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Aim

A *bug* refers to any defect in the design, coding, and features of a product that can cause it to malfunction or deliver incorrect results in a product. The process of identifying these defects in a product is known as bug tracking.

This is a vital process that must be executed appropriately if you want to deliver quality products to end-users.

A *bug tracking software* is an essential tool for managing the process of finding, tracking, and fixing bugs. Not only does it ensure that you deliver a high-quality near-perfect product, but it also enhances the productivity of the development team throughout the product development process.

Our Aim is to come up with bug tracking software as it is an unavoidable part of product development. To ensure that this all-important stage yields the best results, innovative companies are turning to bug tracking software for their bug tracking process.

Another important purpose of a bug tracking system is to enable team collaboration and communication. Typically, it is an integral part of a case management software with features such as in-app chat and notifications that helps to keep everyone working on testing, identifying bugs, and fixing them in the same place. You can prioritize tasks and assign them accordingly to different members of your development team. The ease of access to real-time information and updates about the status of a bug fix also allows better collaboration and accountability.

A bug tracking software keeps all issues relating to your bugs in the same place and ensures that they are fixed appropriately. Not only does It provide visibility to all the aspects of the project, but it also has tools for in-depth analysis and control. Having a single platform from where everything is tracked is particularly valuable for companies running large projects. A bug tracking tool provides a platform from which all of these multiple moving parts involved in resolving bugs are seamlessly managed is critical to delivering a bug-free product that will leave customers satisfied.

Technologies Used

1. Python

2. MySQL

SE Model

This project will be using Agile Philosophies as it has proven time and again to be the most successful modern strategy for today's companies/ businesses. Customer satisfaction is the sole reason for the success of a project/business. Reduced risks, better control, strategic planning and Improved product predictability are some of the simple advantages for using this model. The complexity of the model is such that Agile could be put to good use and we can optimally devise the solution to our problem. We would like to execute the Agile Model to use its flexibility if at all we come across changes in requirements, design, strategies, etc.

Current status of project development:

We are planning to code this project in python as GUI and SQL as the backend for storing databases. At this point we are discussing and planning and will soon start with development after taking a survey of user stories.

The team would be divided to work on each module. Each of the team members will play separate roles during the development of their modules. They would act as leads, team members and QA person for different sections of the module.

At each step of deployment a regression testing phase will be undertaken to make sure that the functionality is working properly.

After the final release , efficient testing is done so that the software works properly even after deployment

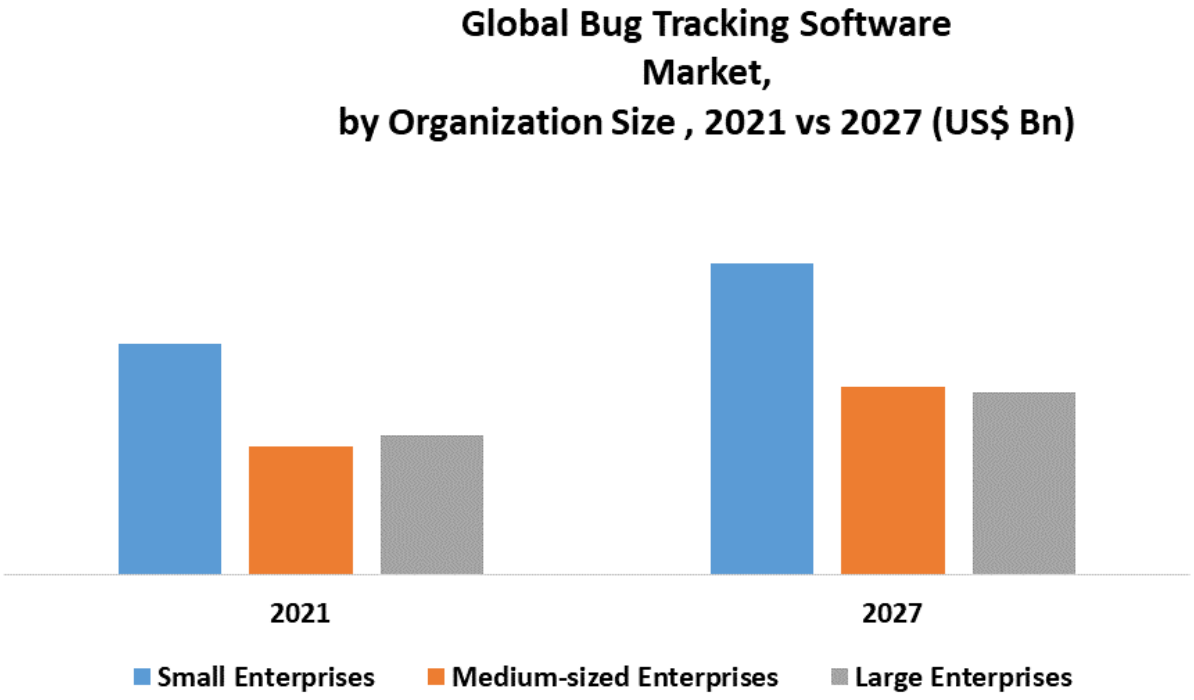
Market Potential and Expected popularity:

Bug reporting tools form a very essential part of product development.To ensure that this yields the best results innovative companies are turning to bug reporting software for their bug tracking process.This robust tool helps deliver high quality finished products to users at a reduced development cost. It helps developers and testers enhance their team's productivity ,resolve bugs without disruption, and deliver high-quality products quickly and efficiently. It allows companies to track all the bugs at a centralized location- the bugs reported, resolved and how complex the fixing process was.Thus to prevent losses occuring due to the bugs in software and for customer satisfaction, fixing bugs within a short turnaround time has made the bug reporting system a great demand for companies.Various organizations use bug tracking On the basis of deployment type, the bug tracking software market has been bifurcated into on-premises and cloud. The cloud-based deployment model witnessed the highest market revenue during the forecast period. Moreover, responsive accessibility related to the storage is further boosting demand for bug tracking software.

One of the primary objectives of the bug tracking tool is to reduce the cost of the development. In addition to aiding the development of quality products (which boost product competitiveness), effective bug tracking also helps to reduce the overall cost of the development process. A good bug tracking software has tools for quicker bug resolution, which allows the development team to avoid product release delays. A result is a reduction in production cost and a higher return on investment for the product company. Furthermore, bug tracking software provides a robust knowledge base that can be used for future reference to prevent a recurrence in the future.Bug tracking software integrates with Test Automation Tools and Project Management, Development.As per the research, nearly 45% of respondents plan to upsurge their expenditure on testing automation. Therefore, the rise in spending on software testing processes is driving the growth of the global bug tracking software market.

The global bug tracking software market is estimated to witness lucrative growth over 2022-2027 thanks to increased spending in the development of new software testing programs.Based on organization size, the large enterprise's segment is estimated to account for 42% of the total market share in 2021 and is expected to grow at the highest CAGR of 15.43% during the forecast period. This segment is attributed to the increasing demand for handling errors in complex software. However, the small enterprise's segment is

predicted to register the fastest CAGR of xx% during 2022-2027.



The chart above shows that the small enterprises are making the best use of bug tracking softwares today. This is exactly how they cut development costs and can make use of much lesser developers for tracking down the bugs and more people for fixing them rather.