



MCA SEMESTER III 2013-14

Bug Tracking System

MantisBT – Project Report

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Under the guidance of
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MANTIS BUG TRACKING SYSTEM

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Deccan Education Society's
NAVINCHANDRA MEHTA INSTITUTE OF TECHNOLOGY AND DEVELOPMENT

PROJECT CERTIFICATE

This is to certify that the Project done at Navinchandra Mehta Institute Of Technology And Development by Mr. Zubin Kadva and Mr. Iyer Rahul Rajan (Roll No. 5227 and 5221) in partial fulfillment for MCA First Year End Project has been found satisfactory. This report had not been submitted for any other examination and does not form part of any other course undergone by the candidate.

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CHAPTER I



Abstract
Illustration
of a Bug

Mantis – A Case Study Report

1.1 Title of the project

Bug Tracking System

1.2 Open Source Used For Further Development

Mantis Bug Tracker

1.3 Objectives of the Project

Implementing an efficient and robust bug tracking system which has various applications including the most obvious; the software industry and can also be used in institutions as a grievance redressal system which can be used by students as well as the staff or the concerned authorities. The main objective of this project is to study the overall structure of Mantis and at the same time gain an insight into the Bug Tracking Process, the actors involved in it as well as the process of reporting a bug along with the idea of how to go about resolving a bug and what to do in case a bug becomes unable to be solved or it causes further violations. Contributions to this system is also available and can be done thorough the official Mantis website <http://www.mantisbt.org>. Thus we present to you this project report.

CHAPTER II

2. Diagrams and Illustrations

2.1 General Perspective of a Bug

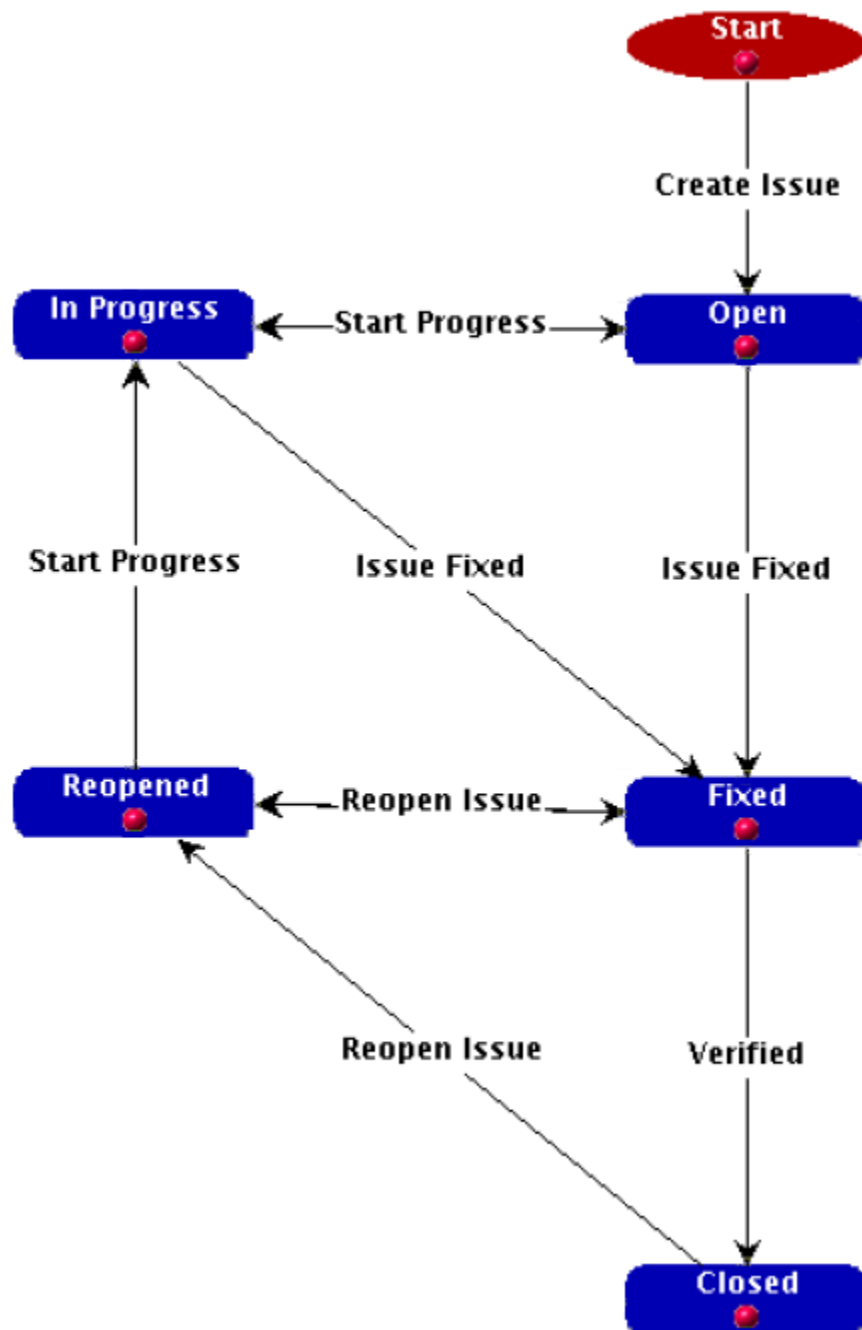


Figure 1 - General Workflow

2.2 Bug Lifecycle in Mantis

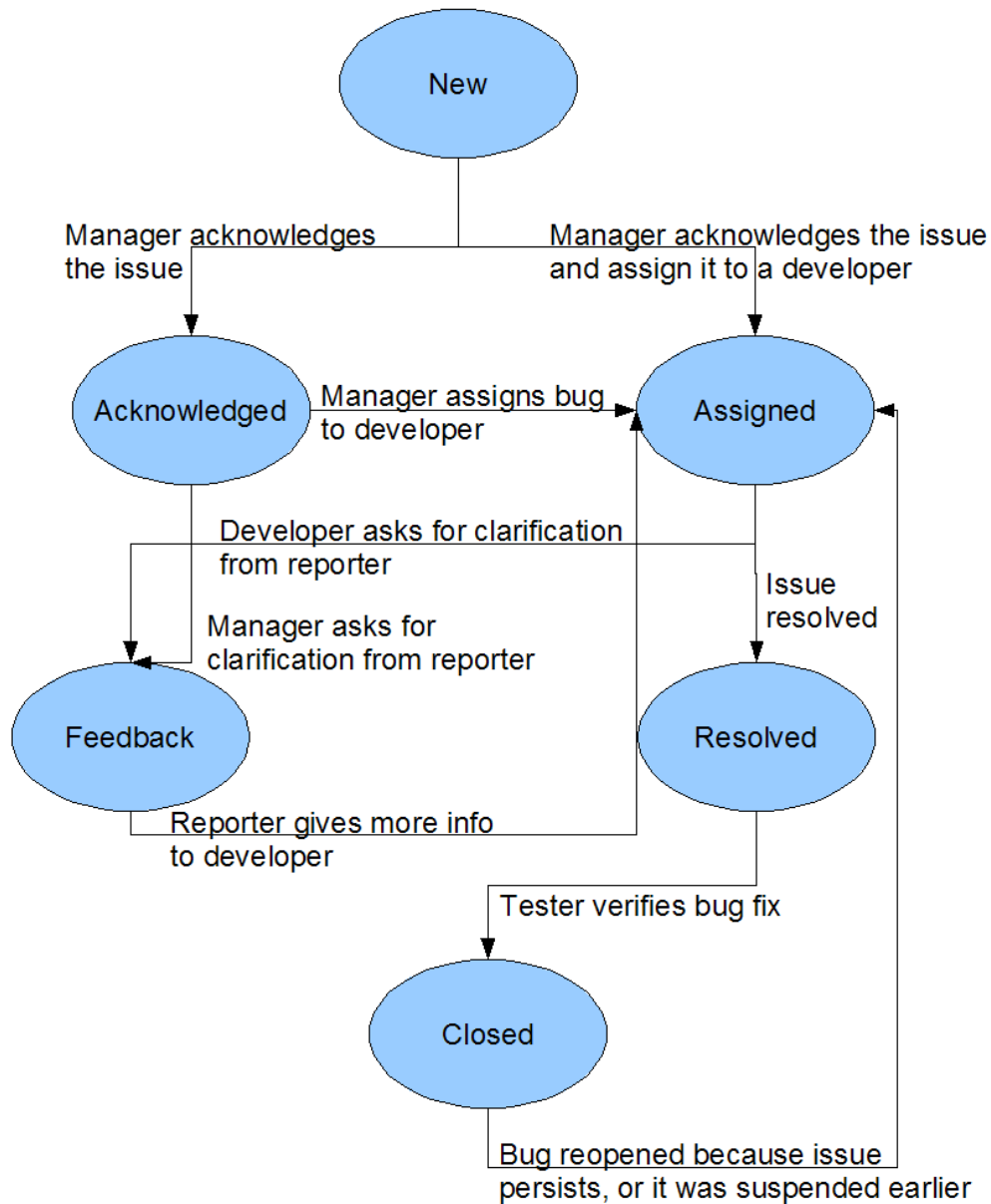


Figure 2 - Bug Lifecycle

2.3 Alternate Lifecycle

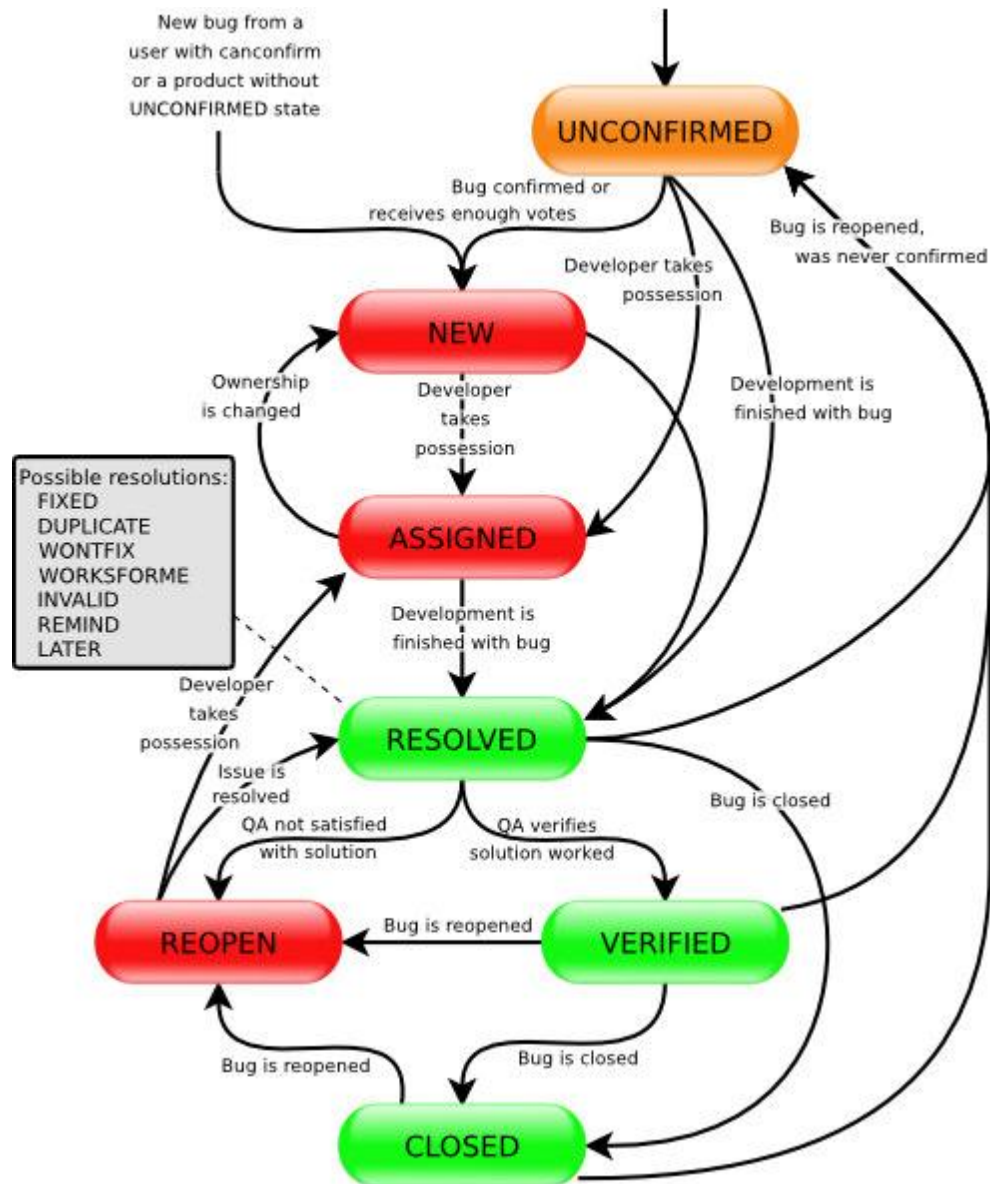


Figure 3 - Alternate Bug Lifecycle

CHAPTER III

3. About The Open Source

3.1 What is an Open Source?

The type of software whose code is visible to the developer (not of the software) is commonly termed as an Open Source. Thus such a software can be ‘torn apart’ and further customized and developed by writing code and placing it in the appropriate position since the necessary files are available with us.

3.2 What is MantisBT?

MantisBT is a web based bug tracking system that was first made available to the public in November 2000. Over time it has matured and gained a lot of popularity, and now it has become one of the most popular open source bug/issue tracking systems. MantisBT is developed in PHP, with support to multiple database back ends including MySQL, MS SQL, PostgreSQL and DB2. MantisBT, as a PHP script, can run on any operating system that is supported by PHP and has support for one of the DBMSes that are supported. MantisBT is known to run fine on Windows, Linux, OS/2, Mac OS X, and a variety of UNIX operating systems.

3.3 Who should read this manual?

This manual is targeted for the person responsible for evaluating, installing and maintain MantisBT in a company. Typically we refer to this person as the MantisBT administrator.

3.4 License

MantisBT is released under the terms of GNU General Public License (GPL). MantisBT is free to use and modify. It is free to redistribute as long as you abide by the distribution terms of the GPL2.

3.5 Support

There are plenty of resources to help answer support queries. Following are the main ones:

- Forums - The forums are one of the most popular destinations for getting MantisBT support. Start off by searching the forums for your questions, if not found, then go ahead and submit a question.
- Mailing lists - Available mailing lists are "MantisBT-announce" for announcements, "MantisBT-dev" for development issues, and MantiBT-lang for localization and "MantisBT-help" for general help/support questions. There are public archives for such mailing lists. Note that only members of the mailing lists can post to them, hence, subscribe to the lists before you attempt to email them.
- IRC - The IRC channel is mainly used by developers to engage in in-person discussion. The recommended tool for IRC is XChat (for Linux), XChat 2 (for Windows). However, you can also use Web Chat8 to connect to IRC via your web browser. This is also useful when your work firewall blocks the IRC port (although there are other workarounds involving tunneling to fix this issue).

Many people prefer to use IRC to ask questions to the developers and other users who are in the IRC channel.

- Wiki - The MantisBT Wiki has information related to "How To (recipes)", FAQ, feature requirements, etc.
- Search - A good way for locating an answer for your question or finding more information about a topic is to search across all MantisBT website and the Internet via Google¹⁰ or Bing¹¹.

It is important to note that support questions should not be sent directly to MantisBT developers or through the MantisBT contact us pages. Use of "Contact Us" page or emailing the developer directly is available if you are after a paid support or consulting service.

3.6 Minor features

- MantisBT also has support for:
- Full text search Audit trails of changes made to issues
- Revision control of text fields and notes
- Roadmaps
- Change logs
- Graphing of relationships between issues
- Sponsorship of issues
- Wiki documentation integration for DokuWiki, MediaWiki, TWiki, WikkaWiki and XWiki
- News
- Project Management & Time Tracking with CodevTT.
- Localized dozens of languages on translatewiki.net.

3.7 Requirements

MantisBT requires a configured web server, PHP programming language interpreter and relational database management system supported by ADOdb.

The stable branch of MantisBT (version numbers within 1.1.x) requires a version of PHP greater than or equal to 4.3.0. For the preview branch (1.2.x) and development branch (1.3.x), the minimum PHP version is 5.2.0.

MantisBT bundles a number of dependencies with each release including:

- ADOdb for abstraction of support for relational database management systems
- Disposable for disposable e-mail checking functionality eZ Components for plotting of statistics NuSOAP for SOAP web service support
- PHPMailer for e-mail sending support Projax for Ajax capabilities in the user interface RSS Builder for RSS feed support PHP UTF-8 wrapper library for internationalization support in absence of PHP's mb_string extension
- For drawing graphs of relationships between issues, GraphViz is required.
- MantisBT also has an alternative dependency upon the commercial JpGraph graphics library for plotting of statistics.

3.8 Usage and Application areas

As the central use of the open source suggests a bug tracker, it can be easily applied during every phase and development of a product viz. software or hardware. Apart from its uses in the software industry, the system can also find its place in universities for the sole purpose of online evaluation. And at the same time, it can also be used for institutional development which can be of the form as a grievance redressal system wherein students and concerned authorities can post their problems and have it rectified.

3.9 Future enhancement of the product

MantisBT presents an acceptable interface which provides ease of use and provides even a person with an acceptable level of computer knowledge to successfully use this product and accomplish the said task. However if the user does not understand its use, he/she can always refer this manual to find the appropriate solution which is further written in an easy language and does not require any competence to accomplish the same. But as the saying goes “nothing is perfect”; similarly the open source is also subject to flaws and minor irritations. The open source can be further enhanced by providing a more attractive interface which can further help the user to do everything with ease ; thus simplifying the task even further. Also with regard to the back end interface viz. the database can further improved with regard to its structure and also improve faster access to the data items to avoid slow data transfer rate even on slower connections or incase the system is uploaded on a server with less functionalities.

CHAPTER IV

4. Functionalities Developed Using Open Source Software

Along with the functionalities provided by the open source, we have also included a few minor and major changes to the system.

The changes include:

- Changing the MantisBT logo accustomed to our needs
- Allowing the use of marquee which displays the latest bug or grievance
- Displaying a small flashing image which grabs the user attention to the said place
- Changing the interface by making the text bold for easier user convince and also for easier reading.
- Minor changes to the footer which appears at the bottom of every page to include our own name and other credentials which gives a new feel to the look.
- Enabled the Change Log (described above) by modifying the project attributes
- Also enabled the Roadmap (described above) feature and including a progress bar showing the amount of bugs versus the ones that have been solved.
- Installed GraphViz plugin which the enables users to view a Summary (described above) report based on various subjective criteria involving the users and the bugs that have been reported
- Email integration has also been accomplished by using Gmail as our SMTP server. With the help of this, all emails are sent using the Gmail Email service.

CHAPTER V

5. Critical Evaluation

The term simply means to critically evaluate a given situation or a criteria in order to simplify it and further ease of use can be provided. The theory under investigation is the Mantis Bug Tracker and the customizations and changes done to it. The Mantis Bug Tracker is effective in the sense that it provides an effective way of easily maintaining and most importantly keeping track of all the bugs that have been reported for the concerned project. It also provides a way for a graphical representation of the bugs solved versus the ones that are reported.

Mantis can be further evaluated based on the following scenario:

- Is the interface suitable in today's modern environment?
- If changes are to be made here, are there implementation difficulties?
- How does it perform when there is limitation of hardware?
- Are there stringent security measures imposed regarding users and their passwords?

We have tried our best to overcome these shortcomings, but nothing is perfect. Therefore there are some things that need to be left as it is, since changing these values hampers the efficiency of the product. Although there are some times when we have been successful and are proud that we have accomplished a milestone.

(For comparison between Mantis, Bugzilla and JIRA, refer to table 1)

<u>System</u>	<u>Creator</u>	<u>License</u>	<u>Imple- mentation language(s)</u>	<u>User interface</u>	<u>Back end</u>	<u>Dynamic documentation integration</u>	<u>Unicode support</u>	<u>First Release</u>
Bugzilla	Mozilla Foundation	MPL	Perl	Web, e-mail, RSS, Web service, command line	MySQL, PostgreSQL	reporting: integrated reports and charts, scheduled reports by mail	✓	September 1998
JIRA	Atlassian Software Systems	proprietary free for non commercial	Java	Web, e-mail, RSS	DB2, Firebird, HSQLDB, MaxDB, Mckoi, MySQL, Oracle, PostgreSQL, SQL Server, Sybase ASA	Atlassian Confluence (enterprise wiki)	✓	October 2004
Mantis	Mantis	GPL	PHP	Web, e-mail	MySQL, PostgreSQL, MS SQL	✓	✓	November 2000

Table 1 - Bug Tracking System Comparison

6. Design and Layout (Page descriptions)

6.1 Login page

Just enter your username and password and hit the login button. There is also a Save Login checkbox to have the package remember that you are logged in between browser sessions.

You will have to have cookies enabled to login. If the account doesn't exist, the account is disabled, or the password is incorrect then you will remain at the login page. An error message will be displayed. The administrator may allow users to sign up for their own accounts. If so, a link to Sign up for your own account will be available. The administrator may also have anonymous login allowed. Anonymous users will be logged in under a common account. You will be allowed to select a project to work in after logging in. You can make a project your default selection from the Select Project screen or from your Account Options. Here you can sign up for a new account. You must supply a valid email address and select a unique username. Your randomly generated password will be emailed to your email account. If MantisBT is setup so that the email password is not to be emailed, newly generated accounts will have an empty password.

Login	
Username	<input type="text"/>
Password	<input type="password"/>
Remember my login in this browser	<input type="checkbox"/>
Secure Session	<input checked="" type="checkbox"/> Only allow your session to be used from this IP address.
<input type="button" value="Login"/>	

[[Signup for a new account](#)] [[Lost your password?](#)]

Screen 1 - Login Page

Signup	
Username:	<input type="text"/>
E-mail:	<input type="text"/>
Enter the code as it is shown in the box on the right.:	<input type="text"/> 8 E 9 7 5
<p>On completion of this form and verification of your answers, you will be sent a confirmation e-mail to the e-mail address you specified. Using the confirmation e-mail, you will be able to activate your account. If you fail to activate your account within seven days, it will be purged. You must specify a valid e-mail address in order to receive the account confirmation e-mail.</p>	
<input type="button" value="Signup"/>	

[[Login](#)] [[Lost your password?](#)]

Screen 2 - Sign up Page

6.2 Main page

This is the first page you see upon logging in. It shows you the latest news updates for the bug tracker. This is a simple and is to keep users abreast of changes in the bug tracker or project. Some news postings are specific to projects and others are global across the entire bug tracker. This is set at the time of posting in the Edit News section. The number of news posts is controlled by a global variable. When the number of posts is more than the limit, a link to show "older news" is displayed at the bottom. Similarly a "newer news" is displayed when you have clicked on "older news". There is an Archives option at the bottom of the page to view all listings. Archives title/date/poster listing of ALL past news articles will be listed here. Clicking on the link will bring up the specified article. This listing will also only display items that are either global or specific to the selected project.

Open and assigned to me: 0
 Last Visit: 2013-08-09 16:31





Screen 3.1 - Main

Open and reported by me: 1

Screen 3.2 - Main

6.3 My View page

This is a simple page where the reported bugs appear. Each of these bugs are in a color coded format representing whether a bug is new, resolved, assigned, feedback or closed. This page also provides representations wherein the bugs can be grouped according to whether a bug is monitored or reported by the user; whether it is unassigned or resolved.

Unassigned [^] (1 - 1 / 1)	
0000006 	Website not working in Safari [All Projects] Defect - 2013-08-09 11:00
Resolved [^] (1 - 2 / 2)	
0000004 	Email Error [All Projects] Feature - 2013-08-09 11:00
0000001 	Database Conflict [All Projects] Database - 2013-08-09 11:00
Monitored by Me [^] (1 - 1 / 1)	
0000006 	Website not working in Safari [All Projects] Defect - 2013-08-09 11:00

Screen 4.1 - My View

Reported by Me [^] (1 - 1 / 1)		
0000005	Page bottom [All Projects] Feature - 2013-08-09 11:00	
Recently Modified [^] (1 - 6 / 6)		
0000006	Website not working in Safari [All Projects] Defect - 2013-08-09 11:00	
0000005	Page bottom [All Projects] Feature - 2013-08-09 11:00	
0000004	Email Error [All Projects] Feature - 2013-08-09 11:00	
0000003	Unable to back [All Projects] Defect - 2013-08-09 11:00	
0000001	Database Conflict [All Projects] Database - 2013-08-09 11:00	
0000002	Missing Textures [All Projects] Graphics & UI - 2013-07-03 09:26	

Screen 4.2 - My View

6.4 View Issues page

Here we can view the issue listings. The page has a set of viewing filters at the top and the issues are listed below. The filters control the behavior of the issues list. The filters are saved between browsing sessions but do not currently save sort order or direction.

Reporter:	Monitored By:	Assigned To:
any	any	any
Status:	Hide Status:	
any	closed (And Above)	
Show:	View Status:	Show Sticky Issues:
50	any	Yes
Platform:	OS:	OS Version:
any	any	any
Note By:	any	Sort by:
Match Type:	All Conditions	
<input type="checkbox"/> Search <input type="text"/> <input type="button" value="Apply Filter"/>		

Screen 5 - Filters

Each (except for number of issue notes) can be clicked on to sort by that column. Clicking again will reverse the direction of the sort. The default is to sort by last modification time, where the last modified issue appears at the top. The issue id is a link that leads to a more detailed report about the issue. You can also add issue notes here. The number in the issue note count column will be bold if an issue note has been added in the specified time frame.

Viewing Issues (1 - 5 / 5) [Print Reports] [CSV Export] [Excel Export] [XML Export] [Graph] [Gantt Chart]								
	P	ID	#	0	Category	Severity	Status	
<input type="checkbox"/>		-	0000004	6	1	Feature	tweak	resolved (manager)
<input type="checkbox"/>		^	0000006		1	Defect	block	new
<input type="checkbox"/>		-	0000005	1	1	Feature	text	feedback (developer)
<input type="checkbox"/>		-	0000003	1	1	Defect	minor	assigned (developer)
<input type="checkbox"/>		-	0000001	6	1	Database	major	resolved (developer)
<input type="checkbox"/> Select All <input type="text" value="Move"/> <input type="button" value="OK"/>								

Screen 6 - View Issues

Each table row is color coded according to the issue status. The colors can be customized through MantisBT Configuration.

Severities

Block - prevents further work/progress from being made

Crash - crashes the application or blocking,

Major - major issue,

Minor – minor issue,

Tweak - needs tweaking,

Text - error in the text,

Trivial – questing new feature

Status

New - new issue,

Feedback - issue requires more information from reporter,

Acknowledged - issue has been looked at but not confirmed or assigned,
 confirmed - confirmed and reproducible (typically set by an Updater or other Developer),

Assigned - assigned to a Developer, resolved - issue should be fixed, waiting on confirmation of fix,

Closed - issue is closed,

Moving the mouse over the status text will show the resolution as a title. This is rendered by some browsers as a bubble and in others as a status line text.

Enter Report Details	
*Category	(select) ▼
Reproducibility	have not tried ▼
Severity	minor ▼
Priority	normal ▼
Select Profile	
<input type="checkbox"/> Or Fill In	
Product Version	▼
Assign To	▼
Target Version	▼
*Summary	
*Description	
Steps To Reproduce	

Screen 7 - Report Issue

6.5 Summary

This page provides an overview about the bugs that have been reported concerned with the appropriate project. Items here can be sorted according to categories like status, severity, date, etc.

Summary				
By Status	open	resolved	closed	total
new	1	-	-	1
feedback	1	-	-	1
assigned	1	-	-	1
resolved	-	2	-	2
closed	-	-	1	1

By Severity	open	resolved	closed	total
text	1	0	0	1
tweak	0	1	0	1
minor	1	0	0	1
major	0	1	1	2
block	1	0	0	1

By Category	open	resolved	closed	total
Database	0	1	0	1
Defect	2	0	0	2
Feature	1	1	0	2
Graphics & UI	0	0	1	1

Screen 8.1 – Summary

This page also has the Graph plugin installed with which users can be provided with a graph like view of the data items

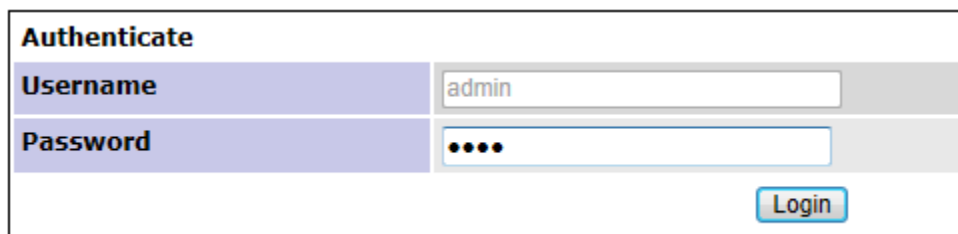
[ [Synthesis](#)] [ [Per state](#)] [ [Per priority](#)] [ [Per severity](#)] [ [Per category](#)] [ [Per resolution](#)]

Screen 8.2 - Graph Summary

6.6 Manage

This page required administrator privileges to access and therefore only the administrator and the manager will be allowed to access this page

However the manager will have limited privileges as compared to those of the administrator. The user has to be first authenticated to view this page

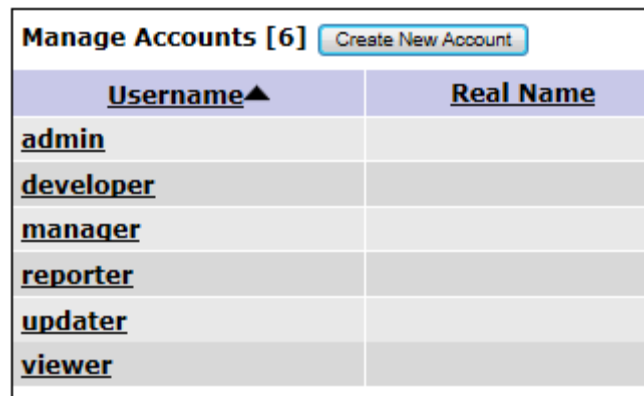


The image shows a web form titled "Authenticate". It contains two input fields: "Username" with the text "admin" entered, and "Password" with four dots representing a masked password. Below these fields is a "Login" button.

Screen 9 - Authentication Required

6.7 Manage Users

Here the administrator can manage users and also configure their accounts and other credentials. This page allows an administrator to manage the users in the system. It essentially supplies a list of users defined in the system. The user names are linked to a page where you can change the user's name, access level, and projects to which they are assigned. You can also reset their passwords through this page. At the top, there is also a list of new users (who have created an account in the last week), and accounts where the user has yet to log in. New users are created using the "Create User" link above the list of existing users. Note that the username must be unique in the system. Further, note that the user's real name (as displayed on the screen) cannot match another user's user name.



Manage Accounts [6] Create New Account	
Username▲	Real Name
admin	
developer	
manager	
reporter	
updater	
viewer	

Screen 10 - Manage Accounts

6.8 Manage Projects Page

This page allows the user to manage the projects listed in the system. Each project is listed along with a link to manage that specific project. The specific project pages allow the user to change:

- the project name
- the project description
- its status
- Whether the project is public or private. Private projects are only visible to users who are assigned to it or users who have the access level to automatically have access to private projects (e.g.: administrators).

- A file directory used to store attachments for issues and documents associated with the project. This folder is located on the webserver, it can be absolute path or path relative to the main MantisBT folder. Note that this is only used if the files are stored on disk or via FTP. In case of FTP, the cached version that is saved on the webserver, is stored in the specified path.
- Common subprojects. These are other projects who can be considered a sub-project of this one. They can be shared amongst multiple projects. For example, a "documentation" project may be shared amongst several development projects.
- Project categories. These are used to sub-divide the issues stored in the system.
- Project versions. These are used to create Change Log reports and can be used to filter issues. They are used for both the Found In and Fixed In versions.
- Custom Fields linked to this project
- Users linked to this project. Here is the place where a user's access level may be upgraded or downgraded depending on their particular role in the project.

Overall, the Mange page can be used either by administrators or managers in order to adjust the project / user attributes and perhaps the settings of the system.

Projects Create New Project	
<u>Name</u> ▲	<u>Status</u>
<u>Blackboard</u>	development
<u>Document Management System</u>	development
<u>Drupal Sites</u>	development
<u>IWork Web Application</u>	development
<u>Java Projects</u>	development
<u>ListServ</u>	development
<u>PeopleSoft Production Issues</u>	development
<u>Student Development Center</u>	development

Screen 11 - Manage Projects

6.9 Manage Custom Fields

This page is the base point for managing custom fields. It lists the custom fields defined in the system. There is also a place to enter a new field name to create a new field. The "Edit" links take you to a page where you can define the details of a custom field. These include its name, type, value, and display information. On the edit page, the following information is defined to control the custom field:

- Name
- Type

The Name attribute of the custom field specifies the identity of the field and creates the corresponding column in the database.

6.10 My Account Page

This page changes user alterable parameters for the system. These selections are user specific. This allows the user to change their password, screen name, and email address. It also reports the user's access levels on the current and other projects.

6.11 Manage Global Profiles

This page allows the definition of global profiles accessible to all users of the system. It is similar to the user definition of a profile consisting of Platform, OS and Version.

Add Profile	
*Platform	<input type="text"/>
*Operating System	<input type="text"/>
*OS Version	<input type="text"/>
Additional Description	<div><div></div></div>
<small>* required</small>	<input type="button" value="Add Profile"/>

Screen 12 - Manage Global Profiles

6.12 Manage Configuration

This set of pages control the configuration of the MantisBT system. Note that the configuration items displayed may be on a project by project basis. These pages

Serve two purposes. First, they will display the settings for the particular aspects of the system. If authorized, they will allow a user to change the parameters. They also have settings for what access level is required to change these settings ON A PROJECT basis. In general, this should be left alone, but administrators may want to delegate some of these settings to managers.

Database Configuration		
Username	Project Name	Configuration Option
All Users	All Projects	database_version
All Users	All Projects	plugin_MantisGanttChart_custom_field_id_for_duration
All Users	All Projects	plugin_MantisGanttChart_eczlibrary
All Users	All Projects	plugin_MantisGanttChart_schema
All Users	All Projects	plugin_MantisGanttChart_use_due_date_field
All Users	All Projects	plugin_MantisGanttChart_use_start_date_field
All Users	All Projects	plugin_MantisGraph_schema
All Users	All Projects	plugin_XmlImportExport_schema

Screen 13 - Manage Configuration

6.13 Email Notifications

This page sets the system defaults for sending emails on issue related events. MantisBT uses flags and a threshold system to generate emails on events. For each new event, email is sent to:

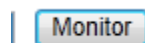
- the reporter
- the handler (or Assigned to)
- anyone monitoring the issue
- anyone who has ever added an issue note the issue
- anyone assigned to the project whose access level matches a range

E-MAIL NOTIFICATION			
Message	User who reported issue	User who is handling the issue	U
E-mail on Change of Handler	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
E-mail on Reopened	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
E-mail on Deleted	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
E-mail on Note Added	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
E-mail on Relationship changed	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Status changes to 'new'	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Status changes to 'feedback'	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Status changes to 'acknowledged'	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Status changes to 'confirmed'	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Status changes to 'assigned'	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Status changes to 'resolved'	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Status changes to 'closed'	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

Screen 14 - Manage Email Notification

6.14 Monitor Issue

The monitor issues feature allows users to subscribe to certain issues and hence get copied on all notification emails that are sent for these issues. Depending on the configuration, sending a reminder to a user about an issue can add this issue to the user's list of monitored issues. Users who reported the issue or are assigned the issue typically don't need to monitor the issue to get the notifications. This is because by default they get notified on changes related to the issue anyway. However, administrators can change the configuration to disable notifications to reporters or handlers in specific scenarios.



Screen 15 - Monitor Issue

6.15 Reopen Issue

Re-open issue button is visible in the issue view pages if the user has the appropriate access level and the issue is resolved/closed. Re-opening an issue will allow users to enter issue notes for the re-opening reason. The issue will automatically be put into the Feedback status.



Screen 16 - Reopen Issue

6.16 Delete Issue

The delete issues button appears on the issue view pages for the users who have the appropriate access level. This allows you to delete an existing issue. This should only be used on frivolous or test issues. A confirmation screen will prompt you if you really want to delete the issue. Updaters, Developers, Managers, and Administrators can remove issues (you can also configure this).

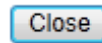


Screen 17 - Delete Issue

6.17 Close Issue

This is a button that appears on the issue view pages for users that are authorized to close issues. Depending on the configuration, users may be able to close issues without having to resolve them first, or may be able to only close resolved issues.

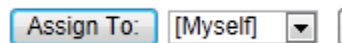
After the button is clicked, the user is redirected to a page where an issue note maybe added.



Screen 18 - Close Issue

6.18 Assign to Me

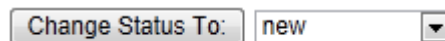
This button appears in the issue view pages in case of users with access level that is equal to `handle_bug_threshold` or higher. When this button is clicked the issue is assigned to the user.



Screen 19 - Assign Issue

6.19 Resolve Issue

This option on the View Issues page allows you to resolve the issue. It will lead you to a page where you can set the resolution state and a duplicate id (if applicable). After choosing that the user can choose to enter an issue note detailing the reason for the closure. The issue is then set to the resolved state. The reporter should check off on the issue by using the Close Issue button.



Screen 20 - Change Issue Status

6.20 News Syndication

MantisBT supports news syndication using RSS v2.0 protocol. MantisBT also supports authenticated news feeds for private projects or installations where anonymous access is not enabled. Authenticated feeds takes a user name and a key token that are used to authenticate the user and generate the feed results in the context of the user's access rights (i.e. the same as what the user would see if they were to logged into MantisBT). To get access to the News RSS as anonymous user, visit the following page:

http://<server_URL>/mantisbt/news_rss.php.

While a user is logged in, the RSS links provided in the UI will always provide links to the authenticated feeds, if no user is logged in (i.e. anonymous), then anonymous links will be provided.



Screen 21 - The RSS Feed

CHAPTER VII

7. Future Enhancements

We believe in one line “There is always an inch more to build”. This means, the system can be enhanced, and will be enhanced further more. We were bound by certain criteria such as time, money, syllabus permission like professional talent and work experience. But positively, without these bounding criteria, we would like to enhance this software project and empower it with many more functionalities.

Some functionality our future enhancement includes.

- Inclusion of stringent security.
- Integration with the advanced web.
- User delegation
- Admin access rights
- Better Interface development
- Improving the performance
- User Delegation

Our current system is a sincere effort to balance all the current limiting criteria but we hope that we can add above functionalities to our current system.

Of course, we were constrained by the limited amount of knowledge and expertise in the concerned fields. But at the same time, we hope that this project will not be a regretted one.

CHAPTER VIII

8. Software product Received and sample report generation

We have included the following as our sample projects:

<u>Blackboard</u>	The central idea of this project is to have an interactive learning environment that can be useful to learning students.
<u>Document Management System</u>	This system efficiently manages all the various reports, documents or files and keeps them in a repository that can be easily modified to suit the user needs.
<u>Drupal Sites</u>	A number of sites built using the Drupal as a basis for open source development.
<u>IWork Web Application</u>	An efficient and robust way to monitor all web applications similar to the Office(R) 365 or Google Docs(R)
<u>Java Projects</u>	Sites based on the most versatile language ever.
<u>ListServ</u>	Providing a listener service which can be used in a variety of applications.
<u>PeopleSoft Production Issues</u>	An ERP solution that claims to solve all the trading and the commercial part of business ingenuity.
<u>Student Development Center</u>	A system that serves as an effective way to easily modify the student criteria and also can be used for curriculum status of the student.

Table 2 - Sample Projects

***NB:** These projects are only used for illustrative purposes so that the user can confirm what kind of reports can he/she expect to receive and therefore do not form a part of the system, hence are not included. These project names will be used throughout the report section.*

8.1 Sample Report

Project - Document Management System; Bug Summary - Email Error

View Issue Details																																																											
ID:	Category:	Severity:	Reproducibility:	Date Submitted:	Last Update:																																																						
4	[Document Management System] Feature	tweak	sometimes	2013-07-03 09:56	2013-08-09 11:00																																																						
<table border="0"> <tr> <td>Reporter:</td> <td>updater</td> <td>Platform:</td> <td colspan="3"></td> </tr> <tr> <td>Assigned To:</td> <td>manager</td> <td>OS:</td> <td colspan="3"></td> </tr> <tr> <td>Priority:</td> <td>normal</td> <td>OS Version:</td> <td colspan="3"></td> </tr> <tr> <td>Status:</td> <td>resolved</td> <td>Product Version:</td> <td colspan="3"></td> </tr> <tr> <td>Product Build:</td> <td></td> <td>Resolution:</td> <td>fixed</td> <td colspan="2"></td> </tr> <tr> <td>Projection:</td> <td>none</td> <td></td> <td colspan="3"></td> </tr> <tr> <td>ETA:</td> <td>none</td> <td>Fixed Version:</td> <td>in v1.0</td> <td colspan="2"></td> </tr> <tr> <td></td> <td></td> <td>Target Version:</td> <td>v1.0</td> <td colspan="2"></td> </tr> <tr> <td>CusotmField:</td> <td colspan="5">2013-06-09</td> </tr> </table>						Reporter:	updater	Platform:				Assigned To:	manager	OS:				Priority:	normal	OS Version:				Status:	resolved	Product Version:				Product Build:		Resolution:	fixed			Projection:	none					ETA:	none	Fixed Version:	in v1.0					Target Version:	v1.0			CusotmField:	2013-06-09				
Reporter:	updater	Platform:																																																									
Assigned To:	manager	OS:																																																									
Priority:	normal	OS Version:																																																									
Status:	resolved	Product Version:																																																									
Product Build:		Resolution:	fixed																																																								
Projection:	none																																																										
ETA:	none	Fixed Version:	in v1.0																																																								
		Target Version:	v1.0																																																								
CusotmField:	2013-06-09																																																										
Summary:	Email Error																																																										
Description:	<p>We all are well aware that the system sends a mail to the appropriate user to inform his of the current changes or statistical information. But there seems to be a problem with sending mail for some users. I have the mail settings as</p> <pre> \$g_allow_signup=ON; \$g_enable_email_notification=ON; \$g_phpMailer_method=PHPMAILER_METHOD_SMTP; \$g_smtp_host='smtp.ourserver.com'; \$g_smtp_username='xxxx@xxxx.com'; \$g_smtp_password='xxxxx'; \$g_smtp_connection_mode='tls'; \$g_smtp_port=25; </pre> <p>Need some help here.</p>																																																										
Steps To Reproduce:																																																											
Additional Information:																																																											
Attached Files:	issue001.jpg (54,364) 2013-07-03 09:56 http://localhost/mantisbt-1.3/file_download.php?file_id=5&type=bug																																																										

8.2 Sample Change Log

Project - Document Management System

Document Management System - Change Log

Document Management System - v1.0 (Not Yet Released) [[View Issues](#)]

=====

- ~~0000001~~: [Database] Database Conflict (~~developer~~) - resolved.
- ~~0000004~~: [Feature] Email Error (~~manager~~) - resolved.

[2 issues]

Screen 23 - Sample Change Log

8.3 Sample Roadmap

Project - Document Management System

Document Management System - Roadmap

Document Management System - v1.0 (Scheduled For Release 2013-06-05) [[View Issues](#)]

=====



- 0000006: [Defect] Website not working in Safari - new.
- 0000005: [Feature] Page bottom (~~developer~~) - feedback.
- 0000003: [Defect] Unable to back (~~developer~~) - assigned.
- ~~0000001~~: [Database] Database Conflict (~~developer~~) - resolved.
- ~~0000004~~: [Feature] Email Error (~~manager~~) - resolved.

2 of 5 issue(s) resolved. Progress (40%).

Screen 24 - Sample Roadmap

8.4 Sample Graphical Reports

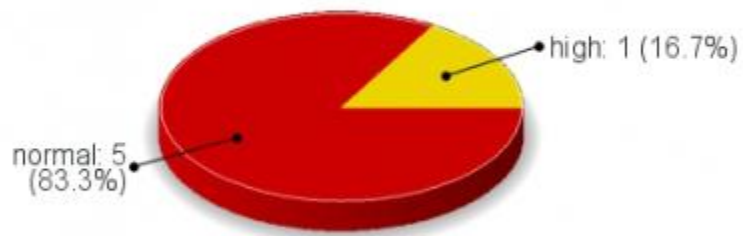
Project - *Document Management System*

8.4.1 Per State



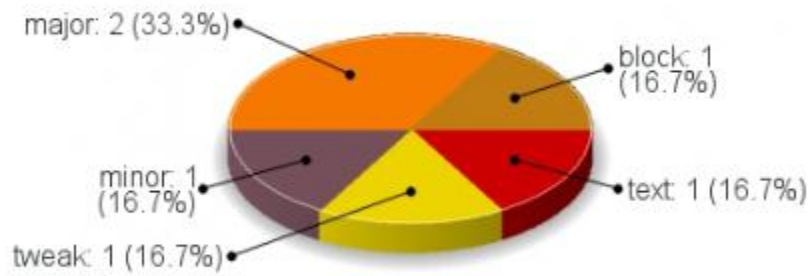
Screen 25.1 - Graph

8.4.2 Per Priority



Screen 25.2 - Graph

8.4.3 Per Severity



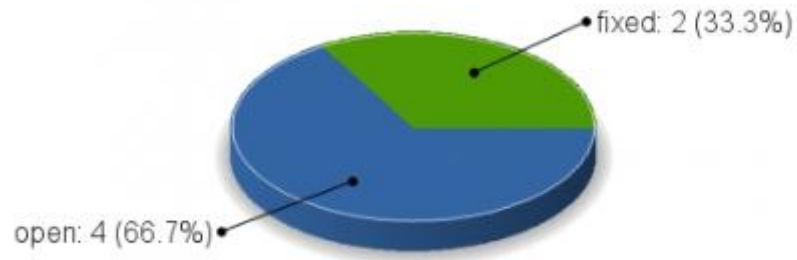
Screen 25.3 – Graph

8.4.4 Per Category



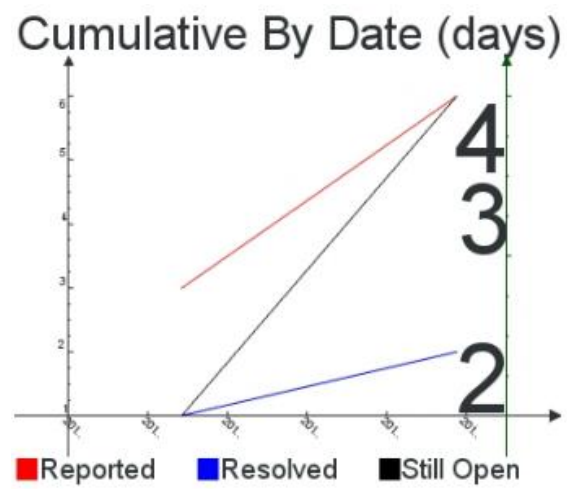
Screen 25.4 – Graph

8.4.5 Per Resolution

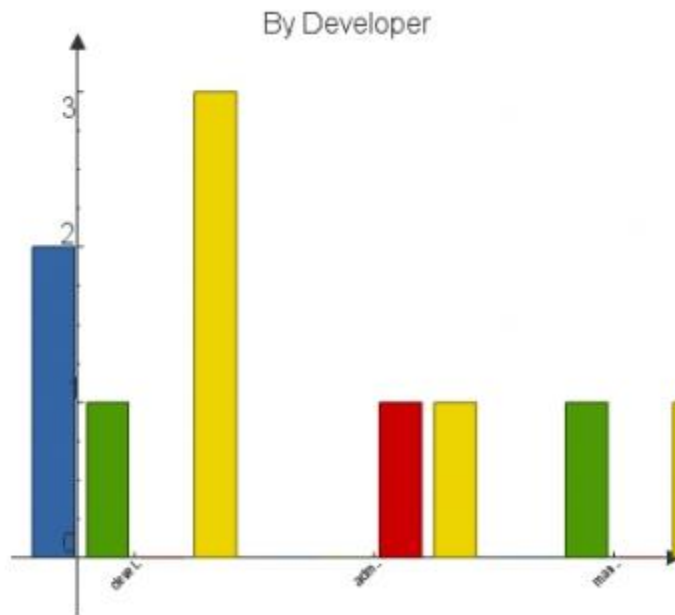


Screen 25.5 - Graph

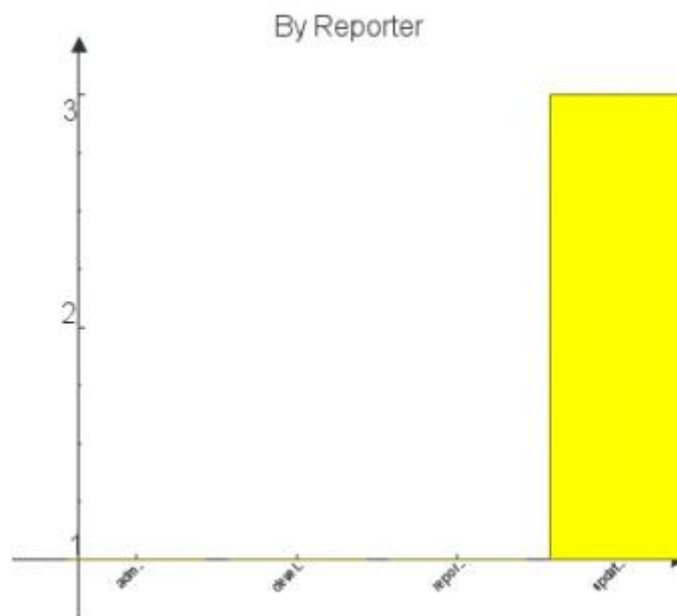
8.5 Advanced Summary



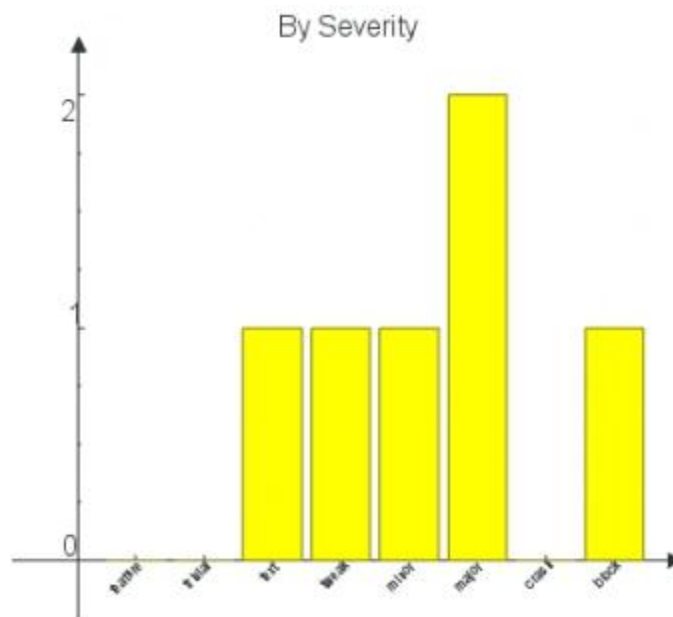
Screen 26.1 - Graph



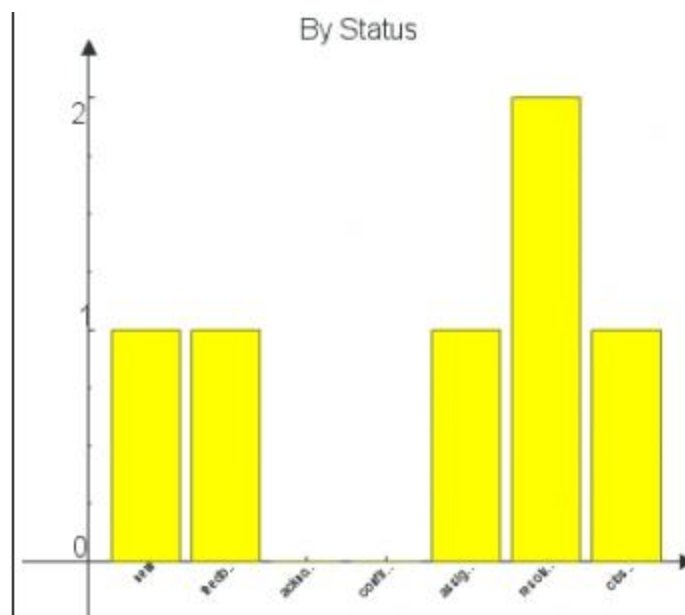
Screen 26.2 – Graph



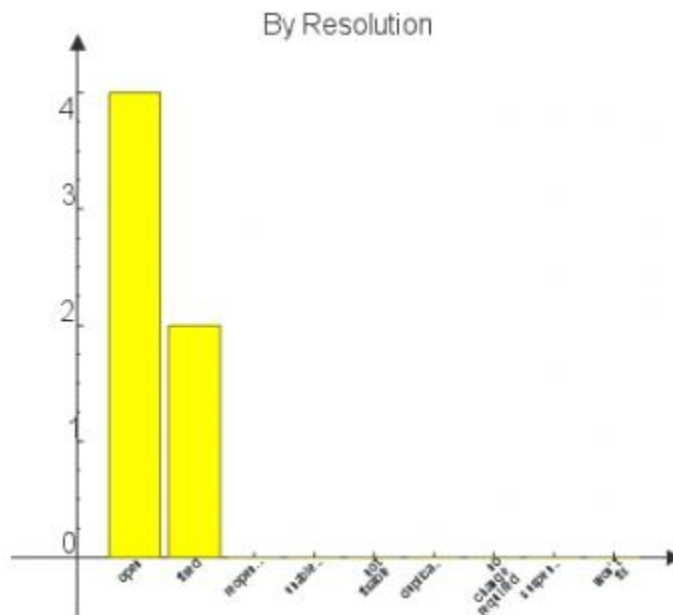
Screen 26.3 – Graph



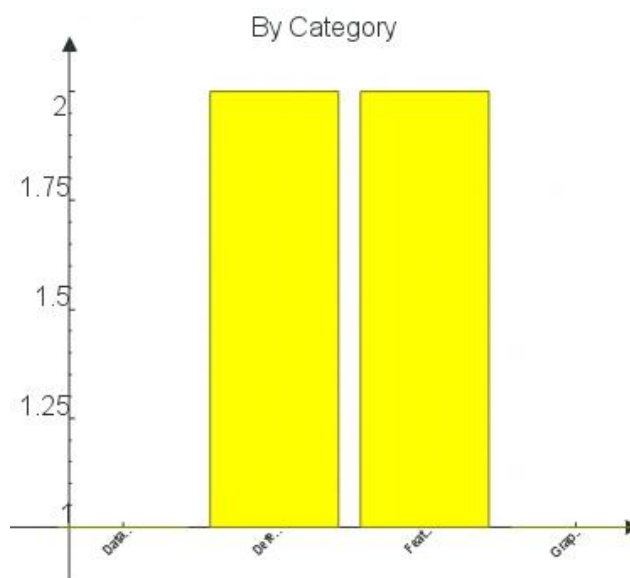
Screen 26.4 - Graph



Screen 26.5 - Graph



Screen 26.6 – Graph



Screen 26.7 – Graph

CHAPTER IX

9. Conclusion

Working with this project has increased my knowledge about advanced programming. At the same time it has also improved my ability to look at things differently thus helping me to understand the methodology and the programming style adopted to create these wonderful programs. As for the database structure, I have also understood the main purpose of a relational DBMS. Each database table clearly depicts its relation with other tables in the system, also I have understood the various queries fired for obtaining the required data items and also the code for connectivity.

In conclusion, this project can have a implementations in not only the software industry but also in a plethora of institutions and a variety of applications, where a strict check needs to be kept on the maintenance and other issues, thus such an application can be used under such circumstances.

We would also like to extend our support to the MantisBT development team for providing the basis for our study and therefore made this project successful. Also the MantisBT forum has been helpful in understanding its code and making the appropriate changes to suit our needs.

CHAPTER X

10. Bibliography and References

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