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Summary of Two Bug Tracking Systems

The first bug tracking system I chose is Bugzilla, which is widely utilized by many companies including my previous company of employment. Bugzilla is easy to use without a long learning curve. The most important point is that Bugzilla is entirely open source and is free.

In general, all the features can be separated into two groups. The first group of these features is for users. Advanced searches are supported. For example, users can do a search for bugs where the priority has changed in a particular period. When the status of bugs is updated, users can receive an email notification according to users' preferences. Bugzilla can generate hourly, daily and weekly reports for users via email. An interesting feature of Bugzilla is its automatic duplicate bug detection, which means Bugzilla will automatically search similar bugs and then allow users to add themselves to the CC list of existing bugs instead of issuing a new one. Due to the web-based system, Bugzilla allows users to file or modify bugs by email. This system provides private attachments and comments, which means users can attach private files and comments only to the users who are in the same group. Finally, one other convenient tool is Bugzilla's nice and colorful patch viewer which makes code review easier. The other group of features is for administrators. Bugzilla provides excellent security because it treats information leaks and abuses seriously. It also provides several customizations for installation, field setting, and workflow. Moreover, supporting full Unicode and localization are useful for global users. Besides the features mentioned above, Bugzilla also supports mod_perl which accelerates page loads, supports XML-RPC and JSON-RPC, supports multiple database engines and executes sanity check to make sure that your database is consistent.

The other bug tracking system is JIRA which was used in my previous customer's organization. Although it is not an entirely free system, many famous companies are using this system right now. However, JIRA is still free to open source projects or organizations that are non-profit. JIRA is considered as an issue tracker, and it provides a state machine, including "Open", "In Progress", "Resolved" and "Close", to record and monitor the status of issues. It also provides plenty of attributes for users to utilize. JIRA allows users and administrators to file, assign, track, audit, prioritize, and report bugs in a simple way. Moreover, users can use this system to generate a customizable report and statistics to monitor the progress of users' issues with detailed graphs and charts. If users want to customize their workflow in JIRA, this system is flexible to map users' businesses process according to their workflows. Because JIRA is an extensible system, it provides a lot of open APIs and more than one hundred free plugins for users to integrate JIRA into users' systems seamlessly.

Some important features of JIRA are related to GitHub. JIRA can integrate with GitHub by linking issue tickets to Git commits, which users can easily reference between JIRA issues and Git commits. Also, the powerful tools of searching and reporting can perform advanced queries well, such as a personalized view or dashboard to track project status or a customized report to monitor team progress with Git information.