

# **Midterm Assignment**

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**Course : Software Verification and  
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**ID # 13838**

**Module : Semester-VI**

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# BUGZILLA

## WHAT IS BUGZILLA?

- ➔ Bugzilla is a "Defect Tracking System" or "Bug-Tracking System".
- ➔ Defect Tracking Systems allow individual or groups of developers to keep track of outstanding bugs in their product effectively.
- ➔ Bugzilla is a Open Source Tool.  
It is written in Perl and Uses MySQL database.

## Bugzilla has two forms of search:

- It has Google-like bug search which is simple to use, and it also searches the full text of a bug.
- It provides you a very advanced search system where you can create any type of search that you want such as time-based searches (For example, you want to see the list of bugs whose priority has been changed since last two days).

# FUNCTIONALITY :

**Bugzilla boasts many advanced features. These include:**

- ➔ Powerful searching
- ➔ User-configurable email notifications of bug changes
- ➔ Full change history
- ➔ Inter-bug dependency tracking and graphing
- ➔ Excellent attachment management

- INTEGRATED, PRODUCT-BASED, GRANULAR SECURITY SCHEMA
- FULLY SECURITY-AUDITED, AND RUNS UNDER PERL'S TAINT MODE
- A ROBUST, STABLE RDBMS BACK-END
- WEB, XML, EMAIL AND CONSOLE INTERFACES
- COMPLETELY CUSTOMIZABLE AND/OR LOCALIZABLE WEB USER INTERFACE

→ EXTENSIVE CONFIGURABILITY

→ SMOOTH UPGRADE PATHWAY  
BETWEEN VERSIONS

# ADVANTAGES OF BUGZILLA :

- ➔ It is an open source widely used bug tracker;
- ➔ It is easy in usage and its user interface is understandable for people without technical knowledge;
- ➔ It easily integrates with test management instruments;
- ➔ It integrates with an e-mailing system;
- ➔ It automates documentation.

## **DISADVANTAGE:**

Not all testers like to work with Bugzilla. Some of them find that its interface is too sophisticated, complain that it is hard to manage the logged in errors and that there are many defects in code of this instrument.



# SUPPORTING LANGUAGES :

→ Perl

→ Java

→ PERL6

→ PHP 5 or 6

→ PYTHON

→ D Programming  
Language

→ RUBY

→ C#

# Perl:

## **pros**

Lots of modules available in CPAN. They are very well tested due to distributed test system. Anybody can participate in testing.

Relatively fast.

mod\_perl is very mature and extremely fast.

Would make us not have to port, avoiding possible Second System Effect and making any transitions (such as to a web framework) easier.

## **Cons**

See The Problems of Perl.

Private Methods aren't well supported require additional scaffolding.

Multiple Inheritance can be problematic in extreme edge cases.

Certain elements of syntax can be confusing for new users, by long experience in training new Perl users:

The difference between () and [].

The fact that %var is a () (which is also the array notation) but {} is \$var.

# PERL 6

## Pros :

Implements many features we'd like to have that Perl5 doesn't have.

Would be the easiest language to port our current code to, since it's so similar to Perl5.

## Cons :

Essentially vaporware. There is an interpreter written for it, but it's in Haskell and it's not very popular yet.

Perl 6 is still very punctuation-heavy and very influenced by Perl 5.

# PYTHON

## Pros:

Quite popular.

Stable.

Actively developed.

Quite a lot of modules (but fewer than CPAN)

## Cons:

Not having curly-braces on "if" statements and other blocks makes it hard to figure out where you are in the block structure without a special editor to help (like Komodo).

Poor Unicode handling--strings are ASCII by default, and are Unicode only if you prepend them with u, like u"string".

Python has no equivalent to Perl's "taint" mode.

# RUBY :

## **Pros:**

Extremely modern language, lots of great features built-in to the language.

RubyGems, a CPAN-like method of installing modules.

Becoming more and more popular.

## **Cons:**

Not yet as well-known as Perl and other languages (lacks the large userbase of Perl, Python, or PHP)

Good Unicode handling isn't coming out until 1.9, but that's the next release.

# JAVA :

## **Pros :**

Excellent "design by contract" features (compared to the other languages in this listing).

Very stable.

Fast.

Popular, although more in Enterprise apps and less in Open Source than scripting languages.

## **Cons :**

Generally slower to write in than scripting languages.

Nothing like CPAN's client-side module installer until Java 7 (see JSR 277).

The standard Java Classpath is not FOSS, but Sun's OpenJDK is.

# Working Example :

Red Hat Bugzilla – Search for bugs Login

Home New Search My Links Help

Simple Search | **Advanced Search**

Hover your mouse over each field label to get help for that field. Sections may be hidden/shown by clicking the label next to a triangle. A hollow triangle represents a section that had one or more values set when the form was loaded.

Summary: contains all of the strings |  Search

Classification:  Product:  Component:  Type a component name.  Sub Component:  Status:   Resolution:

[Click to list all components](#)

- Detailed Bug Information** Narrow results by the following fields: Comments, URL, Whiteboard, Keywords, Deadline, Bug Numbers, Version, Target Milestone, Target Release, Severity, Priority, Hardware, OS
- Search By People** Narrow results to a role (i.e. Assignee, Reporter, Commenter, etc.) a person has on a bug
- Search By Change History** Narrow results to how fields have changed during a specific time period
- Custom Search** Didn't find what you're looking for above? This area allows for ANDs, ORs, and other more complex searches.

Sort results by:

Last search order: priority\_bug\_severity

Windows Taskbar: Type here to search | [Taskbar Icons] | 7:44 AM 4/17/2020

Fri Apr 17 2020 03:19:19 UTC

Hide Search Description

Summary: kernel Classification: Fedora Status: NEW, ASSIGNED Component: grub2 Product: Fedora

Show 25 entries

Search:

ID	Product	Component	Assignee	Status	Resolution	Summary	Changed
1626246	Fedora	grub2	Peter Jones	NEW		after dnf upgrade 4.19.0-0.rc2.git0.1.fc30, all kernels cannot be loaded, error: linux.c217 cannot allocate kernel parameters	2020-01-29 06:21:25 UTC
1699681	Fedora	grub2	Peter Jones	NEW		Errors and reboots after a kernel was selected in grub in F30 on a system with a BIOS and GRUB_ENABLE_BLS_CFG=false	2019-04-14 22:19:38 UTC
1753165	Fedora	grub2	Peter Jones	NEW		Removing kernel leaves invalid saved_entry in grubenv	2019-10-27 03:26:19 UTC
1818458	Fedora	grub2	Peter Jones	NEW		Kernel Panic after upgrade to F32	2020-04-06 17:39:54 UTC
1795274	Fedora	grub2	Peter Jones	NEW		grub2 2.02-105.fc31.x86_64 fails to boot kernel on Dell Inspiron 3668 (EFI, secure boot), -104 works	2020-01-29 13:17:16 UTC
1752861	Fedora	grub2	Peter Jones	NEW		mach_kernel not found during grub2-install	2019-09-17 12:33:22 UTC
1804211	Fedora	grub2	Peter Jones	NEW		dnf kernel upgrades produce unbootable grub.cfg	2020-03-03 13:01:14 UTC
1719052	Fedora	grub2	Peter Jones	NEW		RFE: include grub2 build usable as a KVM direct kernel boot "kernel"	2019-06-10 22:43:34 UTC
1819610	Fedora	grub2	Kernel Maintainer List	NEW		After update of kernel, still booting previous kernel	2020-04-03 12:23:37 UTC

Showing 1 to 9 of 9 entries

First Previous 1 Next Last

Long Format XBL CSV RSS Change Columns Burndown RPC as Perl RPC as JSON TreeView+ (depends on) TreeView+ (blocks) Edit Search

Remember search as

File a new bug in the "grub2" component of the "Fedora" product



Bug List: (1 of 9)



Bug 1626246 - after dnf upgrade 4.19.0-0.rc2.git0.1.fc30, all kernels cannot be loaded, error: linux.c217 cannot allocate kernel parameters

Keywords:

Reported: 2018-09-06 20:49 UTC by Paul DeStefano

Modified: 2020-01-29 06:21 UTC (History)

CC List: 3 users (show)

Fixed In Version:

Doc Type: If docs needed, set a value

Doc Text:

Clone Of:

Environment:

Last Closed:

Type: Bug

Dependent Products:

Status: NEW

Alias: None

Product: Fedora

Component: grub2

Version: 31

Hardware: Unspecified

OS: Unspecified

Priority: unspecified

Severity: unspecified

Target Milestone: ---

Assignee: Peter Jones

QA Contact: Fedora Extras Quality Assurance

Docs Contact:

URL:

Whiteboard:

Depends On:

Blocks:

TreeView+ depends on / blocked

Attachments (Terms of Use)
Add an attachment (proposed patch, testcase, etc.)

Thank You