TRACKING BUGS USING AI ML

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Abstract: BTS (Bug Tracking for Improving Software Reliability) is a systematic approach that can benefit employees and administrators in any firm. The Bug Tracking System using AI ML allows supervisors to route the bugs consumed by employees for their respective work. BTS has a report group capability that allows managers to analyze which of the worker's services are used and which are not. This technique can aid administrators in estimating the number of bugs in each application. The tool aids teams in the filing of Bugs and analyses. This program aims to create a Bug Tracking System. All developers will be able to use this technology. This is one of the important factors that we can use to resolve the problems and it also helps in creating the database and for motivational purposes.

*Index Terms - **BUG TRACKING SOFTWARE, BUG TRACKING APP, USERS.***

I. INTRODUCTION

A bug tracking is a database that allows you to keep track of defects and regularly recommended changes in your software project. An effective bug tracking system that is properly aligned with your development and quality procedures is a priceless asset [5]. AI has revolutionized the way things function, from bug fixing to coding errors and software testing, opening us new avenues for achieving high-quality software. Similarly, AI has had an impact on bug tracking software. AI and Machine Learning (ML) go hand in hand and are now included in Software as a Service (SaaS). [New] To tackle fundamental flaws and issues in an application, test managers typically encourage the use of a variety of issue tracking technologies.[8]

Software Testing Instruments:

AI has had a significant impact on software testing tools in addition to improving the issue tracking process. As a result, there are two types of AI that contribute to software testing:

- Software testing methods based on artificial intelligence
- Putting AI-based products to the test

AI has unquestionably altered the way things are done these days, in one way or another. Thanks to Artificial Intelligence, software testing is now a reliable procedure that requires little human intervention (AI). Most software testing businesses, on the other hand, are increasingly incorporating AI capabilities into their software testing solutions.[8]

II. TYPE OF MODULE

2.1 Admin Module

- The role of the administrator is the one who can add the different users and they have got the responsibility to assign and complete the paper. And the administrator can login into the page and can access everything inside the system.
- Dashboard: In the dashboard, the administrator can be able to see all the services that are available in the system.

- Phlebotomist: during this part, Phlebotomists are responsible for administering and managing blood draws for diagnosis, transfusion, and research.
- Testing: During the part, testing is done to confirm the system and to improve the errors that can be seen in the paper so that Phlebotomist can modify the set of experiences along with the research work.

- Report: During this part of the paper, the administrator can create many types of tests in segment. One is a test of dates, while the other is a search. The administrator could search the test results by request number, name, or variable number.

- Notice: In this sector, the administrator will be well notified about the research work progress and can go ahead according to the notification.

- Administrator may likewise refresh their profile, modify the secret key n recuperate the secret key.

2.2 User (Patient) Module
- Client could visit the machine using a URL.
- Testing: during the fragment, head could manage every last one of the tests like distribute the test to Phlebotomist and change the arrangement of encounters
- Report: In this part, clients can look through their test utilizing request numbers, name and enrolled smaller numbers.
- Dashboard: during this part, the Users can see inside where the type of what numbers of reports is finished.

III. EXISTING SYSTEM

The Project Manager and developer are notified of the defects found by the tester during the software testing process via simple shared lists and emails. The majority of businesses provide this information via a document known as a "defect report." Because there is no specific tracking system in place, this technique is prone to errors, and there is a good probability that some defects will go unfixed and disregarded. Every member of the software development lifecycle team should be informed of the status of every defect that has been reported. Because the current system fails to meet this need, it has an impact on each team member's productivity and accountability.

IV. RESEARCH AIMS

1. The goal of the Bug Tracking System is to find defects in the program and report them to the project manager and developer.
2. The Bug Tracking System's main goal is to keep track of bugs and report them.
3. In the database, save the bug information with a unique id.

V.   PROBLEM STATEMENT
- A bug tracking system allows users to report a discovered bug to the individuals who can solve it directly. The system maintains a database that contains all relevant information on all reported and defected bugs.
- The system can monitor individual performance.
- The majority of problems are caused by flaws or mistakes committed during the design or coding of a program's source code.
- A bug tracking system was developed to keep track of all reported flaws in a system.
- This bug tracking system assists in the creation of an issue once it has been generated.
- It's nearly impossible to manually maintain or track these bugs using word or text documents.

VI.   PAPER OBJECTIVES
The purpose of the Bug Tracking System using AI and ML is to detect and report defects in the programmers to the project manager and developer. The basic purpose of the Bug Tracking System using AI ML is to keep track of bugs and report them. Save the bug details in the database with a unique id for future reference. Dealing with problems becomes considerably easier as a result. In the software development lifecycle, AI has done wonders in terms of problem fixing. As the amount of test data grows, the likelihood of manual testing errors grows as well. The way defects are fixed during software development is changing thanks to AI and machine learning technologies. Whether its code auto-correction or issue tracking for QA teams, AI enables for automated solutions that don't require human interaction.

VII.   BENEFITS OF USING A BUG TRACKING SOFTWARE

7.1.1. Deliver a High-Quality Product: Bug tracking software aids in the tracking of all product issues and defects, as well as guaranteeing that all flaws discovered are fixed.

7.1. 2. Increase Return on Investment (ROI) by lowering development costs [8]: Bug tracking software aids in the ranking and assignment of bugs based on severity and importance. This enables the development team To place a higher priority on high-priority issues over low-priority bugs. Early in the development cycle, getting important hurdles out of the way benefits your development team and the product's ultimate performance.

7.1.3. Improved Communication, Teamwork, and Connectivity: A bug tracking tool puts everyone on the same page with task collaboration, in-app chat, and email notifications. You can quickly assign the appropriate resources to test or fix faults.

7.1.4. Bug tracking solutions allow organizations to keep track of all flaws in one location, including who reported them, who rectified them, what their priority is, and how long it took to fix them.

7.1.5. Improved Service and Customer Satisfaction: A bug tracking solution lets your QA and Dev teams, managers, and customers to collaborate. They can report an issue by logging in directly to the system. The majority of tools are built in such a manner that a user may quickly create problems with all of the necessary information for a developer

VIII.   METHODOLOGY AND EXPERIMENT

The process of monitoring and simplifying complaints of software failure or usability concerns within a company is known as bug tracking [4]. A good bug tracking system is consistent and informative for those working on the problem. There are various ways to bugs in product a detected are: -

8.1.1. Internal bug reporting: Developers and quality assurance officers test the code for problems before releasing a product or a solution. Using this method, the tester investigates all possible use cases in order to determine how the software will perform and identify any potential flaws.

8.1.2. External bug reporting: a method for people to report faults they encounter after a product has been released. A great number of reports are routinely generated by internal and external means, which can be overwhelming for enterprises. A good bug tracking system can help QA teams figure out what their priorities.

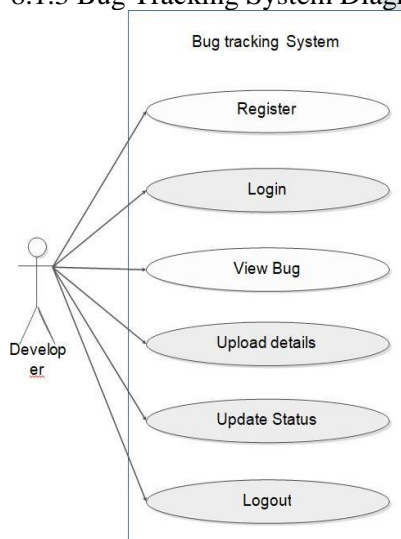8.1.3 Bug Trackeing System Diagram

Fig 1: *Use-case diagram shown above for the developer*

IX.   ECONOMIC FEASIBILITY ASSESSMENT

The development of this system does not require investing money in it. So, what is available is used. What is available is also used because the system does not intend for commercial are within the present scope form, economic feasibility is not warranted for this system. The Cost of doing a full project is minimum. The estimated price of hardware and

software is affordable.

X. IMPLEMENTATION AND RESULTS

The process of converting a new or altered system into an operational system is known as Implementation one that is operational Conversion is the most important component of any business implementation [5]. It is the process of transitioning from one state to another from the old system to the new one after the system has been implemented, the user will be able to use it carries out a system evaluation. It is used to collect information. Information needed to keep the system running.

XI. CONCLUSION AND FUTURE ENHANCEMENT

In this paper, it is not a simple task to create a system that meets all of the user's requirements. As the application is decommissioned, user requirements continue to change.

It's fair to argue that AI and machine learning have a significant impact on software testing firms. Because bug management is such an important part of these organizations' operations, investing in the correct issue-tracking software is critical to their success. By intruding on manual testing processes, AI has automated a lot of issue-tracking system functions, saving time and money. The most repetitive operations in a defect management system are automated by AI, reducing the need for human intervention. This is wonderful news for managers and senior executives because they have eliminated manual testing errors and prioritized software quality [8]. The following are some of the upcoming enhancements that can improve the overall approach:

- Safety can be increased based on impending safety issues.
- A module for keeping track of attendance could be introduced.
- You can add the upgraded sub-administrator module.

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