

ONLINE BUG TRACKING SYSTEM

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Abstract: A small proportion of the world's most successful software developers use bug tracking. Many, including myself, didn't prioritise bug tracking. Instead, shared lists and email were used to monitor concerns. This process is prone to mistake, thus developers often dismiss problems they deem minor. The industry requires criteria for selecting the best systems tool from the available collection of system tools, which will aid in bug fix reporting and tracking. This system is used to keep track of all the products, bugs, and bug trackings. With this, you may keep track of all of the bugs you've encountered, including their causes and solutions. Collection of relevant data from the enormous and unorganised set of bug reports is still a difficult task, as there are numerous bug tracking systems that supply data via numerous means, such as web-based interfaces.

Keywords: Web Development, BTS, Categories Of Bugs, Error, Java Technology, User interface.

INTRODUCTION

This project purpose, known as the Bug Tracking System project, aims to provide online support to software developers with software problems or bugs. This project's name stems from its bug-tracking mission. Keeping track of project, developer, and tester information is possible with this project's capabilities. A bug-tracking system may be used to keep track of any defects that are found during software development. While bug data is supplied, no actual bugs are located. If you're interested in learning about or reporting issues, the Bug Tracking System is for you. Engineers work on the project to ensure that it meets the demands of the client. The tester will seek for bugs during the testing process. The tester records the bug ID and other pertinent details for each problem he encounters in his database. Computing The repairing of bugs consumes more than half of the budgets of companies that produce software. The process of bug triage is an integral aspect of the process of problem-fixing, which aims to allocate the appropriate developer to the appropriate bug. Text classification algorithms are used to do automatic bug triage, which saves the time that would otherwise be necessary for human problem monitoring. This research will concentrate on the topic of data reduction, often known as the process of decreasing the quantity of bug data while simultaneously improving its quality, in order to facilitate issue triage. When feature selection and instance selection are combined, both the word dimension and the bug dimension may be lowered simultaneously. The Bug Tracking System is important for testing. This feature assigns projects to developers and testers. Bug Tracking manages project management, developer, and tester environments. In this paper, We first combine variables from previously collected Bug Data sets and then develop a prediction Model for a New bug data set to identify the right instance selection and feature selection order. We test data reduction on 600,000 bug reports from Eclipse and Mozilla, two popular open-source projects. Our research shows a reduction in data and improvement in bug triage accuracy. Our research provides a way for reducing the quantity of bug data and improving its quality by using various data processing techniques. This can aid in designing and maintaining software.

RELATED WORKS

Gaurav Soni et al [1] Gave a tool may assist managers in the estimate of defects (also known as bugs) per project[1]. The Bug Tracking system is responsible for generating the automatically created individual searches, such as open problems, Milestones to do list, Most non-voted issues, and the Project wish list. These searches are performed for each of the several projects that are being tracked by the system. The user interface of the online version of the project may be debugged quickly and simply using the bug tracking system. It is also easy for developers to work on it since it is open source[2]. NileshZaware[3] showed Bug tracking program are open source, free, and commercial. Bug tracking systems help developers manage software

project issues. The industry needs criteria to identify the best bug-fixing system tool. Bug tracking systems give useable data via web interfaces from large, unorganized complaints. We use this detailed classification to analyse tools and

recommend a bug tracking and reporting solution. It also reports process-detected flaws to developers for monitoring and rectifying progress using graphical/charting features and status updates.

It predicts bugs, finds complexity issues, and distributes fixes and Nithya et al [4] showed that the programme requires human concentration. Despite the work, bugs and upgrades must be monitored. We trace. It will enhance efficiency and production by reducing labour duplication and allowing development and testing teams to govern system development. This affects software development resource performance (from requirement to implementation phase). The system will be more experimental to coordinate team activities and guarantee comprehensive diagnoses and improvement suggestions.

A bug tracking system was used as a state transition diagram in an analytical approach presented by Akinori Ihara et al [5]. For Novell, OpenOffice, and LiveCode problems, we use Bugzilla to conduct an empirical examination. In order to anticipate the time it will take for an issue to be fixed, we construct a categorization model for each bug report. To build the suggested model, we used the Bugzillas Bugs tracking System (BTS)[7]. In general, Open source Software Products have grown in size and complexity as they have developed to meet the needs of an ever-growing number of users. [6] Improving Software Quality Assurance. Using Bug Tracking System is mainly for applications developed in a company. An application known as a bug tracking system, or BTS, is a piece of software designed to help programmers keep track of reported software faults in their work[7]. Having this project at their disposal allows them to focus on building the database structure, rather than maintaining it[8].

METHODOLOGY

This Paper study uses Bug Tracking System is vital to testing success. Each of these three jobs in the Bug Tracking System has its own user interface. One person will be accountable for bugs. A comprehensive explanation of the problem may be supplied. Problem categories, priority levels, and bug statuses may be specified for individual user, projects, and organisations. This system is responsible for the upkeep of the items and the identification of problems. It is possible that the root cause of each mistake and the resolution employed to solve it will be documented in this fashion. All of the product's users may be found and traced down thanks to this database. One advantage is that customers are kept up to date on any problems or solutions that have arisen. When looking for a machine on our platform, it's important to bear in mind the operating system, status, and priority. Using this functionality, users and issues may better comprehend the relationship between defects and the people who can remedy them. The encryption method used to safeguard user credentials may be independently verified. It can also preserve bug attachments as well. This is feasible due to the fact that it is less expensive and requires less work. Log data must be retained in order for this system to work effectively, since this enables identification of faults or illegal use by other users.

MODELING

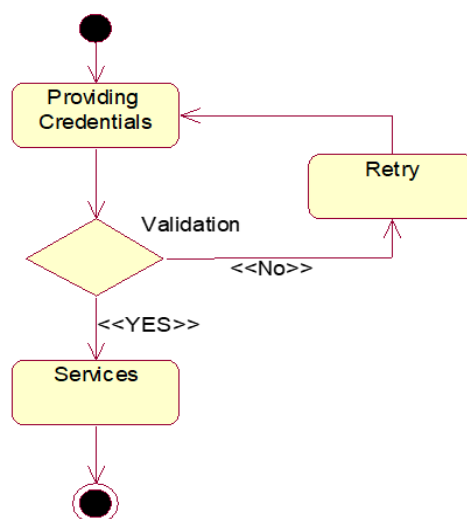


Fig 1: Login Activity Diagram

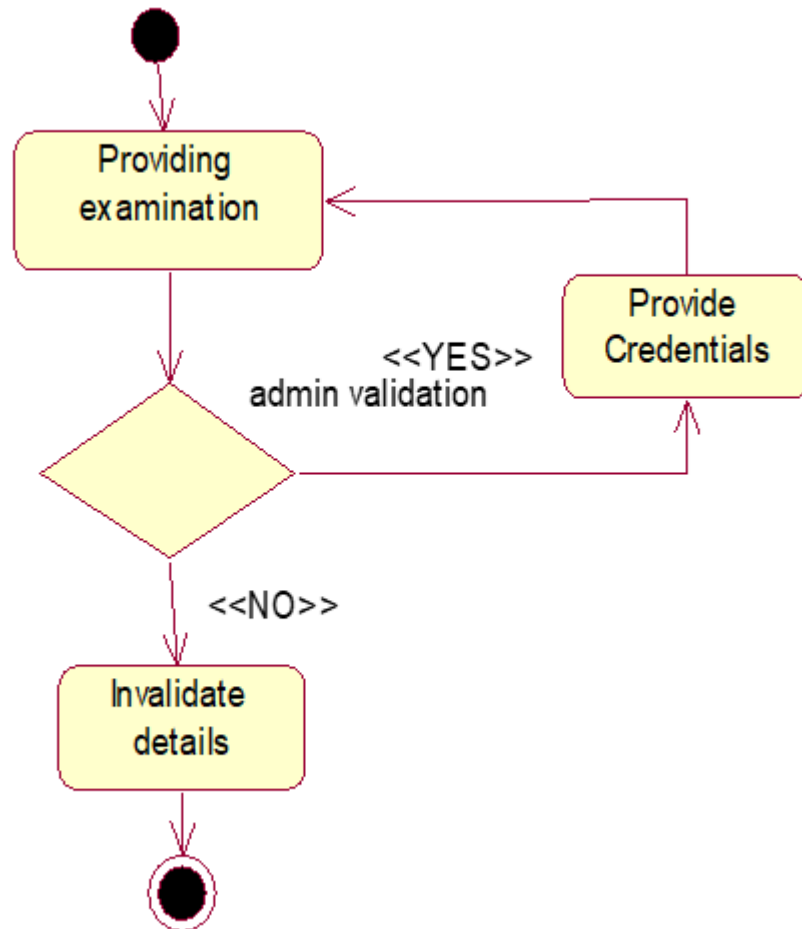


Fig 2: Registration Activity Diagram

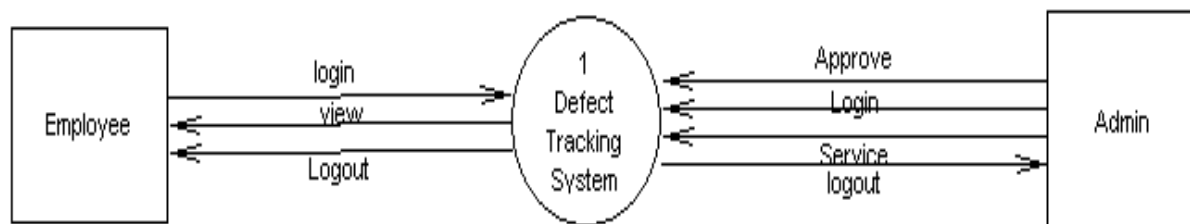


Fig. 5.1 Context Level DFD

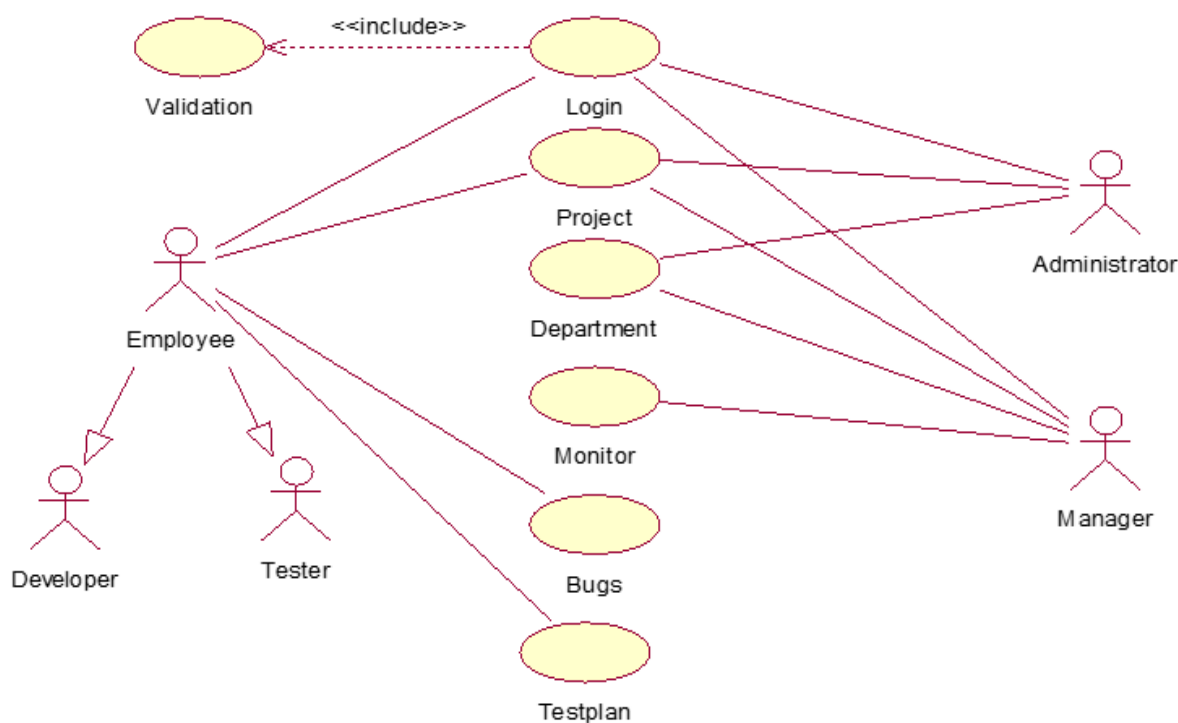


Figure 3: A general diagram of a use case

Diagrams depicting a collection of use cases and the individuals and relationships within them are known as use case diagrams. This is a case study. From the standpoint of an end user, the system's functioning is represented visually using diagrams. Requirements elicitation and analysis are two of the stages in the software development life cycle where use cases are employed. It is the system's behaviour from an outside perspective that is the focus of use cases.

RESULTS AND DISCUSSION

This portion of the article compares the performance of the proposed Software capabilities with the performance of other related protocols. This technique tracks object flaws. It's a big help for keeping track of problems since it covers information from the time an issue emerges until it's remedied. This skill helps you handle future issues faster. Each product's database maintains user data for simplicity.

Investing in bug tracking systems improves products and projects, staff efficiency, and communication between software developers and testers. Company efficiency has enhanced product quality. Customers gain from the company's ability to explain new problems and solutions. Our technique of investigating rates discoveries based on status, importance, and operating system. Identifying who's accountable for which users and concerns is easy. Thus, it's possible to determine who's responsible for what. This affects both groups equally. Since the password is protected, using the authentication method is safe. Attachments related to mistakes can be preserved. Until recently, discovering product errors was regarded to be expensive. This approach records every system action. Fault detection and correction are easier.

FUTURE SCOPE

In future, The interactive system's prototype will soon be replaced by a full-scale version that can manage a wide range of information, as in the real world. This Bug Tracking System may be expanded to accomplish more sophisticated tasks. In addition to this online facility, chat room, SMS alerts, and a separate account for the testing team to compare problem severity, many more changes are planned. Creating a second test account is one option.

CONCLUSION

Keeping track of problems is a crucial part of the software engineering lifecycle. Talking with each other and prioritising issues is facilitated by this strategy, but the degree of dialogue is confined to a highly technical level. It's preferable to get faults from within the organisation than from outsiders, according to an ancient adage. When a bug tracking system is used effectively, the whole development process becomes more efficient. As a consequence, we will be able to provide a higher-quality product at a reduced cost. Bug tracking system research leads to better products and projects, as well as better employee performance data and a smaller communication gap between developers and testers in software projects. Both the productivity of the company and the quality of the products are enhanced.

REFERENCES

- [1] Gaurav Soni et al “ONLINE DEFECT TRACKING SYSTEM “, North Dakota State University of Agriculture and Applied Science
- [2] Koppula Sunil and Mr. Karthik K., “Online Bug Tracking System on the Web”, International Journal of Engineering Research & Technology (IJERT) Vol. 2 Issue 9, September - 2013 IJERT ISSN: 2278-018.
- [3] Nilesh Zaware and Priyanka Datir, “Online Bug Tracking System”, International Research Journal of Engineering and Technology (IRJET) e-ISSN: 2395 -0056 Volume: 03 Issue: 10 | Oct -2016 www.irjet.net p-ISSN: 2395-0072
- [4] V. Nithya and S. Lavanya , “To Ameliorate Quality in Software Development Projects By Using Contemporary Agile Bug Tracking System International Journal of Emerging Technology and Advanced Engineering Website: (ISSN 2250-2459, ISO 9001:2008 Certified Journal, Volume 3, Issue 3, March 2013).
- [5] Akinori Ihara, Masao Ohira and Ken-ichi Matsumot, ” An Analysis Method for Improving a Bug Modification Process in Open Source Software Development”.
- [6] Pasquale Ardimento and Andrea Dinapoli “Knowledge Extraction from on-line Open Source Bug Tracking Systems to Predict Bug-Fixing Time”, In Proceedings of ACM International Conference on Web Intelligence, Mining and Semantics, Amantea, Italy, June 2017.
- [7] Rajnish Kumar, Devasani Yellaiah Gattaiah, Swati Shahi,” Improving Software Quality Assurance Using Bug Tracking System”, (IJCSIT) International Journal of Computer Science and Information Technologies, Vol. 4 (3) , 2013,
- [8] Nitumani Sarmah, Samiran Kakoty, “BUG TRACKING SYSTEM (BTS)”, International Research Journal of Engineering and Technology (IRJET) e-ISSN: 2395-0056 Volume: 04 Issue: 09 | Sep -2017 www.irjet.net p-ISSN: 2395-0072.