

# Test Case Management Tools

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- Test management tools are the automation tools that help to manage and maintain the Test Cases. Main Features of a test case management tool are
  - 1) For documenting Test Cases: With tools, you can expedite Test Case creation with use of templates
  - 2) Execute the Test Case and Record the results: Test Case can be executed through the tools and results obtained can be easily recorded.
  - 3) Automate the Defect Tracking: Failed tests are automatically linked to the bug tracker, which in turn can be assigned to the developers and can be tracked by email notifications.
  - 4) Traceability: Requirements, Test cases, Execution of Test cases are all interlinked through the tools, and each case can be traced to each other to check test coverage.
  - 5) Protecting Test Cases: Test cases should be reusable and should be protected from being lost or corrupted due to poor version control. Test Case Management Tools offer features like

- Naming and numbering conventions
- Versioning
- Read-only storage
- Controlled access
- Off-site backup

# What is JIRA?

- **JIRA** is a tool developed by Australian Company Atlassian. This software is used for **bug tracking, issue tracking, and project management**. The JIRA full form is actually inherited from the Japanese word “Gojira” which means “Godzilla”. The basic use of this tool is to track issue and bugs related to your software and Mobile apps.
- It is also used for project management. The JIRA dashboard consists of many useful functions and features which make handling of issues easy. Some of the key features are listed below.

# What is JIRA used for?

- ❖ Jira software can be used for the following purposes:
- ❖ Requirements and Test case management
- ❖ In Agile Methodology
- ❖ Project Management
- ❖ Software Development
- ❖ Product Management
- ❖ Task Management
- ❖ Bug Tracking

# How to Use JIRA?

- Here is a step by step process on how to use Jira software:

**Step 1)** Open Jira software and navigate to the Jira Home icon

**Step 2)** Select Create project option

**Step 3)** Choose a template from the library

**Step 4)** Set up the columns as per your need from Board settings

**Step 5)** Create an issue

**Step 6)** Invite your Team members and start working

# What is JIRA Issue?

- JIRA issue would track bug or issue that underlies the project. Once you have imported project then you can create issues.
- Under Issues, you will find other useful features like
  - Issue Types
  - Workflow's
  - Screens
  - Fields
  - Issue Attributes

# Jira Issue Types

- Issue Type displays all types of items that can be created and tracked via Jira testing tool. JIRA Issues are classified under various forms like new feature, sub-task, bug, etc. as shown in the screen shot.

There are two types of Issue types schemes in Jira project management tool, one is

- **Default Issue Type Scheme:** In default issue type scheme all newly created issues will be added automatically to this scheme
- **Agile Scrum Issue Type Scheme:** Issues and project associated with Agile Scrum will use this scheme

Apart from these two issue type schemes, you can also add schemes manually as per requirement, for example we have created **IT & Support** scheme, for these we will **drag and drop** the issue types from the **Available Issue type** to **Issue type for current scheme** as shown in the screen shot below

# JIRA Components

- **Jira Components** are sub-sections of a project; they are used to group issues within a project into smaller parts. Components add some structures to the projects, breaking it up into features, teams, modules, subprojects and more. Using components you can generate reports, collect statistics, and display it on dashboards and so on.

- To add new components, as shown in the above screen you can add **name, description, component lead and default assignee.**

# JIRA Screen

- When issue is created in JIRA, it will be arranged and represented into different fields, this display of field in JIRA is known as a screen. This field can be transitioned and edited through workflow. For each issue, you can assign the screen type as shown in the screen-shot. To add or associate an issue operation with a screen you have to go in main menu and click on **Issues** then click on Screen **Schemes** and then click on **“Associate an issue operation with a screen”** and add the screen according to the requirement.

# Jira Issue Attributes

- Issue Attributes encompasses
  - Statuses
  - Resolutions
  - Priorities
- Statuses: Different statuses are used to indicate the progress of a project like **To do**, **InProgress**, **Open**, **Closed**, **ReOpened**, and **Resolved**. Likewise, you have resolutions and priorities, in resolution it again tells about the progress of issue like **Fixed**, **Won't fix**, **Duplicate**, **Incomplete**, **Cannot reproduce**, **Done** also you can set the priorities of the issue whether an issue is **critical**, **major**, **minor**, **blocker** and **Trivial**.



# Issue Security Schemes

- This function in JIRA allows you to control who can view the issues. It consists of a number of security levels which can have users or groups assigned to them. You can specify the level of security for the issues while creating or editing an issue.
- Similarly, there is a **Default Permission Scheme** any new project that are created will be assigned to this scheme. Permission Schemes allow you to create a set of permissions and apply this set of permission to any project.

# System Administration

- Some of the useful features that JIRA admin provides to users are:
- ✓ **Audit Log**Under Audit Log, you can view all the details about the issue created, and the changes made in the issues.
- ✓ **Issue Linking**This will show whether your issues link with any other issue that is already present or created in the project also you can de-activate Issue linking from the panel itself
- ✓ **Mail in JIRA**Using Mail system in admin you can mail issues to an account on a POP or IMAP mail server or messages written to the file system generated by an external mail service.
- ✓ **Events**An event describes the status, the default template and the notification scheme and workflow transition post function associations for the event. The events are classified in two a System event (JIRA defined events) and Custom event (User defined events).

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# How to create an issue in JIRA

- Here is the step by step process to create, edit, and summarize an issue in JIRA, an effective Jira tool for testing.

## Step 1) Open Jira software and login with your ID and password

- JIRA Dashboard will open when you enter your user ID and password. Under free JIRA dashboard you will find option **Project**, when you click on it, it will open a window that list out options like **Simple Issue Tracking, Project Management, Agile Kanban, Jira Classic** and so on as shown in screen shot below.



- **Step 2) Provide issue details**

When you click on option Simple Issue Tracking, another window will open, where you can mention all the details about the issue and also assign the issue to the responsible person.

- **Step 3) Provide detailed information to create an issue**

When you click on “Submit” button, a window will open where you can perform a list of work like creating issues, assigning issues, check the status of issues like- resolved, In-Progress or closed and so on.

- Once the issue is created a pop-up will appear on your screen saying your issue is created successfully as shown in the screen shot below

Step 4) Open the Issues menu to search and perform multiple functions on issues

Now if you want to edit an issue or you want to export the issue to XML or Word document, then you can hover your mouse on main panel and click on Issues. Under Issues options click on search for issues that will open a window from where you can locate your issues and perform multiple functions.



- When you select the “**search for Issues**” under **Issues**, a window will appear as shown in the screen shot

# JIRA WorkFlows

- A JIRA workflow is a set of statuses and transitions that an issue goes through during its lifecycle. JIRA workflow encompasses five main stages once the issue is created.
  - ❖ Open Issue
  - ❖ Resolved Issue
  - ❖ InProgress Issue
  - ❖ ReOpened Issue
  - ❖ Close Issue



- ❖ While workflow in JIRA comprises of **Statuses, assignee, resolution, conditions, validators, post-function's and properties**
- ❖ **Statuses:** It represents the positions of the issues within a workflow
- ❖ **Transitions:** Transitions are the bridges between statuses, the way a particular issue moves from one status to another
- ❖ **Assignee:** The assignee dictates the responsible party for any given issue and determines how the task would be executed
- ❖ **Resolution:** It explains why an issue transitions from an open status to a closed one
- ❖ **Conditions:** Conditions control who can perform a transition
- ❖ **Validators:** It can ensure that the transition can happen given the state of the issue
- ❖ **Properties:** JIRA recognizes some properties on transitions

- You can assign the status of the issue from the window itself, when you click on the check box for **IN Progress** status as shown in screen shot below, it will reflect the status in the issue panel highlighted in yellow.

- For the issue that we have created, JIRA will present a workflow which maps the progress of the project. As shown in screenshot whatever status that we have set in the Issue panel it will be reflected in Workflow chart, here we have set the issue status in “In Progress” and same status is updated in the workflow, highlighted in yellow. Workflow can give a quick overview of the work under process.