**Bug Management System**

BackLog Items

* Authentication and Authorization
  + Login
  + Forgot password
  + Remember password
  + Admin Controls
  + Password-protected links
* Products
  + List of products
  + Product Versions
  + Product Users
* Bug
  + Bug Details
  + Bug History
  + Bug Assignee
  + Bug Life cycle
* Bug tracking
  + Track Hierarchy
  + Track resolution
  + Track Resources
* Attachment
  + Images(png, JPEG), Pdf, txt, doc, xls
  + Multiple upload
* Admin
  + Users
  + Configuration
  + Log View
* Search & View
* Comments and tagging
* Prepare Logs & Report
* Logout

MVP-

* Sign up
* Login
* Forgot Password
* Products
* Bug.
* Attachment
* Bug life cycle flow
* Comments and tagging
* Prepare Logs & Report
* Email Notifications

MVP Prioritization

1. Sign up
2. Login
3. Products
4. Bug.
5. Attachment
6. Bug life cycle flow
7. Comments and tagging
8. Email Notifications
9. Forgot Password
10. Prepare Logs & Report

Story Sizing

* Login (3)
* Products.(3)
* Bug (8)
* Attachment (8)
* Bug life cycle flow (3)
* Comments and tagging(3)
* Email Notifications (3)
* Sign up (5)
* Forgot Password(3)
* Prepare Logs & Report (8)

**Abstract**

Bug-tracking mechanism is employed only in some of the large software development houses. Most of the others never bothered with bug tracking at all, and instead simply relied on shared lists and email to monitor the status of defects. This procedure is error-prone and tends to cause those bugs judged least significant by developers to be dropped or ignored.

Bug Tracking System is an ideal solution to track the bugs of a product, solution or an application. Bug Tracking System allows individual or groups of developers to keep track of outstanding bugs in their product effectively. This can also be called as Defect Tracking System.

The Bug Tracking System can dramatically increase the productivity and accountability of individual employees by providing a documented workflow and positive feedback for good performance.

Some salient features are

1. Product and Component based
2. Creating & Changing Bugs at ease
3. Query Bug List to any depth
4. Reporting & Charting in more comprehensive way
5. User Accounts to control the access and maintain security
6. Simple Status & Resolutions
7. Multi-level Priorities & Severities.
8. Targets & Milestones for guiding the programmers
9. Attachments & Additional Comments for more information
10. Robust database back-end

# Modules & Description

1. **Authenticate User :**

The Bug Tracking System first activates the login form. Here the user enters the Username and password and our system starts the authentication process in which the username and password are matched with the existing username and password in the database. If the password matches then it is allowed to the main page else it warns the user for Invalid Username and password.

After successful authentication the system activates menus. The activity log also prepared for failures and security.

1. **Products :**
   1. **List Of Products**

After successful authentication the user is provided with the list existing products. Here the user can view the details of products and can modify the existing products. This project even provides the facility of adding new projects.

* 1. **Product Versions**

All the products are maintained in several versions. As it is not possible to complete the whole project in a single version Features required for the product are categorized into several version with deadlines. And the versions are completed according to their deadline dates. Here the user can add new versions to a product or can modify the existing details of version.

* 1. **Product Users**

In order to complete the project each product is allotted with Resources or users. First all the employees with their names and qualifications are stored in the database. Each user is allotted to the product based on their rating, Qualification and designation. For each user Effective date is stored which specifies the total period a user is valid for that product.

1. **Bug Details :**
   1. **Bug Details**

In this module the user is provided with the facility for adding bugs or updating the existing bugs. As the number of bugs for a product can be very large this system is provided with efficient filtering. The user can filter the bugs based on the priority, database, operating system and status. After the user applies filter the list of bugs are displayed from the database.

* 1. **Bug History**

Here the bug history is maintained. All the solutions given for the bug resolution by various users are stored. As the bug needs several techniques or methods for resolution it is important to store the history of the bug.

* 1. **Bug Assignee**

This displays the list of users for whom the bug is assigned for resolution. As the bug need to be resolved for completing the product several user are assigned to find a solution for the bug. The user can add this bug to a new user or he can modify the existing user details.

* 1. **Bug Attachments**

This gives a list of attachments for a particular bug. The bug can be of any type it can be a database bug or a GUI bug. So while you add a bug you need to provide with the details of bug. So the file attachments can be a document, database file or an image file. All the attachments are stored in a location along with the size and type of the file. Here the user can add a new attachment or can change the details of existing files.

1. **Bug Tracking:**
   1. **Track Hierarchy**

All the bugs saved in the database will have a particular hierarchy. There might be bugs which can be related to the earlier bugs saved in the database so our system is provided with a hierarchy. And user can add child nodes in this hierarchy or he can modify the existing values of the nodes. This hierarchy is based on the parent child relation ship between the bugs.

* 1. **Track Resolution**

This displays a list of all solutions provided by the users allotted to a bug. This stores the action type and the necessary resolution provided by the user.

* 1. **Track Resources**

This displays list of resources allotted to the project. As the bugs need to be resolved resources are provided for the bugs. These Resources will be the resources allotted to the project. The resources are allotted based on the rating of the employee.

1. **View:**
   1. **Product Bug Hierarchy**

This module is just for displaying the hierarchy for the easy Look of the bugs. Here the bugs are displayed in the form of parent child nodes. As it is difficult for the user to look at the vast number of bugs in the database. And one cannot easily access the relation between the bugs.

* 1. **Product User Hierarchy**

This module if for displaying the user's allotted to the bug. The users along with their name and designation are displayed in this module. Even in the allotment of resources there can be hierarchy between the employees depending on their designation. So this module simplifies the hierarchy among the employees.

1. **Search:**

Our system provides with the feature of advanced search technique. Generally Number of bugs for a project increased tremendously so if we want to know about a particular bug It takes much amount of time. With the search screen provided one can filter the bug’s base on priority, product, severity, database and type of operating system. He can also list the bugs between particular time based on the start date and end date. After Searching it displays a list of bugs. From this list the user can modify the existing bugs or can add a new bug.

1. **Admin:**
   1. **Users**

All the users of this system are displayed in this module. One can add new user or can update the details of an existing user. Here the password provided by the user is encrypted before saving them to the database for proper security. This module saves the details like address, phone and email.

* 1. **Configuration**

All the Values that we are using in this system are configurable. Values like status, priority and others can be added dynamically on the screen. Suppose if we limit these fields by hot coding them and if the user wants to add a new value again he has to come to the developer of the product. So In order to avoid this it is provided with the feature of adding values from the screen. And the user can change the status to In Active whenever he wants.

* 1. **Log View**

In order for the efficient Tracking of the system logs are maintained. As the logs will be in vast it will be a problem for user for checking the database. The Log View module can be searched based on the user and Records between a start date and end date.

1. **Logout:**

In this once the user clicks on Logout First the session variable is killed and then the system is redirected to the login page.

1. **Prepare Logs:**

At all the stages, whenever user performs an operation by clicking a button, automatically the Bug Tracking System logs the activity.