

## **Development of a Defect Tracking System (DTS)**

### **Abstract**

This project is aimed at developing an online defect tracking system useful for applications developed in an organization. The Defect Tracking System (DTS) is a web-based application that can be accessed throughout the organization. This system can be used for logging defects against an application/module, assigning defects to individuals and tracking the defects to resolution. There are features like email notifications, user maintenance, user access control, report generators etc in this system.

### **Functional components of the project**

Following is a list of functionalities of the system. More functionality that you find appropriate can be added to this list. And, in places where the description of functionality is not adequate, you can make appropriate assumptions and proceed. Following three tasks can be performed with the application:

(a) User Maintenance: Creating, Granting & Revoking access and deleting users from application.  
(b) Component Maintenance: Creating a component (application being developed / enhanced), Granting & Revoking access on components to Users and Marking a component as “Active” or “Closed”.

(c) Defect Tracking : Creating, assigning defects to users, Modifying and Closing a defect. A defect screen should at least have following details:

- Defect Number and Title
- Defect priority
- Date created
- Defect description
- Defect diagnosis
- Name of originator
- Name of Assignee
- Status
- Resolution

(d) Find User: A search screen to find users and display results.

(e) Find component: A search screen to find components and display results.

(f) Find defect: A search screen to find defects and display results.

(g) Report: Generate reports on defects.

Accordingly, there would be following levels of user privileges:

- Application admin has all privileges.
- Component admin having privileges (b),(d),(e),(f) for the components they own.
- Users have privileges for (b), (d), (e), (f) for components they have access to.
- All should have privileges for (c).

1. A user should be able to

- Login to the system through the first page of the application.
- Change the password after logging into the system.
- View the defects assigned to the User.
- Find defects for components to which the user has access.
- Find components to which the user has access.
- Modify the defects by changing / putting values in fields.
- Assign defects to other users having access to the component.
- Find details of other Users.
- Generate reports of defects for components to which the user has access.

2. As soon as a defect is assigned to a user a mail should be sent to the User.

3. A Component Admin should be able to do the following tasks in addition to 1:

- Add a User to the component for creating and modifying defects against that component.
- Remove a user from the component.
- Mark a component as “Active” / “Closed”. No new defects can be created against a “Closed” component. A component cannot be closed until all defects against the component are also closed.

4. The Application Admin should be able to do the following tasks in addition to 1 & 3:

- Add a new component.
- Add a user to a component as Component Admin.
- Remove Component Admin privilege from a user.
- Add a new user and remove a user.