

EXPERIMENT 7: To Create Scrum Board for Scrum Master using JIRA Tool.

Theory:

Agile Methodology and Test Case Management using JIRA Tool

1. Introduction to Agile Methodology

Agile is a software development methodology that emphasizes iterative development, collaboration, customer feedback, and small, rapid releases. The primary goal of Agile is to deliver high-quality software quickly and efficiently, while adapting to changes in requirements even in the later stages of development.

Agile promotes:

- **Individuals and interactions** over processes and tools
- **Working software** over comprehensive documentation
- **Customer collaboration** over contract negotiation
- **Responding to change** over following a plan

2. Agile Frameworks

Agile encompasses various frameworks like:

- **Scrum** – A lightweight process framework that facilitates collaboration on complex software projects.
- **Kanban** – A visual method for managing work as it moves through a process.
- **XP (Extreme Programming)** – Focuses on technical aspects such as continuous integration and test-driven development.

Among these, **Scrum** is the most widely adopted and is supported extensively in JIRA.

3. Scrum in Agile

Scrum divides the project lifecycle into **sprints** (typically 2-4 weeks long). Each sprint begins with **sprint planning** and ends with a **retrospective**. Daily stand-up meetings are held to ensure synchronization among team members.

Key Scrum Roles:

- **Product Owner** – Manages the product backlog, sets priorities.

- **Scrum Master** – Facilitates the Scrum process, ensures the team follows Agile principles.
- **Development Team** – Cross-functional team members responsible for delivering the product increment.

Scrum Artifacts:

- **Product Backlog** – A prioritized list of features, enhancements, and bug fixes.
 - **Sprint Backlog** – Items selected from the product backlog to be completed in a sprint.
 - **Increment** – The usable end-product developed during a sprint.
-

4. JIRA Overview

JIRA by Atlassian is a popular tool for **Agile project management, bug tracking, and issue tracking**. It supports Agile practices like Scrum and Kanban through specialized boards and workflows.

Key Features of JIRA:

- Custom workflows and issue types
 - Agile boards (Scrum and Kanban)
 - Sprint planning and tracking
 - Epic and story mapping
 - Test case and bug management (through plugins like Zephyr or Xray)
 - Reporting and analytics (burndown charts, velocity, etc.)
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5. Test Case Management in JIRA

Though JIRA doesn't natively include a dedicated test management module, it can be extended through plugins such as:

- **Zephyr**
- **Xray**
- **TestRail (integration)**

Steps for Managing Test Cases in JIRA (Using Zephyr or Similar Add-ons):

1. **Install the Plugin:** Add Zephyr or Xray from Atlassian Marketplace.
2. **Create a Test Issue Type:** Use the "Test" issue type to create and define test cases.
3. **Write Test Steps:** Define the input, expected output, and actual output.
4. **Test Execution:** Create a Test Cycle and assign test cases to runs.

5. **Track Results:** Monitor pass/fail status and link issues/bugs to failed tests.

Test cases can also be linked directly to user stories to ensure traceability and better quality assurance.

6. Creating a Scrum Board in JIRA

Scrum Boards in JIRA visualize work and enable Agile teams to manage sprint cycles effectively.

Steps to Create a Scrum Board:

1. **Login to JIRA**
2. Navigate to **Boards > View all boards > Create board**
3. Choose **Scrum board** and then:
 - Create a new project, or
 - Use an existing project
4. Configure the board with:
 - **Backlog view** – to manage product backlog items
 - **Active sprints** – to track tasks in the current sprint
5. Add issues (user stories, tasks, bugs) to the backlog.
6. Start a sprint and drag backlog items to the sprint.
7. Monitor progress via **burndown charts, velocity charts, and sprint reports**.

Role of the Scrum Master in JIRA:

- Maintain the Scrum board
- Facilitate sprint planning, reviews, and retrospectives
- Track team velocity and sprint performance

Methodology and Test Case Management using JIRA Tool

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Role of the Scrum Master in JIRA:

- Maintain the Scrum board
- Facilitate sprint planning, reviews, and retrospectives
- Track team velocity and sprint performance
- Remove blockers and ensure Agile compliance

Projects

SEPMlab6

Summary Timeline Backlog Board Calendar List Forms Goals Issues Code Archived issues Pages Shortcuts

Search board

TO DO

IN PROGRESS

DONE ✓

Get started in the backlog
Plan and start a sprint to see issues here.

Go to Backlog

V Veer
veer.bhatt2005@gmail.com

Profile
Account settings
Theme
Switch account
Log out

Projects

SEPM_LAB

Summary Timeline Backlog Board Calendar List Forms Goals Issues Code Archived issues Pages Shortcuts

Search timeline

Epic Status category

	ch	April	May	June	July
Sprints					
<input type="checkbox"/> SL-5 scrum 1	DONE				
<input type="checkbox"/> SL-6 scrum 2	DONE				
<input type="checkbox"/> SL-7 scrum 3					
<input type="checkbox"/> SL-8 scrum 4	DONE				
+ Create Epic					

The image displays two screenshots of the Atlassian Admin console. The top screenshot shows the 'Select a template for your first project' page, which offers three options: SCRUM (a single board to visualize workflow), JIRAFORM (deliver work in short, repeatable time blocks), and BUSINESS (collaboration for business teams). The bottom screenshot shows the 'Platform experiences' page, which lists various features available to users. Below this, a 'Welcome!' message is displayed, encouraging users to start their first project. The 'Welcome!' section includes a 'Name your project' field, a 'How familiar are you with Jira?' dropdown menu, and a 'Get started' button. A preview of the Jira interface is also shown, highlighting the 'Experiment 1' section.

Select a template for your first project

If you're not sure what to choose, don't worry. You can quickly create a new project if this one's not right for you.

SCRUM
A single board to visualize your workflow.
A flexible and efficient way to manage agile work, with a board and timeline.
[More info](#)

JIRAFORM
Deliver work in short, repeatable time blocks.
Plan, prioritize, and schedule work using agile sprints with a backlog, board and timeline.
[More info](#)

BUSINESS
Collaboration for business teams.
Designed to help your business team collaborate and connect, with list and calendar views, forms, and more.
[More info](#)

Platform experiences

Platform experiences are features that come with any plan and can be used across Atlassian products. Goals and projects are currently in early access and available to everyone on the plan below. You can opt out of early access at any time. [Get more info on each access](#)

Goal	Activated on	Action
https://adityabhatt1711.atlassian.net	Mar 25, 2025	Get out

Welcome!

Your first project is ready to kick off. It's where you'll track tasks across teams, turning big ideas into real outcomes.

Name your project

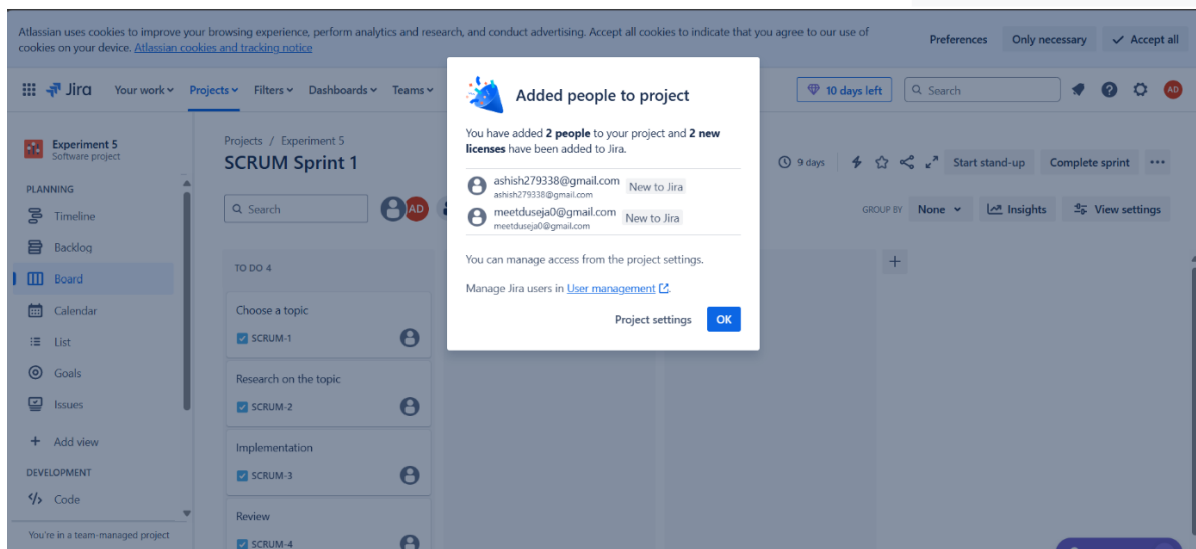
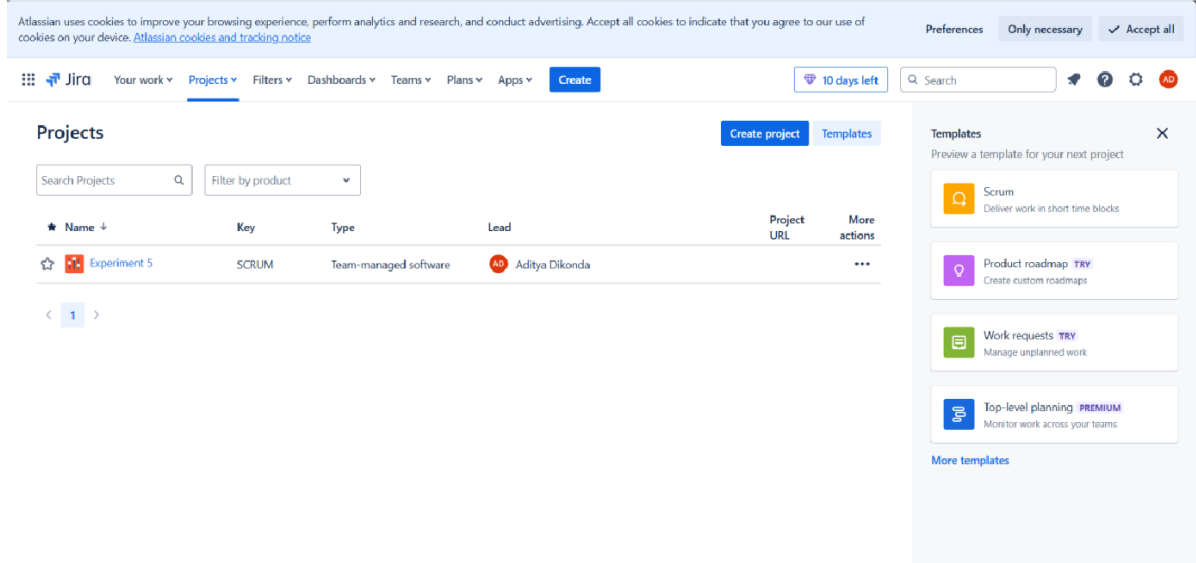
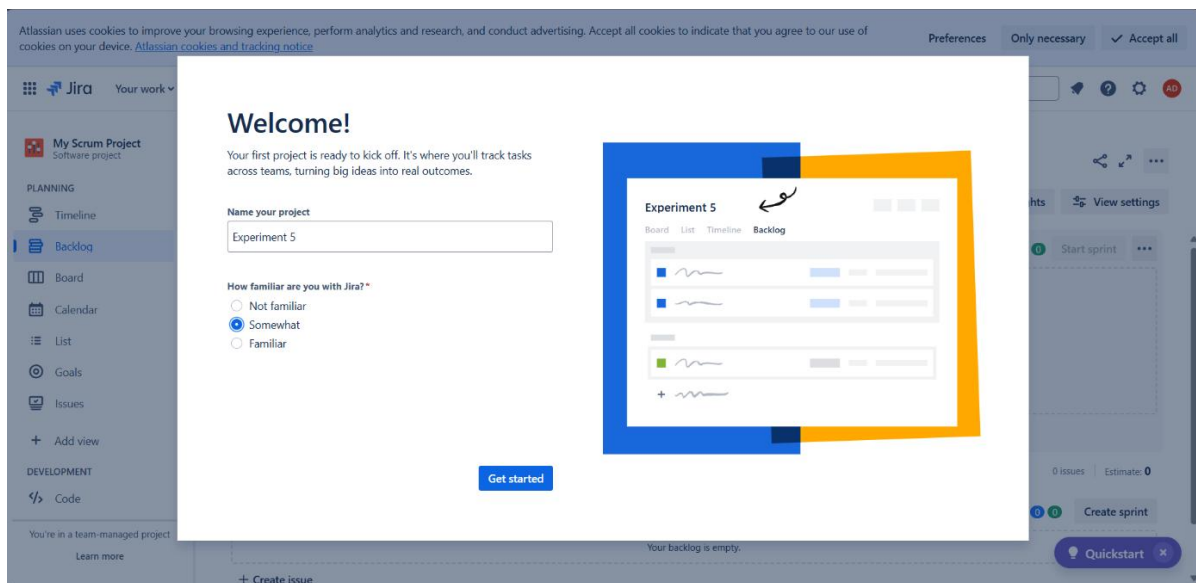
How familiar are you with Jira?
☐ Not familiar
☒ Somewhat familiar
☐ Familiar

[Get started](#)

Experiment 1

Backlog

Task	Status	Assignee
Task 1	In Progress	Assignee 1
Task 2	Not Started	Assignee 2
Task 3	In Progress	Assignee 3

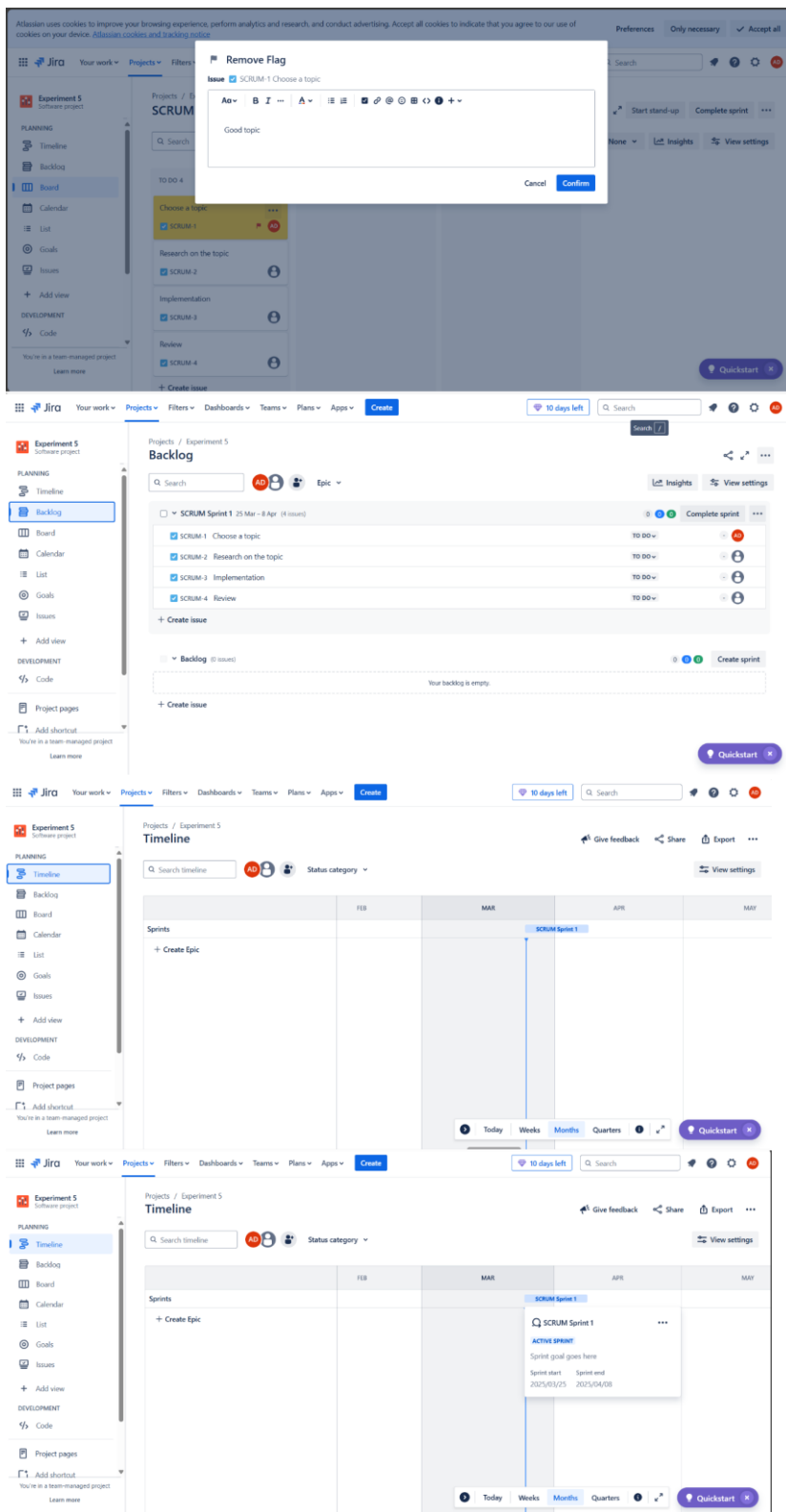


The image displays three sequential screenshots of the Jira web application interface, illustrating the process of creating and managing issues within a project.

Top Screenshot: Issue Creation Dialog
This screenshot shows the 'Choose a topic' dialog box for creating a new issue. The dialog includes a 'Description' field with the placeholder 'Add a description...', an 'Activity' section with tabs for 'All', 'Comments', 'History', and 'Work log', and a 'Details' section. The 'Details' section lists fields such as 'Assignee' (Aditya Dikonda), 'Labels' (None), 'Parent' (None), 'Team' (None), 'Sprint' (SCRUM Sprint 1), 'Story point estimate' (None), and 'Reporter' (ashish279338). A 'Pinned fields' section is also visible at the top right of the dialog.

Middle Screenshot: Add Flag Dialog
This screenshot shows the 'Add Flag' dialog box. It features a text input field with the placeholder 'Not a good topic' and a 'Confirm' button. The background shows the Jira interface with a 'Choose a topic' dialog box open, indicating the context of the flag being added.

Bottom Screenshot: Project Board View
This screenshot shows the 'SCRUM Sprint 1' board view for the 'Experiment 5' project. The board is divided into columns: 'TO DO 4', 'IN PROGRESS', and 'DONE'. The 'TO DO 4' column contains a list of tasks: 'Choose a topic' (with a 'Choose a topic' button), 'Research on the topic', 'Implementation', and 'Review'. The 'IN PROGRESS' and 'DONE' columns are currently empty. The board includes a search bar, a 'GROUP BY' dropdown, and a 'View settings' button.



Conclusion:

Scrum project was implemented using JIRA.