

Web based solicitation of Product defect tracking system

Mr. Sagar K. Srivastav, Mr. Sachin Saini, Prof. Tulshihar B. Patil, Miss. Supriya C. Sawant

Abstract— Defect tracking systems has a tendency to resolve, change the scope as well as the productivity staging of a product development as in accordance it leads to the logging of defects encountered, discussing it for the purpose of fixing the issues. For any organizational periodic growth quality is the major factor in terms of consistent economy growth. Defect tracking systems is an issue tracking system which maintains a peak quality set in order to provide quality assurance and also keeping track of the defects for the assigned programmer is much easier. We have a subsequent set of modelled architectural system which includes an set of functional units such as working testers, group of managers, and sub divisional hierarchical sub domains. It can be considered as a defect tracking/review system. Our defect tracking system has a tendency to provide such an environment where multiple set of developers can contribute together on a single defect in the common central project by handling it using different defect tracking/review/fixing tools and methodologies. The collective and detailed information into the initial first defect report helps the tester as well as developer to understand a defect quickly and work upon it accordingly in the most effective manner. Thus deciding upon an functional defect tracking system has multiple set of growth changing factors such as minimizing total processing time interval, maximizing the output levels, results which are as per the customer requirements and demands and last not the least the communication panel establishing in order to direct the direct flow of suggestion in between the developers. The final defect report carrying detailed information about the

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I. INTRODUCTION

Defect Tracking System (DTS) is solely a defect/issue system in order to detect and configure bugs and also BTS created specifically for product development component. The developing unit, set of testers and managerial workers collaborates to a certain set of defect domains which translate it for the progress of defects (bugs), problems and new functioning features. Understanding Defect Tracking System requires understanding how specific features, such as change friendly Workflow environment and also some additional add-on application appropriate for it, also relating to your requirements and your current issue/defect tracking procedures. This system deals with multiple level of permission set like highest goes with the developer then it considered to be as the highest permission able job which is allotted to the administrator. Whether it's creating new user

account or even employee account, the creation, maintenance, and updating authority is horded by the administration itself as per the new projects introduced. Administrator has an authority to add relevant project name in the particular assigned projects respective of the developer and the tester those who are working on the same directed project. The software development processes are divided among multiple functional phases, once the software development is completed the next phase comes in function i.e. testing phase. The output completed product has to be tested by the assigned software tester/engineer and as soon as the defect is been encountered they can be logged/stored with its defect description. It's necessary to get a quick updating on the defect status, status on number of job handled by the tester as well as developer and the most importantly the time span of the discrete project we are working upon. In case a particular client or software support engineer faces problems after delivery there has to be an mechanism so they can log in to system and add their issues for the particular project.

Defect tracking tools has a tendency to support fixed set of notifications:

- Set of defects Added
- Set of defects edited
- Set of defects status changed

Set of defects assigned

II LITERATURE REVIEW

This today's era of digitization is providing a leading demand of a product based bug tracking system. But the immense unavailability of a standard product based bug tracking system leads us to work in this direction. The present section provides the detail survey about various developments in the field of product based bug tracking system. The survey is organized according to the year wise systematic enhancement in this field. Davor „Cubrani“, Gail C. Murphy presented their experimental report by proposing a methodology in which they evaluated 15,859 bug reports from a large open source projects. They met their aim using the “Naïve Bayes Classifier”. In their research they introduced a technique that automatically performs the task of assigning the bug to appropriate developer by using text categorization technique which saves a lot of developer's time and resources used in bug triage process. Robert J. Sandusky, Les Gasser, Gabriel Ripoche presented their research work by proposing the methodology in which they have examined a sample of 385

bug report and then identifying the relationship between them. In their research work, they have listed out various management strategies to handle software problems and also explained when and how communities use BRN (Bug Report Network). A. Gunes Koro and Jelf Tian presented their survey report by using a methodology which included conducting a survey in order to predict defect handling process. A. Gunes Koro and Jelf Tian meet their objective by using the tool Bugzilla, survey tool. In their research they found out different defect handling process adopted by various open source projects. John Anvik, Lyndon Hiew Gail C. Murphy have presented their research work by examining the two open bug receptacle from eclipse and Firefox projects. They met their aim by using tool Bugzilla. In their research they come out with various challenges that the developers face due to duplicate that the developer face due to duplicate bugs and bug triage problem. survey conducted between the software professionals and studied various research around bug fixing. In their research they presented various ways by which one can get the complete set of information regarding bug's history and has also explained the use of automated analysis of bug record data in acquiring information about the bug. Silvia Breu, Rahul Premaraj, Jonathan Sillito have presented their research work by using a methodology in which they conducted a survey considering the questions asked in a sample of 600 bug reports from Mozilla and Eclipse. They met their aim by using card sorting technique. In their research they listed out various implications that can be made to BTS, which works to improve the interaction between the developer and user.

II. ANALYSIS

The goal is to study the importance of "Bug Tracking System" including its various drawbacks and Applications in the field of software development, product manufacturing, information technology etc. The work is carried out in two steps: first gathering knowledge on various aspects of bug tracking system second analysing the challenges faced by the current bug tracking system based on which suggesting what all can be implemented in order to overcome those shortcomings .

The data has been acquired from various social sites, blogs and journal. The detail analysis of various bug tracking system in the terms of methodologies, application area and various pros and cons in this field. The goal is to study the importance of "Bug Tracking System" including its various drawbacks and Applications in the field of software development, product manufacturing, information technology etc. The work is carried out in two steps: first gathering knowledge on various aspects of bug tracking system second analysing the challenges faced by the current bug tracking system based on which suggesting what all can be implemented in order to overcome those shortcomings . The data has been acquired from various social sites, blogs and

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III. PROPOSED SYSTEM

We are proposing a bug system where we mainly focusing on some bug tracking related crucial features like flexible workflow, easy and efficient interface, automatic email notification, and database record. The most important set of principles of which our defect tracking system is recording as well as logging of defects. This logging database is a space where set of issues are recorded and also the set of credential of that particular defect is been stored and recorded for future references. The convenience of such system is completely depended upon the way designated user access and alter valuable changes to a particular set of records at a time. It should also provide users to search in most elegant manner in order to achieve the desire set of record with feature like advanced searching database application which leads to an effective record searching rapidly and accurately. The attachment for every record helps in for the future references and this facility has to be present there. The stored data in the subsequent database has to be liable in case of tracking a set of changes made and it has to be visible when needed. In this particular defect tracking system administration is upholding an all over control over the system. The decision authority providence is solely controlled by the administrator and administration is the one who is in command to decide who will have what level of, how much of access to the database such as adding data, changing, and also deleting a set of information. Defect or issue reporting has to be convenient enough in order to make system easy to use. Reporting a set of issues in a defect tracking system is most important. Unable to report a defect properly leads to a decisive set of difficulties in finding and fixing a defect. The reporting domain must have a set of verified tools which can provide the complete detailing of a defect and ours this system ensures complete and robust way of reporting system with its complete detailing.

In the proposed system we are working on automatic email notification where we are providing automated notification system in order notify the designated domain set such as an developer, testers, managers these automated notification are generated upon creation/updating, comment focused notification in mail comment, and multiple simple mail transfer protocol sets. We need to define fields rule for each transition in order to follow the constraint set and cross check its availability in the given domain set the validated defect tracking system needs to be highly customizable in order to use, make accessible, and alter depending upon the present scenario and requirement.

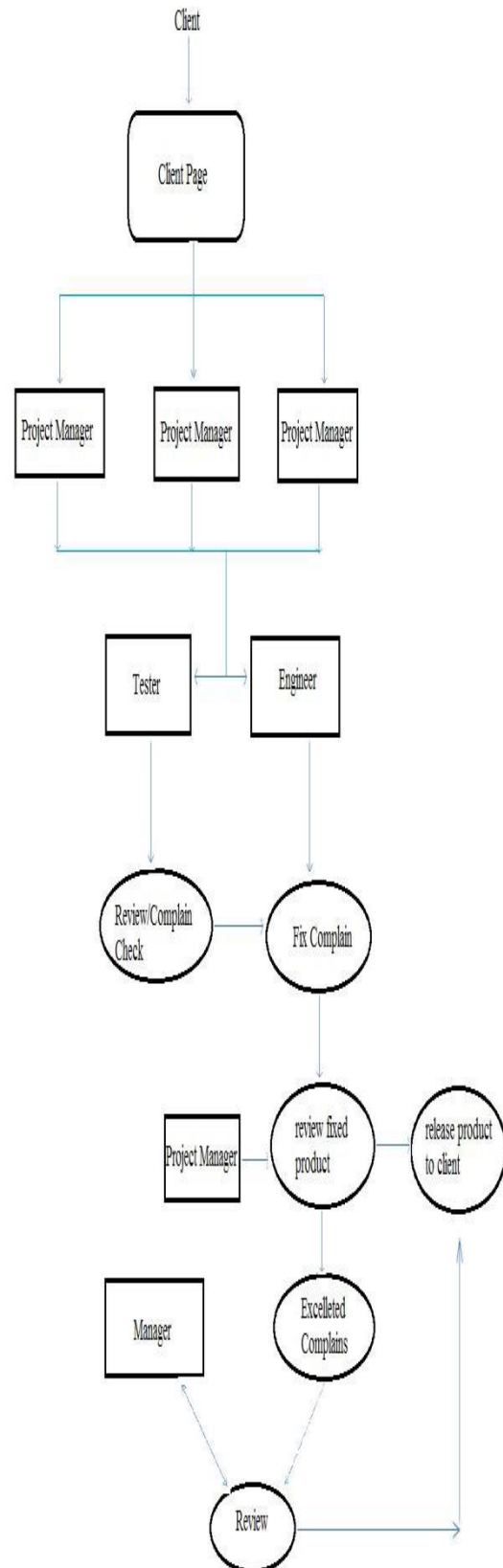
Frequently visiting set of bug reports/issue can be accessed using shortcuts to the concerned issue this reduces access time

and handling interval. Switching between projects leads working multiple projects at a same time conveniently and robustly. Tree hierarchy navigates to our workspace in such a way that it provides an functioning flow from top to bottom or bottom top approach so that a distributed system could be maintain in order to focus on particular bug review.

Tabular analysis of properties based upon system technologies (platform):

Tools	BugZilla	Jira	Trac	Mantis	Gnats	BugTracker.Net	Vitium Investigo
Platform	Open source / Free / Proprietary	Proprietary / free for non-commercial	Open source/ Free	Free/ Paid	GPL Free and Open source	Open Source	Open source/ Free
System Architecture	Client server/ Web Based	Client server/ Web Based	Web Based/ Wiki based	Web Based/ WAP	Web Based	Web Based	Client server/ Web Based
Server Operating System	Linux	Cross-Platform	Cross-Platform	Windows, Linux, Mac OS, OS/2, and others	Linux	Windows	Linux/ MacOS/ Windows
Web Server	Apache, MS-IIS or server capable to run CGI	Apache Tomcat	Apache	Apache and MS-IIS	Apache	MS-IIS	Apache Tomcat
Backend Database	MySQL, Oracle, and PostgreSQL	Mostly supports all RDBMS	MySQL, PostgreSQL, SQLite	MySQL, MS SQL, and PostgreSQL	MySQL	MS-SQL Server	Oracle
Programming languages	TCL/Perl	Java	Python	PHP	C	ASP.Net	Java
Client (web browser)	Anyone	Anyone	Anyone	Anyone	Anyone	Anyone	Anyone

IV. ARCHITECTURE



V. CONCLUSION

The standardized defect tracking system is the one which rapidly performs the set of functionalities such as logging, storing, fixing, issues. Bug tracking system forms an essential part in the working and enhancement of various

software developments, product manufacturing companies etc. But the current bug tracking system lacks certain features due to which its functioning is not that accurate and helpful in tracking bugs and fixing them with the help of developer. In future the research will be present in more comprehensive form with experimental results by taking the consideration of some real time bug tracking system.

Mr. Sagar K. Srivastav, I.T., B.V.D.U. C.O.E., PUNE-43 india
Mobile No. 8055013290

Mr. Sachin Saini, I.T., B.V.D.U. C.O.E., PUNE-43 india
Mobile no. 9028993447

Prof. Tulshihar B. Patil, I.T., B.V.D.U. C.O.E., PUNE-43 india
Mobile no. 8793219754
Supriya C. Sawant, *E&TC, S.K.N.C.O.E., PUNE-41,India*

Mobile no.9029771916

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