

Experiment No 6

Aim: To study Agile methodology and Test case Management using Jira Tool.

Theory:

Overview of Jira

Jira is a comprehensive project management and issue tracking tool developed by **Atlassian**. It is widely used across various industries, but it is especially prominent in software development teams and Agile environments. Jira provides a flexible platform for tracking tasks, bugs, user stories, and other issues throughout the lifecycle of a project, from inception to completion. With its powerful capabilities and broad customization options, Jira is designed to help teams collaborate efficiently, maintain workflow consistency, and achieve their project goals.

1. The Purpose of Jira

The primary purpose of Jira is to **track and manage work**. It provides a structured approach to managing tasks and issues, whether they are software bugs, user stories, features, or any other work items. Jira helps teams monitor the progress of these items, assign responsibilities, set priorities, and resolve issues in a timely manner. It ensures that all aspects of the project are properly documented, which promotes transparency and improves overall communication across teams.

Jira is most effective in Agile project management, supporting frameworks like **Scrum** and **Kanban**. However, it can also be adapted to fit traditional project management methodologies, making it a versatile tool for teams with different operational needs.

2. Key Features of Jira

Jira provides a wide range of features that make it an indispensable tool for project management:

- **Issue Tracking:** The core feature of Jira is its ability to track issues, which can include tasks, bugs, user stories, and other work items. Issues are organized into projects and can be assigned to specific team members. These issues can include detailed information such as priorities, deadlines, descriptions, and attachments.
- **Customizable Workflows:** One of the standout features of Jira is its customizable workflows. A workflow defines the various stages through which an issue passes (e.g., To Do, In Progress, Done) and the actions that can be taken at each stage. Workflows are highly flexible, enabling teams to tailor them to suit their specific processes.
- **Agile Boards:** Jira supports **Scrum** and **Kanban boards**, which are used for visualizing the work process. Scrum boards help teams plan sprints, track progress

during the sprint, and ensure that goals are met. Kanban boards provide a continuous flow of work, helping teams manage and prioritize tasks as they arise.

- **Backlog Management:** Jira offers an intuitive backlog management feature where all tasks are stored before they are worked on. The backlog serves as a queue of items that need attention and can be prioritized based on importance or urgency. The **Product Backlog** in Scrum helps product owners organize and prioritize tasks for upcoming sprints.
- **Epics, Stories, and Tasks:** Jira supports hierarchical structures that enable large projects to be broken down into manageable parts. At the top of this hierarchy are **Epics**, which represent large bodies of work. These are broken down into **Stories** (user stories or feature requests), and further broken down into **Tasks** (individual actions or steps).
- **Reporting and Dashboards:** Jira provides built-in reporting tools, such as burndown charts, sprint reports, and velocity charts, which help teams analyze performance and predict future progress. Customizable dashboards provide a comprehensive view of ongoing projects, allowing users to monitor various metrics and project health indicators.
- **Permissions and Security:** Jira allows for detailed permission settings, ensuring that only authorized users can access specific projects, issues, or actions. This level of control helps protect sensitive information and ensures that teams operate within defined boundaries.
- **Integration with Other Tools:** Jira integrates seamlessly with other **Atlassian** tools, such as **Confluence** for documentation, **Bitbucket** for source code management, and **Trello** for simple task management. It also supports third-party integrations, such as GitHub, Slack, and various Continuous Integration (CI) and Continuous Delivery (CD) tools.

3. Jira in Agile Methodology

Jira is specifically built to support **Agile methodologies**, such as Scrum and Kanban, which are widely used in software development.

- **Scrum in Jira:** Jira's Scrum features are designed to help teams organize work into **Sprints**—timeboxed periods during which a specific set of work is completed. Teams plan their sprint by selecting items from the product backlog, which are then moved to the **Sprint Backlog**. During the sprint, progress is tracked on a Scrum board. Jira also offers **burndown charts**, which show how much work remains in a sprint, helping teams ensure that they are on track to meet their goals.
- **Kanban in Jira:** Kanban is a continuous flow system, ideal for teams with an ongoing stream of work rather than timeboxed sprints. Jira's Kanban boards allow teams to manage their workflow visually, optimizing the flow of work from one stage

to the next. Kanban focuses on **work in progress** (WIP) limits to ensure that teams don't overcommit to tasks at any given time.

4. Customizability and Flexibility

Jira's customizability is one of its key strengths. Teams can create custom **issue types**, **fields**, and **screens**, adapting the tool to fit their specific needs. For example, software development teams may use different issue types, such as **bugs**, **user stories**, or **feature requests**, each with unique fields and workflows. Non-technical teams, such as marketing or HR, can also use Jira by creating custom templates that suit their specific use cases.

Additionally, Jira supports custom **notifications**, ensuring that stakeholders are kept in the loop whenever relevant changes occur.

5. Benefits of Using Jira

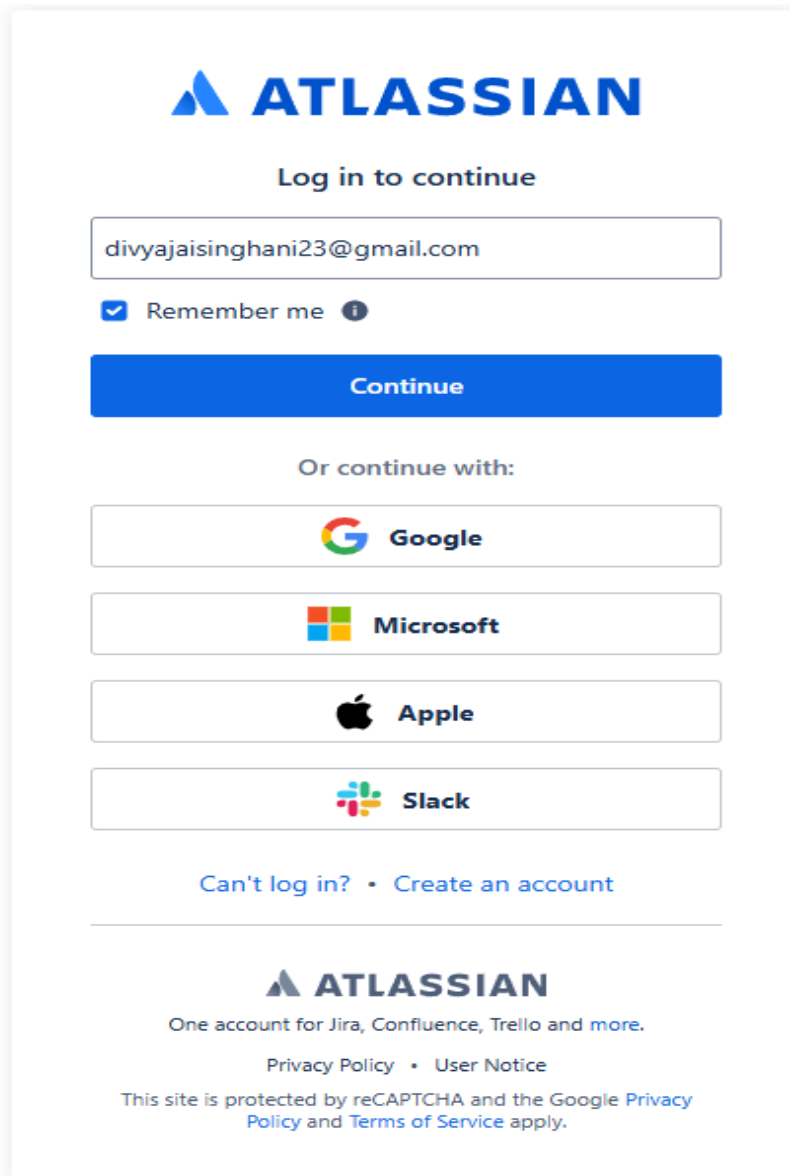
- **Improved Collaboration:** Jira enables real-time collaboration among team members by providing a centralized platform to track work, share progress, and communicate. It breaks down silos and helps teams stay aligned with project goals.
- **Increased Transparency:** Jira offers visibility into project progress, task assignments, and bottlenecks. Stakeholders, including team members, managers, and clients, can access up-to-date information, which fosters transparency and trust.
- **Better Project Management:** Jira's tools for backlog management, sprint planning, and issue prioritization allow project managers to efficiently plan and execute work. The ability to create and track milestones ensures that projects stay on track and deadlines are met.
- **Enhanced Productivity:** With its well-organized structure, Jira minimizes confusion and helps team members stay focused on their tasks. The integration of development tools, such as code repositories and testing systems, also ensures that developers can work efficiently within a unified platform.
- **Scalability:** Jira scales well for small teams as well as large organizations. Whether a team is managing a handful of tasks or handling complex, multi-team projects, Jira can adapt and grow with the organization's needs.

6. Common Use Cases for Jira

- **Software Development:** Jira is commonly used in software development for tracking bugs, managing user stories, planning sprints, and integrating with version control systems.
- **IT Helpdesk & Service Desk:** Jira Service Management is used by IT teams to handle service requests, incidents, and change requests, providing a systematic approach to handling internal or customer support tickets.

- **Project Management:** Non-technical teams use Jira to track tasks, manage workflows, and ensure that deadlines are met. Whether for marketing campaigns, HR processes, or operations management, Jira can be adapted to various industries.
- **Change Management:** Jira is ideal for managing change requests in complex projects or businesses, ensuring that all changes are tracked, reviewed, and implemented according to best practices.

Output:



The image shows the Atlassian login page. At the top is the Atlassian logo. Below it is the text "Log in to continue". There is a text input field containing the email address "divyajaisinghani23@gmail.com". Below the input field is a checkbox labeled "Remember me" with an information icon to its right. Below this is a blue "Continue" button. Underneath the button is the text "Or continue with:". Below this text are four buttons for social login: "Google" (with the Google logo), "Microsoft" (with the Microsoft logo), "Apple" (with the Apple logo), and "Slack" (with the Slack logo). Below these buttons are two links: "Can't log in?" and "Create an account". At the bottom of the page is the Atlassian logo again, followed by the text "One account for Jira, Confluence, Trello and more.". Below this are two links: "Privacy Policy" and "User Notice". At the very bottom is a line of text: "This site is protected by reCAPTCHA and the Google Privacy Policy and Terms of Service apply."

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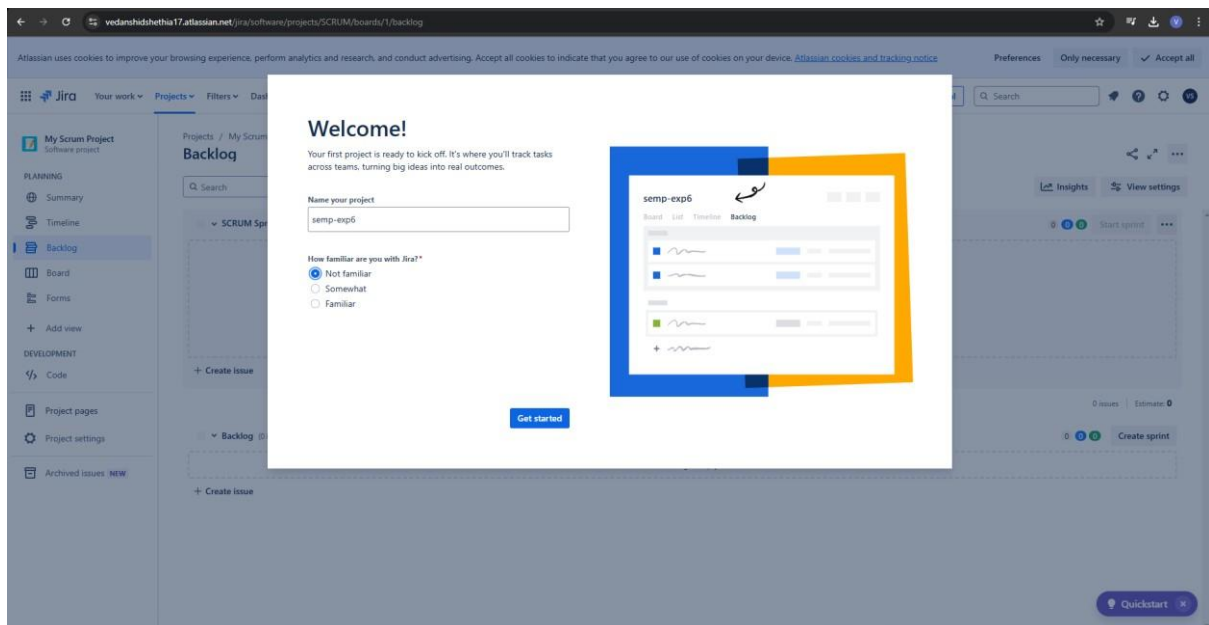
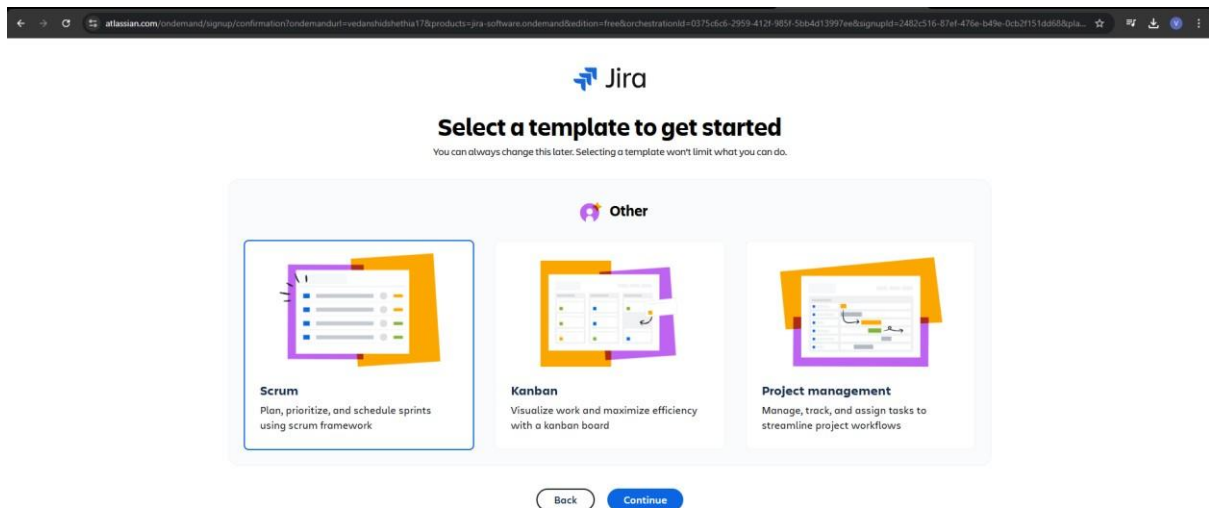
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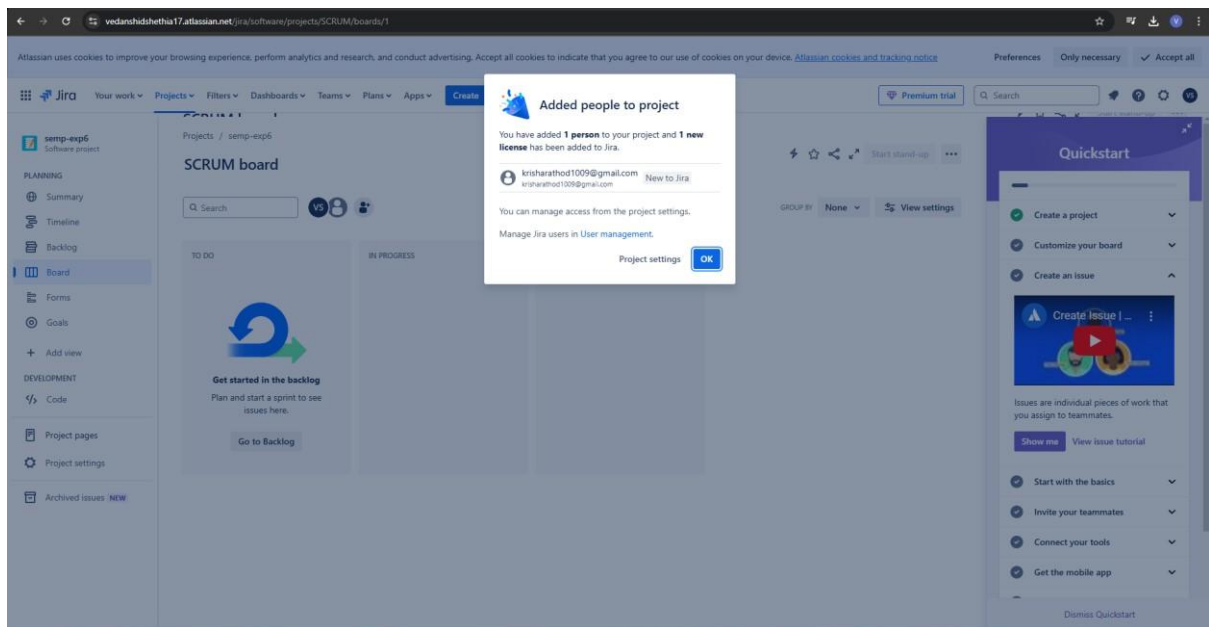
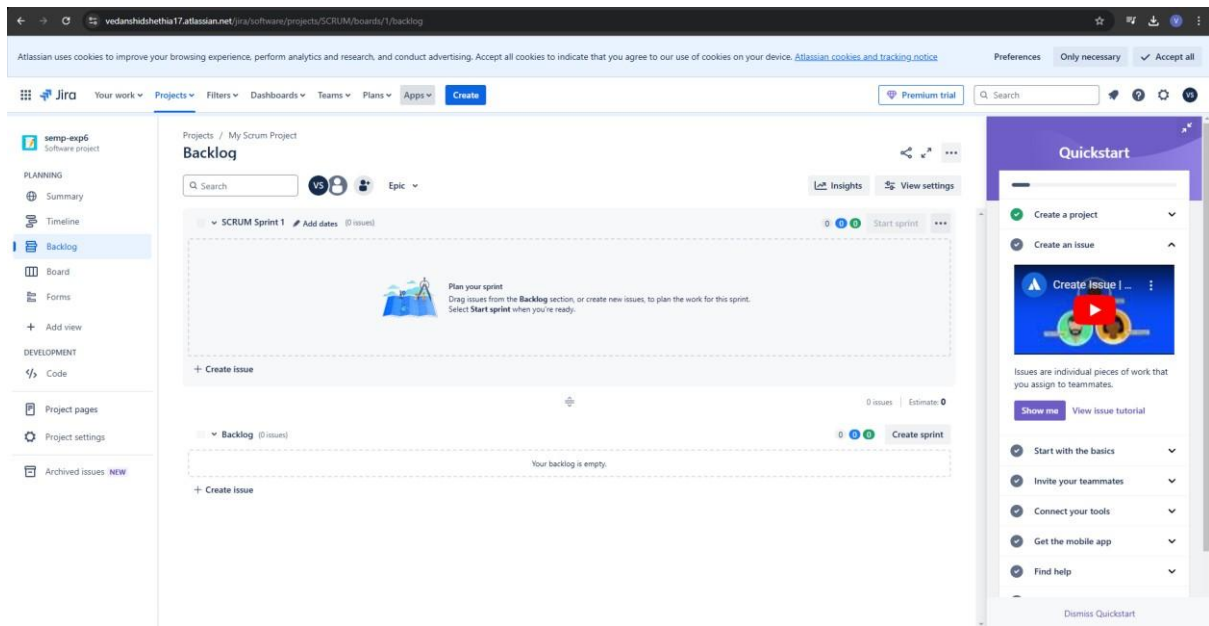
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Jira Your work Projects Filters Dashboards Teams Plans Apps Create Premium trial Search

semp-exp6
Software project

PLANNING
Summary
Timeline
Backlog
Board
Forms
Add view
DEVELOPMENT
Code
Project pages
Project settings
Archived issues NEW

Projects / semp-exp6

SCRUM board

Q Search VS

GROUP BY: None View settings

TO DO
Get started in the backlog
Plan and start a sprint to see issues here.
Go to Backlog

IN PROGRESS

DONE ✓

Quickstart

Create a project
Customize your board
Create an issue
Create issue! ...
Issues are individual pieces of work that you assign to teammates.
Show me View issue tutorial
Start with the basics
Invite your teammates
Connect your tools
Get the mobile app
Dismiss Quickstart

👤 Admin invited you to join them in Jira Inbox x

Atlassian <noreply-2bfc34c@id.atlassian.net>
to me

9:22 AM (1 minute ago) ☆ 😊 ↶ ⋮

Jira

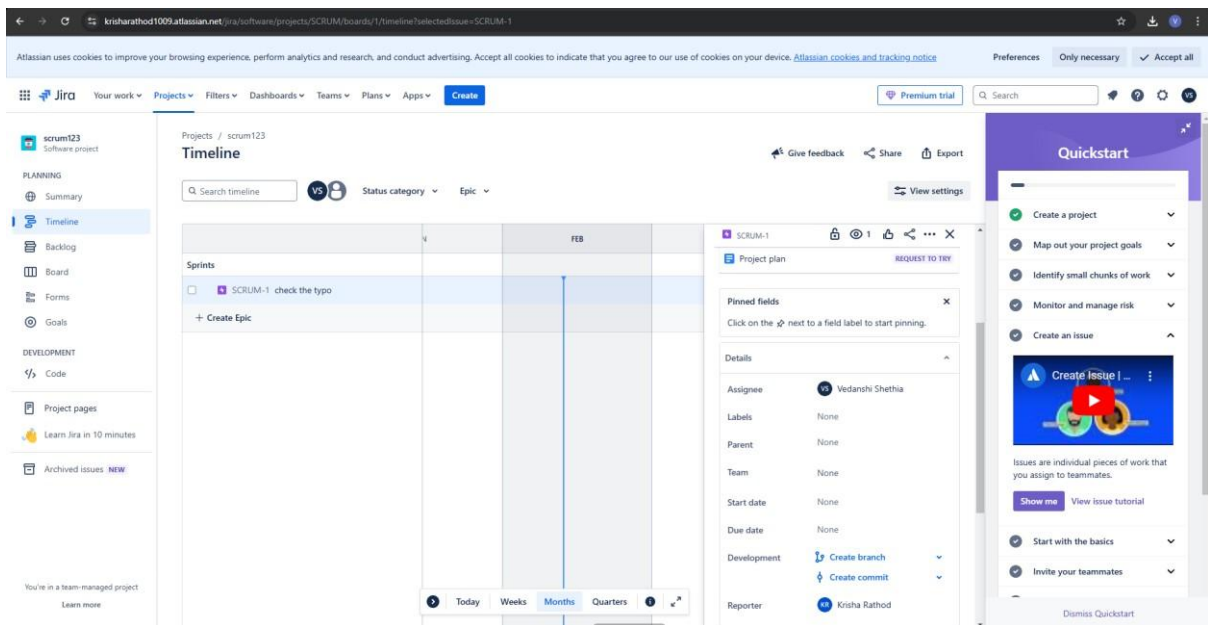
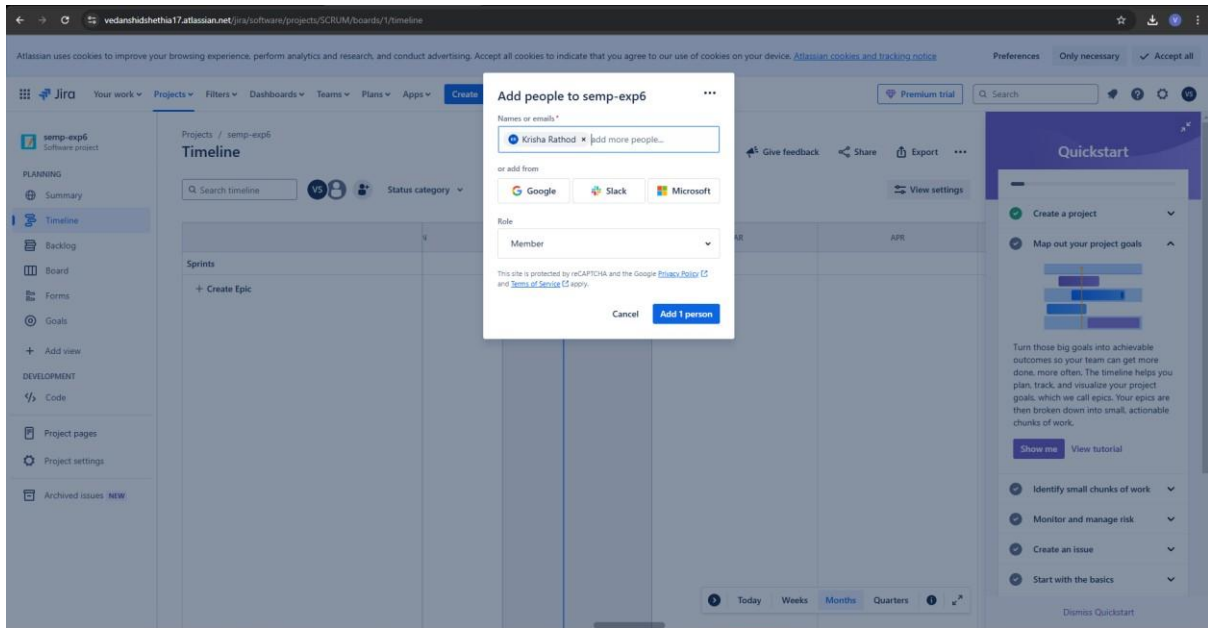
Admin invited you to join them in Jira
Start planning and tracking work with Admin and your team. You can share your work and view what your team is doing.
Accept Invite
What is Jira? A software tool for project and issue tracking across your team. Plan, track and manage your projects in Jira. [Learn more](#)

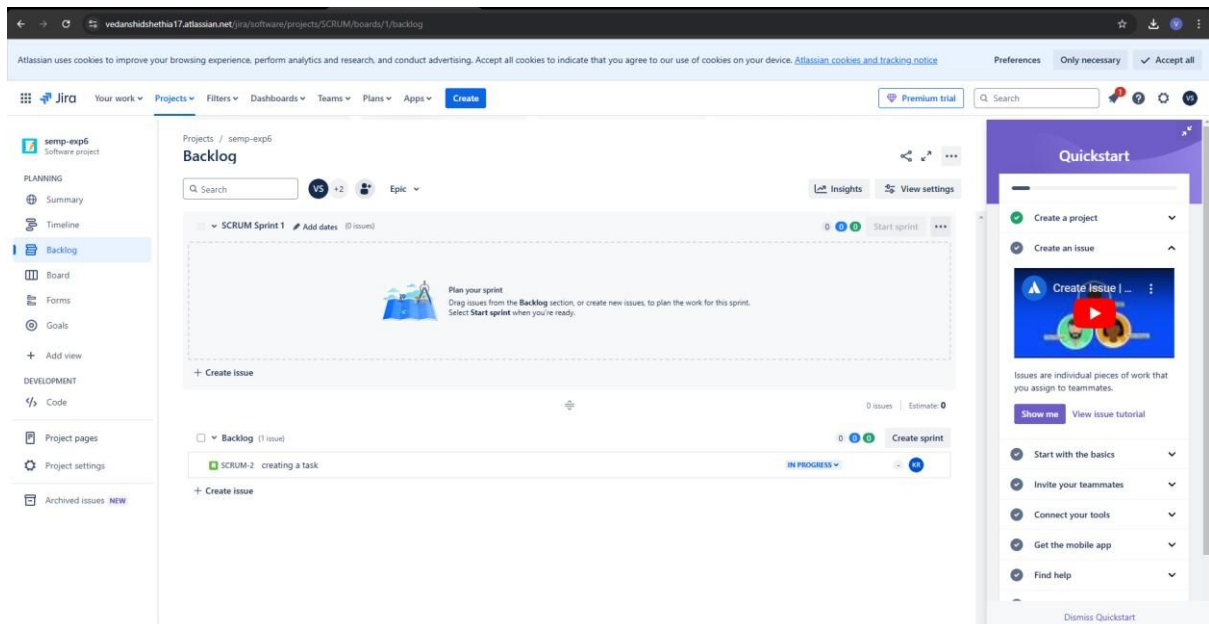
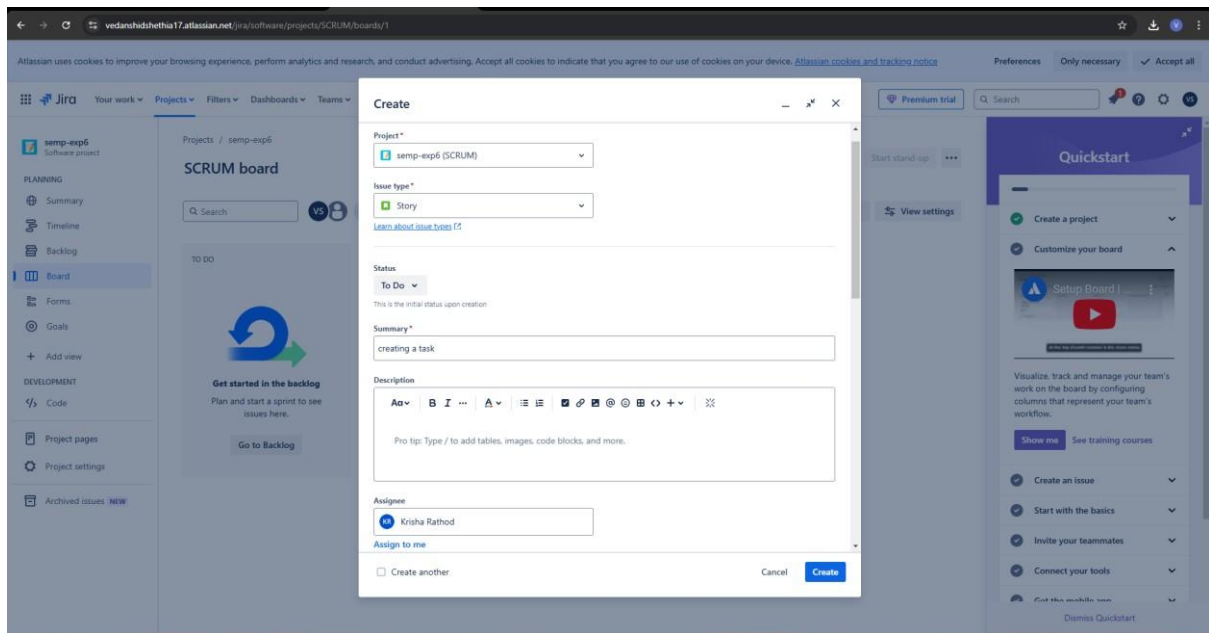
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This screenshot shows the Jira interface for a project named 'scrum123'. The main view is the 'SCRUM board', which displays a Kanban-style workflow with three columns: 'TO DO', 'IN PROGRESS', and 'DONE'. The 'TO DO' column contains a card with a circular arrow icon and the text 'Get started in the backlog'. The 'IN PROGRESS' and 'DONE' columns are currently empty. On the left sidebar, the 'Board' view is selected under the 'PLANNING' section. The right sidebar features a 'Quickstart' panel with various guides and a 'Create an issue' button. The top navigation bar includes links for 'Your work', 'Projects', 'Filters', 'Dashboards', 'Teams', 'Plans', and 'Apps'.

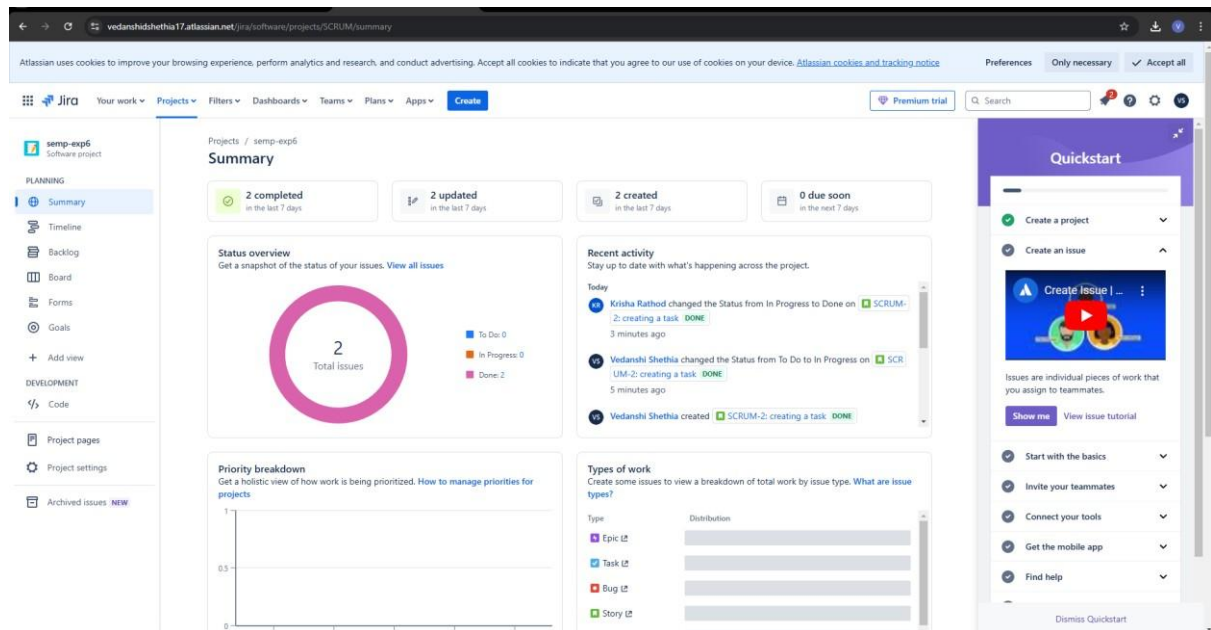
This screenshot shows the Jira interface for the same project 'scrum123', but with the 'Timeline' view selected. The main view displays a timeline for the month of February. A single sprint is visible, containing one issue titled 'check the typo' with a status of 'DONE'. The right sidebar shows the 'Quickstart' panel, which is slightly different from the one in the first screenshot, featuring a 'Create an issue' button and a 'Map out your project goals' option. The top navigation bar is consistent with the first screenshot, showing 'Your work', 'Projects', 'Filters', 'Dashboards', 'Teams', 'Plans', and 'Apps'.





This screenshot shows the Jira Backlog for project 'semp-exp6'. The left sidebar contains navigation links for Planning (Summary, Timeline, Backlog, Board, Forms, Goals), Development (Code), and Project pages (Project pages, Archived issues). The main area displays the 'SCRUM Sprint 1' backlog with a 'Create issue' button and a 'Create sprint' button. A search bar is at the top of the backlog. The right sidebar shows a 'creating a task' panel with a '+ Add' button, a 'Done' status, and a 'Description' field. Below the description is a 'Confluence content' section with a 'Product requirements' link. At the bottom of the sidebar is a 'Pinned fields' section with a 'Click on the pin icon next to a field label to start pinning.' instruction. The bottom of the sidebar shows 'Details' with an 'Assignee' field set to 'Krisha Rathod'.

This screenshot shows the Jira Summary view for project 'scrum123'. The left sidebar contains navigation links for Planning (Summary, Timeline, Backlog, Board, Forms, Goals), Development (Code), and Project pages (Project pages, Archived issues). The main area displays the 'Summary' view with a '2 completed' status, a '2 updated' status, a '2 created' status, and a '0 due soon' status. Below these are sections for 'Status overview' (a donut chart showing 2 total issues), 'Recent activity' (a list of recent changes), 'Priority breakdown' (a bar chart showing work prioritization), and 'Types of work' (a table showing the distribution of work types). The right sidebar shows a 'Quickstart' panel with a 'Create a project' button, a 'Create an issue' button, and a 'Create issue' video. Below the video are links for 'Show me' and 'View issue tutorial'. At the bottom of the sidebar is a 'Dismiss Quickstart' button.



Conclusion

Jira is a powerful, flexible, and highly customizable project management tool that has become the go-to solution for Agile teams, particularly in software development. With its support for Scrum, Kanban, and other methodologies, Jira enables teams to organize, prioritize, and track work efficiently. Through its rich set of features, customizable workflows, and seamless integrations with other tools, Jira helps teams improve collaboration, streamline processes, and deliver high-quality projects on time.