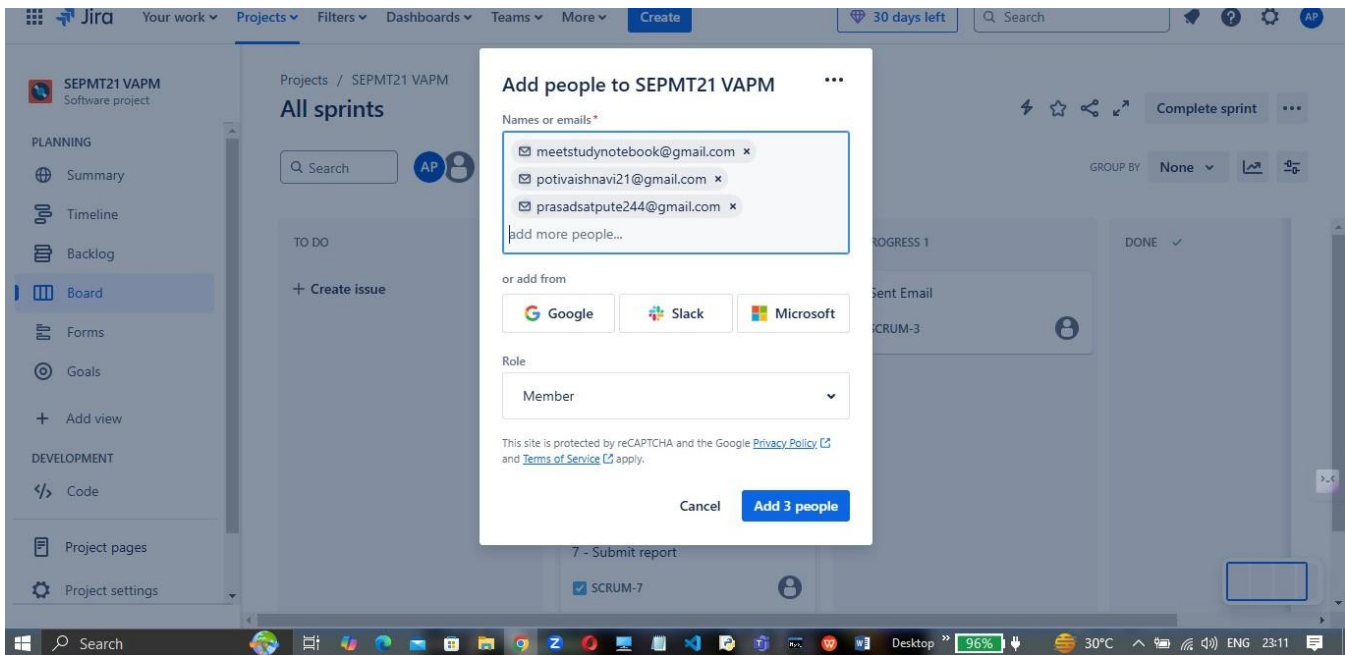




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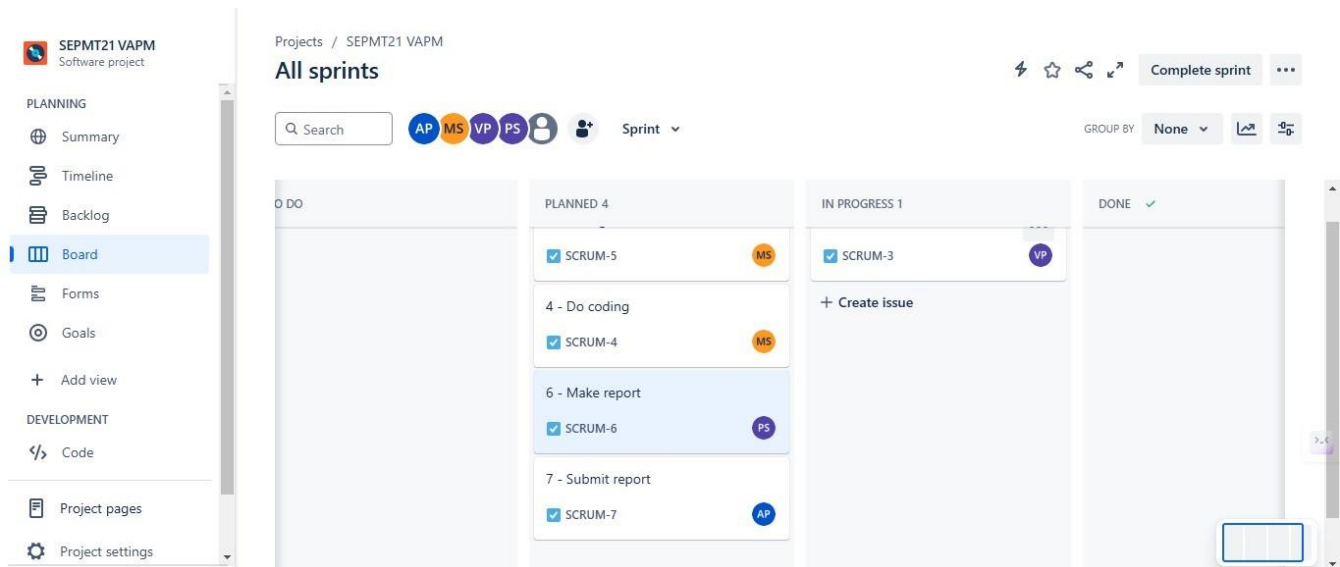
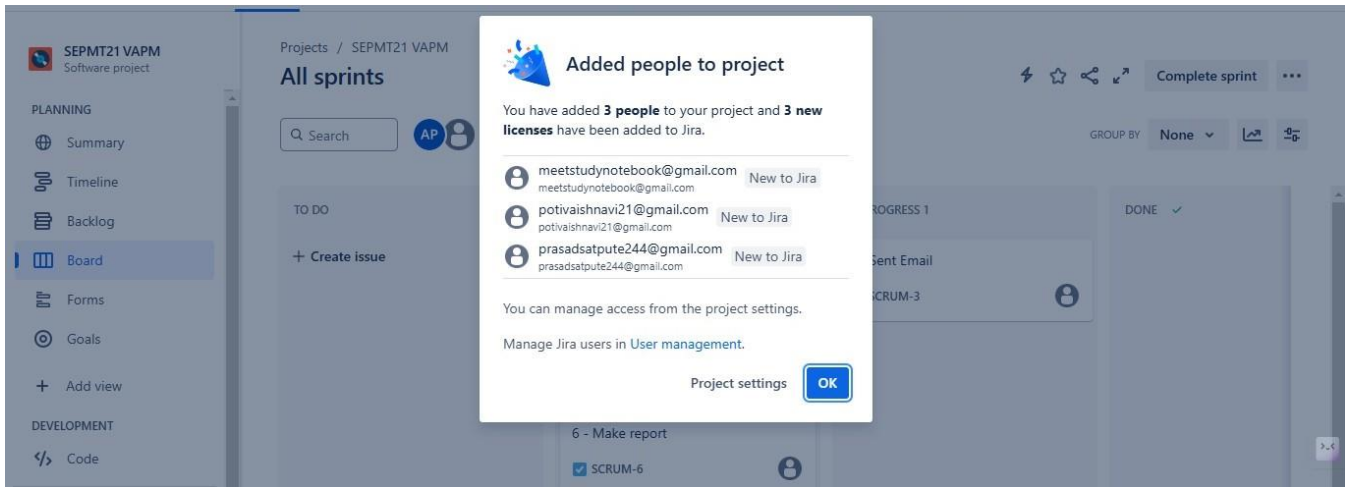
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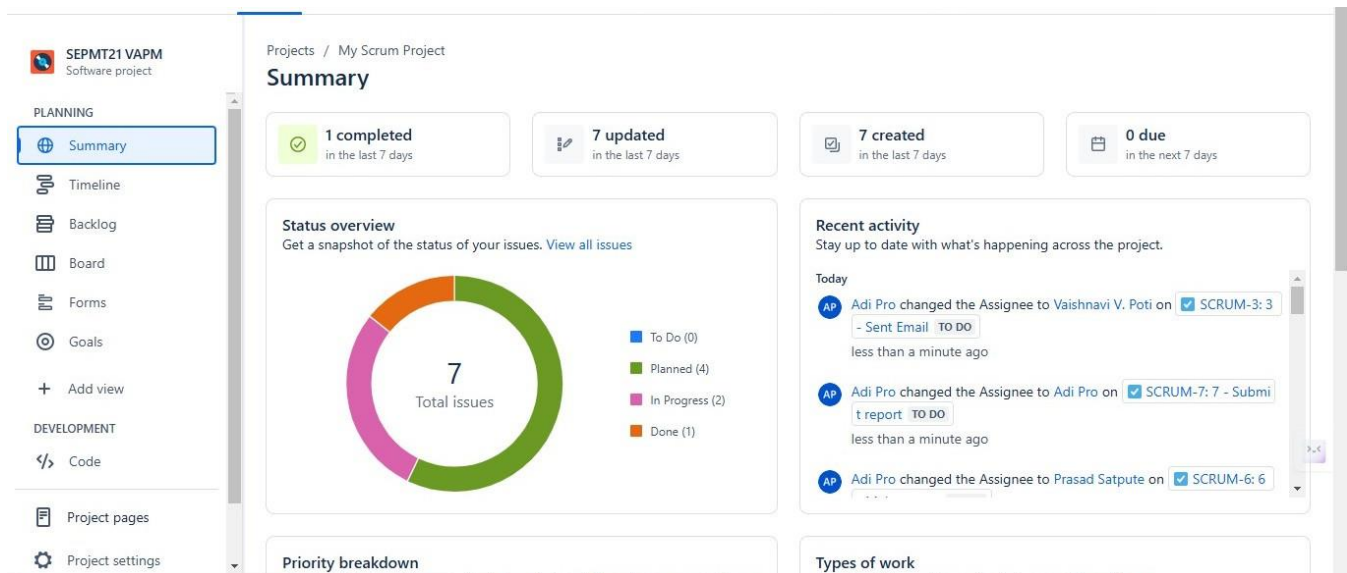
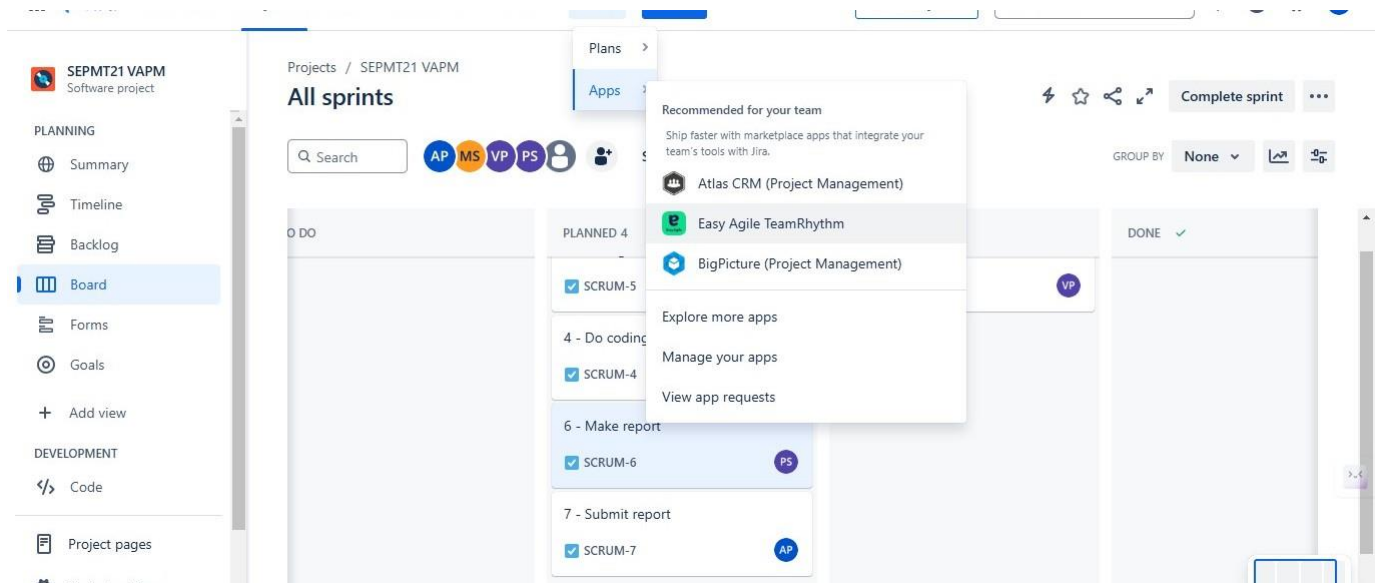
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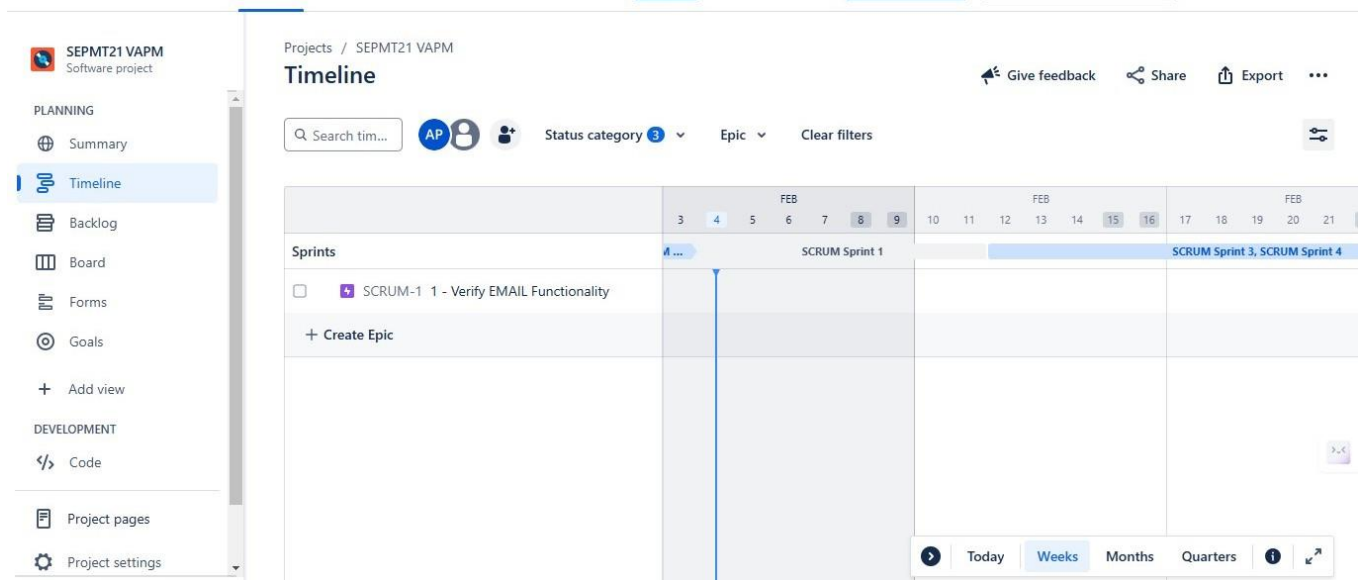
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SEPM DEMO  
Plan

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

#	Priority	Start date	Due date	Status	Progress (days)
1	Medium			IN PROGRESS	
Story – 6 issues					
SCRUM-2	Medium	04 Feb 2025	11 Mar 2025	DONE	
SCRUM-3	Medium	02 Feb 2025	09 Feb 2025	IN PROGRESS	
SCRUM-5	Medium	12 Feb 2025	26 Feb 2025	PLANNED	
SCRUM-4	Medium	12 Feb 2025	26 Feb 2025	PLANNED	
SCRUM-6	Medium	19 Feb 2025	26 Feb 2025	PLANNED	
SCRUM-7	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

Timeline

Give feedback

Unsaved changes

Warnings

TIMELINE

LIST

View settings

Issue

Create issue

Fields

#	Priority	Start date	Due date	Status	Progress (days)
1	Medium			IN PROGRESS	
Story – 6 issues					
SCRUM-2	High	04 Feb 2025	11 Mar 2025	DONE	
SCRUM-3	Medium	02 Feb 2025	09 Feb 2025	IN PROGRESS	
SCRUM-5	High	12 Feb 2025	26 Feb 2025	PLANNED	
SCRUM-4	Highest	12 Feb 2025	26 Feb 2025	PLANNED	
SCRUM-6	Medium	19 Feb 2025	26 Feb 2025	PLANNED	
SCRUM-7	Medium	19 Feb 2025	26 Feb 2025	PLANNED	

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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 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

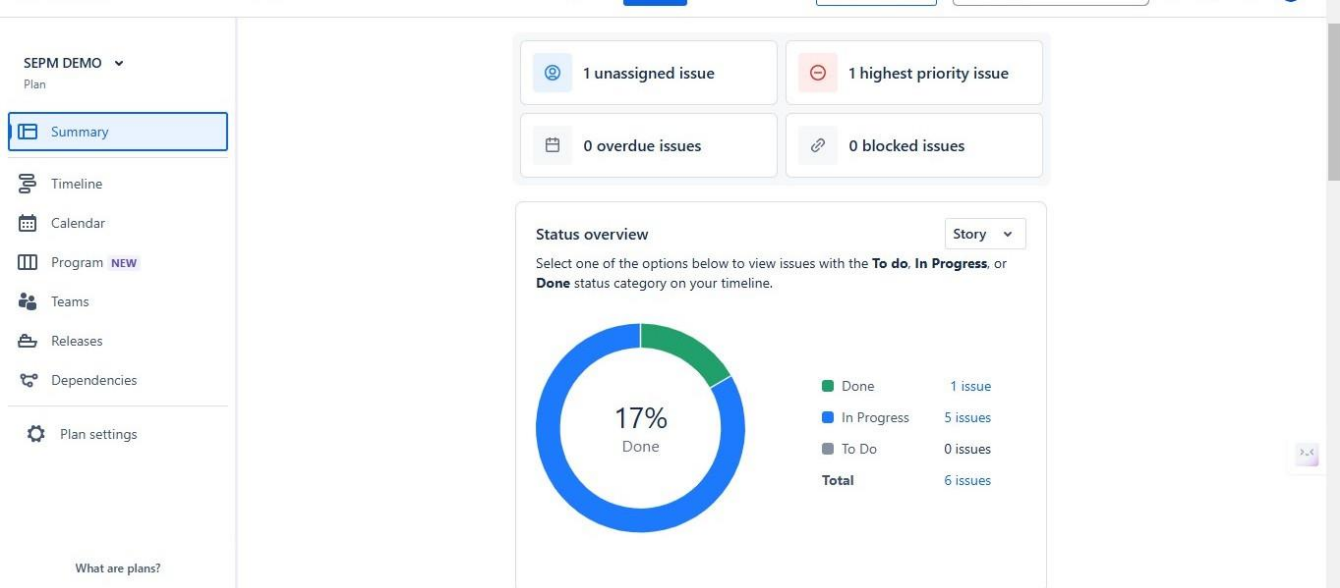
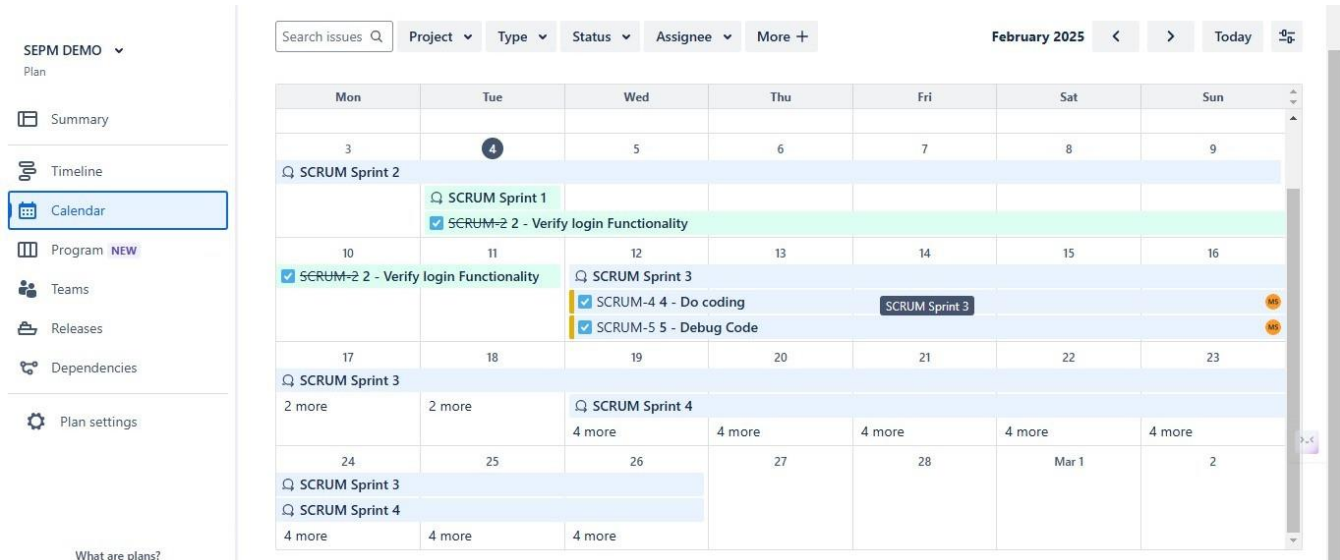
Mon	Tue	Wed	Thu	Fri	Sat	Sun
27	28	29	30	31	Feb 1	2
SCRUM Sprint 2						
3	4	5	6	7	8	9
SCRUM Sprint 1						
SCRUM-2 2 - Verify login Functionality						
10	11	12	13	14	15	16
SCRUM Sprint 3						
SCRUM-2 2 - Verify login Functionality						
SCRUM-4 4 - Do coding						
SCRUM-5 5 - Debug Code						
17	18	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. A small 'Issue' label is visible on the left side of the board.

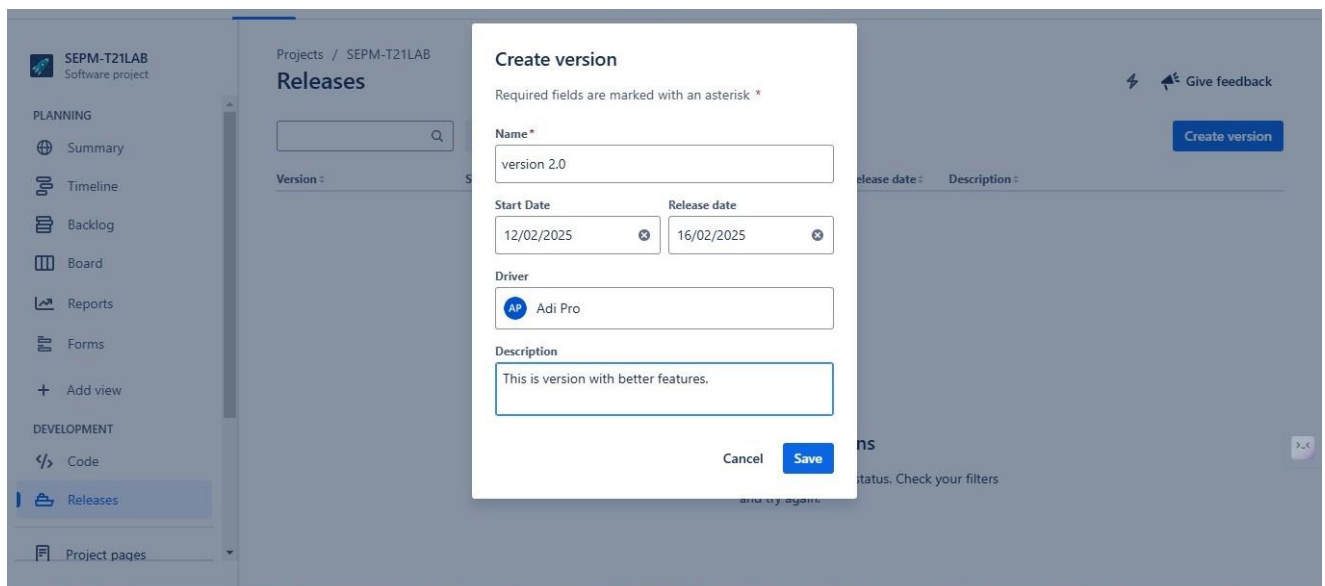
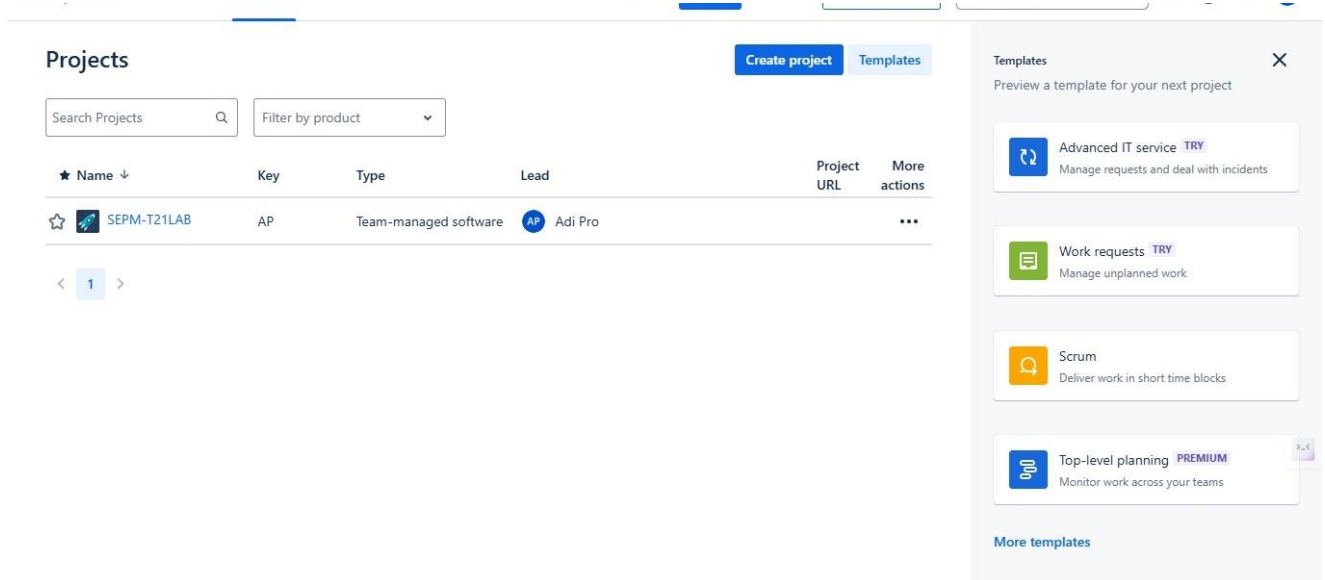
Column	Task	Assigned To	Status
PLANNED 2	6 - Make report	PS	SCRUM-6
	7 - Submit report	AP	SCRUM-7
IN PROGRESS 2	5 - Debug Code	MS	SCRUM-5
	4 - Do coding	MS	SCRUM-4
DONE 1	3 - Sent Email	VP	SCRUM-3

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### 8) Version Creation



# Software Engineering & Project Management Lab

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Projects / SEPM-T21LAB

### Releases

Unreleased

Create version

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

All issues

Apps Share Export LIST VIEW DETAIL VIEW

AI Search issues Project Type Status Assignee More + Copy filter BASIC JQL

Created Meeting Report KAN-4 Connect instance to Cloud KAN-3 Software Design and Planning KAN-2 Update the database count KAN-1

### Update the database count

+ Add

Description

Add a description...

Activity

Show: All Comments History Summarize Newest first

PS Add a comment... Can I get more info...? Status update... Thanks...

Pro tip: press M to comment

Details

None

Fix versions

Version2.0

Development

Create branch

Create commit

Reporter

PS Prasad Satpute

Automation Rule executions

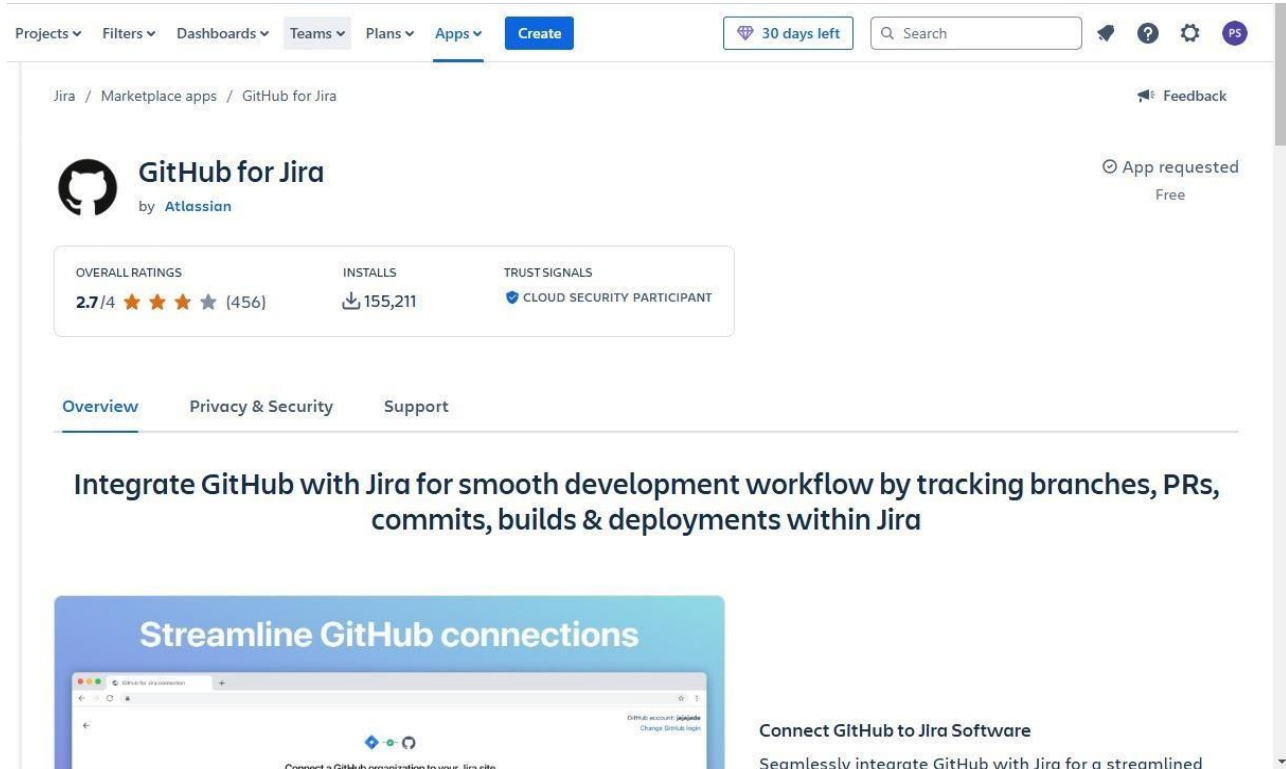
Created 7 minutes ago

Updated 14 seconds ago

Experiment No :- 06 & 07

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10) GitHub connection



**GitHub Repo Link :- <https://github.com/shubhampandey78/SEPM-90-SHUBHAM/tree/main/EXP%2006%20%26%2007>**

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