**BUG TRACKING SYSTEM FOR SOFTWARE RELIABILITY**

SRS DOCUMENT

**1] INTRODUCTION**

1.1 Purpose:

Bug Tracking Software Reliability is a system that can be useful to employees and the managers in any functional organization. Bug Tracking System gives the facility to define the tasks in the organization and also allows the managers to track the bugs spent by the employee for that particular task. A report generation facility is supported in system that allows the managers to analyze which are those skills by employee are utilized and those which are not utilized. This tool can help managers for Bug estimation per project or application. This tool helps employees to document their Bugs and analyze.

1.2 Scope:

The Bug Tracking for Software Reliability is a web based application that can be accessed throughout the organization. This system can be used for logging bugs against an application/module, assigning bugs to team members and tracking the bugs for resolution. There are features like email notifications, user maintenance, user access control, report generators etc in this system.

* 1. Definitions:
* Bug - A software bug is an error, flaw, mistake, failure, or fault in a computer program that prevents it from behaving as intended.
  1. Overview:

Bug tracking is the process of reporting and tracking the progress of bugs from discovery through to resolution, where a bug is defined as a deviation from requirements. Bug tracking systems are most commonly used in the coding and testing phases of the software development process. However, tracking systems can in fact be used for many other purposes such as general issue tracking, simple task lists, help desk situations or contact management, where the focus is on the tracking aspect rather than what is being tracked. Even in software development, tracking systems are quite often not limited to simply tracking bugs, but extended to track feature requests or enhancements as well as enquiries.

**2] SPECIFIC REQUIREMENT:**

2.1 Functional Requirement:

* 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.
* Report Generation: Both Admin and Manager can access this module and generate the reports based on the requirements.
  1. Non-Functional Requirements:

2.2.1.Security:

* The system must automcatically log out all customers after a period of inactivity.
* The system should not leave any cookies on the customer's computer containing users's password.
* The system's back-end servers shall only be accessible to authenticated administrators.
* Sensitive data will be encrypted before being sent onver insecure connections like internet.
* The proper firewalls should be developed to avoid intrusions from the internal or external sources.

2.2.2.Reliability:

* The system provides storage of all databases on redundant computers with automatic switchover.

2.2.3: Availability:

* The system should be available at all times.meaning the user can access it using web browser.

2.2.4: Maintainability:

* Database is used for maintaining the data and application server takes care of the site.

2.2.5.Portability:

* End user part is fully portable and any system using any web browser should be able to use the features of the system,including any hardware platform that is available or will be available in the futuer.
* An end-user is used this system on an OS, either it is Windows or Linux.
* The System shall run on PC, Laptops and PDA.etc.
* The technology should be transferable to different environments easily.

2.2.6.Accessibility:

* Only registered users should be allowed to process the orders after authentications.
* Only GUI access of the system should be permmited to end users.

2.2.7.Policies:

* The system should adhere to all the legal formalities of the particular countries.
* The system should maintain security related to sensitive data.

2.2.8.Efficiency:

* The system should provide good throughput and response to multiple users without burdening the system by using appropriate number of servers.

2.2.9.Safety:

* Software should not harm ethical and environmental conditions of the end users machine.

2.2.10.Modulariy:

* The system should have user friendly interface.
* It should be easily updated,modified and reused.
  1. Technical Issues:
* This system will work on client-Server architecture. It will require an internet server.
* The system should support some commonly used browser such as Chrome etc.
  1. Hardware Interface:
* The System must run over the internet,
* All the hardware shall require to connect to internet will be hardware interface for the system.

e.g. modem, WAN, LAN

* Specialized Server Infrastructure Hardware
  1. Software Interface:
* Operating System:Windows-XP and above.
* User Interface:HTML,CSS
* Client side Scripting: JSP or PHP..
* Backend(DB):MySQL
* Web Server:Apache Tomcat
* Web Browser: Google Chrome,Microsoft edge
  1. Performance Requirement:

There is no performance requirement in this system, because the server request and respone to client is totally based on internet connection of enduser.

* 1. Design Constraints:
* System should be developed using Standard Web Page Development Tool .
* System should support various RDMS.