



JIRA

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(expleo)

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Introduction

- Jira Software is the #1 agile project management tool used by teams to plan, track, release and support world-class software with confidence.
- It is the single source of truth for your entire development lifecycle, empowering autonomous teams with the context to move quickly while staying connected to the greater business goal.
- Whether used to manage simple projects or to power your DevOps practices, Jira Software makes it easy for teams to move work forward, stay aligned, and communicate in context.

Introduction

- Jira Software launched in 2002 as an issue tracking and project management tool for teams.
- Since then, 65,000+ companies globally have adopted Jira for its flexibility to support any type of project and extensibility to work with thousands of apps and integrations.
- Used by :
 1. Agile teams
 2. Bug tracking teams
 3. DevOps teams
 4. Product management teams
 5. Project management teams
 6. Software development teams

Introduction

1. Jira Software for bug tracking

- Bugs are just a name for to-do's stemming from problems within the software a team is building.
- It is important for teams to view all the tasks and bugs in the backlog so they can prioritize big picture goals.
- Jira's powerful workflow engine ensures that bugs are automatically assigned and prioritized once they are captured.
- Teams can then track a bug through to completion.

Introduction

2. Jira Software for requirements & test case management

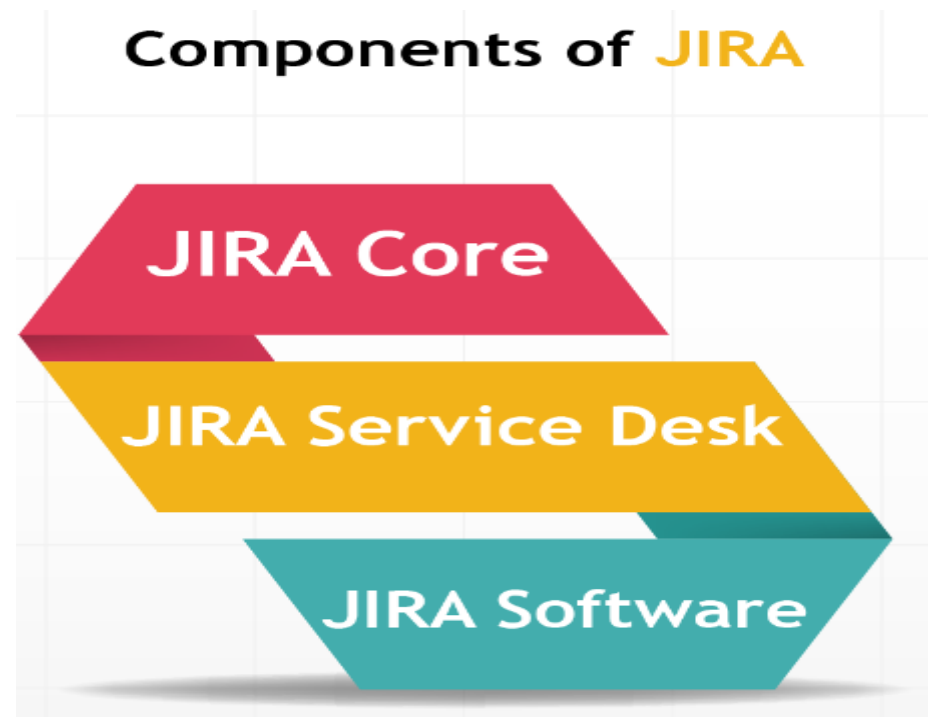
- Jira Software is the central hub for the coding, collaboration, and release stages.
- It integrates with a variety of quality assurance apps, and allows for customizable fields, workflows and screens.
- All of these enable teams to manage manual and automated tests in their software development cycle seamlessly and effectively.

Components of JIRA

- JIRA is divided into 3 major components and the term JIRA refers to a common platform that these products are developed on. Now, let's have a look at these 3 JIRA components.
- 1. JIRA Core** - JIRA Core resembles classic JIRA with its workflow capabilities and field customizations. JIRA Core is ideal for general-purpose task management.
 - 2. JIRA Service Desk** - JIRA Service Desk is a JIRA Core with the capabilities of a Service Desk. JIRA Service Desk is designed for running JIRA as a support system for ticketing with a focus on customer satisfaction with Service Level Agreement (SLA) goals and with a simple user interface for the end-users.

Components of JIRA

3. JIRA Software - Previously known as JIRA Agile, JIRA Software is JIRA Core with capabilities of Agile. This is highly suited for software development teams that want to utilize Agile methodologies like JIRA Kanban and Scrum.

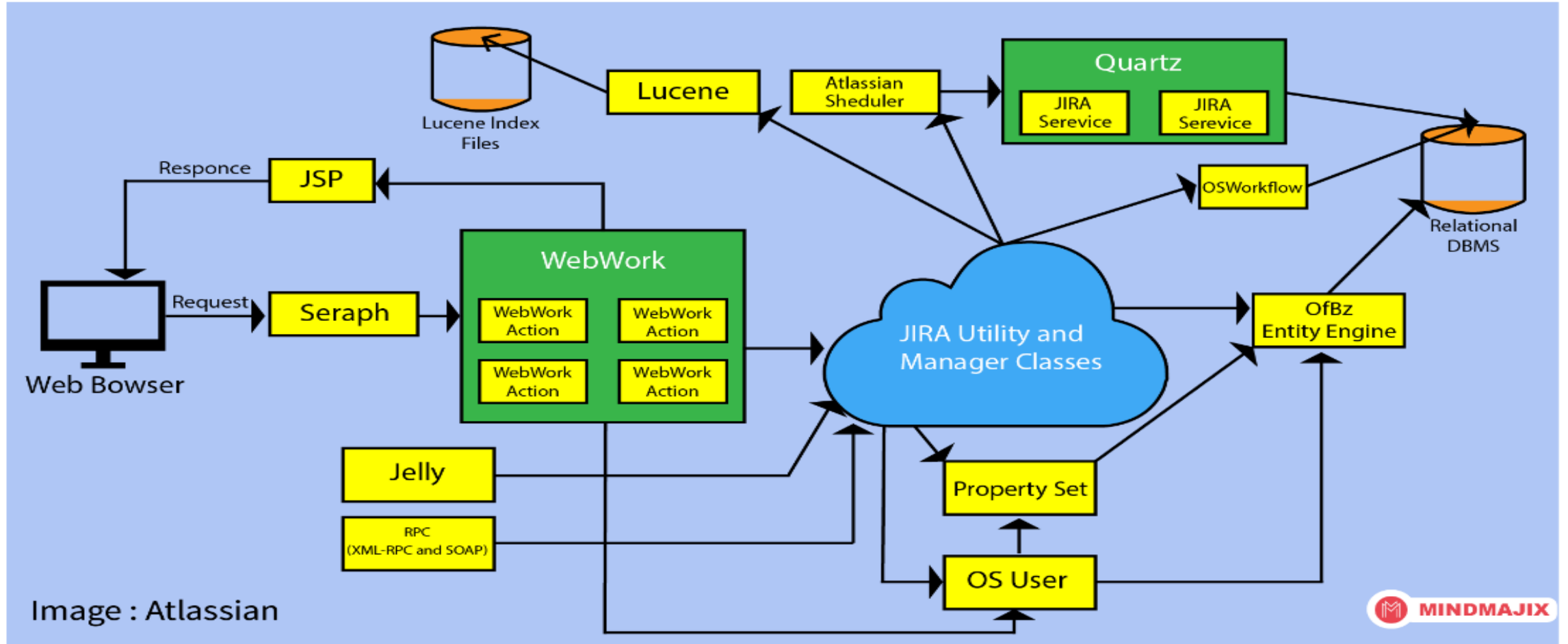


JIRA Architecture

- JIRA is written in Java and is deployed into a java Servlet Container like Tomcat as a standard Java WAR file.
- Users interact with JIRA with the help of a web browser since JIRA is a web application. JIRA utilizes WebWork 1 for processing web requests that the users submit.
- WebWork 1 is actually an MVC framework that is similar to Struts.
- JSP is used by JIRA for the View layer. When you visit a specific URL in a web application, the scenario that happens is defined by a web application framework.
- In JIRA, almost all authentication is performed via Seraph. Seraph is an open-source web authentication framework.

JIRA Architecture

JIRA Architecture



JIRA Architecture

- JIRA can have new actions that are defined with the help of Webwork.
- The Webwork Sample plugin consists of example classes and actions that can be utilized to understand this topic in a comprehensive manner.
- The Single Sign-On (SSO) and Identity Management tool of Atlassian is known as Crowd.

JIRA software Installation

- <https://www.atlassian.com/software/jira/download>
- Go to the above site and choose appropriate software : JIRA SOFTWARE with DATA Center and BUG management.

SCRUM

- Scrum is one of the most popular frameworks for implementing agile.
- With scrum, the product is built in a series of fixed-length iterations called sprints that give teams a framework for shipping on a regular phase and interval or frequency.
- Steps in creating SCRUM Project
- **Step 1: Create a scrum project**
- **Step 2: Create user stories or tasks in the backlog**
- **Step 3: Create a sprint**
- **Step 4: Hold the sprint planning meeting**
- **Step 5: Start the sprint in Jira**

SCRUM

SCRUM

- **Step 6: Hold the daily standup meetings**
- **Step 7: View the Burndown Chart**
- **Step 8: View the sprint report**
- **Step 9: Hold the sprint review meeting**
- **Step 10: Hold the sprint retrospective meeting**
- **Step 11: Complete the sprint in Jira**

JIRA Project

- In JIRA Tool, the collection of issues is known as a Project.
- A JIRA project could be used to manage a help desk, track a project, coordinate a product's development, and more, based on your requirements.
- A JIRA project can also be customized as well as configured for suit your needs.
 - Creating a Project in JIRA
 - Click on "Projects" in the header and then on "Create Project."
 - Follow the wizard for project creation.

JIRA Project

Project types:

- More than one project type is available to you based on which JIRA applications you have installed.
- Every project type has a particular set of features.
- All the users on the JIRA instance can see all projects, but the actions they can take and the features they see are determined by their project-specific permissions and application access.

SCRUM

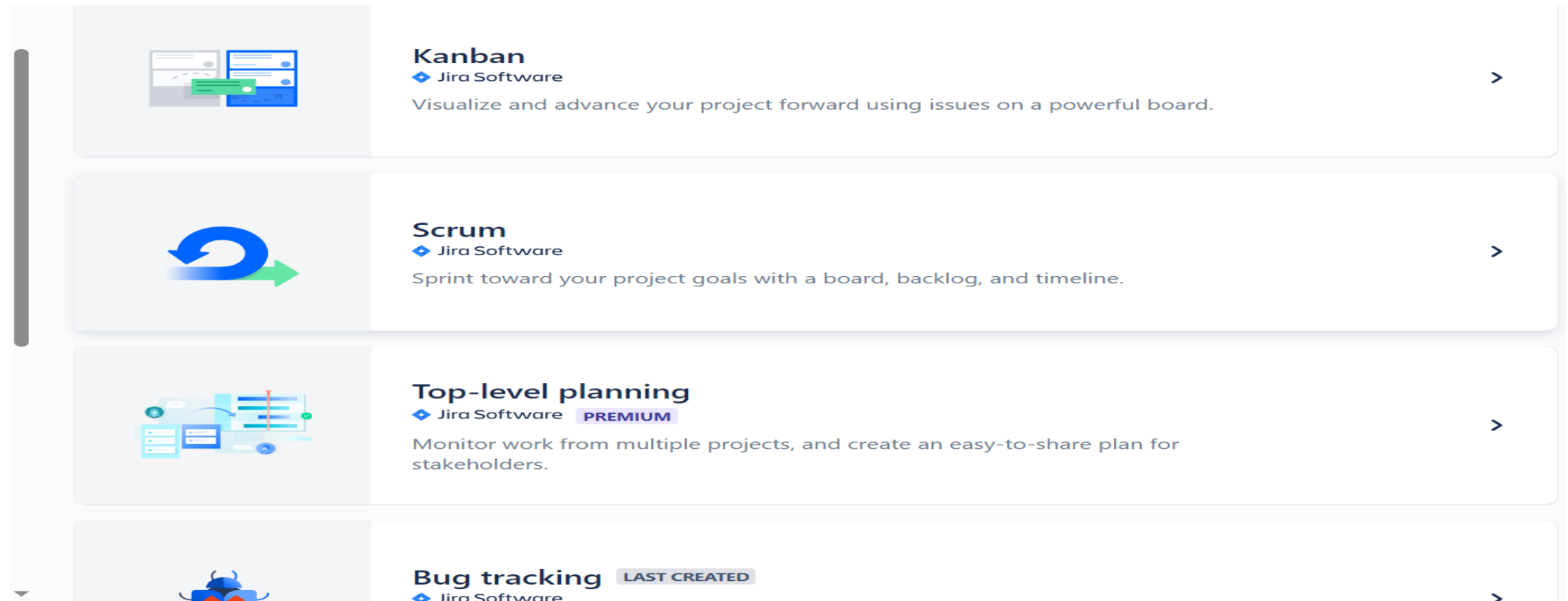
Creating a Project

- In home page, Click Project Menu and select create project/

The screenshot displays the Jira web interface. The top navigation bar includes 'Your work', 'Projects', 'Filters', 'Dashboards', 'Teams', 'Apps', and a 'Create' button. The 'Projects' menu is open, showing a list of recent projects: 'JiraDemoProject (SCRUM)' and 'JiraBugTrackingDemo (JIR)'. Below this list, there are options to 'View all projects' and 'Create project'. The 'Create project' option is highlighted. On the right side of the screen, a 'New Story' form is visible. The form includes fields for 'Project' (set to 'JiraDemoProject (SCRUM)'), 'Issue type' (set to 'Story'), and 'Status' (set to 'TO DO'). The 'Summary' field is empty and highlighted with a red border, with a red error message 'Summary is required' below it. The 'Description' field is also empty. At the bottom of the form, there is a checkbox for 'Create another issue' and a 'Create' button.

Creating a Project

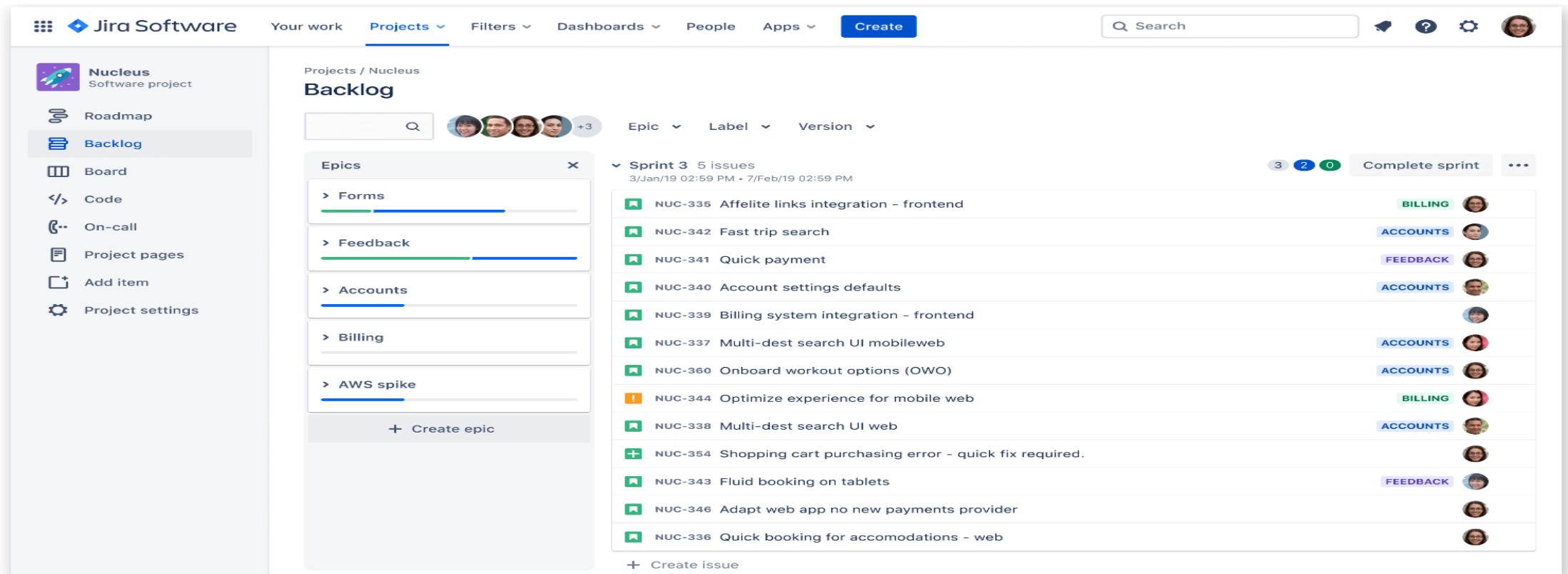
- After selecting project choose any of the software project development templates.



SCRUM

Creating an SCRUM

- Scrum Template looks like the one below;



JIRA Issues

- The issues in JIRA software help you to keep track of your team, estimate workload, and manage code. In this section, I will let you know what you can do with an issue.

What is an Issue?

- Various companies use JIRA Tool to track different types of issues, which can represent anything such as a leave request form, a project task, or a software bug.
- In any JIRA project, issues can be termed as its building blocks.
- A task, a bug, a story, or any other issue type can be represented as an issue.
- An issue can be stated as a packet of work in JIRA Core.

JIRA Issues

- It can be a large chunk of work or a small task depending on your project and how your team decides to divide work into issues.
- An example of a small issue can be “Remember to order a burger for charity night” and a large issue can be “Build a bridging wall between garage and house.”

JIRA Issues

- In JIRA, everything is an issue, – Epic, story, task and sub tasks, these are issue types.
- An epic is a large story that cannot be simply achieved in a single sprint.
- Usually, it takes months to accomplish an epic.
- It typically refers to a set of requirements that have not been rationalized into user stories yet.
- Think of it as a big goal that is yet to be simplified and divided into several tasks for your agile team to work on them.
- Epic is usually regarded as the 'top tier' or a work hierarchy.

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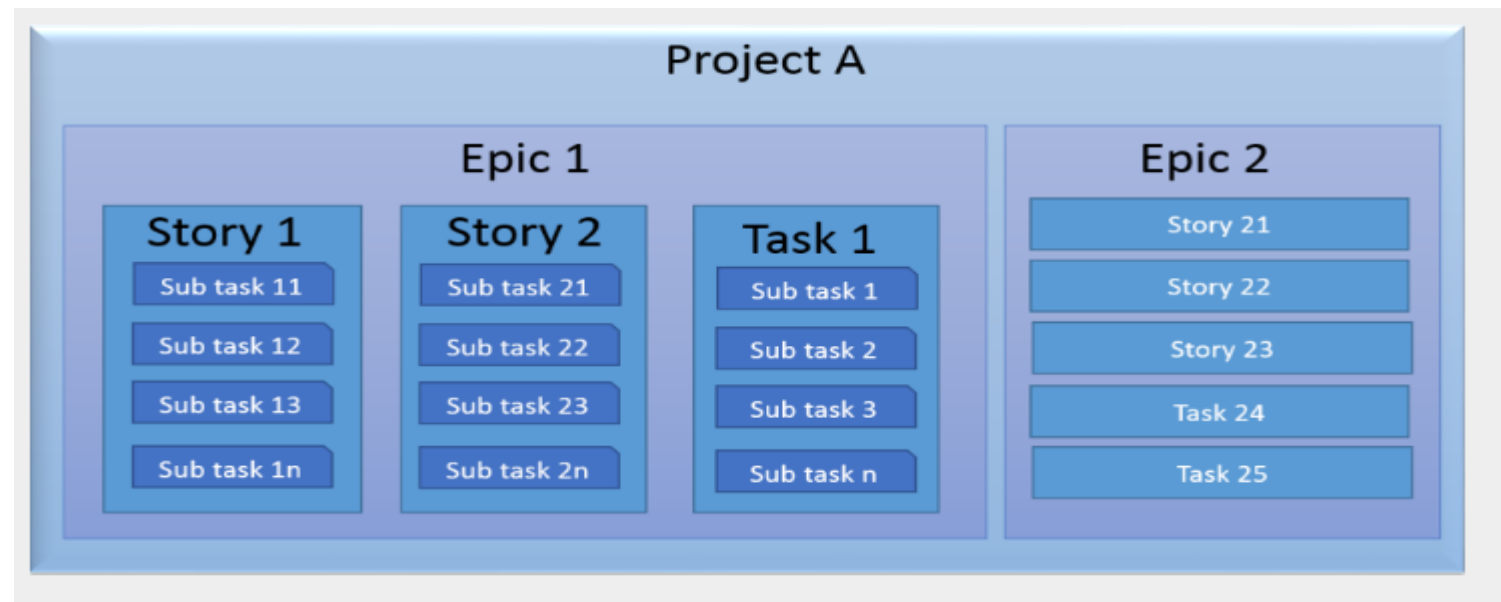
EPIC :

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JIRA Issues

Examples of Epics:

- As a bank, we want to extend our services by offering life and health insurance.
- We want to add biometric recognition to increase security without hassle.
- As the marketing department, we want to create an interactive app to cater to more customers.



JIRA Issues

User Story :

- The User Story is simply the list of items that need to be done within a project.
- Think of it as a to-do list. This is owned by the Scrum Product Owner. The Scrum master, stakeholders, and the scrum team contribute to the completion of the backlog items.
- The idea is to break down a product into shippable pieces so that the large project can be done successfully.
- Epics can involve multiple teams and multiple projects, and can be tracked on multiple boards.
- A user story is a very high-level definition of the project requirements.

JIRA Issues

Template for writing a user story:

- As a < type of user >, I want < some goal > so that < some reason >.

Examples of User Stories :

- As a user, I want to migrate all my data backups in a cloud system to free up my device.
- As a student, I can order official transcripts online to save time.
- As a consumer, I want to shop for grocery items from a mobile app so that I could skip the lines in the store.

JIRA Issues

Task :

- Scrum tasks are detailed pieces of work that are necessary to complete a story.
- Tasks can range from a few hours to several hours (usually up to 12) and are assigned to team members who have the skills or expertise to do them.
- Take note that a story is not considered complete until all tasks under it are done.
- Tasks are placed on a Scrum Board for easy tracking.
- **Stories**
 - **Not started** – the tasks that are yet to be worked on.
 - **In progress** – tasks that the Scrum team are doing.
 - **Done** – tasks that are completed.

JIRA Issues

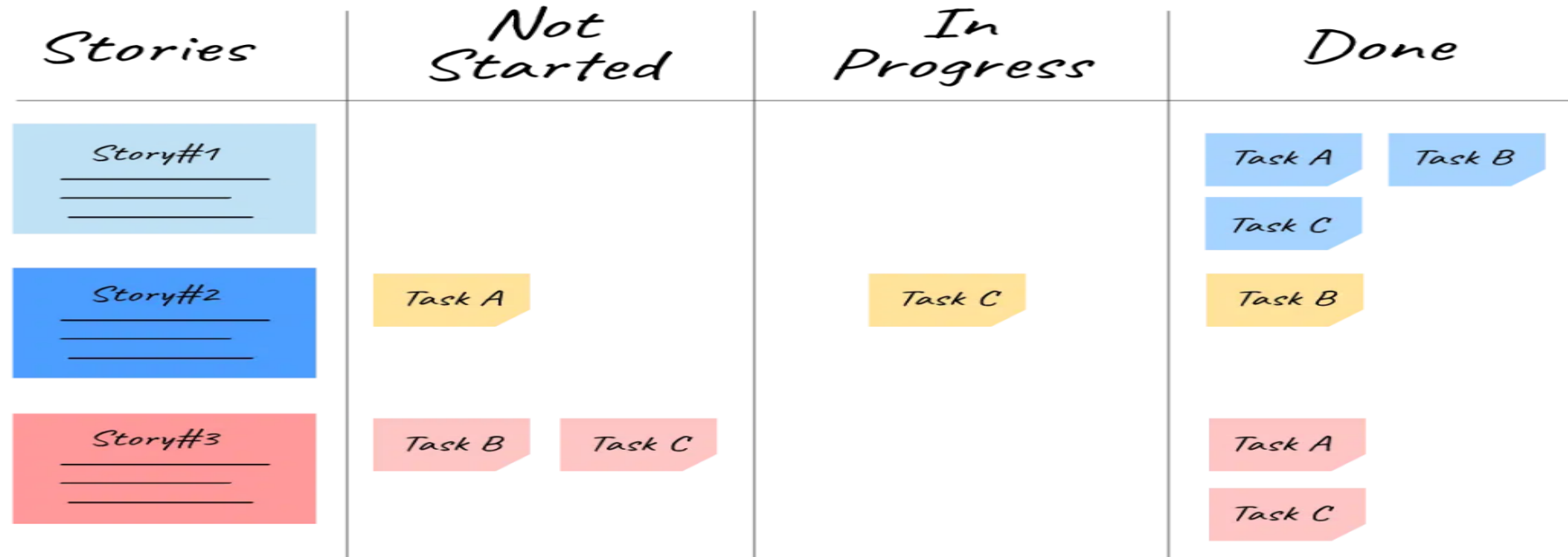
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JIRA Issues

Scrum Board:

- The Scrum Board serves as a very useful visual tool that lets your agile team easily keep track of the sprint. The board should be updated on a daily basis.



JIRA Issues

- A task is not written in the user story format. A task has more a technical nature.

Example of Task:

- “Evaluate Angular material design for user interface” or “Submit app to app store”.
- In summary, stories contain multiple types of work (e.g., programming, testing, database design, user interface design, analysis, etc.) while tasks are restricted to a single type of work.

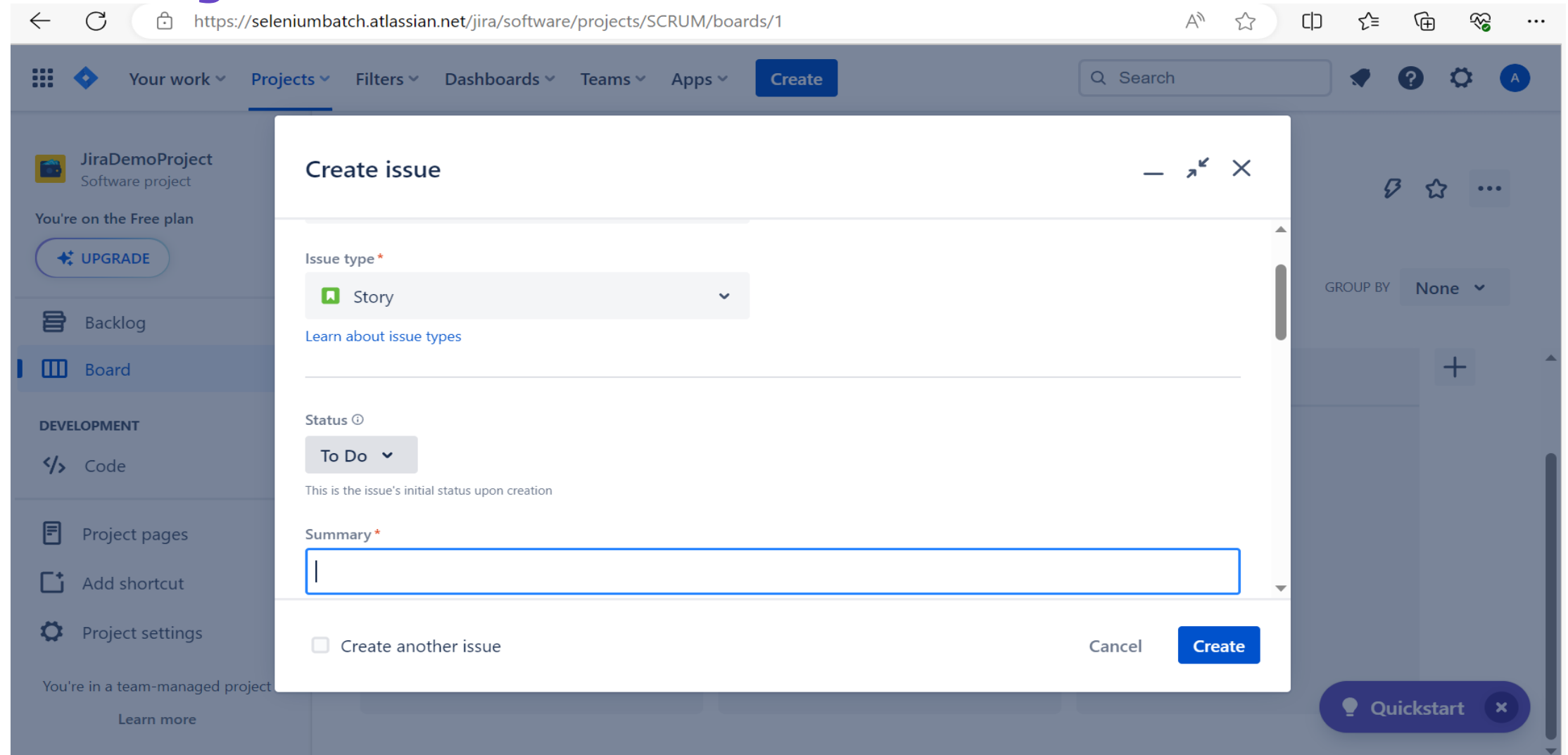
Creating an Issue

- Before you begin with issue creation, you require the Create Issue project permission for the relevant project of the issue. Now, let's have a look at the steps involved in creating an issue.
- At the top of the screen, click "create" for opening the "Create Issue" dialog box.
- In the Create Issue dialog box, select the relevant Issue Type and Project.
- For the issue, type a "Summary" and complete any appropriate fields.
- If you want to hide existing fields or if you want to access fields that aren't displayed in this dialog box:
 - You should click the "Configure Fields" button present at the top right of the screen.

Creating an Issue

- Click on “Custom” and choose the fields you want to hide or show by clearing or selecting the relevant check boxes respectively, or for showing all fields, you should click “All.” These selected fields will be displayed when you next create an issue.
- **Optional:** You can select the “Create another” checkbox present at the bottom of the dialog if you want to create a series of similar issues with the same Issue and Project Type.
- In the new Create Issue dialog box, some of the fields may be pre-populated depending on the values you may have specified while creating previous issues, and your configuration. Before creating the next issue, ensure you check they are all correct.
- Click the “Create” button when you are satisfied with your issue’s content.

Creating an Issue



Creating an Issue

The screenshot shows the Jira web interface for a project named 'JiraDemoProject'. The browser address bar displays the URL: `https://seleniumbatch.atlassian.net/jira/software/projects/SCRUM/boards/1/backlog`. The top navigation bar includes links for 'Your work', 'Projects', 'Filters', 'Dashboards', 'Teams', and 'Apps', along with a 'Create' button and a search bar. The left sidebar shows the project name and plan status ('You're on the Free plan'), with navigation options for 'PLANNING' (Timeline, Backlog, Board) and 'DEVELOPMENT' (Code). The main content area is titled 'Backlog' and shows a section for 'SCRUM Sprint 1' with 'Add dates' and '(0 issues)'. A large dashed box contains the text: 'This is where you plan a sprint. Drag issues from the backlog section, or create new issues, to plan the work for this sprint. Select *Start sprint* when you're ready.' Below this is a '+ Create issue' button. At the bottom, there is a 'Backlog (0 issues)' section and a 'Quickstart' button.

JIRA Sprints

- A Sprint is defined as a fixed time period wherein teams finish work from their product backlog.
- The time period for sprints may be one, two, or four weeks.
- A team will usually have developed and implemented a working product increment at the end of the Sprint.

JIRA Sprints

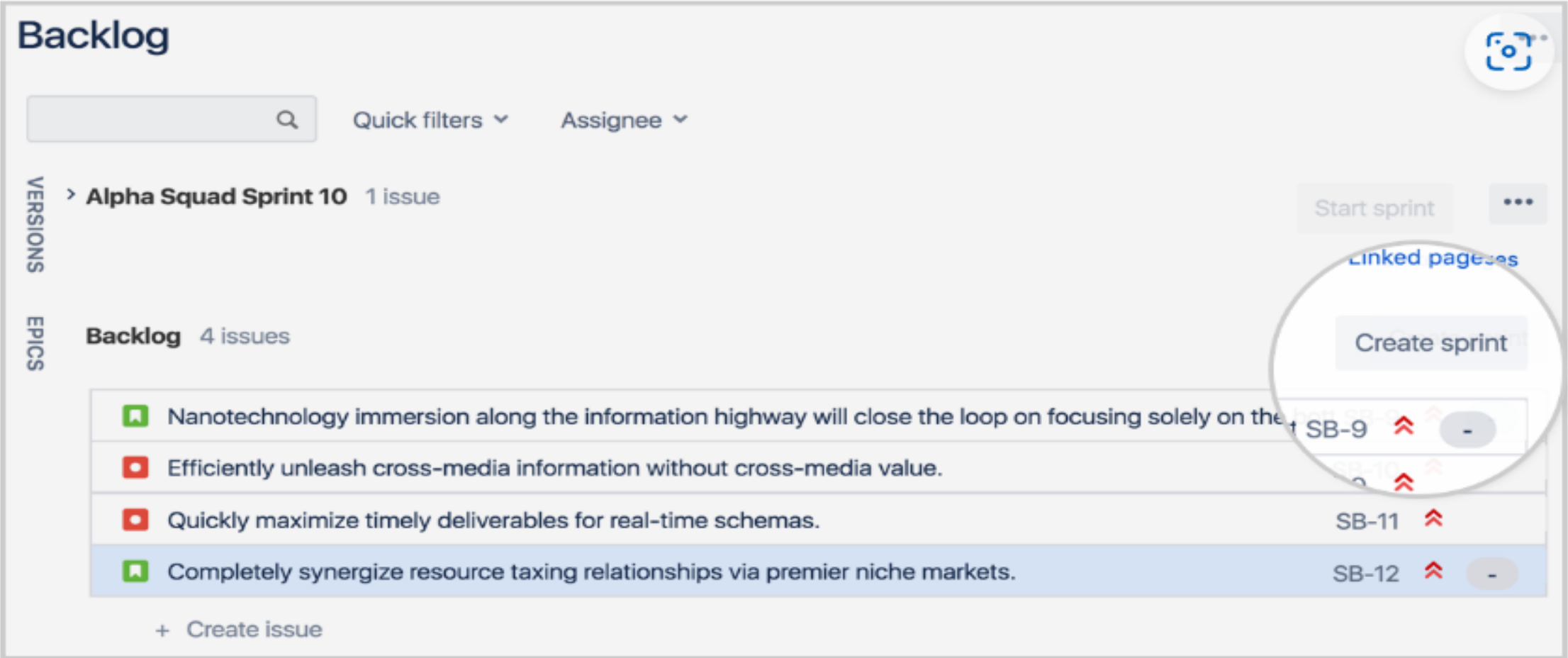
How to Create a Sprint in JIRA?

- In order to create a sprint in JIRA, you must navigate to the “Backlog” of your Scrum project and click on the “Create Sprint” button which is present at the top of the Backlog.

Planning Sprints

- Every sprint begins with a planning meeting.
- While planning a sprint, your team would usually commit to providing a set of stories that are pulled from the top of a backlog.
- You see sprints on a board in JIRA software and assign issues to them. With the help of JQL (Sprint field), you can search for any issues in upcoming sprints. This involves starting the sprint, assigning stories to the sprint, and creating a sprint.

JIRA Sprints



JIRA Sprints

Fill your sprint with stories from the backlog

To add stories to your sprints

- 1.Navigate to the Backlog.
- 2.Drag and drop issues from the Backlog onto your sprint.

Note that you can also add an issue to your sprint by editing the issue and updating the Sprint field.

JIRA Sprints

How to Start a Sprint?

- In order to start a sprint, you must navigate to the “Backlog” of your Scrum project.
- You should locate the sprint that you wish to begin and click on “Start sprint”.
- Then, you have to update the Sprint name and add a sprint goal if required.
- After that, choose the Start and End dates for the Sprint.
- You will be navigated to the Active sprints where you can view the issues in the newly started sprint.

JIRA Sprints

Backlog

Quick filters ▾

Assignee ▾

VERSIONS

EPICS

▾ Alpha Squad Sprint 11

4 issues

Start sprint

Linked pages

As a user I want to be able to save useful filters	CUSTOM FILTERS	SB-1	↑	3
Provide performance and monitoring plans for 2017 Park strategies within the Commonwealth Planning Fr		SB-3	↑	5
Organically grow the holistic world view of disruptive innovation via workplace diversi	CUSTOM FILTERS	SB-6	↑	2
Provide performance and monitoring plans for 2017 Park strategies within the Com	NANOTECHNOLOGY	SB-2	↑	8

+ Create issue

4 issues

Estimate

18

▾ Alpha Squad Sprint 10

1 issue

...

JIRA Sprints

Viewing Issues in a Sprint

- To view planned sprints, you can utilize the backlog of a board. You can utilize the Active sprints of a board if you want to see a sprint in progress. JQL can also be used to search for a sprint's issues.

Viewing the Sprint Report

1. Select Projects in the navigation bar, then select the relevant project.
2. Select Reports, then Sprint Report.
3. Select the relevant sprint from the sprint dropdown.

JIRA Reports

- JIRA Core offers a range of reports that display statistics for specific versions, people, information about issues.

How to Generate Reports in JIRA?

In order to generate a report, you must navigate to the desired project, and click on “Reports”. Then, you have to select a report from the list of reports. The various types of reports are as follows.

- Average Age Report
- Pie Chart Report
- Created vs Resolved Issues Report
- Resolution Time Report

JIRA Reports

- Recently Created Issues Report
- Time Since Issues Report
- Single Level Group By Report
- User Workload Report
- Time Tracking Report
- Workload Pie Chart Report
- Version Workload Report

JIRA Blocks

Workflows

- Your JIRA issues can follow a process that mirrors the practices of your team.
- A workflow defines a sequence of steps or statuses that an issue will follow.
- Examples of the statuses or steps are “Resolved,” “In Progress,” and “Open.”
- How the issues will transition between steps can be configured by you.
- The workflow scheme of a project determines which workflows will apply to issue types in this project.

JIRA Blocks

Columns and their statuses could look a little like this:

Column	Status
To do	To do Gathering requirements
In progress	In progress In review On hold
Done	Won't do Done

Your board configuration is now separated from your board. To create new columns, or make any changes to your existing columns and statuses, use your **Columns and statuses** settings.

JIRA Blocks

Configure your board

- To access your Columns and statuses settings from your board:
 1. If not already there, navigate to your team-managed Jira Software project.
 2. From your project's sidebar, select Board.
 3. In the top, far right select More (⋮) > Configure board.
- To access your Columns and statuses settings from anywhere in your project:
 1. If not already there, navigate to your team-managed Jira Software project.
 2. From your project's sidebar, select Project settings > Board.

JIRA Blocks

Add or move a column

- Creating a new column in the Columns and statuses settings won't create an associated status.
- Statuses are instead created and managed in the workflow editor.

To add a new column:

- 1.If not already there, navigate to your **Column and status** settings.
- 2.Select **Create column (+)** next to the rightmost column.

JIRA Blocks

Add or create a status in your issue type's workflow

To create a new status:

- 1.From your project's sidebar, select Project settings > Issue types.
- 2.From the sidebar, select the issue type you want to edit.
- 3.Select Edit workflow.
- 4.Using the toolbar at the top of the editor, select a status category for the status you want to create.
- 5.Give your status a name.
- 6.Select Add.

JIRA Blocks

Change the column title and set limits

Keep in mind, choosing unique names for a column and the status it's assigned will impact your ability to edit from your board.

- 1.If not already there, navigate to your Column and status settings.
- 2.Hover over the column heading. Select Edit column ().
- 3.Choose a new name for the column.
- 4.In this modal, you may also set a maximum number of issues. The column changes color when it contains too many issues.

JIRA Blocks

Delete a column

In your Column and status settings, you can only delete columns. Statuses are independent of columns in these settings. If a status isn't assigned to a column, any issues with that status won't be visible on the board.

- 1.If not already there, navigate to your Column and status settings.
- 2.Hover over the column heading. Select Edit column ().
- 3.Select Delete column in the bottom left.

JIRA Blocks

Using a Bug Report Template as a Jira User

- You will need to create an issue, select the project under which it falls, and decide on the issue type.
- When you create an issue, there are many details you will need to provide. For bugs, there are some standard things you will have to add.
- Summary: a quick description of the bug
- Description: a more in-depth look at the bug
- Expected and actual results
- Steps to reproduce
- Priority: the severity of the bug

JIRA Blocks

- Environment: the operating system, device, network connectivity, etc.
- Attachment: screenshots, video, and other documents
- Assignee: the person assigned to deal with the issue
- Status: created automatically depending on your workflow
- It is important to remember that Jira lets you assign one or more people to an issue. You also have the option of automating this step so that it can change assignees when going from one status to another.
- Each issue also has an activity section where those assigned to deal with it can leave notes and where you can see the history of all activities.
- Jira also makes it possible for you to link issues together if they are related. If lots of people report the same bug, you can put the reports together.