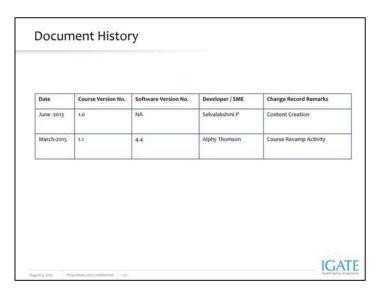
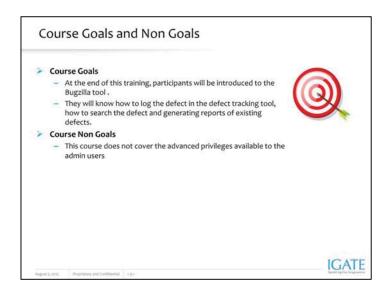
# Defect Tracking Tool- Bugzilla



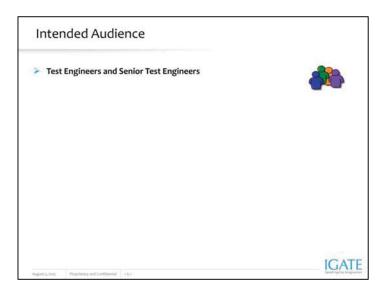
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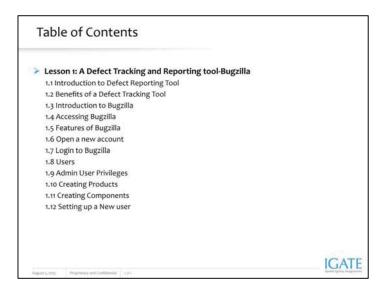




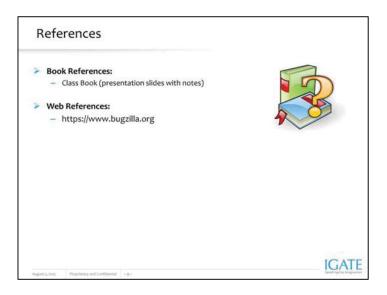


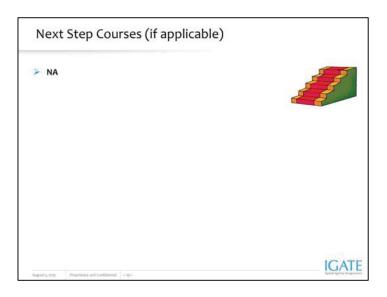


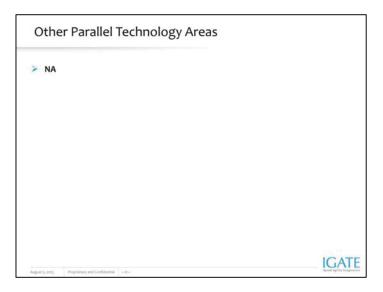
















# Introduction to Defect Tracking tool

- Every application that is developed and implemented have defects, in spite of the rigorous testing conducting
- It is important to keep track of these defects identified for various purposes like future reference, enhancement etc.
- Managing, evaluating and prioritizing these thousands of defects found in any complex application is a difficult task in itself
- Defect tracking system offers a solution to this problem
- Defect tracking systems are computer database systems or software application that store defects and help people to manage them.
- It is a type of issue tracking system.
- Bug tracking systems support the concept of the life cycle for a bug which is tracked through status assigned to the bug.

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# Benefits of a Defect Tracking Tool

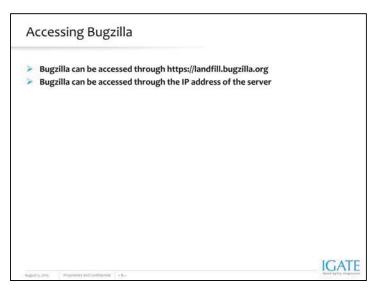
- The main benefit of a bug-tracking system is to provide a clear centralized overview of development requests and their state
- It helps programmers to keep track of reported software bugs in their work.
- A major component of a bug tracking system is a database that records facts about known bugs.
- It helps in quality assurance.
- It is termed as the "hallmarks of a good software team"

Average a trans

# Introduction to Bugzilla

- Bugzilla is a Web-based general-purpose bug tracker and testing tool
- It is developed and used by the Mozilla project
- Bugzilla is the most popular bug tracking system available today.
- > It is highly customizable and easily configurable.
- Bugzilla supports MySQL, PostgreSQL and Oracle as database servers.

**IGATE** 



### Accessing Bugzilla through:

- Landfill
  - It is a test Bugzilla installation which can be used by end users. However, not all of the Bugzilla installations there will necessarily have all Bugzilla Features enabled and different installations run different versions, so some things may not quite work.
- Specific IP Address
  - Bugzilla installed in any machine can be accessed throughhttp://<installed machine IP address-/</li>

### Features of Bugzilla

- Excellent security to protect confidentiality
- Advanced Search Capabilities
- Advanced Query tool
- Integrated email capabilities
- Custom fields
- Customizable Workflow
- Reports and Charts
- Bug list in multiple formats
- Impersonate Users
- Automatic Duplicate Bug Detection
- Time Tracking
- Save and Share Searches

Local S. See



### Excellent security to protect confidentiality

Bugzilla prevents SQL Injection(is an type of code injection in which malicious SQL statements are inserted into an entry field for execution), and has a very careful system in place to prevent Cross-Site Scripting. Bugzilla's history of patching security vulnerabilities is excellent, and the system is designed at every stage with security in mind

### Advanced Search Capabilities

Bugzilla offers two forms of search:

A **basic** Google-like bug search that is simple for new users and searches the full text of a bug.

A very advanced search system where you can create any search you want, including time-based searches (such as "show me bugs where the priority has changed in the last 3 days") and other very-specific queries.

### Advanced Query tool

Bugzilla offers Advanced query tool that can remember your searches

### Integrated email capabilities

The Email Notifications can be controlled By User Preferences.

You can get an email about any change made in Bugzilla, and which notifications you get on which bugs is fully controlled by your personal user preferences.

### Custom Fields

Bugzilla supports adding custom fields to your bug database, to capture and search data that is unique to your organization! Many different types of custom fields are supported, and you can even display them based on the value of another field, to only use them when they are relevant.

### Custom Workflow

Bugzilla comes with a default list of bug statuses and resolutions, as well as a default workflow. But they can all be edited to better match your needs. This means bug statuses and resolutions can be created or deleted very easily, and the workflow is fully customizable.

### **Reports and Charts**

Bugzilla has very advanced reporting systems. If you want to know how your bug database looks right now, you can create a table using any two fields as the X and Y axis, and using any search criteria to limit the bugs you want information on. For example, you could pick Product as the X axis, and Status as the Y axis, and then you would see a report of how many bugs were in each Status, in each Product. You can also view that same table as a line graph, bar graph, or pie chart. You can also specify a "Z axis" to generate multiple tables or graphs. You can even export these reports as CSV so that you can work with them in a spreadsheet.

### Bug Lists in Multiple Formats (Atom, iCal, etc.)

When you search for bugs, you can get the results in many different formats than just the basic HTML layout. Bug lists are available in Atom, if you want to subscribe to a search like it was a feed. They're also available in iCalendar format, so if you're using the time-tracking Features of Bugzilla you can see where your bugs fit into your calendar! There are even more formats available, such as a long, printable report format that contains all the details of every bug, a CSV format for importing into spreadsheets, and various XML formats.

### Impersonate Users

Bugzilla administrators can impersonate any user in the system (except other administrators). This helps for troubleshooting, and also is useful at other times.

### **Automatic Duplicate Bug Detection**

When filing a bug in Bugzilla, as soon as you start typing a short summary for it, Bugzilla will automatically look for similar bugs in the system and allow the user to add themselves to the CC list of one of those bugs instead of filing a new one.

### Time Tracking

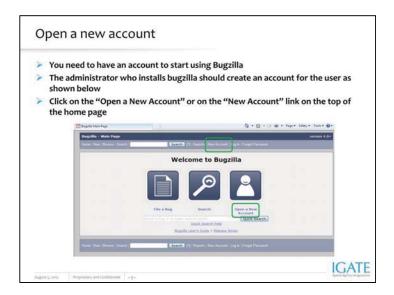
You can estimate how many hours a bug will take to fix, and then keep track of the hours you spend working on it. You can also set a deadline that a bug must be complete by.

For installations that don't need time-tracking, you can turn off these fields. You can also control who is able to see them. (Just modify the timetrackinggroup parameter)

### **Save and Share Searches**

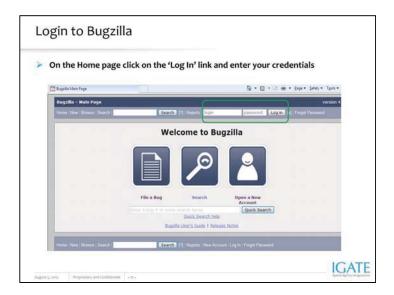
Once you have performed a search, you can "save" it so that it appears in the footer of every page and all you have to do to run it again is click the link.

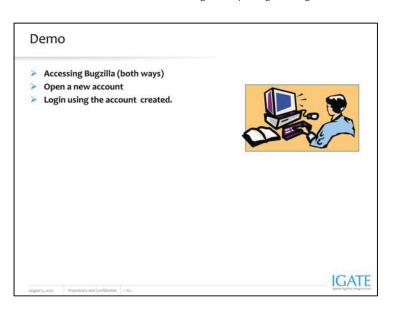
Once you have saved a search, if you have the right permissions you can also share that search with any group that you belong to in Bugzilla. Then they will have the option of displaying your search in their footer along with their searches!





You will receive an email at this address to confirm the creation of your account. You will not be able to log in until you receive the email

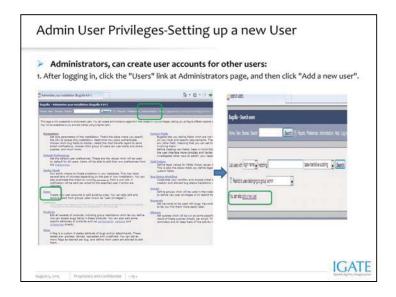




Add the notes here.

# After the installation of Bugzilla, the super administrator user will be created by default. The Super administrator can create other users. Before you begin entering bugs, make sure you add some new users. Bugzilla users are classified into two types: administrator users and normal users. Admin User Responsible for creating, modifying, deleting the Bugzilla users & assigning, modifying permissions to them. Have complete access to configure Bugzilla and have access to the entire issue/defect data. Normal User responsible for creating or modifying or viewing the issue/defect details depending on the permissions assigned to them by the admin user.

Admi	n User Pri	vileges	
	ing up a new Us	ser nd Components	
August 5, 2015	Proprietary and Confidential	l-w	IGAT





# Admin User Privileges- Creating Products



- Products typically represent real-world shipping products.
- Products can be given Classifications
- For E.g.: if a company makes computer games, they could have a classification of "Games", and a separate product for each game.
- This company might also have a "Common" product for units of technology used in multiple games, and perhaps a few special products that represent items that are not actually shipping products (for example, "Website", or "Administration")

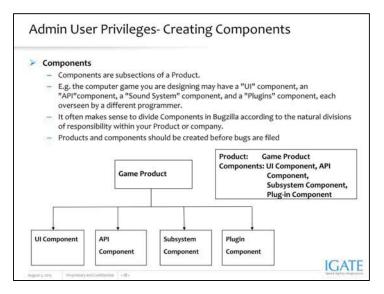
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### **Creating New Products**

To create a new product:

- 1. Select "Administration" from the footer and then choose "Products" from the main administration page.
- 2. Select the "Add" link in the bottom right.
- 3. Enter the name of the product and a description. The description field may contain  ${\sf HTML}$ .
- 4. When the product is created, Bugzilla will give a message stating that a component must be created before any bugs can be entered against the new product. Follow the link to create a new component.

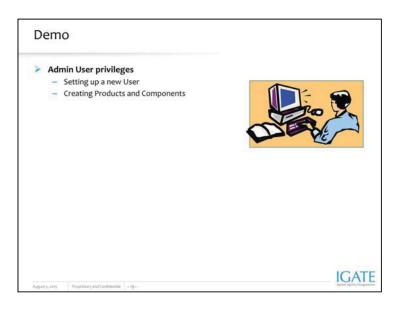


### To create a new Component:

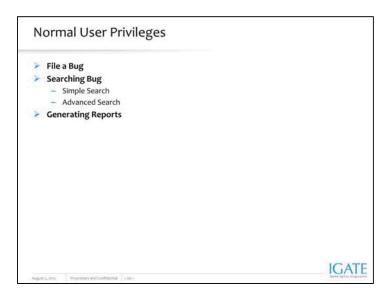
- 1. Select the "Edit components" link from the "Edit product" page
- 2. Select the "Add" link in the bottom right.
- 3. Fill out the "Component" field, a short "Description", the "Default Assignee",
- "Default CC List" and "Default QA Contact" (if enabled). The "Component

Description" field may contain a limited subset of HTML tags. The "Default Assignee" field must be a login name already existing in the Bugzilla database.

# A Defect Tracking and Reporting tool-Bugzilla

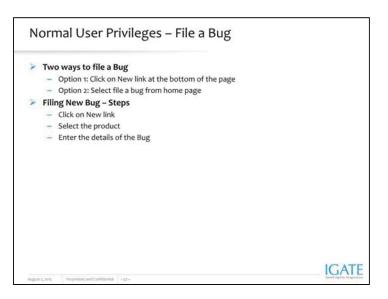


Add the notes here.



# Normal User Privileges – File a Bug Principles Be precise Be clear - explain it so others can reproduce the bug One bug per report No bug is too trivial to report - small bugs may hide big bugs Clearly separate fact from speculation Preliminaries Reproduce your bug using a recent build of the software, to see whether it has already been fixed. Search Bugzilla, to see whether same bug has already been reported.

**IGATE** 



*	File a new bug with basic fields				
		up willing pudelines, please look at the list of most frequently reported bugs, and please search for	the bug.		
	Show Advanced Fields Product: Samsung	(* = Required Field)  Reporter: Hearn@igute.com			
	* Component: Electronic	Component Description Electronic component			
	Version:	Security: inhancement • therefore: PC •			
	We've made a guess at	OS; Windows •  rour operating system and platform. Please check them and make any corrections if necessary.			
	* Summary:				
	Description:	*			
	Attachment: Add an attachment				
	Attachment: Add an attachment Submit Bug				

Here is some help understanding the form:

- Component: In which sub-part of the software does it exist?
   This field is required. Click the word "Component" to see a description of each component. If none seems appropriate, look for a "General" component.
- Reporter: The person who filed the bug.
- Version: The "Version" field is usually used for versions of a product which have been released, and is set to indicate which versions of a Component have the particular problem the bug report is about.
- Severity: This indicates how severe the problem is from blocker ("application unusable")
  to trivial ("minor cosmetic issue"). You can also use this field to indicate whether a bug is
  an enhancement request. The severity options are blocker, critical, major, normal, minor,
  trivial and enhancement.

Blocker: Blocks development and/or testing work

Critical : crashes, loss of data, severe memory leak major

Major : loss of function

Normal : regular issue, some loss of functionality under specific

circumstances is present

Minor : minor loss of function, or other problem where easy workaround

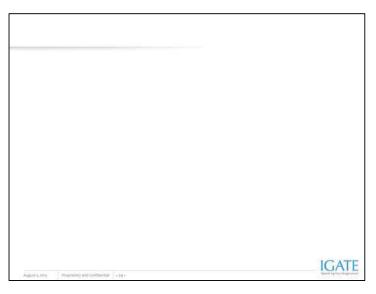
Trivial : cosmetic problem like misspelled words or misaligned text Enhancement : Request for enhancement

- OS: On which operating system (OS) did you find it? (e.g. Linux, Windows XP, Mac OS X.).If bug identified OS isn't listed, choose Other.
- Summary: A good summary should quickly and uniquely identify a bug report. It should explain the problem, not your suggested solution.

Good: "Cancelling a File Copy dialog crashes File Manager"

Bad: "Software crashes"

Bad: "Browser should work with my web site"



- Description: The details of problem report, including:
- 1. Overview: More detailed restatement of summary.
- Steps to Reproduce: Minimized, easy-to-follow steps that will trigger the bug. Include any special setup steps.
  - View any web page. (used the default sample page is, resource:/res/samples/testo.html).
  - Drag-select the page. (Specifically, while holding down the mouse button, drag the mouse pointer downwards from any point in the browser's content region to the bottom of the browser's content region).

**Actual Results:** What the application did after performing the above steps.

E.g.: The application crashed or working fine or only that functionality is not working.

**Expected Results:** What the application should have done, if the bug was not present.

E.g.: The window should scroll downwards.

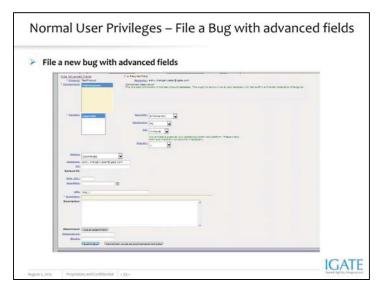
Scrolled content should be selected.

(Or, at least, the application should not crash.)

Attachment: More information about the bug can be added in this report.
 Like screenshot

Note that the labels for most fields are hyperlinks; clicking them will take you to context-sensitive help on that particular field. Fields marked \* may not be present on every installation of Bugzilla

Page 01-24



### **Advanced Fields:**

**Priority:** This field describes the importance and order in which a bug should be fixed compared to other bugs. This field is utilized by the programmers/engineers to prioritize their work to be done ranging from highest priority to lowest priority.

**Status:** The Status field indicates the current state of a bug from not even being confirmed as a bug, through to being fixed and the fix confirmed by Quality Assurance.

Assignee: The person responsible for fixing the bug.

**CC list**: A list of people who get mail when the bug changes.

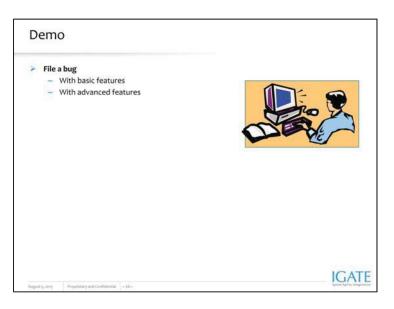
**Orig.Est.:** This field shows the original estimated time. Mention the duration in hours.

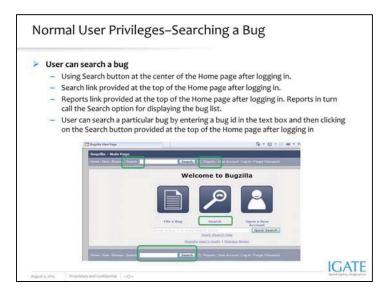
Deadline: This field shows the deadline for this bug.

**URL**: Bugs can have a URL associated with them - for example, a pointer to a web site where the problem is seen.

**Depends on:** If this bug cannot be fixed unless other bugs are fixed, their numbers are recorded here.

**Blocks:** This bug must be resolved before the bugs listed in the 'blocks' field can be resolved.

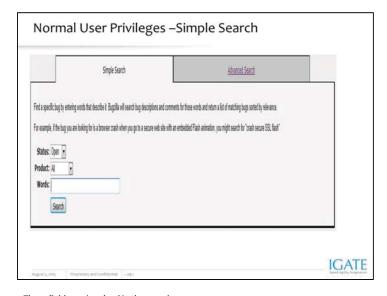




## Normal User Privileges - Searching a Bug

- The format of the bug list is configurable
- It can be sorted by clicking on the column heading
- It can be seen in Long format, XML format or CSV format just by clicking on
- > Searching option will take the user to the screen where he has to select one of the 2 search types provided by Bugzilla.
- Two ways of search
  - Simple search
     Advanced search

**IGATE** 



Three fields are involved in the search. **Field**: the items being searched

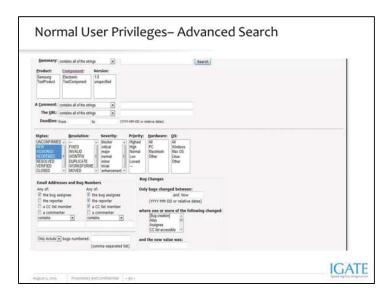
Operator: the comparison operator

Value: the value to which the field is being compared

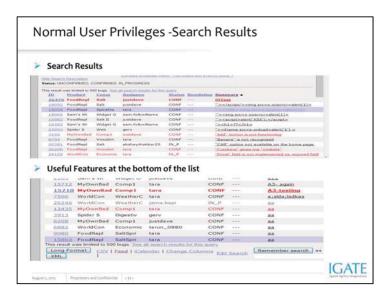
 $\label{thm:continuous} \textbf{Simple Search:} \ \ \textbf{The bug can be searched based on status, product or based on the specific words.}$ 

**Status**: The bug can be searched based on the status of the bug like open, closed or all.

**Products:** The bug can be searched based on the specific product or for all products. **Words:** Find a specific bug by entering words that describe it. Bugzilla will search bug descriptions and comments for those words and return a list of matching bugs sorted by relevance



If the user wanted to search for a particular bug information based on multiple field values, it is possible through advanced search in bugzilla.



If you run a search, a list of matching bugs will be returned.

The format of the list is configurable. For example, it can be sorted by clicking the column headings. Other useful Features can be accessed using the links at the bottom of the list:

**Long Format:** this gives you a large page with a non-editable summary of the fields of each bug.

XML: get the buglist in the XML format.

**CSV:** get the buglist as comma-separated values, for import into e.g. a spreadsheet. **Feed:** get the buglist as an Atom feed. Copy this link into your favorite feed reader. If you are using Firefox, you can also save

the list as a live bookmark by clicking the live bookmark icon in the status bar. To limit the number of bugs in the feed,

add a limit=n parameter to the URL.

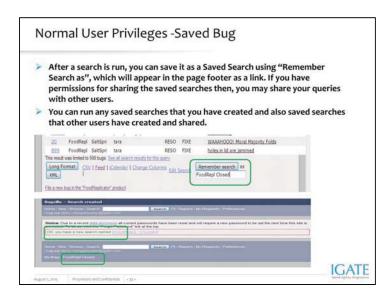
**iCalendar:** Get the buglist as an iCalendar file. Each bug is represented as a to-do item in the imported calendar.

Change Columns: change the bug attributes which appear in the list.

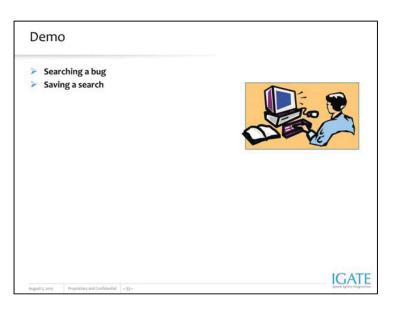
**Edit Search:** If you didn't get exactly the results you were looking for, you can return to the Query page through this link and

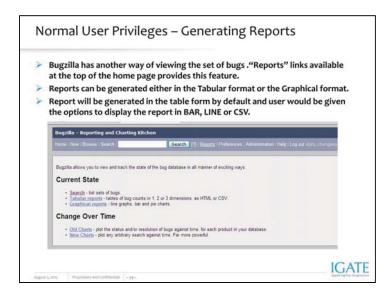
make small revisions to the query you just made so you get more accurate results.

Remember Search As: You can give a search a name and remember it; a link will appear in your page footer giving you quick access to run it again later



In the screen shot provided in the slide above, a basic search is made on the product "FoodReplicator" with Status as "closed". The search list is then saved by using the "Remember search" feature. The search is named as 'FoodRepl Closed'. In the second screen shot the name 'FoodRepl Closed' is found as a link at the footer.

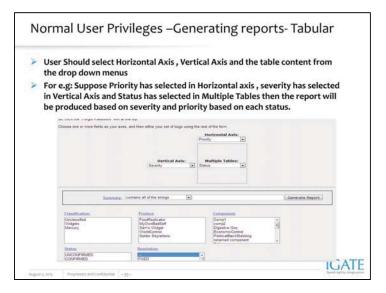




A report is a view of the current state of the bug database.

You can run either an HTML-table-based report, or a graphical line/pie/bar-chart-based one. Once you've defined your parameters and hit "Generate Report", you can switch between HTML, CSV, Bar, Line and Pie.

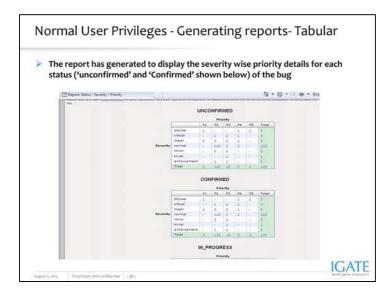
Note: Pie is only available if you didn't define a vertical axis, as pie charts don't have one

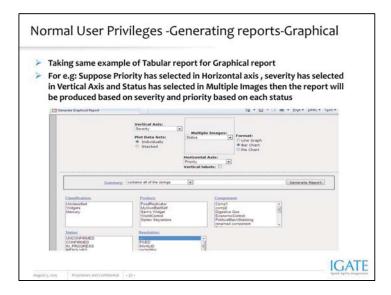


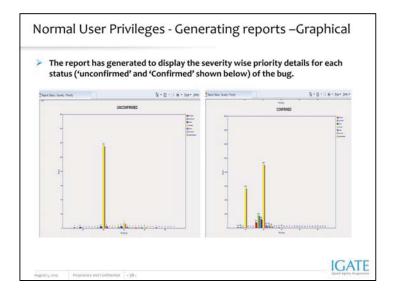
To generate the report, user should select Horizontal Axis , Vertical Axis and the table content from the drop down menus.

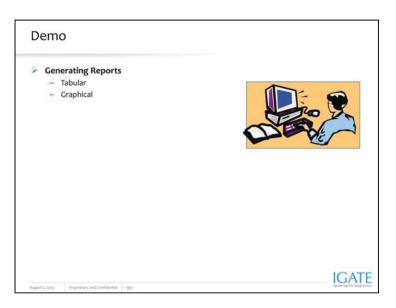
### For eg:

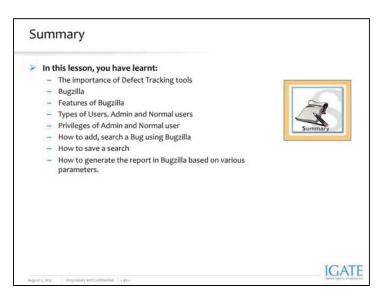
Suppose Priority has selected in Horizontal axis, severity has selected in Vertical Axis and Status has selected in Multiple Tables then the report will be produced based on severity and priority based on each status.













# Defect Tracking Tool - Bugzilla V2.0 Lab Book

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## **Document Revision History**

Date	Revision No.	Author	Summary of Changes
19/06/13	1.0	Selvalakshmi P	New artifact creation
15/07/2015	2.0	Shilpa Bhosle	Material Revamp

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	1:1 Defect Report for Product Enquiry form:	4

### Lab 1. Defect Report - Bugzilla

Goals	•	Understand the application and report defects in defect report tool Bugzilla
Time	180 min	

#### 1:1 Defect Report for Product Enquiry form:



Refer to the negative test cases written for the above Product Enquiry form in the Lab 2 from Testing Concepts. Assume that the test cases written by you are to test the functionality of the application are failing due to the problem in the application. You need to make necessary defect entries in Defect tracking tool Bugzilla for the defects.

1.2 Refer to the Lab 1 – 1.1 lab assignment from Defect Reporting and Defect Life Cycle Management and make necessary defect entries for the defects in Defect Tracking Tool – Bugzilla for the defects mentioned in the lab book.

