# Web Based Issue Tracker for System Development

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**Abstract -** *Defects or bugs have existed as a drag within the system and they are normally unavoidable in software development. While coding, a team of developers are prone to make errors, these errors in coding are called Software Bugs. A huge amount of bugs might be found in the course of system development. Till date, developers and testers find it difficult to manage bugs in word documents, text files or remember everything in one's head. Many open sources, free and commercial bug tracking tools are developed and are currently under development. There are a number of issues associated with the present bug tracking systems that are unable to supply bug fixes to the software developers leading to the hampering of software development. We attempt to present this comprehensive classification criterion to manage the reviews for available tools and propose a replacement modified tool for the bug tracking and reporting system.*

***Keywords***: Web based Application, Centralized Data Repository, System Development, Bug Tracking,

## 1 .INTRODUCTION

Issue Tracker is a web-based application that defines a streamlined process for bug reporting, bug assignment, status, severity, duplicity, and priority. It is a kind of a central repository that is used to keep all the information regarding the bugs in the software i.e. the progress of bug reports, the discussion of potential solutions for fixing the bug. It helps the software developers to understand what the error is So that they can resolve it and learn from it and they use the information provided in bug reports to identify the cause of the defect and narrow down reasonable files that need fixing.

This system allows users to insert attachments such as text files and images in the comment so that developers can get the results or capable information faster and then take suitable action on it immediately. Keeping detailed information regarding the bugs like the source of origin and the potential solution to the bug will increase the intelligence of the system, by providing suggestions for a future similar bug. It also helps you to keep track of the status of the issue, why the system was changed, and what future changes to consider. This application is written using Java and will use MySQL as a database to store relevant information about the defect and is accessed through the internet using a web browser. It supports multiple users and information can be accessed at the same time by multiple users from any type of computer without installing software on a user's computer.

[10] Logged bugs are described by a few ascribes so as to rapidly understand them, decide to which part of the program they belong to, know to fix what bugs are critical, and which ones might be revised later.

### Bugs are classified as follow [10]:

1. Blocker – 1st priority
2. Critical- 2nd priority
3. Major- 3rd priority
4. Minor- 4th priority
5. low-5th priority

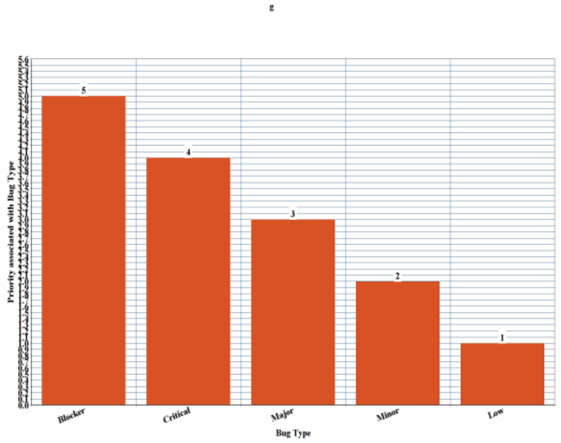

**Fig-1 :** Bug Type and Priority

Agreeing to the research by [8], when the designers have completed an errand, they can continue to deal with the following issues while the Quality Assurance (QA) group will begin testing. The QA group can utilize the bug following framework to record issues progress, until such time that an engineer could purchase time to investigate different issues. In the event that the issue is basic, engineers can take care of that immediately. Be that as it may, if the issues are not gems, the group of designers can pick to fix them as per the needs of the exercises on which they are working at this point.

## 2. PROBLEM STATEMENT

### 2.1 Bug Reports Lack Information

In current bug tracking systems, the information provided by the user is not appropriate or necessarily related to the problem or the bug that the developer is trying to find. So, it is necessary to include a platform where the user can talk directly with the developer and the developer asks the user a series of question-related to his quest of finding the bug.

### 2.2 Enhancements of Tools

By enhancement of the tools, we mean to enhance the features related to bug tracking systems. Thus, it can help to reduce the burden of information collection and provision.

### 2.3 Process Fixing

Process fixing means to focus on the administration of activities related to bug fixing so that it can be reported and resolved as soon as possible.

### 2.4 Complexity

Presently, there are various Bug Tracking Systems present in the market, but most of them lack a user-friendly interface along with the ease of use. The majority of them have redundant time-consuming functions that make the system slow to respond to user queries, which ultimately contribute to unhappy user experience.

## 3. PROPOSED SYSTEM

The proposed system maintains the Bugs in the most detailed manner such that it makes the entire process of bug tracking and resolution faster and effective. To make this process dauntless, the most precise method is to maintain the entire history of a discovered bug in the database. The details of the user are also stored in the database, mapping a many-to-many relationship between user projects and bugs. .This helps us identify the project where a particular type of error has occurred, making the system more detailed and intelligent.

There is a searching facility based on specific criteria, like the severity of a bug. The application provides security by the means of user authentication. What's more, has the office for putting away connections for a bug. One can monitor the bug in an item with much lower cost and exertion.

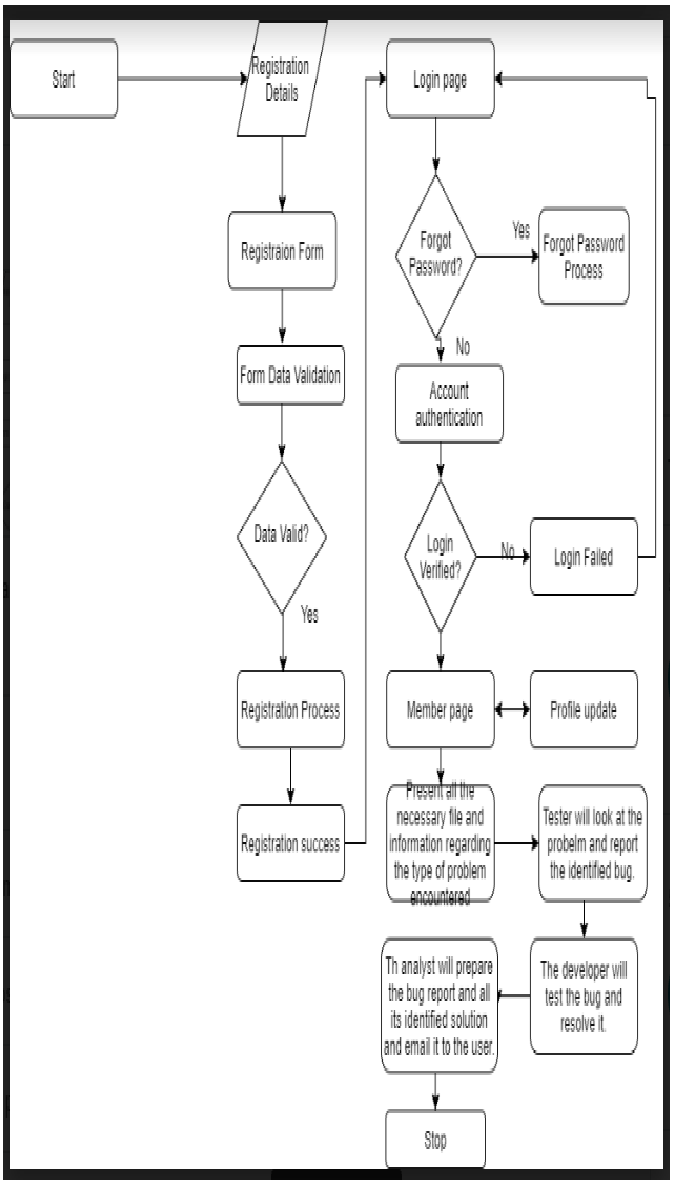
Start
Registration Details
Registraion Form
Form Data Validation
Data Valid?
Yes
Registration Process
Registration success
Login page
Forgot Password?
Yes
Forgot Password Process
No
Account authentication
Login Verified?
No
Login Failed
Member page
Profile update
Present all the necessary file and information regarding the type of problem encountered
Tester will look at the probelm and report the identified bug.
The developer will test the bug and resolve it.
Th analyst will prepare the bug report and all its identified solution and email it to the user.
Stop

**Fig -2:** Workflow of Proposed Model

As shown in Fig **-2,**, the user first logs in the web-based application, and then when the member is verified, he/she can report the problem he has encountered in the software development. Then, the tester will look at the problem and report a bug he found. After that, the developer will test the bug and try to resolve it by looking at the solutions already present in the database and if not then add the bug to the database along with its solution.

The analyst will prepare a bug report for the user and email it to him.

## 4. RESULT AND FINDINGS

This Issue Tracking Life Cycle is a received from Bugzilla Bug Life Cycle [9]. The framework configuration had been proposed by the client necessities. Each issue in the framework will have a related status, need, and seriousness. The status demonstrates the present advancement as for an issue.

An issue can either be open, closed, resolved, halted or in-progress.

**Table -1:** Issue Status

| Issue Status and their Description | |
|---|---|
| Open | It is accessible for developers to solve it. |
| Closed | Someone solved the issue successfully and the issue is deleted |
| Resolved | Someone gave a solution to the issue |
| Halted | The issue is suspended for some time. |
| In-Progress | The issue is open and someone is working on it. |

Being a web-based application the issue tracker requires both software and hardware to work in the most optimal way possible.

Software Requirement:

1. Operating System( Linux, Mac, Windows)
2. Database Server(MySQL)
3. Web Server
4. Internet Browser(On Client Side)

Hardware Requirement:

1. Processor
2. Memory
3. Hard Disk Space
4. Monitor
5. Others

## 5. RECOMMENDATION AND FUTURE SCOPE

During the framework improvement stage, issues have been experienced and legitimate arrangements have been applied on it so as to take care of these issues. Those arrangements can be found from different sources, for example, books and articles, conversation gathering and specialized assets sites. Furthermore, there are a few proposals for the future scientists in going before this investigation top to bottom. The accompanying suggestions are as per the following:

### 5.1 Multiple Dialects

Currently there is just a single language accessible, which is English. The framework can be improved to have various dialects, for example, English, Bahasa Malaysia and Chinese and permit clients to pick the favored language in the framework.

### 5.2 Online Assistance Archive

The framework can be upgraded to have an online assistance archive so as to control the client to utilize the framework. The online assistance record incorporates all the highlights accessible, bit by bit instructional exercise and Q&A area.

### 5.3 Live Visit Room

The framework can give another talk room capacity to permit.

Also, Inner clients to speak with one another in a flash. The talk work is inserted in the framework. Therefore, the talk room is limited and must be gotten to by enlisted clients.

## 6. CONCLUSION

In this paper, we heavily emphasize the use of the latest technologies which are being used for improving the traditional bug tracking system by making it faster, efficient and optimised. Further, we have introduced a different approach to implementing them in the most user-friendly way by means of an user interactive platform which makes the process of extracting relevant information form the user easy and to the point. And by ensuring storing of bugs in our central repository, we make our system intelligent by providing data to our system to learn from. By bettering the techniques and making a more convenient web-based application, the time taken between reporting and resolving the bug will lessen and be more beneficial to the user.

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