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JIRA

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JIRA Tutorial

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1. Introduction

JIRA is a tool developed by Australian Company Atlassian. It is used for **bug tracking, issue tracking,** and **project management**. JIRA helps us to manage the project effectively and smoothly. It is a powerful tool to track the issues, bugs, backlogs of the project.

- **Plan:** Create user stories and issues, plan sprints, and distribute tasks across your software team.
- **Track:** Prioritize and discuss your team's work in full context with complete visibility.
- **Release:** Ship with confidence and sanity knowing the information you have is always current.
- **Report:** Improve team performance based on real-time, visual data you can use

JIRA Features

JIRA comes with following Features. We can choose the type of JIRA as per our Requirement.

JIRA Software
JIRA software development tool used by agile teams. Plan, track, and release world-class software

JIRA Service Desk
Give your customers an easy way to ask for help and your agents a fast way to resolve incidents

Confluence
Create a self-service Knowledge Base

Overall Features of JIRA

- **Issue tracking**
- **Scrum boards**
- **Project planning**
- **Project tracking**
- **Reporting**
- **Notifications**

Advantages of JIRA

- **Improves collaboration**
- **Improves tracking**
- **Better planning**
- **Increase productivity**
- **Improves customer satisfaction**
- **Flexible to use**

2. JIRA Installation and Configuration

We can Install & configure JIRA in two ways

1. Installing JIRA Software in Local System
2. Using Atlassian Cloud Platform

2.1 Installing JIRA Software in Local System

To Install JIRA in your local machine you need to Install & Configure below Software's/ Tools

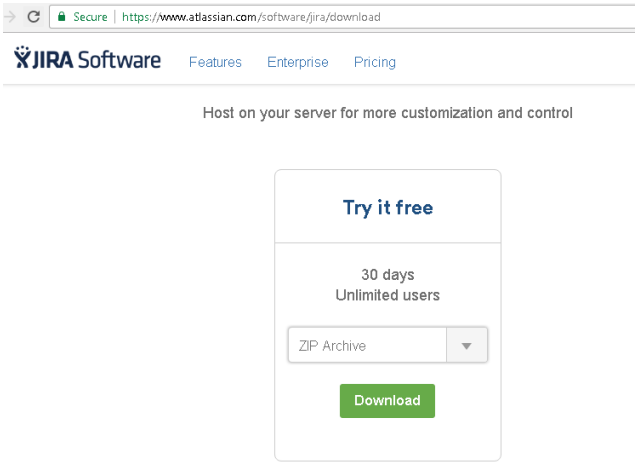
1.Java ()

Check java installation by 'java –version' command

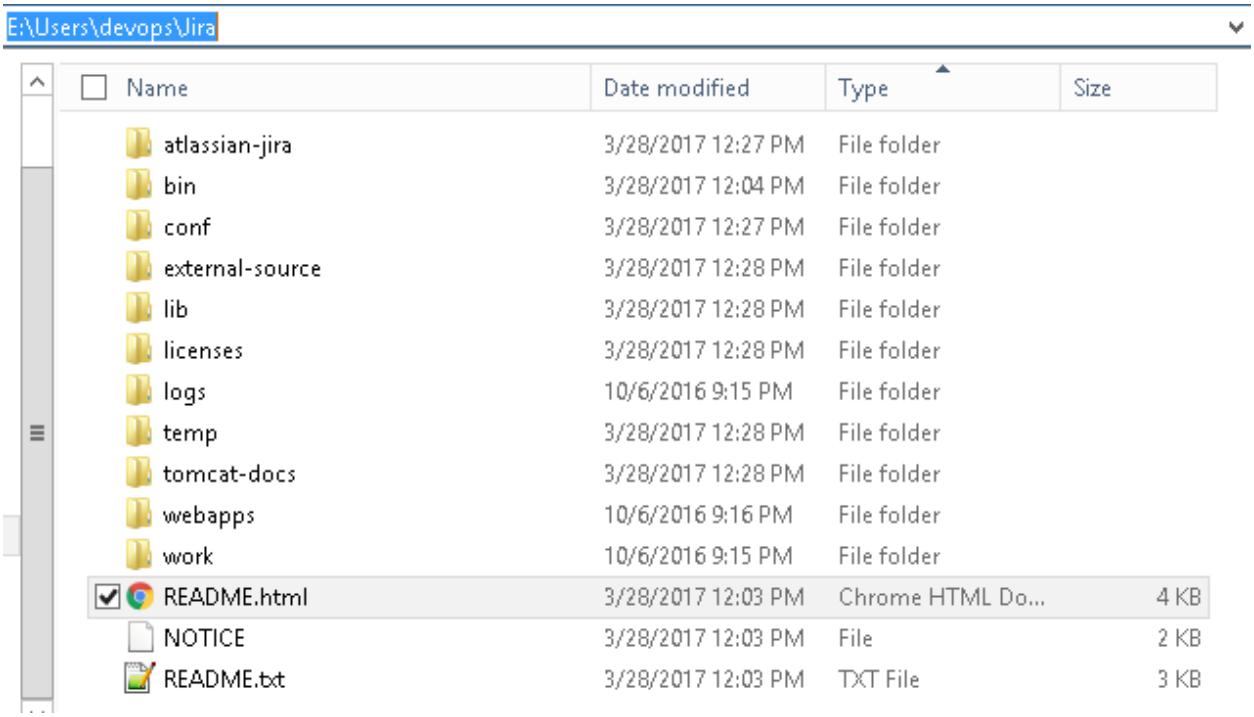
2.MySQL

3.Apache Tomact Server

4.Go to **https://www.atlassian.com/software/jira/download** and download appropriate version



5.Extract the .zip file, change the folder name for convenience to Jira.it will be the **<installation-directory>** for Jira Software

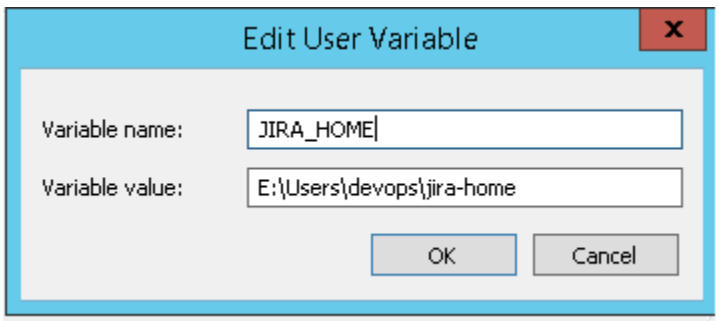


6.Create a new folder. This should be separate to your installation directory. We'll refer to this directory as your **<home-directory>.** For **Ex: E:\Users\devops\jira-home**

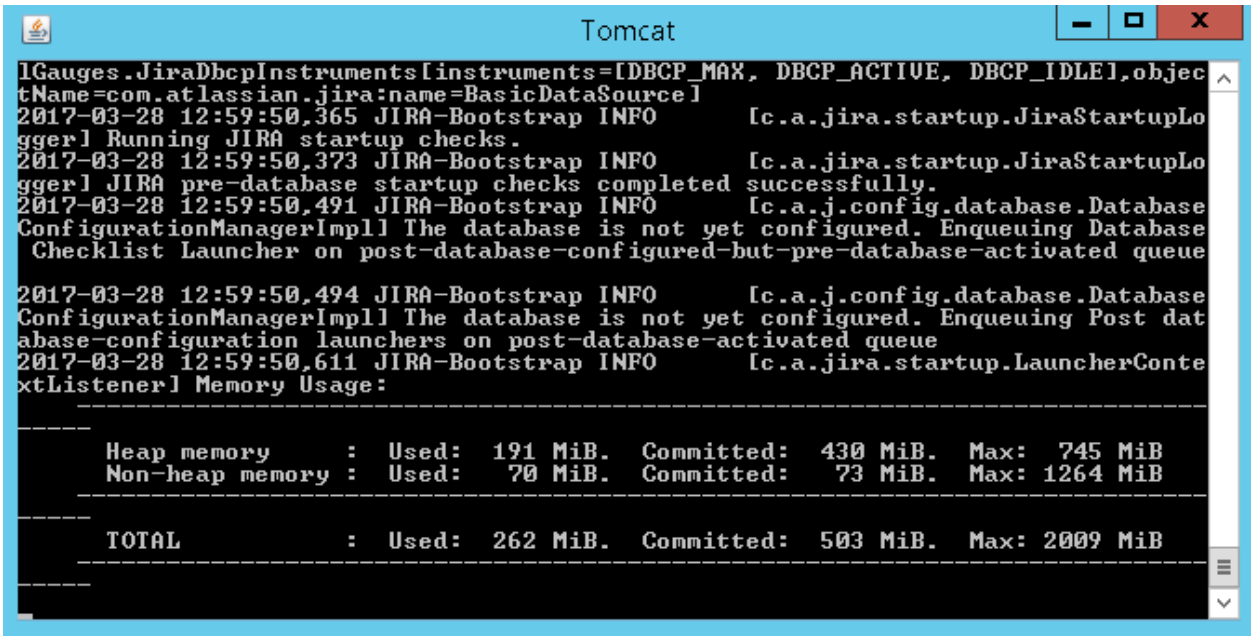
7. Edit **<installation-directory>\atlassian-jira\WEB-INF\classes\jira-application.properties** file by adding **jira.home** = absolute path to your home directory. You will need to escape the backslashes, for example:

```
jira.home =E:\\Users\\devops\\jira-home
```

and also set JIRA_HOME environment variable

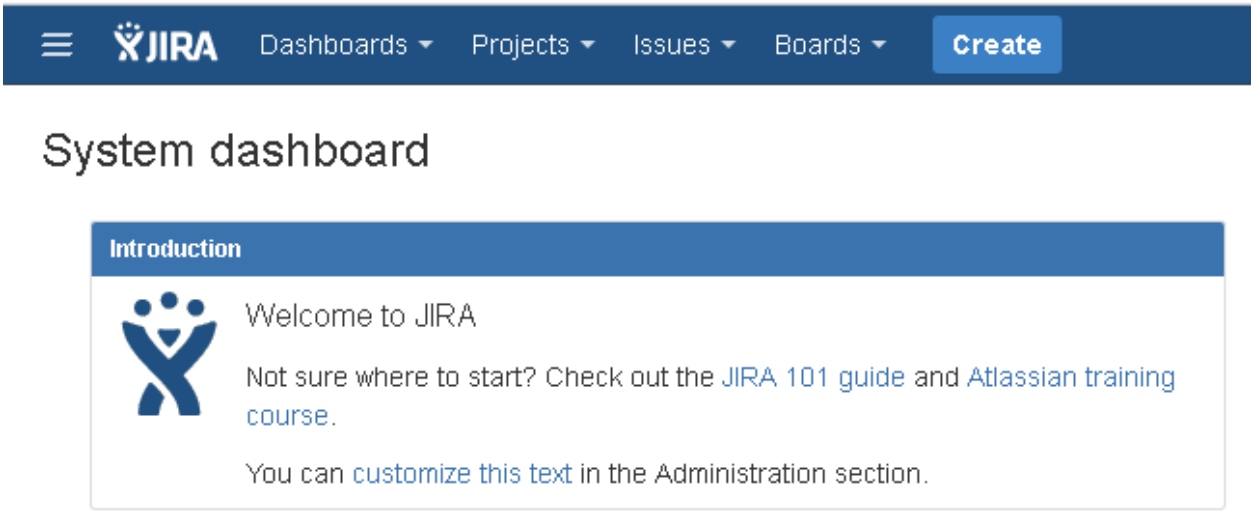


8.Start JIRA Server by going `E:\Users\devops\Jira\bin\start-jira.bat`



9.You can access JIRA software by going http://localhost:8080/ through browser.

10. Then it will start a Wizard, Just select autoconfigurations for demo purpose.Once configuration is done, it will shows the dashboard as below

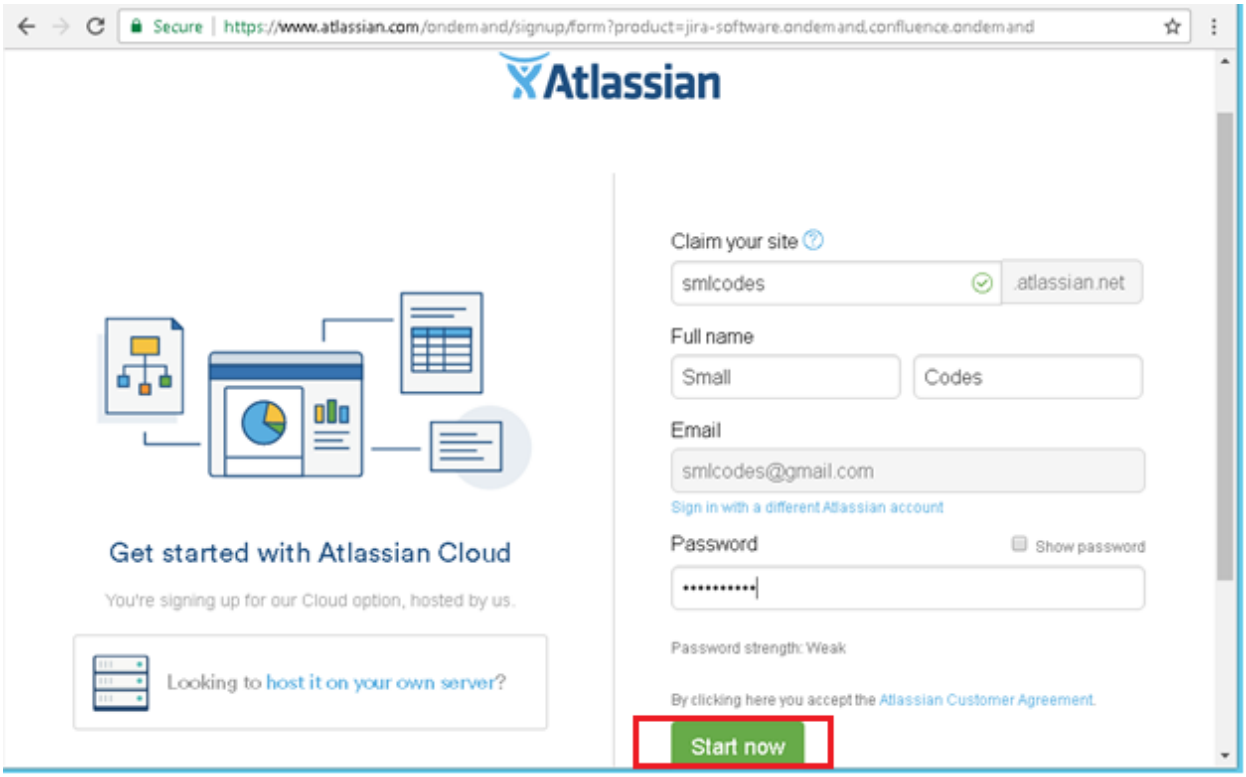


We can change the port number by Editing **<installation-directory>\conf\server.xml** Change the **Server** port (8005) and the **Connector** port (8080) to free ports on your server. For example change the **Server** port to 5005 and the **Connector** port to 9191.after changing port JIRA URL is http://localhost:9191/

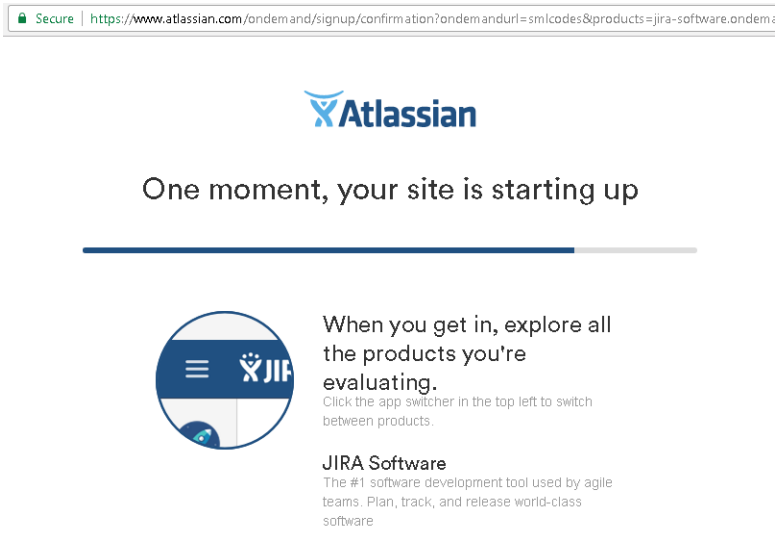
2.2 JIRA Cloud account Setup

1.Go to https://www.atlassian.com/software/jira/try

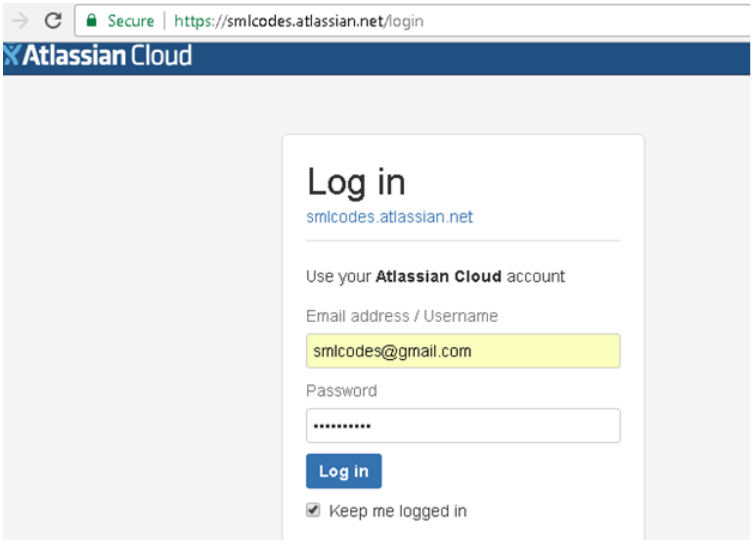
2.Choose the plan (Just click on try it for free). Fill the form and select **Start now**



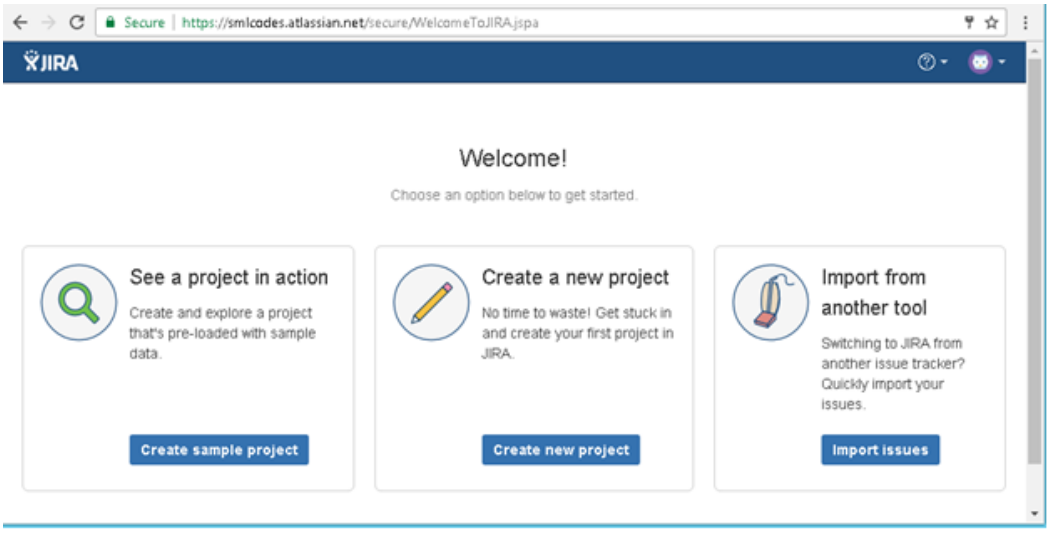
3.It will Setup the JIRA Software



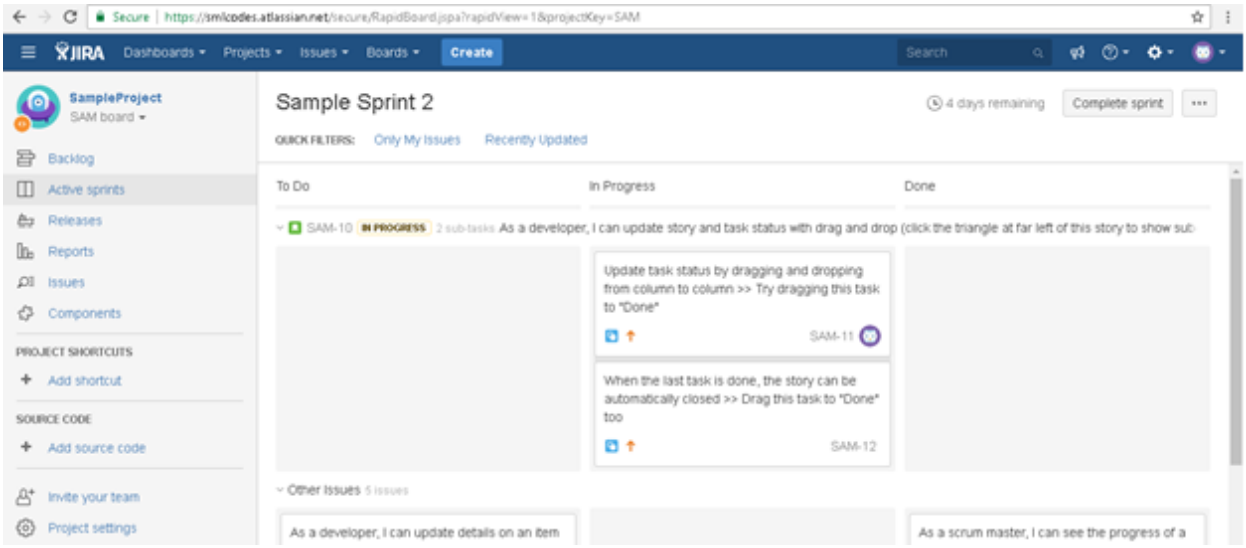
4.Once Setup is completed, it will navigates to Login page.provide login credencials & Login



5.It will Start the Setup wizard, provide the details & it will shows the Jira homepage as follows



6.Create a Sample Project, It will show the JIRA Dashboard as below



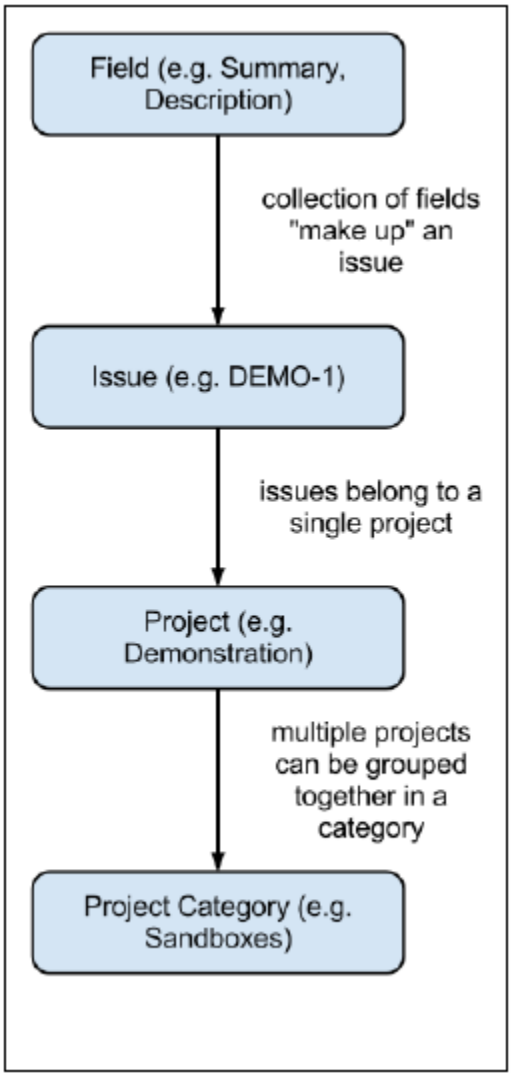
3. JIRA Project Management

JIRA initially started off as a bug tracking system, helping software development teams to better track and manage the problems/issues in their projects

3.1 JIRA Project hierarchy

JIRA organizes its data in a hierarchical structure. At the lowest level, we have field, which are used to hold raw information. Then the next level up, we have issue, which are like a unit of work to be performed

An issue will belong to a project, which defines the context of the issue. Finally, we have **project category**, which logically group similar projects together. The figure in the following illustrates the hierarchy we just talked about:



1.Project category

Project category is a logical grouping for projects, usually of similar nature.Project category is optional. Projects do not have to belong to any category in JIRA.When a project does not belong to any category, it is considered uncategorized. The categories themselves do not contain any information; they serve as a way to organize all your projects in JIRA, especially when you have many of them.

2.Project

In JIRA, a **project** is a **collection of issues.** Projects provide the background context for issues by letting users know where issues should be created. Users will be members of a project, working on issues in the project. Most configurations in JIRA, such as permissions and screen layouts, are all applied on the project level.

It is important to remember that projects are not limited to software development projects that need to deliver a product. They can be anything logical, such as the following:

- Company department or team
- Software development projects
- Products or systems
- A risk register

3.Issue

Issues represent work to be performed. From a functional perspective, an issue is the base unit for JIRA. Users create issues and assign them to other people to be worked on. Project leaders can generate reports on issues to see how everything is tracking.

- An issue can belong to only one project
- There can be many different types of issues
- An issue contains many fields that hold values for the issue

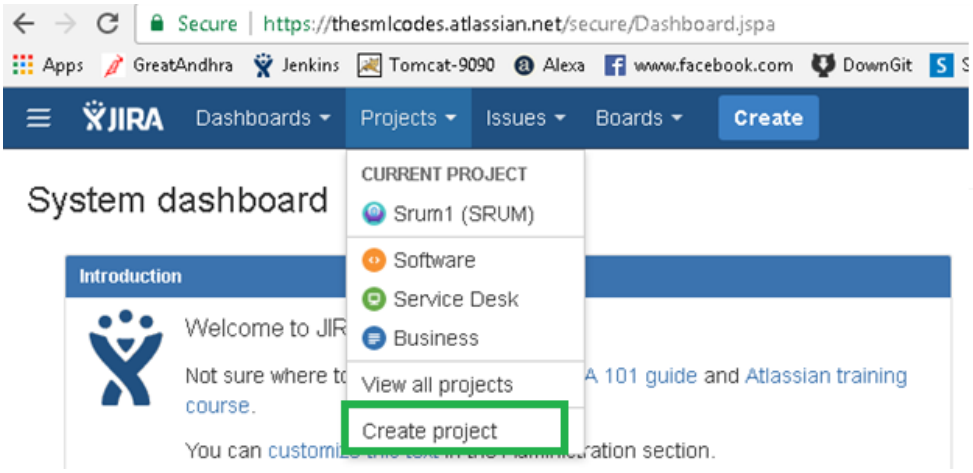
4.Field

Fields are the most basic unit of data in JIRA. They hold data for issues and give meaning to them. Fields in JIRA can be broadly categorized into two distinctive categories, namely, system fields and custom fields. They come in many different forms, such as text fields, drop-down lists, and user pickers. Fields and the topics

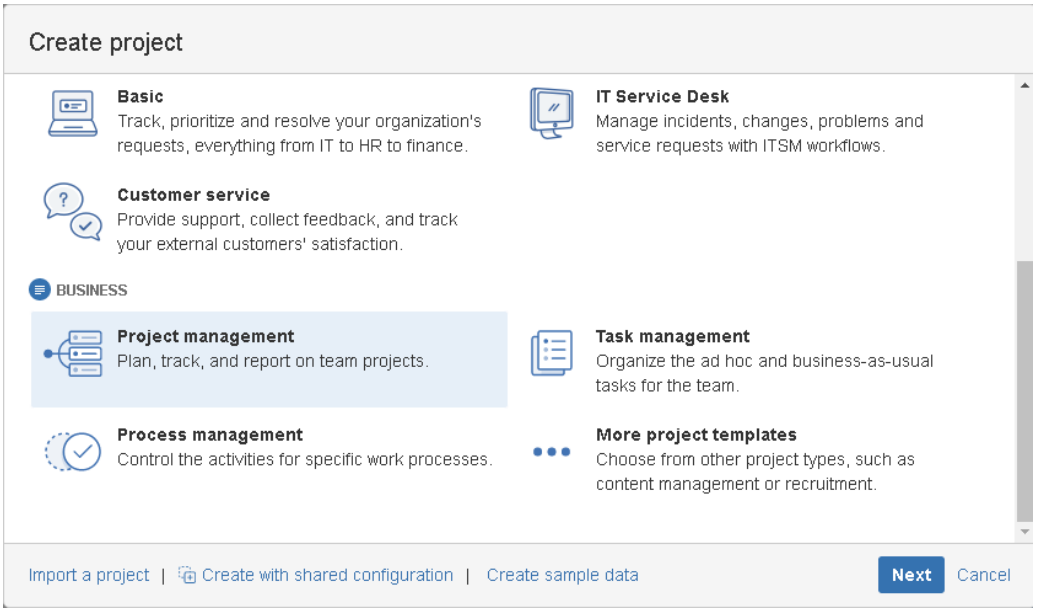
- Fields hold values for issues
- Fields can have behaviors (hidden or mandatory)
- Fields can have a view and structure (text field or drop-down list)

3.2 Creating Project in JIRA

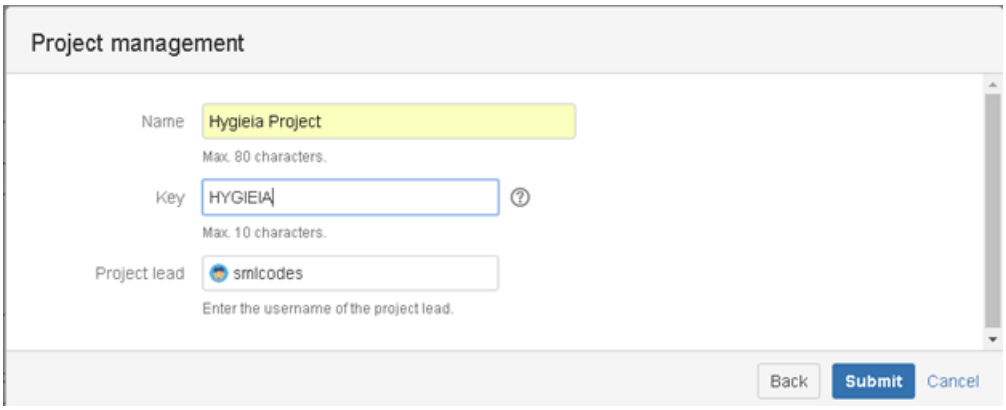
1.Go to the JIRA Home, On the Top Choose **Projects →Create Project**



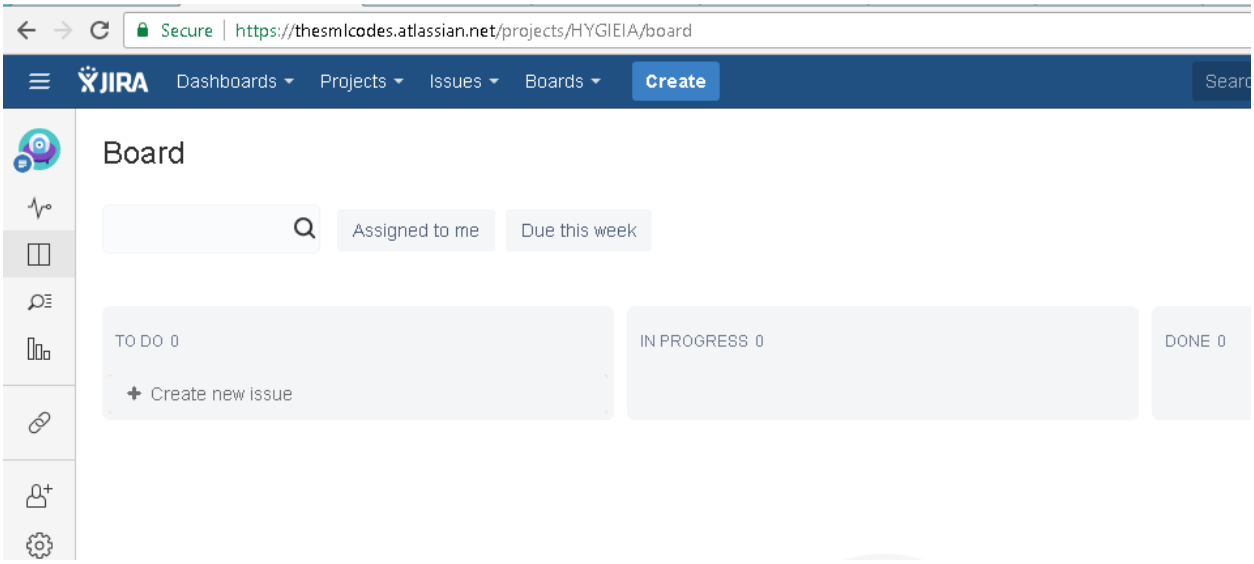
2.Select type of the Project & click on next



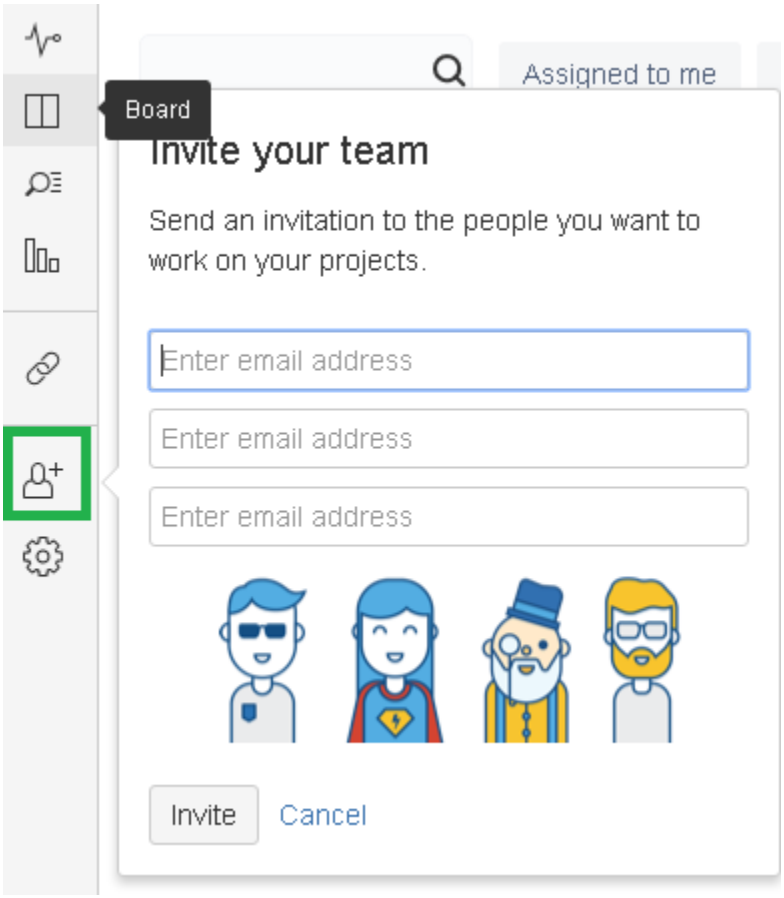
3.Provide details & Submit



4.It will show the Empty Dashboard as below.



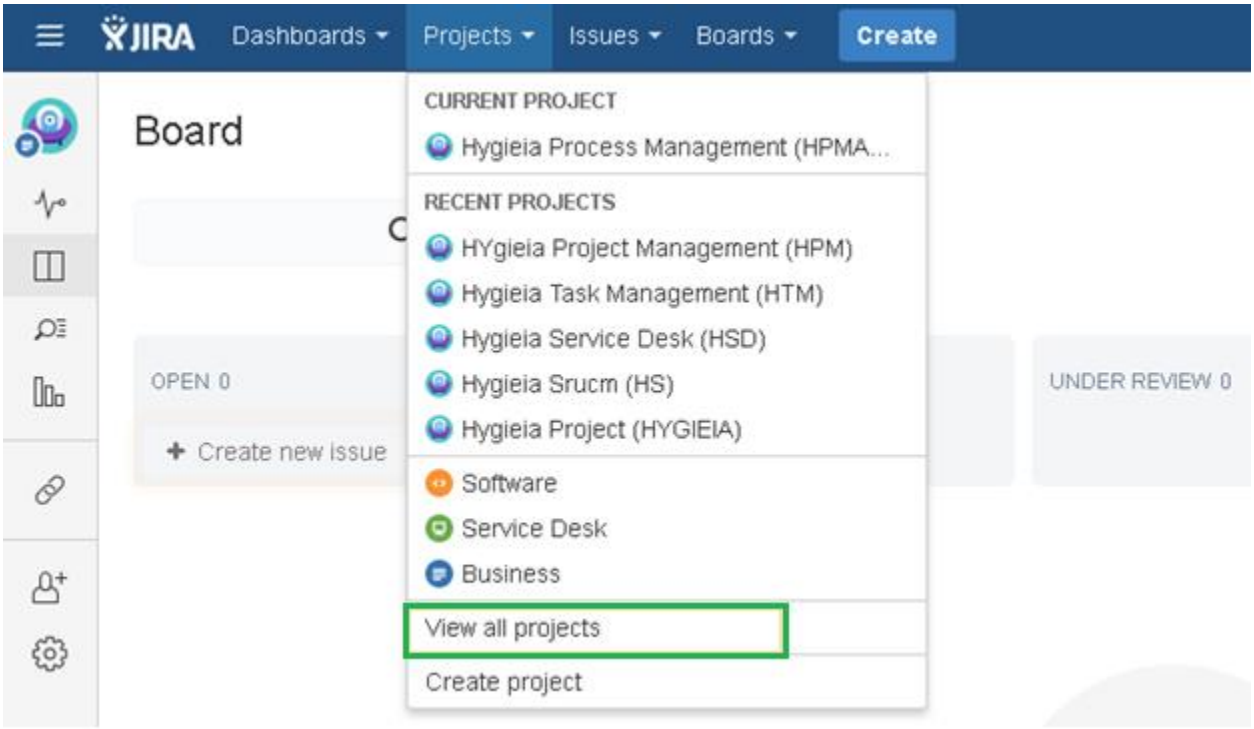
5.You can add your team members by clicking on invite your team button



3.3 Creating Project Category in JIRA

Project category is a logical grouping for projects, usually of similar nature.Project category is optional. Projects do not have to belong to any category in JIRA.When a project does not belong to any category, it is considered uncategorized.The categories themselves do not contain any information; they serve as a way to organize all your projects in JIRA, especially when you have many of them.

1.Go to Dashboard home, Click Projects option in the top bar and select view all projects option



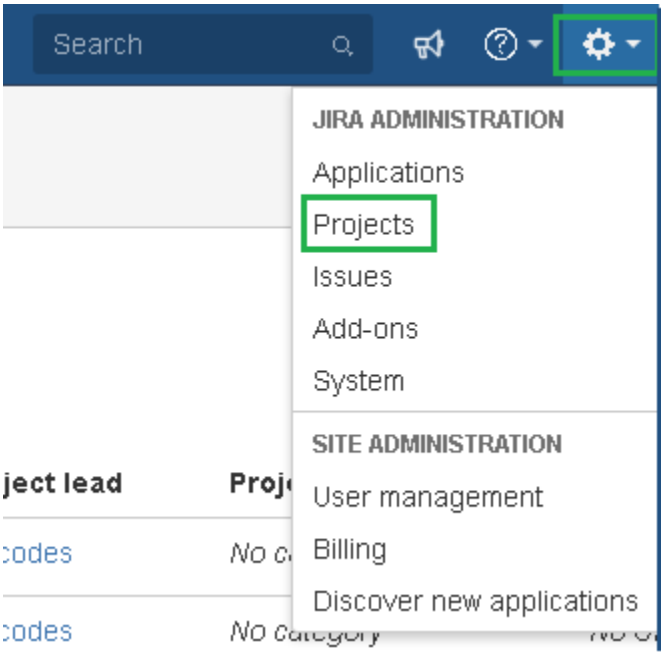
2.It will show the all the projects. Observe that by default **Project Category is *No category***

All project types - All categories

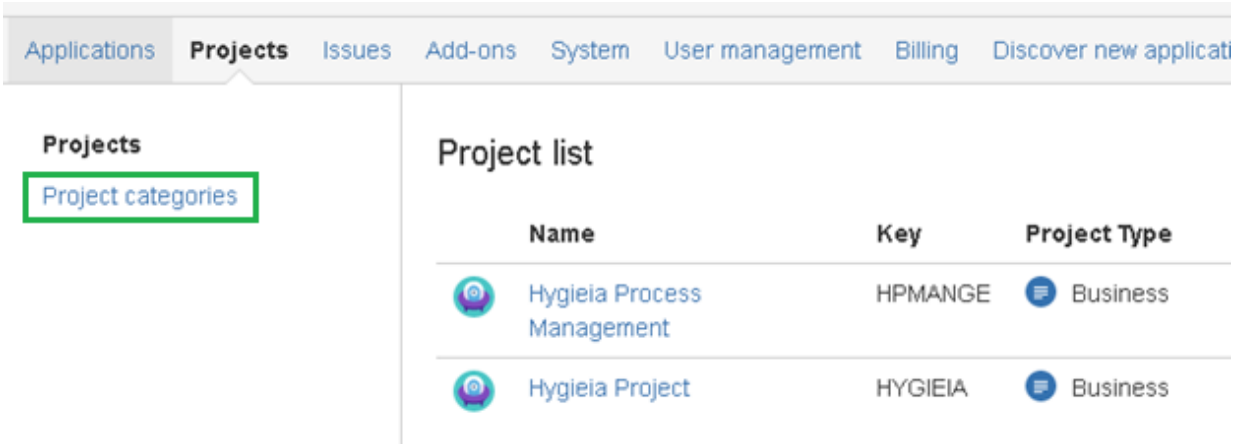
hygieia

Project	Key	Project Type	Project lead	Project Category	URL
Hygieia Process Management	HPMANGE	Business	smlcodes	No category	No URL
Hygieia Project	HYGIEIA	Business	smlcodes	No category	No URL
HYgieia Project Management	HPM	Business	smlcodes	No category	No URL
Hygieia Service Desk	HSD	Service Desk	smlcodes	No category	No URL
Hygieia Srucm	HS	Software	smlcodes	No category	No URL
Hygieia Task Management	HTM	Business	smlcodes	No category	No URL

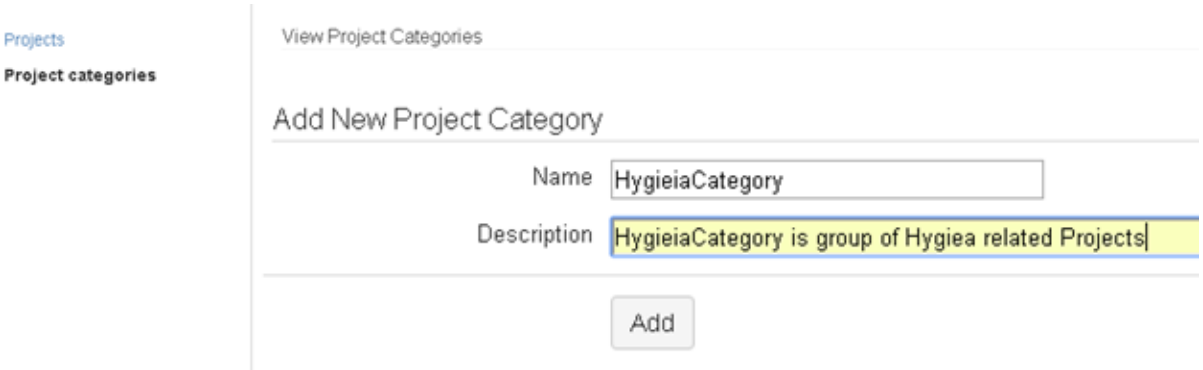
3.To add category to project, select **Settings→ Projects**



4.It will show the all Projects with Edit buttons.On the left side menu, click on **Project Catagories**

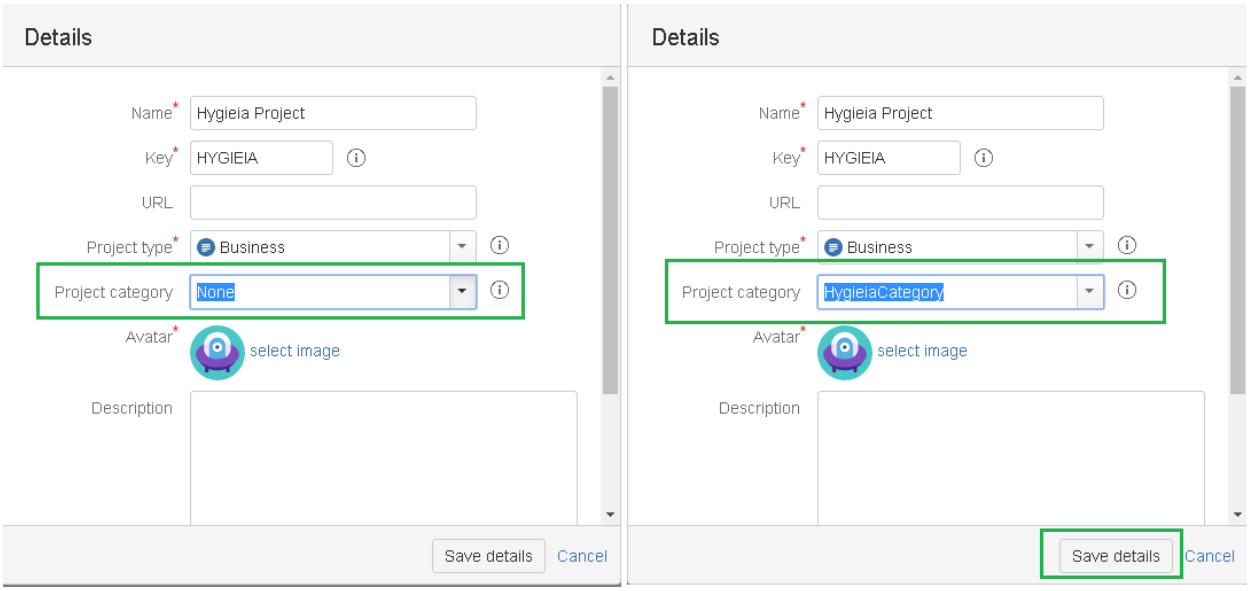


5.Add Category name, Description and click on **ADD** button to save the details.

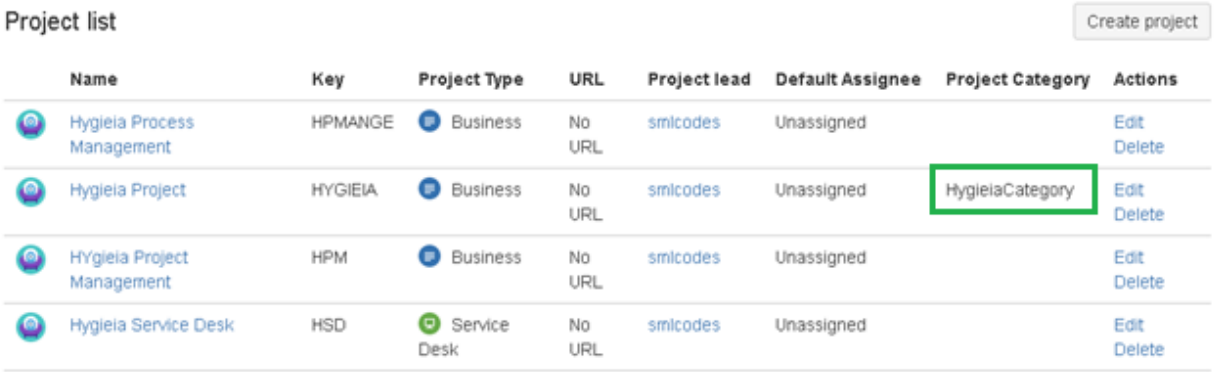


6.Now go to Projects tab, Click on **EDIT** button to add Project category for that Project .

7.It will opens the Pop-up window, Choose **Project category** from the list & Save details.



8.Now go to Projects, check the Project category is updated for Hygieia Project.

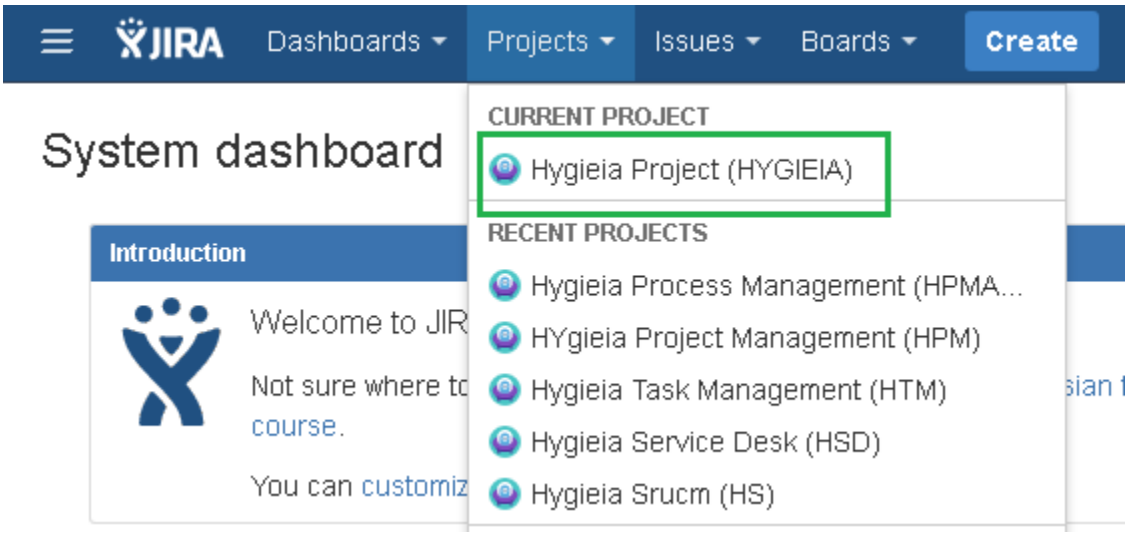


9.We can categorize/Group the projects by adding Project category to the Project

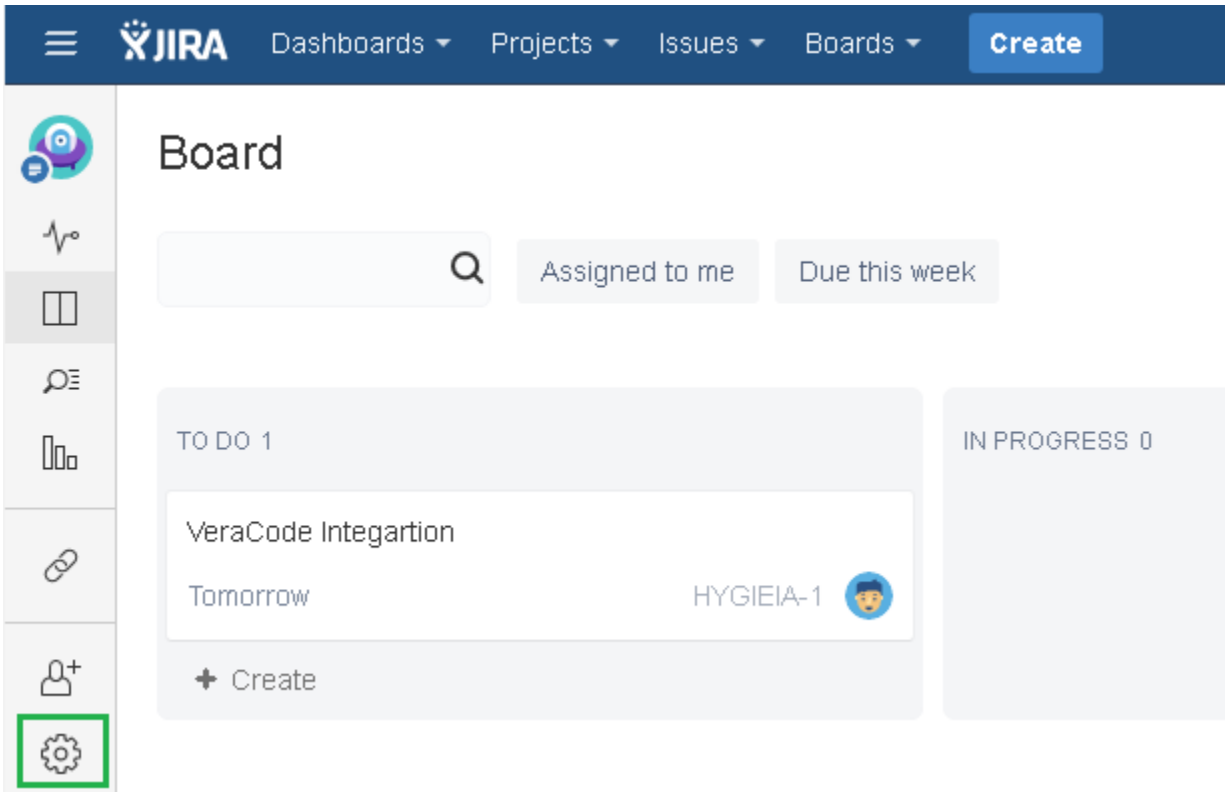
3.4 Creating Project Component in JIRA

Project Components are sub-item of a project. Components are used to categorize issues under the project. You can also assign a component lead to manage the component.

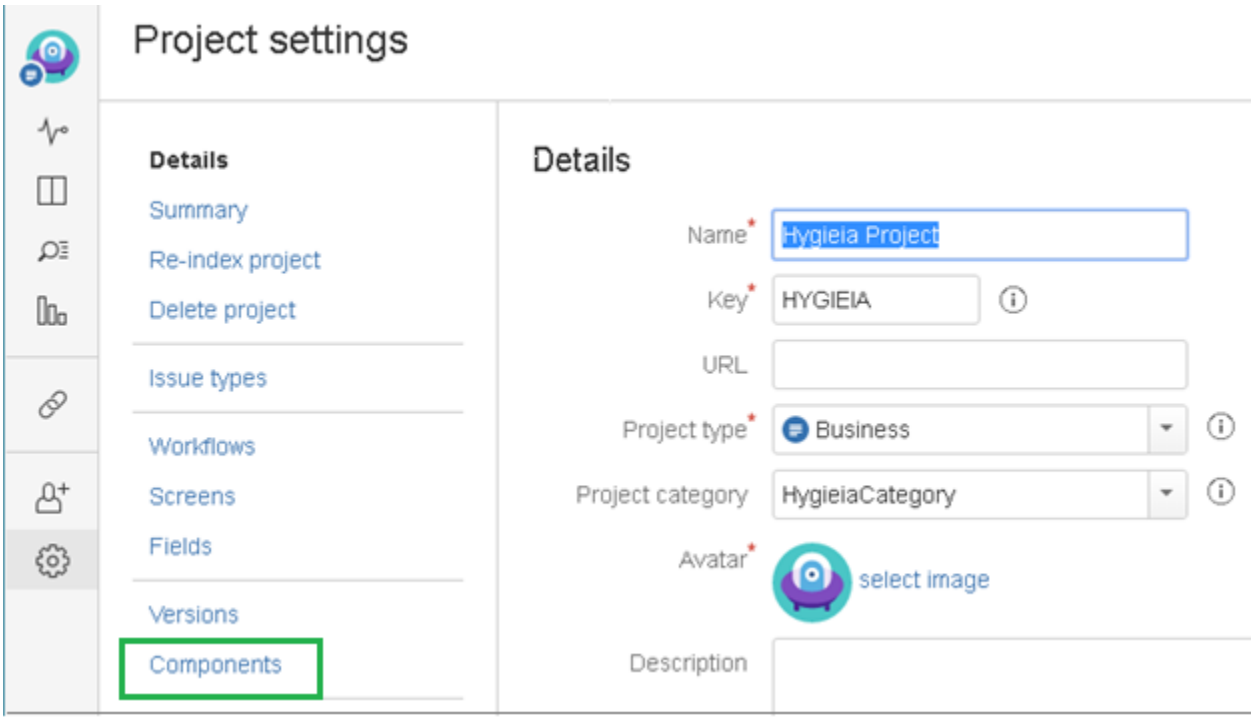
1.Click the projects option in the top bar and select the Project



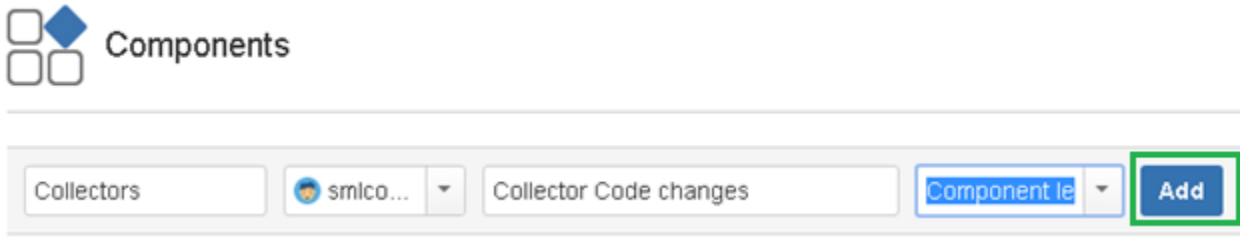
2. Click Project Settings in the bottom left



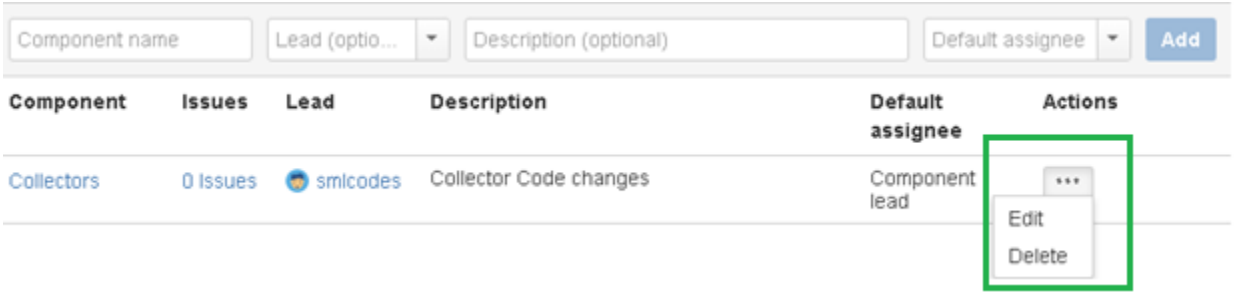
3. In the Project Settings screen, Click ***Components*** in the sidebar



4. In the next window, provide details like Component Name, Component Description (Optional), Default Assignee.click on Add button to save the Details



5. Project Component is added successfully. Project Component can be edited or deleted using ***Edit*** or ***Delete*** option under actions column.



4.JIRA Issue Management

In JIRA, an issue can represent any number of things. In fact, an issue in a given project may mean something that is very different in another project. For example, an issue in a normal software development project would often represent a software bug, while in a help desk project it can represent a support request.

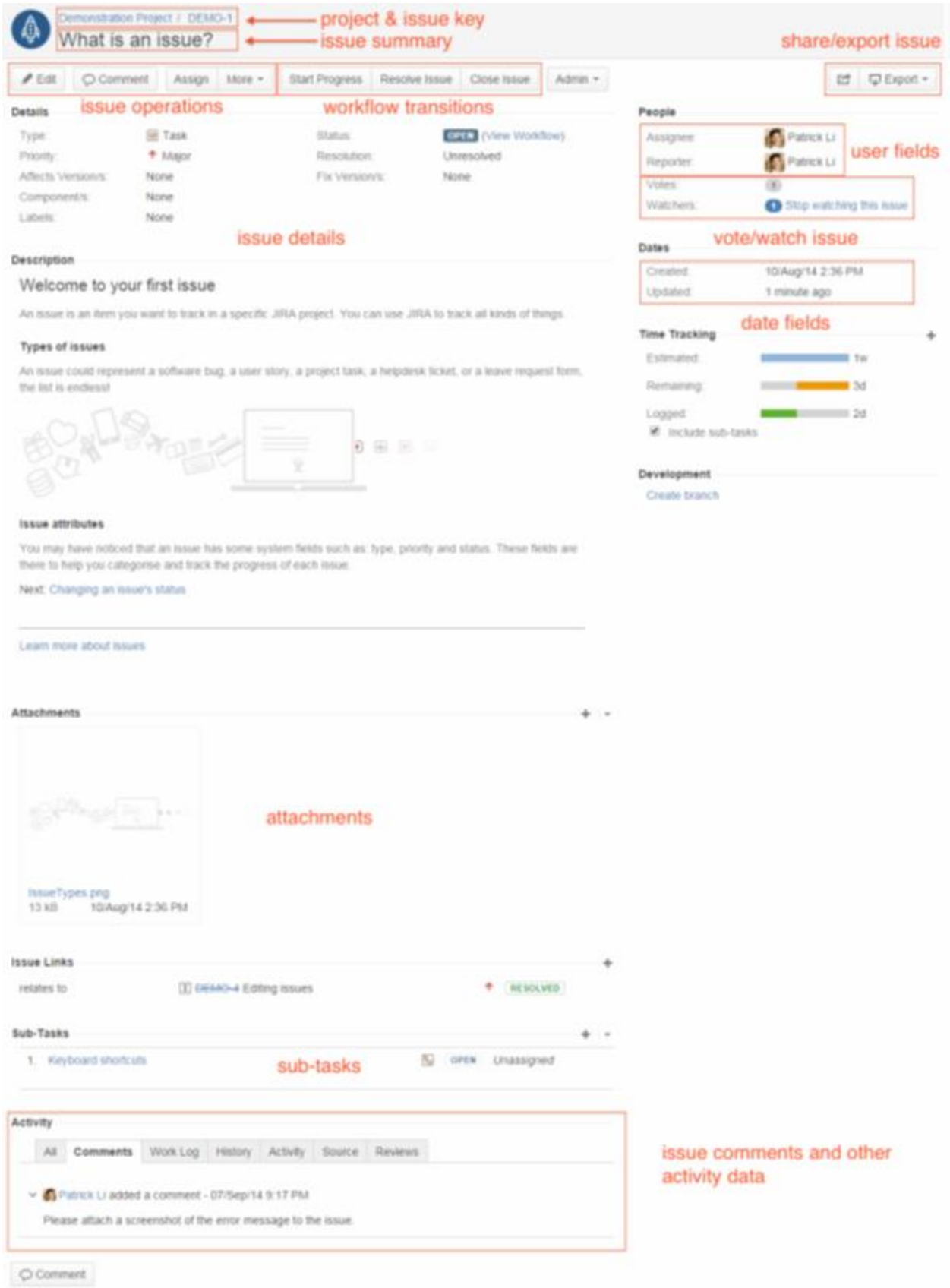
Despite all the different objects an issue can represent, there are a number of key aspects that are common for all issues in JIRA, as follows:

- An issue must belong to a project.
- It must have a type, otherwise known as an issue type, which indicates what the issue is representing.
- It must have a summary. The summary acts like a one-line description of what the issue is about.
- It must have a status. A status indicates where along the workflow the issue is at a given time

4.1 JIRA issue summary

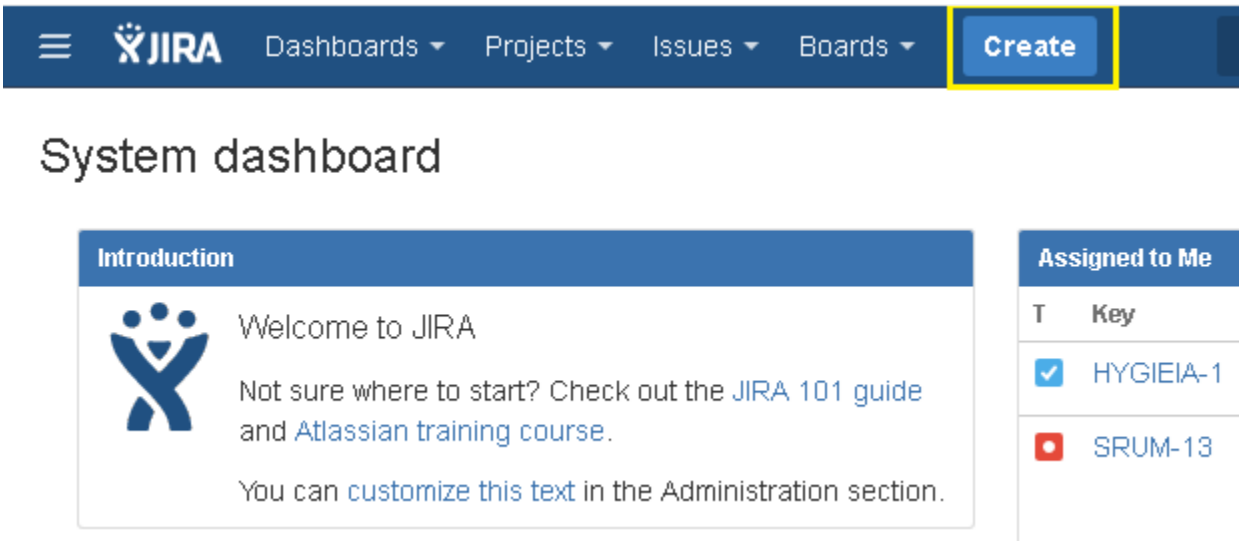
The following screenshot shows a typical example of an issue and breaks it down into more digestible sections, followed by an explanation of each of the highlighted sections in a table. This view is often called the Issue Summary or the View Issue page.

Section	Description
Project / Issue Key	It shows the project the issue belongs to. The issue key is the unique identifier of the current issue. This section acts as a breadcrumb for easy navigation.
Issue Summary	It is a brief summary of the issue.
Issue View Options	These are the various view options for the issue. The options include XML, Excel, and Word.
Issue Operations	These are the operations that users can perform on the issue, such as edit, assign, and comment. These are covered in the later sections of this chapter.
Workflow Options	These are the workflow transitions available.
Issue Details / Fields	This section lists the issue fields such as issue type and priority. Custom fields are also displayed in this section.
User Fields	This section is specific for user-type fields such as assignee and reporter.
Date Fields	This section is specific for date-type fields such as create and due date.
Vote / Watch Issue	These are the options that allow users to vote and watch an issue.
Attachments	These list all the attachments in an issue.
Comments	These list all the comments that are visible to the current user.


Demonstration Project / DEMO-1
What is an issue?
project & issue key
issue summary
share/export issue
Edit
Comment
Assign
More
Start Progress
Resolve Issue
Close Issue
Admin
Export
issue operations
workflow transitions
Details
Type: Task
Priority: Major
Affects Version/s: None
Component/s: None
Labels: None
Status: OPEN (View Workflow)
Resolution: Unresolved
Fix Version/s: None
issue details
People
Assignee: Patrick Li
Reporter: Patrick Li
user fields
Votes: 0
Watchers: 1 Stop watching this issue
vote/watch issue
Dates
Created: 10/Aug/14 2:36 PM
Updated: 1 minute ago
date fields
Description
Welcome to your first issue
An issue is an item you want to track in a specific JIRA project. You can use JIRA to track all kinds of things.
Types of issues
An issue could represent a software bug, a user story, a project task, a helpdesk ticket, or a leave request form, the list is endless!
Issue attributes
You may have noticed that an issue has some system fields such as: type, priority and status. These fields are there to help you categorise and track the progress of each issue.
Next: Changing an issue's status
Learn more about issues
Time Tracking
Estimated: 1w
Remaining: 3d
Logged: 2d
Include sub-tasks
Development
Create branch
Attachments
issueTypes.png
13 kB 10/Aug/14 2:36 PM
attachments
Issue Links
relates to DEMO-4 Editing issues RESOLVED
Sub-Tasks
1. Keyboard shortcuts OPEN Unassigned
sub-tasks
Activity
All Comments Work Log History Activity Source Reviews
Patrick Li added a comment - 07/Sep/14 9:17 PM
Please attach a screenshot of the error message to the issue.
issue comments and other activity data
Comment

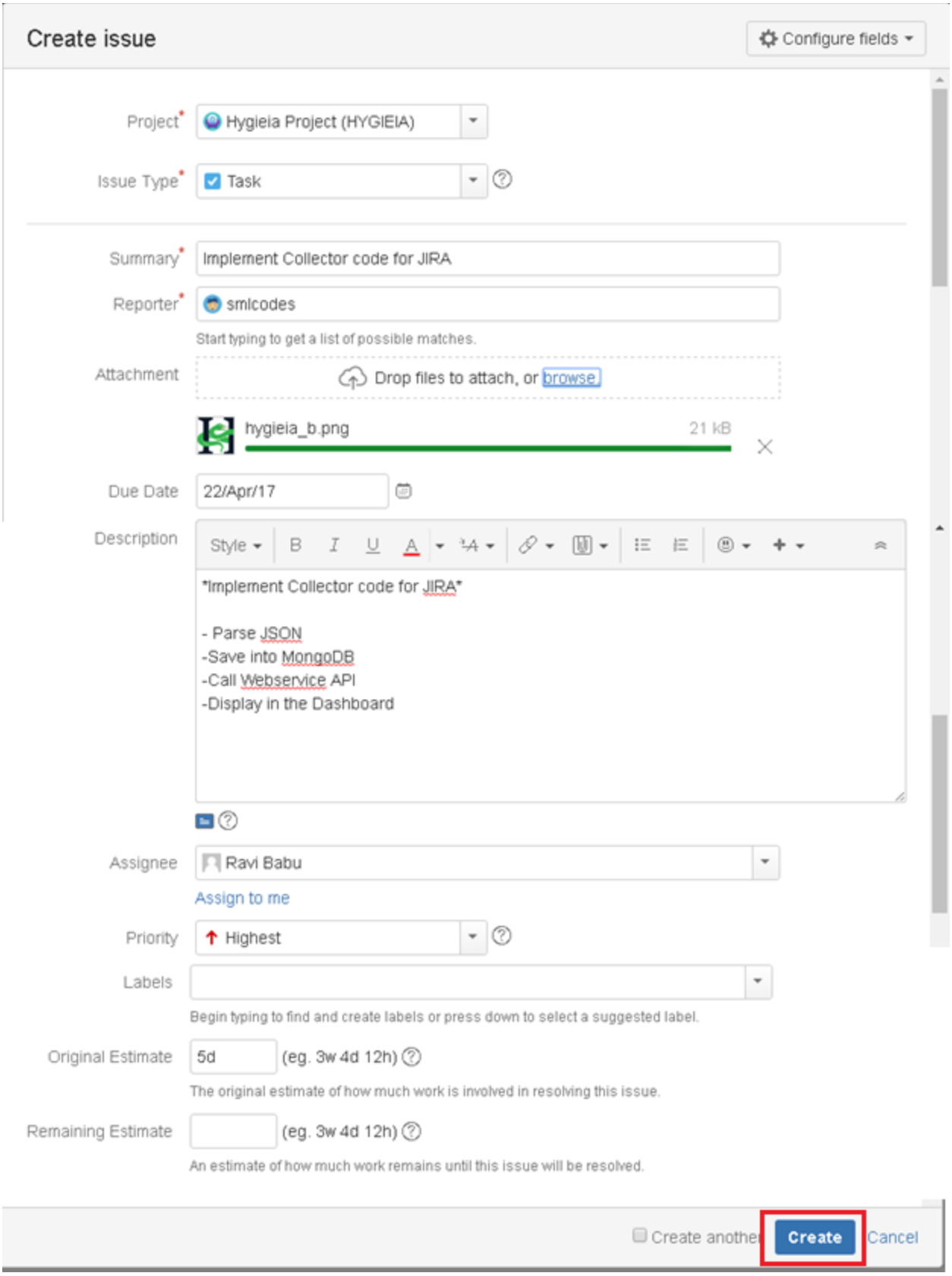
4.2 Creating an Issue in JIRA

1.Go Dashboard, On the Top menu Click **CREATE** button to create an Issue

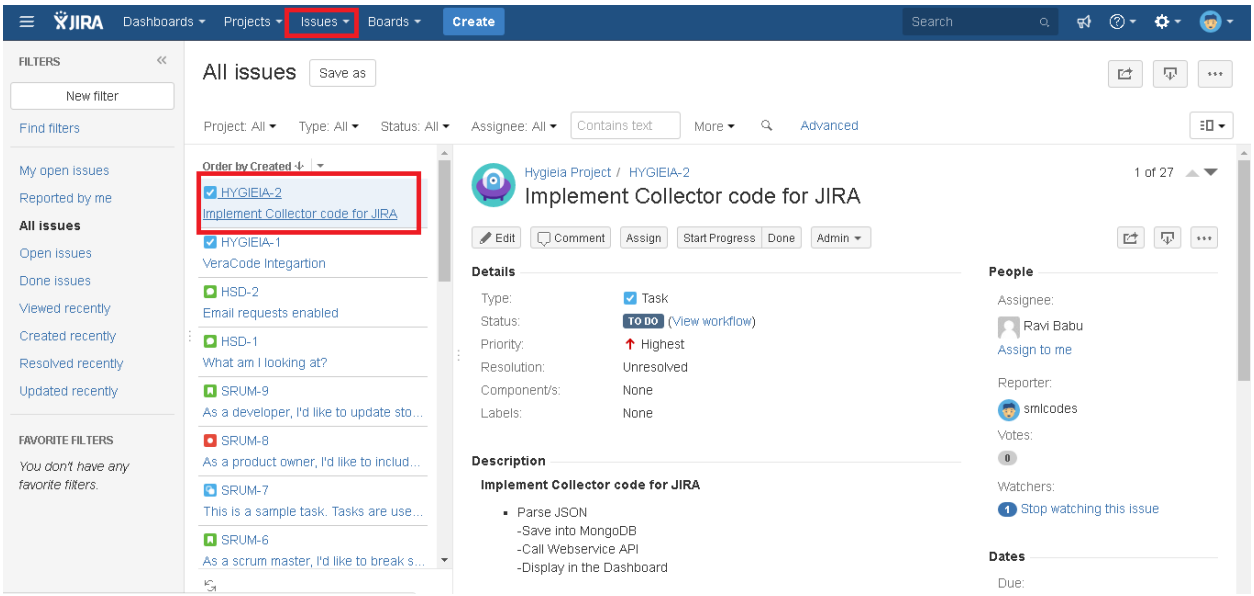


2.Provide following Issue Details & click Create button, it will create the issue

- Select Project
- Select an Issue Type (like bug/story/task/Epic)
- Write Summary for the Issue type
- Reporter (person who create issue)
- Select Component (Create Component)
- Write Description
- Add an attachment (Additional info about the issue type)
- Supporting information for the issue type (Optional)
- Select Version
- Set the priority of the issue type


Create issue
Configure fields
Project*
Hygieia Project (HYGIEIA)
Issue Type*
Task
Summary*
Implement Collector code for JIRA
Reporter*
smlcodes
Start typing to get a list of possible matches.
Attachment
Drop files to attach, or browse.
hygieia_b.png
21 kB
Due Date
22/Apr/17
Description
Style
Implement Collector code for JIRA
- Parse JSON
-Save into MongoDB
-Call Webservice API
-Display in the Dashboard
Assignee
Ravi Babu
Assign to me
Priority
Highest
Labels
Begin typing to find and create labels or press down to select a suggested label.
Original Estimate
5d
(eg. 3w 4d 12h)
The original estimate of how much work is involved in resolving this issue.
Remaining Estimate
(eg. 3w 4d 12h)
An estimate of how much work remains until this issue will be resolved.
Create another
Create
Cancel

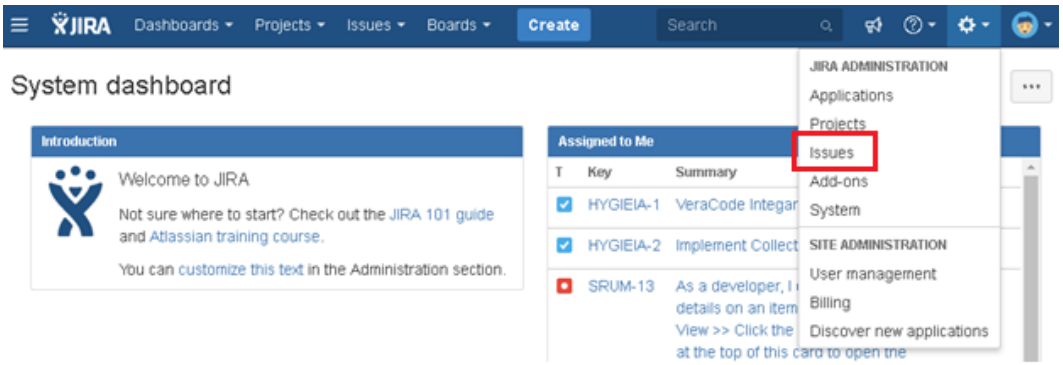
3.You can find the issue details, by clicking issues on the Top menu bar



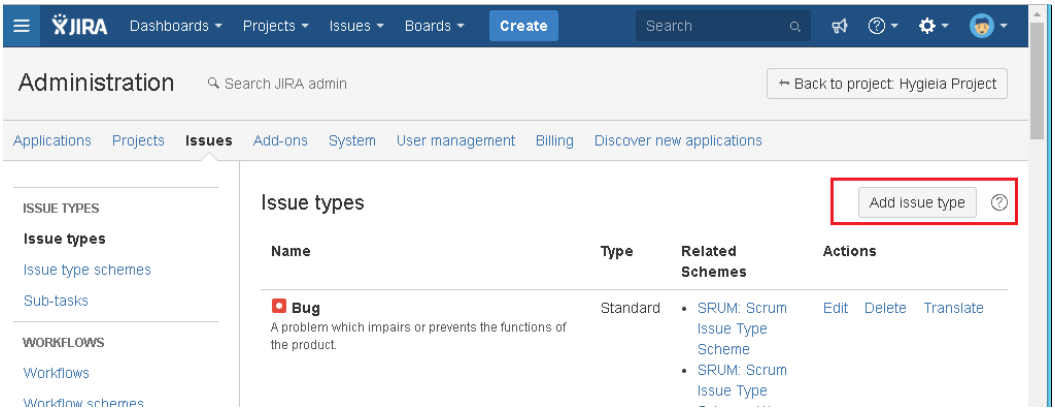
4.3 Creating an Issue type in JIRA

JIRA software has set of pre-defined Issue types to get started with. We can also create our own custom Issue types based on our project needs and add them to the Issue type scheme of the project.

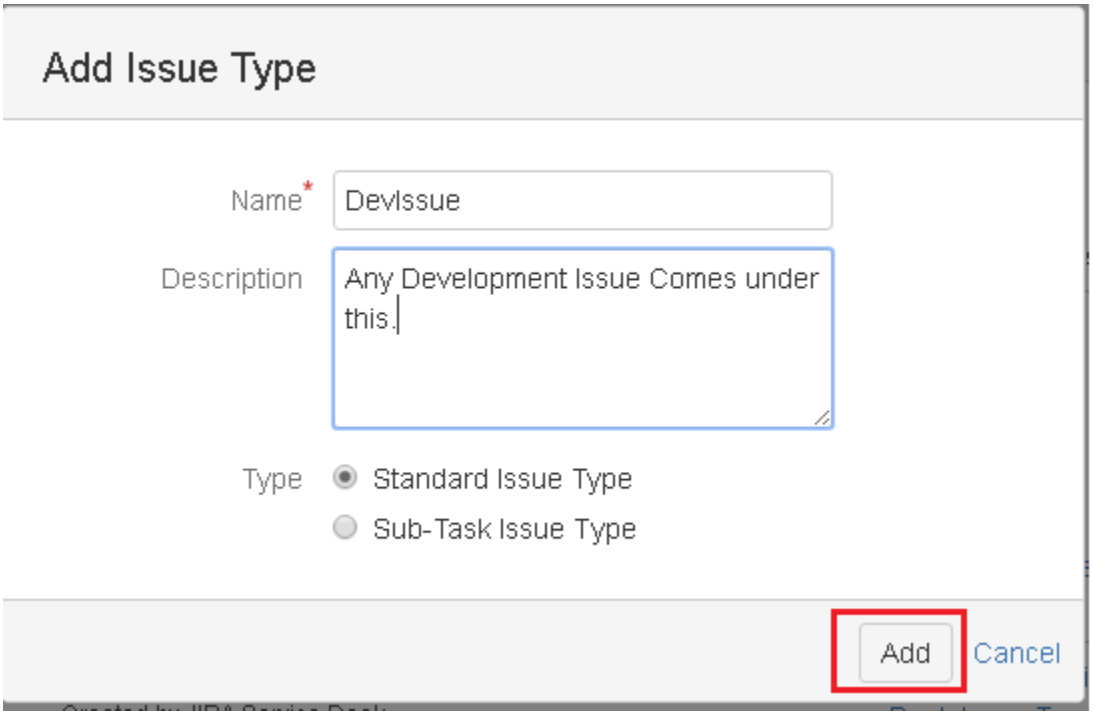
1.Click **Administration Settings icon** on the top right and Select **Issues** option in the list.



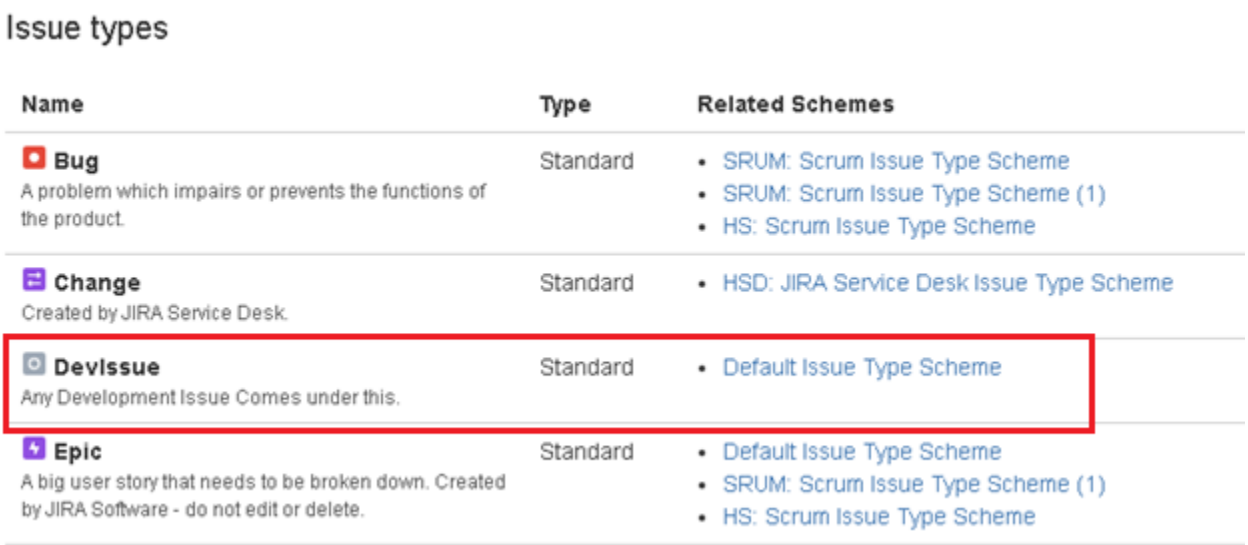
2. In the next screen, Click **Add Issue type** in the top right.



3.It will Opens the Pop-up window & provide details like Issue type Name, Description for the Issue type, select the Type as below.



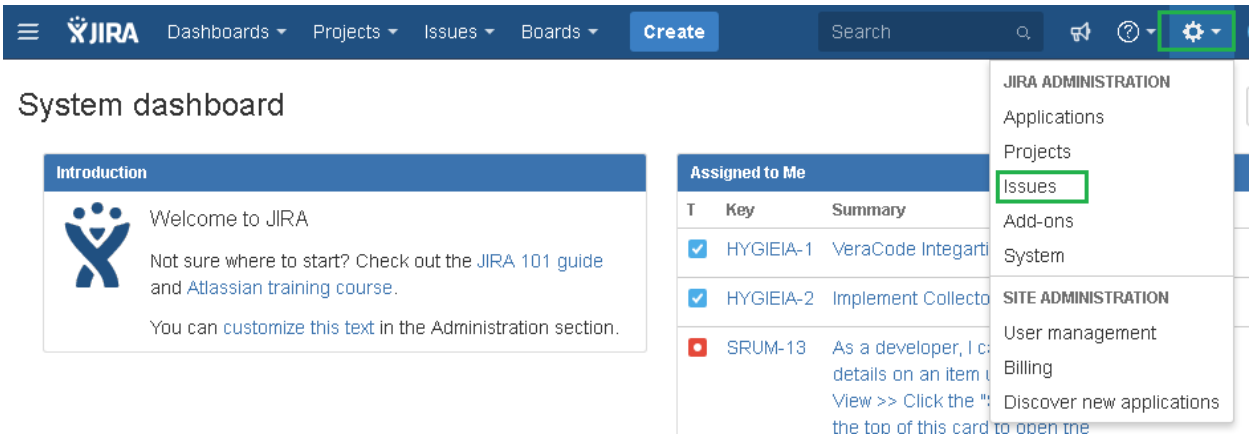
4.By clicking button Issue type is created successfully & it will displays in the issue type list



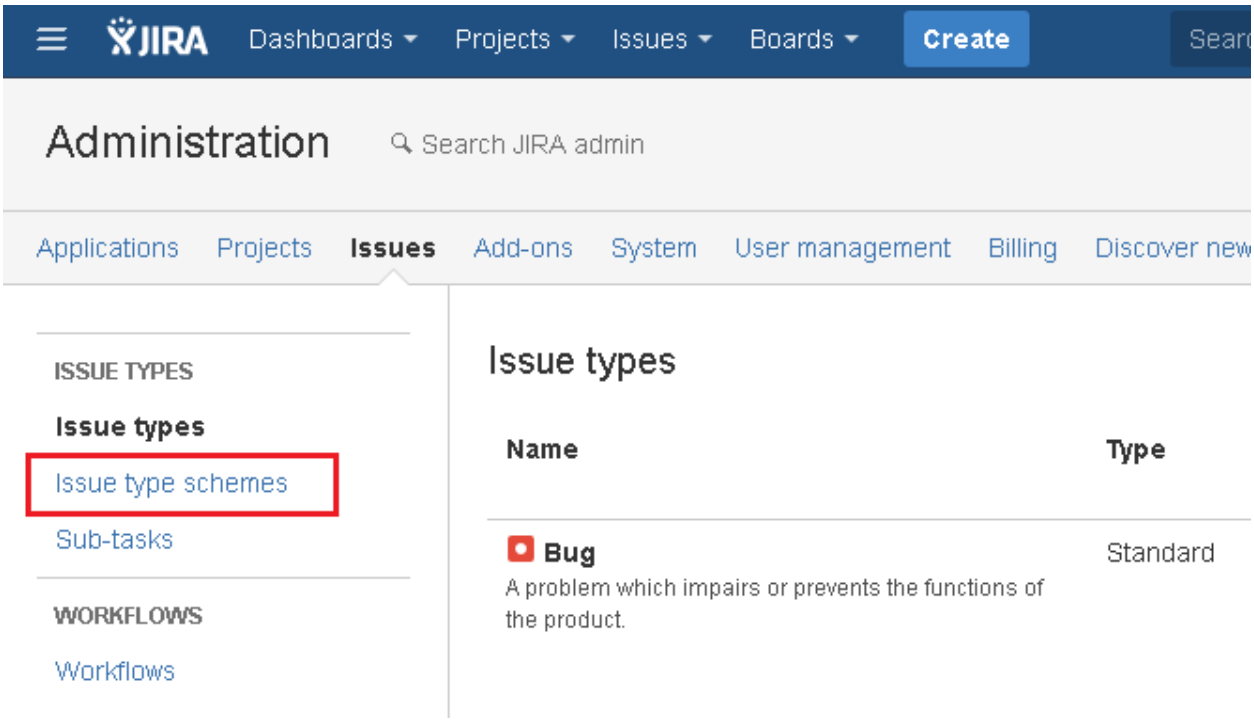
4.4 Creating an Issue type scheme in JIRA

Issue type scheme controls which issue types will be available to a set of JIRA projects

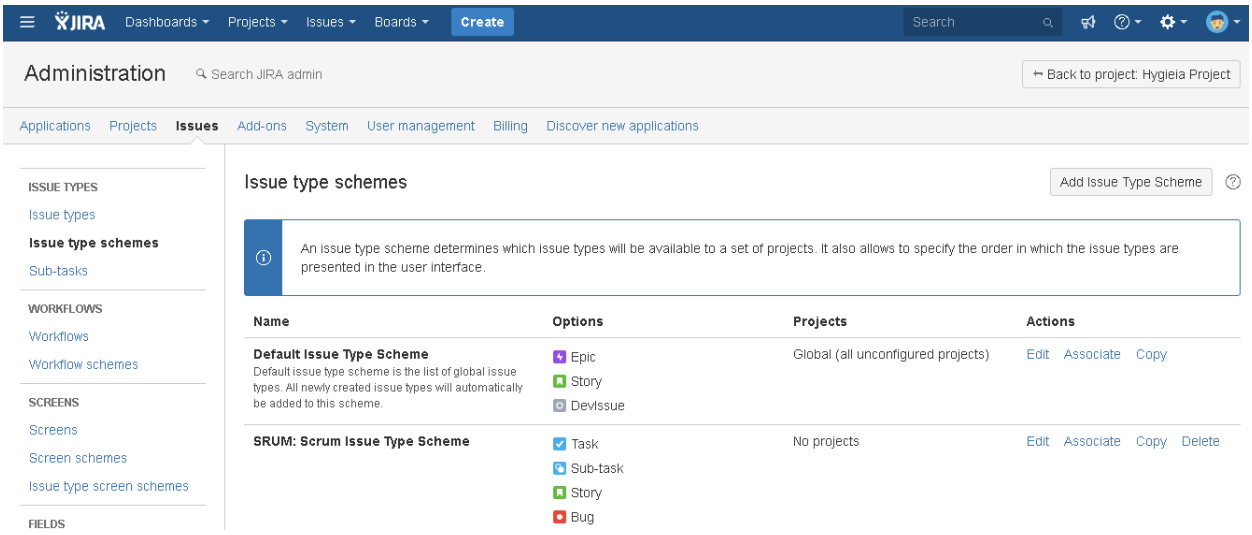
1.Click Administration Settings icon and Select Issues option from the list.



2.In the next screen, Click Issue type scheme in the left side panel.



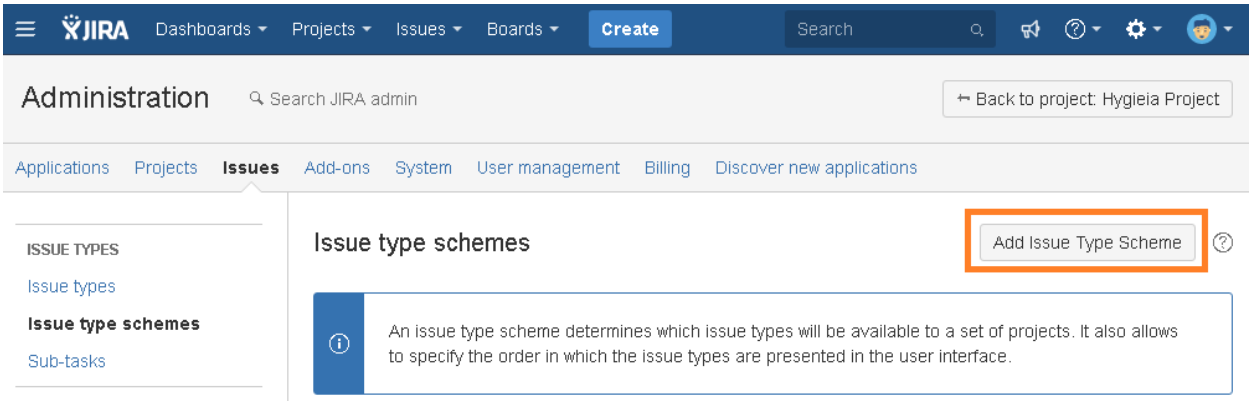
3.In the next Screen it will show the all the Issue types.



4. There are **two types of Issue type scheme** in JIRA. They are,

I. **Default Issue type scheme** – All newly create Issue types will be listed under this scheme.
II. **Scrum Issue type scheme** – Agile scrum projects will use this scheme.

5. Click to create a new Issue type scheme



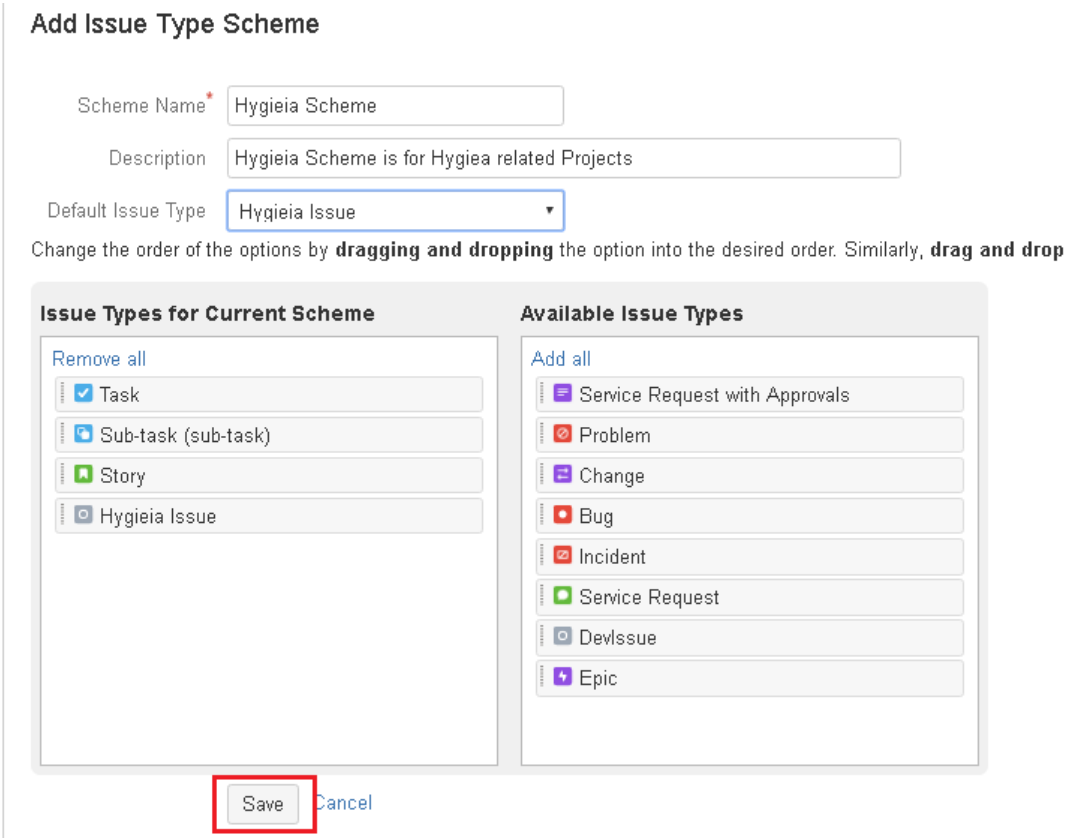
6.It will Opens below form, provide following details in that form

- Enter Scheme Name
- Enter Description
- Select Default Issue type for the scheme
- Drag & drop Issue types for scheme from available Issue types and Vice versa

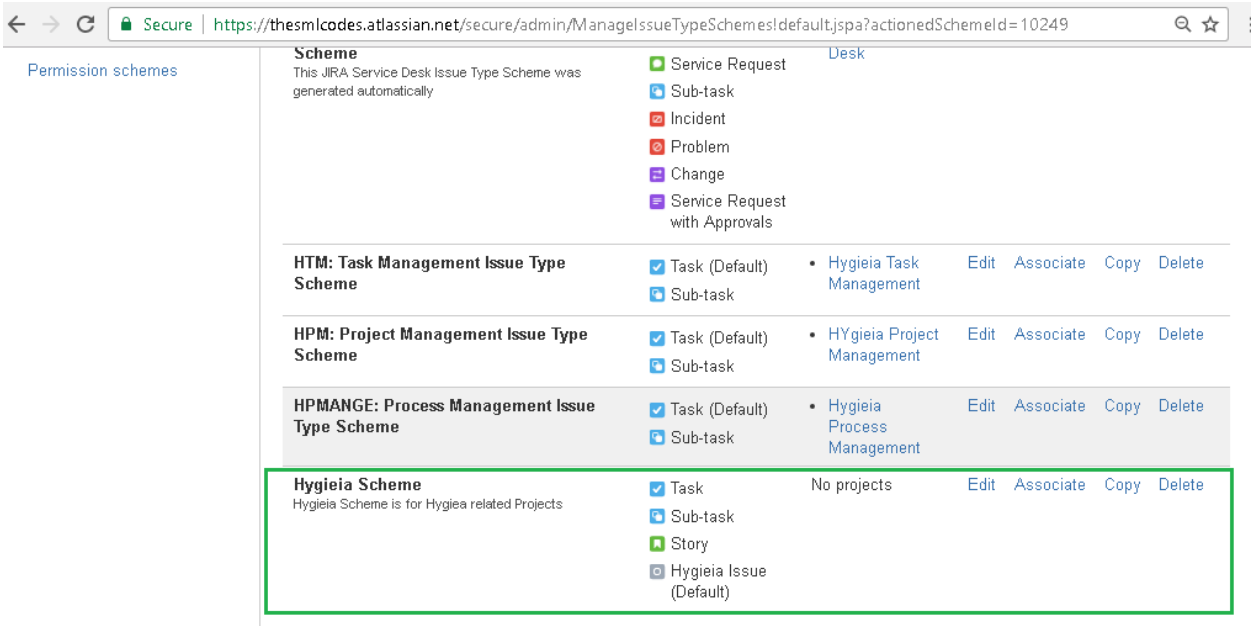
Issue types order can also be re-arranged (moving up or down) according to our project needs.

To add new Issue type to this scheme, Click Add Issue type on the top right.

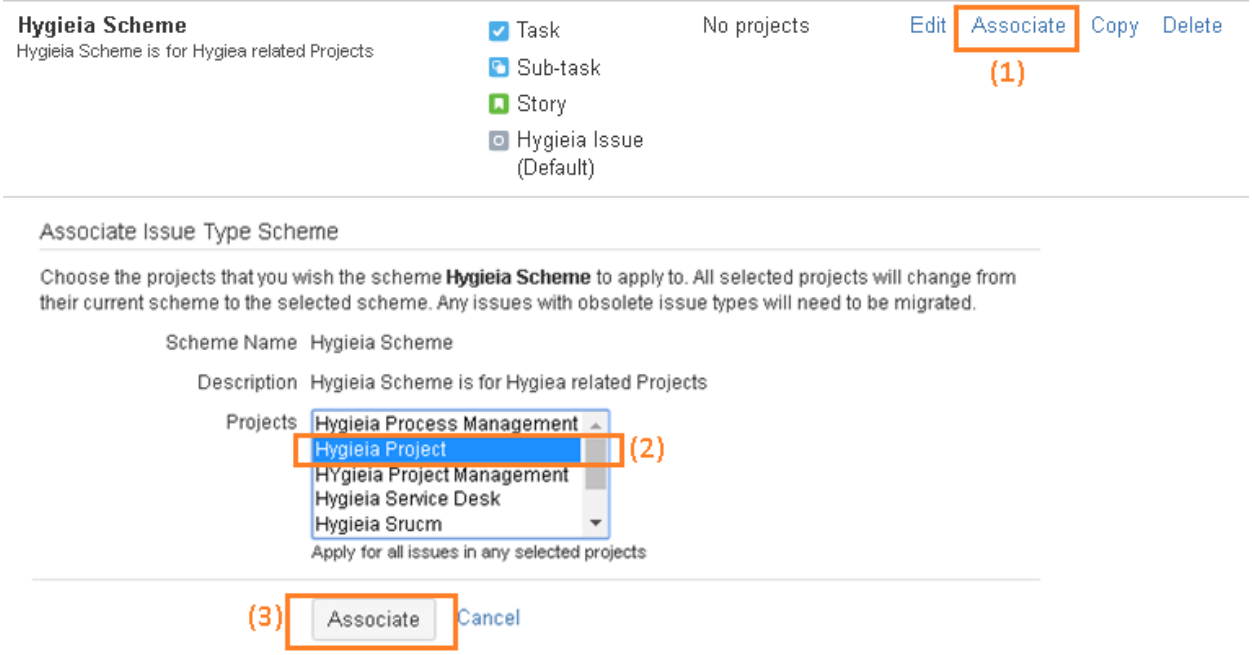
Once all the information are entered, Click ***Save***



7.Once save, it will display in Issue type schemes list



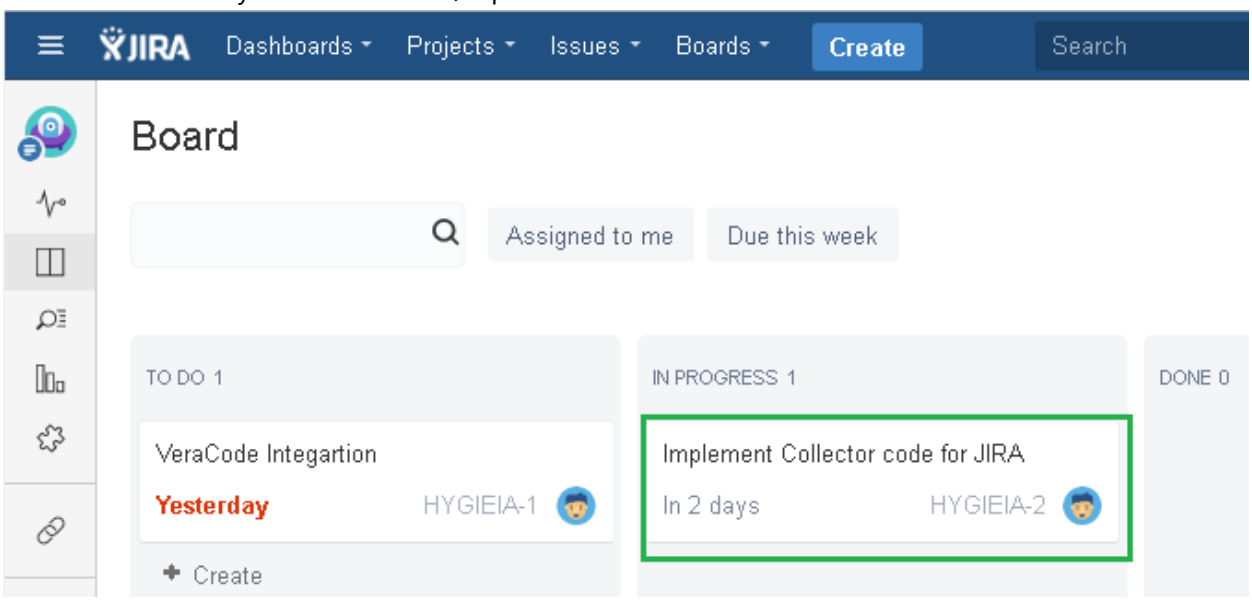
8. To associate projects with this newly created scheme, Click ***Associate &*** *then* ***Select*** the project (multi-select allowed), Click Associate and follow migration s until finish to complete the association.



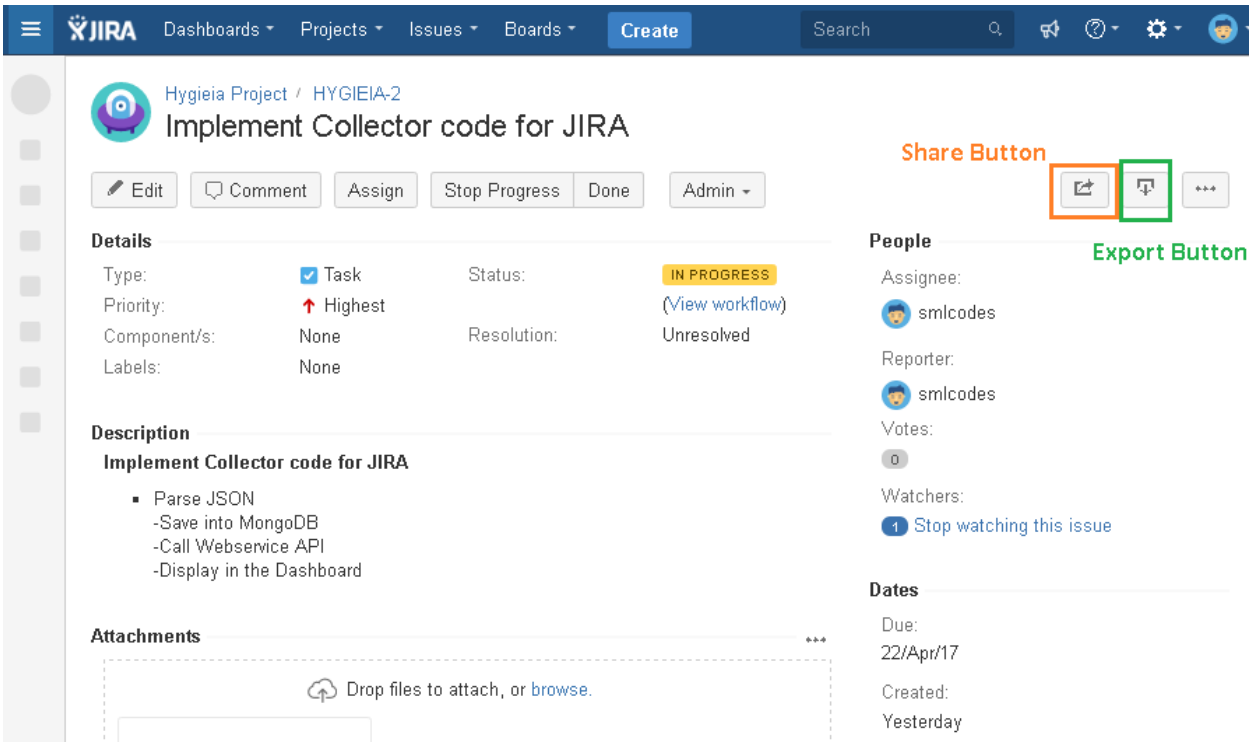
4.5 Sharing and Exporting an Issue in JIRA

1.Go to the project dashboard by selecting the project from top menu

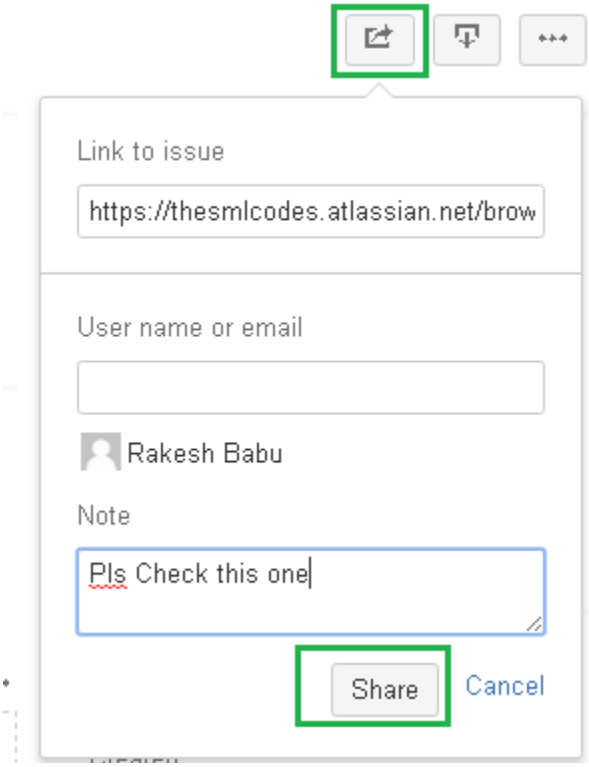
2.Click on the Issue you want to Share/Export



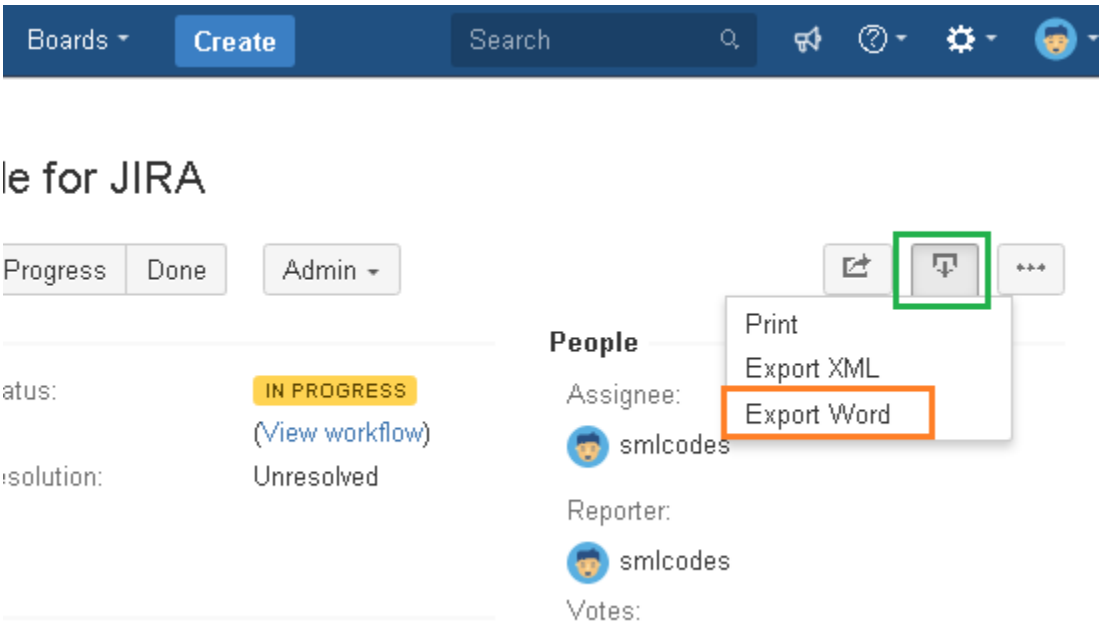
2.It will Opens a Pop-up window, Click on view details it will show the Issue details.



3. Click on Share button on the top to Share the Issue with others, Provide details & Share.



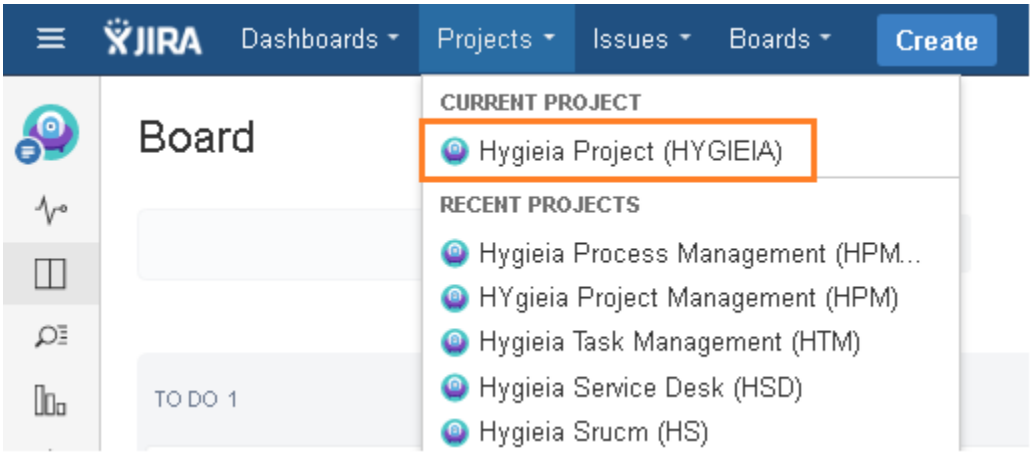
4.To export Click on Export button, choose the Export format, file name, location, and Save the file



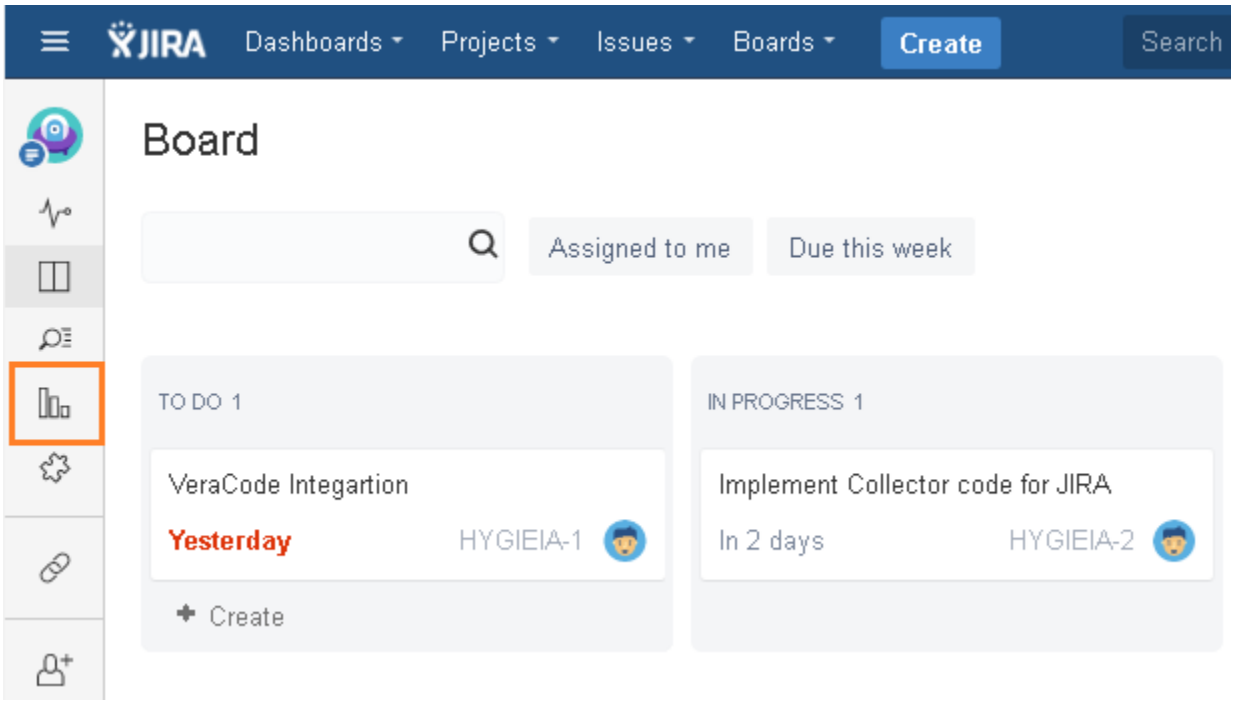
4.6 Generate Reports in JIRA

We can generate reports in JIRA very easily. Reports are used to track the progress of the issues effectively.

1.Select the project

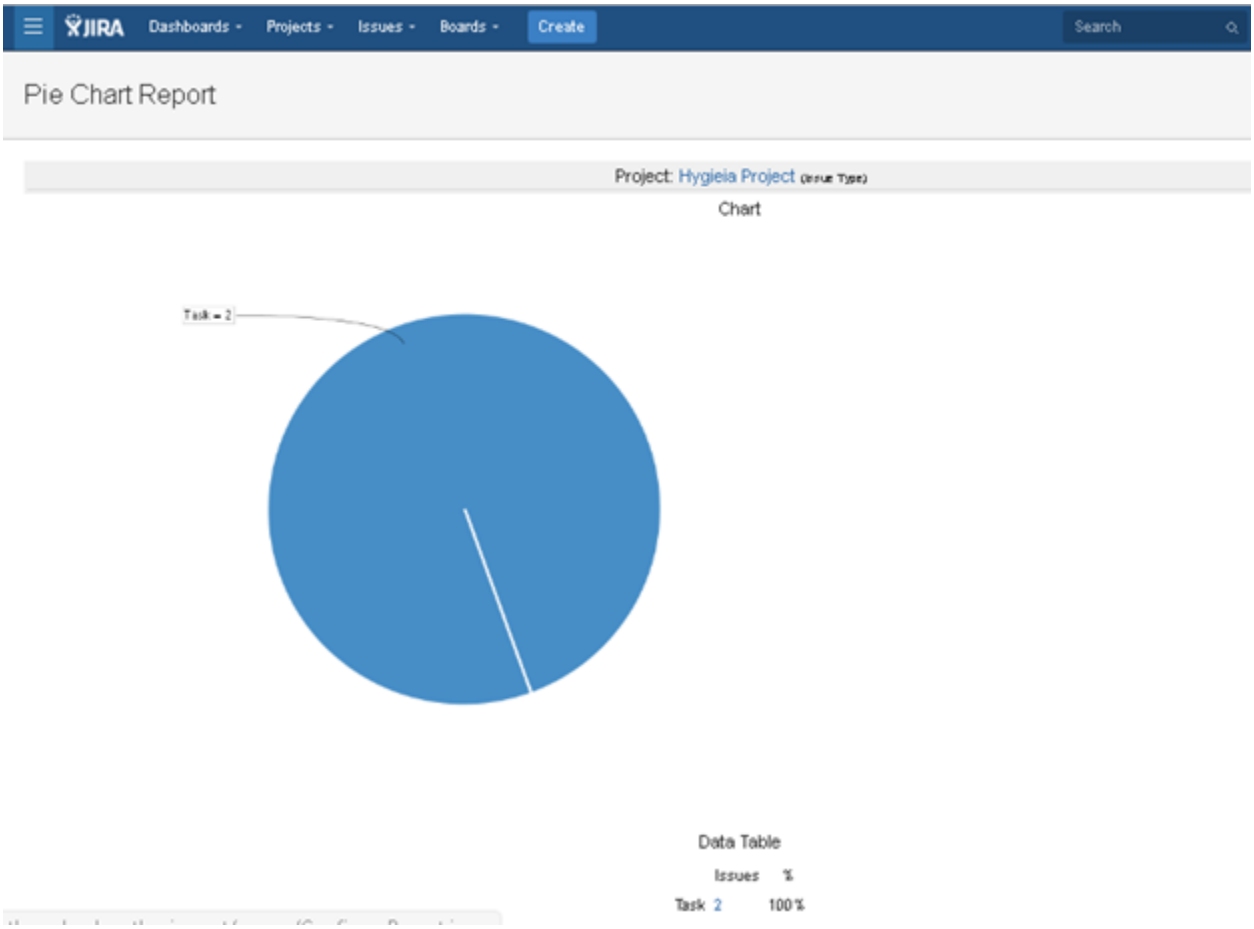


2.Click Reports option in the Left-side bar.



3.Select the report that you want to generate the report for.

4.I Selected PIE_Chart, It will ask for Statistic type details, provide the details & Click on next



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