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Online Bug Tracking System

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Abstract: Bug tracking system is an online project management implement, which will be habituated to track and manage bugs with the project without any latency. Project Manager will engender team members including developers and testing team. Testing team will engender and assign bugs to developer in the bug tracker which notifies developer immediately through email notification. Developer will commence fine-tuning the bugs which were allocated to him and after consummating the fine-tune, will update it as "resolution" in the bug tracker which will notifies the testing team through email notification. Testing team member will immediately verify the fine-tune and close the issue if it is working else testing team will re-open the issue. In this way entire process will be automated which will avails to achieve the quality in the project.

The bug report is mailed to the project manager and the developer as anon as the bug is identified. This makes that no error will go unfixed because of indigent communication. It makes ascertain that anyone who requires to ken about a bug can learn of it anon after it is reported. Bug tracking system plays vital role in the testing phase. But it fortifies assigning projects for the developer, tester by the project manager.

Keywords - Web based application, Errors, Duplicates, Tools, Bug priorities, functionalities of modules.

1. Introduction

A bug is a common term used to describe an error, mistake, failure or fault in a program. Most bugs are arise from mistakes and errors made by people in either programs source code or its design, and few are caused by compilers. Bug Tracking System is a web-based application that is designed to help quality assurance and programmers keep track of reported software bugs in their work. A major component of bug tracking is a database that records facts and known bugs. The report of database can consist of several information which can also called facts. The project manager assigns projects to the developers. The developer develops the projects as per customer requirements. The project manager itself assigns the developed applications to the Testers for testing. The testers test the application and identify the bugs in the application. When the tester encounters no. of bugs, he generates a unique id number for each individual bug. The bug information along with its id is mailed to the project manager and developer. This is Bug Report. These are stored in the database. This is useful for further reference. Bug information includes the bug id, bug name, bug priority, project name, bug location, bug type. This whole process continues until all the bugs are got fixed in the application. The bug report is mailed to the project manager and the developer as soon as the bug is identified. This makes that no error will go unfixed because of poor communication. It makes ensure that anyone who needs to know about a bug can learn of it soon after it is reported. Bug Tracking System plays a vital role in the testing phase. But it supports assigning projects for the developer, tester by the project manager. The Bug Tracking System maintains the different users separately i.e. it provides separate environments for project manager, developer and tester.

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2. Literature Survey

Advanced bug tracking implement, utilizer does not productivelyelicit most of the information required by the developers.Without this information the one is resolve bugs fromsubsisting software application. So, to implement it we designthe advanced technique which could implement online task.From that utilizer can facilely resolve bugs in an efficient way. Itdepends upon the magnitude of data is present to execute bugtracking system. If the data is less, then bugs can bedetecting expeditiously as compare to more volume ofinformation. It depends upon the variations of the programscripts. To make the implementation of bugs more securelyand execute expeditiously, we working on bug tracking application in four different methods like implement centric,process centric, utilizer centric and information centric. In implementcentric that avail to decrement the peril of informationaccumulation and supply. In process centric which targets onadministration of activities cognate to bug detection. In utilizercentric that comprises testers and developers to provideto be acclimated to sort out bugs. Ininformation centric that straightly targets upon informationproviding by manager or tester. Here we fortify andenhance all types of data or information. Comments, graphs,customized themes, workflow diagrams, email notificationexport and failure files, File histories, astringency status andversions are the different features considered for analysisof the implements. This implement can avail through its software life cycleto engender initial report to execute ultimate resolutions

3. Problem Statement

Bug Tracking System is to test the application for the bugs and report it to the project manager and developer. The main intention abaft the Bug Tracking System is that to track bugs and report them. Store the bug information with a unique id in the database.

The quandary in the older system can be defined as the whole project maintenance; user's maintenance and their assignment have to be maintained manually. The Software development companies have to face a plethora of quandaries while maintaining manually all the maintenance of the projects their bugs and their status. This type of quandary makes the whole system an inefficient one and thus making an indigent and unorganized working. In order to abstract this type of quandary, so that the paper is orchestrated to develop. Bug tracking software is a "Defect Tracking System" or a set of scripts which maintain a database of quandary reports. Bug tracking software sanctions individuals or groups of developers to keep track of outstanding bugs in the product description etc. in the form of reports from time to time. The paper efficaciously. Bug tracking software can track bugs and transmutes, communicate with members, submit and review patches, and manage quality assurance. This web-predicated application is a great implement for assigning and tracking issues and tasks during software development and any other projects that involve teams of two or more people.

4. Proposed System

Bug Tracker is an online application which will be used to track and manage bugs with the project without any latency. Project success rates can be increased. There will be tracking for all the bugs and quality of the team can be measured based on this application. Every action in this application will send notification to the team members which will notify the team immediately

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Admin: This module has the entire access to all other modules, admin creates the project and assigning the projects to the created manager, adding members to the managers, assigning bugs based on the priority.

Manager: Manager has the full access to the particular project assigned by the admin and controls the team member's access to the bugs assigned.

Developer: Can access the task or bug assigned by the manager, view assigned projects and resolving the assigned bug. Developer can view the bugs list assigned by the manager.

Tester: Tester can access to the projects or bugs assigned by the manager, can view the assigned projects and can add a new bug to the list and send the bug back to the manager. Tester can login to the system and access the assigned projects list.

Reports: Both Admin and Manager can access this module and generate the reports based on the requirements

5. Implementation

Whenever a software engineer presents a bug records,
probably they are going to ask many different questions, some of the questions would be what would be the denomination of product? What kind of bug? In which class bug is present? Or in which module bug is subsisting? Which platform is utilized? Or which Operating system is utilized? And many more. The information provided by developer may be some time erroneous or may be incomplete information. Once the bug report submitted by the developer, then corresponding follow up questionnaire to be asking and in integration to that preserving the submitted report will be in hand. So, we approve that software development teams should have bug tracking implement which consists "build expert application". This system or implement raises all required questionnaires to software developer ergo, all the work will be automated. The questionnaire to be sent and replication by developer will not be same. The questions will not be in sequential order i.e. there will be a randomized question. Predominantly answers to the questions regulate next feasible questions. The proposed system consisting of different modules which are expounded through use case model, which is depicted in below diagram:

Fig. 1. Use case diagram for bug tracker

The utilization case diagram will subsidiary to understand thenumber utilizer modules. Here we are having 4 modules thereare admin, project, utilizer, bugs. The admin will manage allthe utilizer and project list and admin can able to integrate the allthe project and he can able to manage all the projects. The tester and developer can able to view the bugs.

The below details are essential for depict expert systems:

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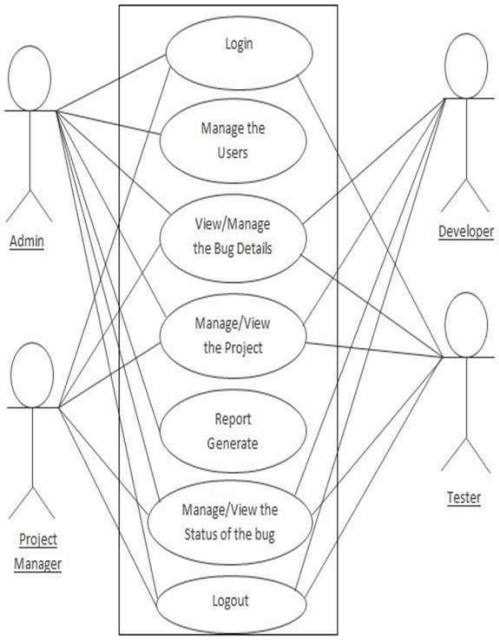
- The bug location details are very consequential to tracking bugs and location provides the information like line number, methods, class name and other information additionally. This will avail developer to



pergrinate to the congruous location facilely. So, now many software environment implements are already having short cut methods like a single button click.

- The bug list additionally avails machine learning model can be put up that pick the question and presage the location of the bugs predicated upon the replication according to the bug. So, this paper gives a substantiation of study which makes utilization of information which is present in the bug records. Hence, we can get plenty of information that is pertinent in implementing an implement that can possibly avail automatic evaluation of data.

6. Modules

Admin: This module has the entire access to all other modules, admin creates the project and assigning the projects to the created manager, adding members to the managers, assigning bugs based on the priority. Can update the manager, members and access to the particular project data. Generating reports based on the managers report submission.

Manager: Manager has the full access to the particular project assigned by the admin and controls the team members access to the bugs assigned. Has the permission to generate the reports and update the information of team members and adding members to the project.

Developer: Can access the task or bug assigned by the manager, view assigned projects and resolving the assigned bug. Developer can view the bugs list assigned by the manager.

Tester: Tester can access to the projects or bugs assigned by the manager, can view the assigned projects and can add a new bug to the list and send the bug back to the manager. Tester can login to the system and access the assigned projects list.

Reports: Both Admin and Manager can access this module and generate the reports based on the requirements.

7. Conclusion

This Bug following associated reportage System avails asoftware package Concern to find and manage the bug intheir product efficaciously and efficiently. Utilizing bugfollowing software package will avail in troubleshootingerrors for testing and for development processes. With theflexibility to engender comprehensive reports,documentation, looking out capabilities, following bugs andquandaries, bug following software package may be a greatimplement for those software package development wants.

This System is mainly used to identify the bugs accurately and it is facile to utilize it ameliorate communications between teams of individuals and it is incrementing the standard of the software package.

REFERENCES

[1]. Gauri M. Puranik, Design of Bug Tracking System, International Journal of Innovative Research in Science, Engineering and Technology (An ISO 3297: 2007 Certified Organization) Vol. 3, Issue 7, July 2014.

[2]. S. Just, R. Premraj, and T. Zimmermann, Towards the next generation of bug tracking systems, In VL/HCC08 International Research Journal of Engineering and Technology (IRJET) e-ISSN: 2395-0056 Volume: 07 Issue: 05 | May 2020 www.irjet.net p-ISSN: 2395-0072.

[3]. J. Aranda and G. Venolia, The secret life of bugs: Going past the errors and omissions in software repositories, In ICSE09 Proceedings of the 31st International Conference on Software Engineering.

[4]. Syed Parvez1 , Syed Yousef Danish Mehdi2 , Defect Tracking System, International Journal for Research in Applied Science & Engineering Technology (IJRASET), Volume 5 Issue III, March 2017 IC Value: 45.98 ISSN: 2321-9653.

[5]. A.S.SyedFiaz, N.Devi, S.Aarthi, Bug Tracking and Reporting System, International Journal of Soft Computing and Engineering (IJSCE) ISSN: 2231-2307, Volume-3, Issue-1, March 2013.

[6]. Jifeng Xuan , Hee Jiang , " Towards Effective Bug Triage", "IEEE transactions on journal 2013",pp.251-269.

[7]. Sandeep Singh Analysis of Bug Tracking Tools International Journal of Scientific & Engineering Research, Volume 4, Issue 7, July-2013.

[8]. Er. Amandeep, 2Er. Saurabh Mittal A REVIEW ON BUG TRACKING SYSTEM USING NAÏVE BYES IN DATA MINING International Journal of Advance Research. In Science and Engineering IJARSE, Vol. No.3, Issue No.9, September 2014.

[9]. Ashwini Jadhava, Komal Jadhava, "A Survey on Software Data Reduction Techniques for Effective Bug Triaging", "International Journal of Computer Science and Information Technologies, Vol. 6 (5) , 2015, 4611- 4612".

[10]. Nilesh Zaware,Priyanka Datir, Online Bug Tracking System, International Research Journal of Engineering and Technology (IRJET) e-ISSN: 2395 -0056 Volume: 03 Issue: 10 | Oct -2016.