# Defect Tracking for Improving Product Quality and Productivity

I.P.Rambabu[1], Prof.S.Ramesh[2]
[1]*Student, Dept. of MCA, EAIMS*
[2]*Professor, Dept. of MCA, EAIMS, Tirupati, A.P.*

***Abstract*—For improving software reliability , defect tracking system (DTS) gives the facility to define the tasks and allow the managers to track the defects and time spend by each employee for that particular task, this tool can help managers for defects(bugs) estimation per project. this tool also helps employees to document their defects and analyze Their quality of output**

**More over the project aims at creation of a defects tracking system which will be accessible to all developers and facility allows to focusing on creating the database schema and while letting the application server define table based on the fields in jsp and relationship between them.**

**The objectives of this system to keep track of employ skills and based on the skills, assignment of the task is done to an employee. employee does defects capturing. It can be done on daily basis.**

***Index Terms*—Introduction, existing system, proposed system, modules, architecture, screenshots.**

## I. INTRODUCTION

Defect Tracking for Improving Product Quality and Productivity for Improving Software Reliability is an automated system that can be useful to employees and the managers in any functional organization. Defect Tracking for Improving Product Quality and Productivity gives the facility to define the tasks in the organization and also allows the managers to track the Defects spent by the developer for that particular task. A report generation facility is supported in DTS that allows the managers to analyze which are those skills by employee are utilized and those which are not utilized. project or application. This tool helps employees to document their Defects and analyze.

### 1.1 Existing System

The existing system consists of entering the details in the Microsoft Excel Sheets for the storing of the data. When a manager needs information of the employee he searches for the specified file in the file system. He opens the file and takes the information. Report Generation done manually by copying the content of the different files into another file. The Manually generated report was then printed.

Limitations in Existing System

- Information retrieval is a very big process.
- Lack of organization of the files may porn to information loss due to accidental deletion of files.
- No security because the files are visible to the users.
- Report generation will be a big task.

### 1.3 Proposed System

The Proposed system is a browser which is completely related to online system, which provides the centralized database. It stores Defects data and description of the particular Defect data. It can also create reports and documents based on the information in its database.

Advantages over Existing System

- The performance is increased due to well-designed database.
- Security is increased
- Time saving in report generation
- Easy to update the details

## II. MODULES

The project has been divided into 5 different modules:

1. Administrator
2. Manager
3. Developer
4. Tester
5. Reports

### 2.1 Administrator

This module has the entire access to all other modules, admin creates the project and assigning the projects to the created manager, adding members to the managers, assigning Defects based on the priority. Can update the manager, members and access to the particular project data. Generating reports based on the managers' report submission.

2.2 Manager

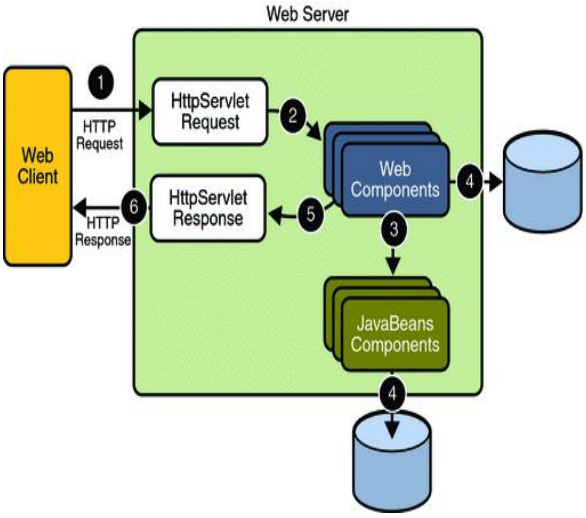
Manager has the full access to the particular project assigned by the admin and controls the team members access to the Defects assigned. Has the permission to generate the reports and update the information of team members and adding members to the project.

2.3 Developer: Can access the task or Defect assigned by the manager, view assigned projects and resolving the assigned Defect. Developer can view the Defects list assigned by the manager.

2.4 Tester: Tester can access to the projects , can view the assigned projects and can add a new Defect to the list and send the bug back to the manager. Tester can login to the system and access the assigned projects list.

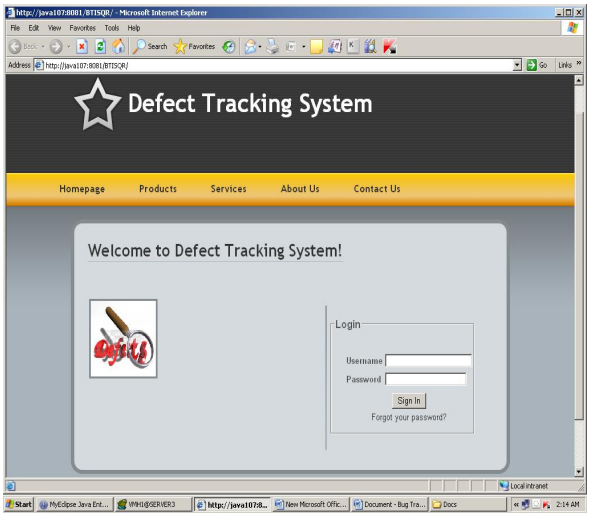
2.5 Reports: Both Admin and Manager can access this module and generate the reports based on the requirements.

## III. ARCHITECTURE DIAGRAM

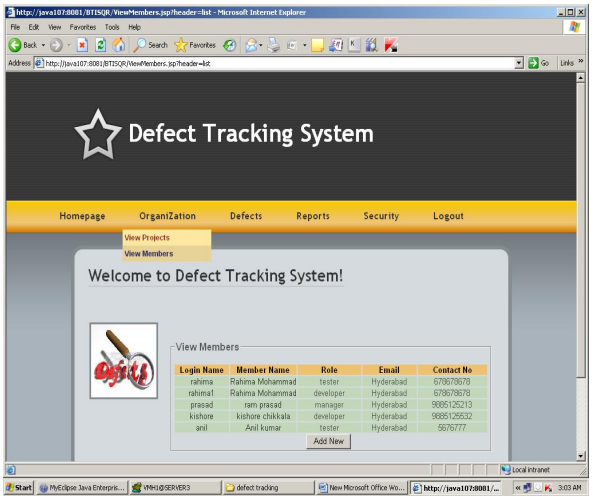



## IV. SCREENSHOTS

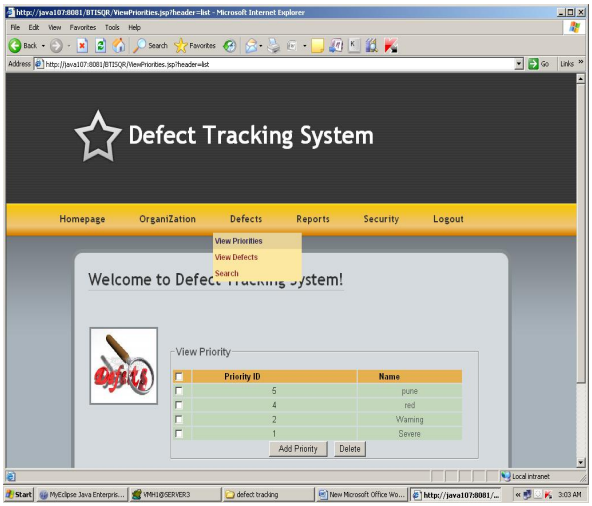
Home page



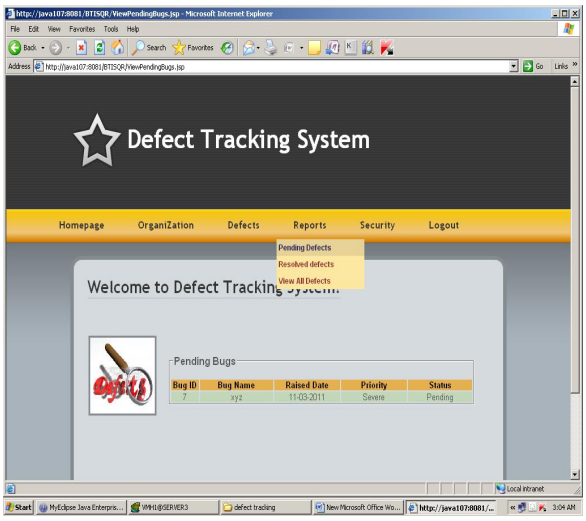

Viewing organizations page:



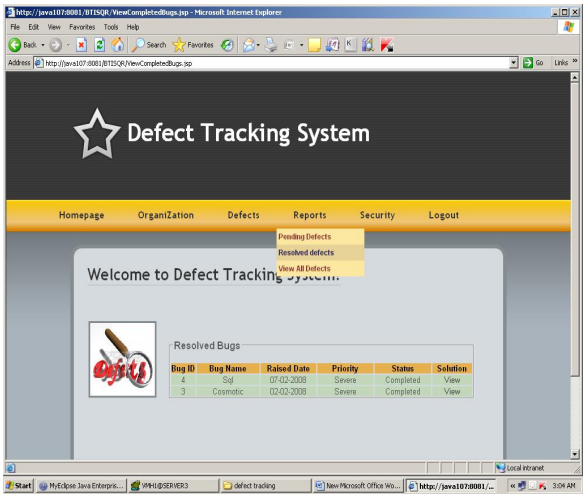

Viewing Defects page:



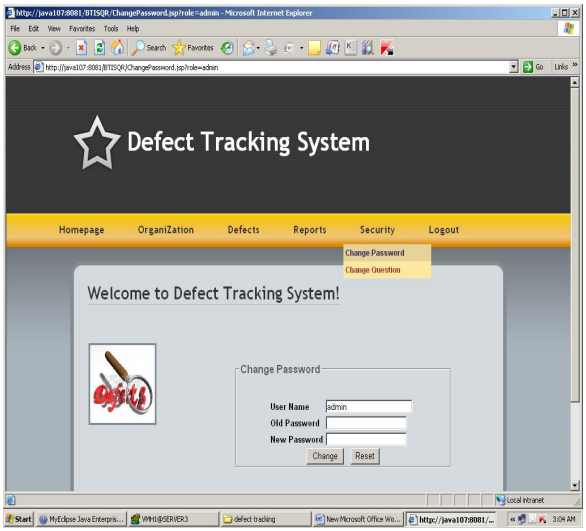

Viewing Reports page:




Resolved defects in reports




Security page:




## V. CONCLUSION

With the results obtain the evolution of our test cases, we can conclude that the concept of DTS is applicable in software engineering domain and should be used to track and investigate defects with effectiveness. The data size used in small the result show that 9 out of 11 test cases have been passed successfully . results of two test cases lead to varied output identifying higher number of risks. Overall this DTS is a capable enough to meet the most of the proposed system requirements including correct tracking of defects at all level. Also, at manager and admin level we are successful to have a capability of generating defects report and assignments of defects to developers. Over software tool can be used at any level by developers and project managers to manage the software process depending and their need of overall defect coverage. It is also helps them focus on particular type of defect report depending on use in the project.

Our future focus can be on testing our tool for larger data sets at an industrial level where bug priority can be increased to more than two levels and on generation of a larger report containing defects of higher level the results were narrow down for the requirements and testing process, however this concept can be extended for equality improvement processed of other activities involved in the SDLC process(like design review, code review, best practices review etc..)

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