**Team C – Final Project**Bachmeier, Ferguson, Friedman, Moore  
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# Guardian Library

The patrons of Guardian Library are in need of a database that allows them to search for books and view metadata such as if the book in stock. In a future milestone, the system will need to support being accessed from Windows 7 within the library or remotely, and viewed under all major browsers (IE, Chrome, Firefox and Safari).

Why Open Source (owner nateb)

The Guardian Library would be a good candidate for using open source software as their scenario is not very complex. There is no need for advanced enterprise grade scenarios enabling many free options to be sufficient.

Another limitation of this project is monetary limitations. To keep these at a minimum the organization cannot afford extra licensing or support contracts. Since the group is a nonprofit, they could receive free closed source software; however it would require a lot of paper work.

Setting up this environment would be a great project to pitch to a local college. Most of those students are learning on Linux based systems, which will make it easier to find participants.

## What We Plan To Accomplish

* Build a system that can support around a dozen concurrent users
* Design the front end to use open standards such as HTML 5 and CSS 3

Owner Tonyo

## How We Will Use OSS

* Standard Linux, Apache, MySql, PHP/Perl/Python (LAMP) Stack
* Administrate the database from MySql Workbench or phpMyAdmin

Owner Julie

## Budget Planning and Restrictions

The largest challenge of this project is the small budget, there will only be enough to dual purpose an existing server or purchase a single dedicated server at most.

This project needs to be up and running within a short period which may limit many of their options on who will be perform this work.

A third and concern is the security and privacy of the users. For some people the books they have read is public others it’s confidential. Care needs to be taken that only authorized people can see this information and it is not maintained longer than needed.

## Conclusion

* This is a great scenario for open source software
* There are many existing systems can be quickly merged to build the entire end to end experience
* Extending the database to be remotely accessible would not be difficult later on

Tonyo

# Dynamic Republican

Dynamic Republican a medium sized newspaper business wants to expand their business as well as provide copy, printing and mailing services. Dynamic Republican needs an additional servers that will store the inventory and provide web services for their website and printing services. The design should include e-commerce services to their website and backup resources.

Owner Tonyo

Why Open Source  
 There are many free open source options available throughout the community to build this system. These software packages provide inter-operational behavior with their closed source counter parts.

Many of the available options are well documented and can provide all the required knowledge to correctly configure the environment.

In theory open source software is safer due to having more eyes looking at it. This could turn out to be useful for their public facing assets with reduced security indecent counts.

## What We Plan To Accomplish

The group will need the ability to route and receive mail from both internal and external customers. This mail service needs to work with the most common open protocols and mail clients. The system needs to be correctly configured to authenticate senders and not be an open relay proxy for spam.

Dynamic Republican will need a solution for accepting and routing print jobs to the appropriate location and queue them if multiple requests are coming in parallel. If the organization is a heterogeneous environment multiple systems may be required.

The web site needs to be extend their web presence to publish these new services along with inventory and e-commerce services. The addition of these scenarios may also require enabling SSL for their web servers. There are numerous free solutions which can add function as a shopping cart and customized as needed.

Owner Nate

**How We Will Use OSS**

The Servers for Dynamic Republican may include Ubuntu, Debian, and or Slackware, the operating system will be consistent which would include the following components: stability of the database, flexibility for web services and the security that is needed for e-commerce to enhance the overall success of Dynamic Republican:

**Stability**. The database will include the computer software which would provide the interface between the users and the databases, the database would be responsible for storing, modifying or extracting data from the database, the database must be reliable, the operating system must be robust enough to deal with any errors that may be encountered, the operating system should be tested before implementation.

**Flexibility**. Dynamic Republicans wants to integrate e-commerce and web services to include copy, printing and mailing services, the operating system must be flexible enough to allow several machines to perform some of the same operations, the operating system must be able to handle vast changes in volumes, the operating system must be able to handle changes quickly and the operating system must be able to handle a wide range of applications.

**Security**. Dynamic Republican wants to expand their services to e-commerce, the security of the network and the system administration is an important aspect for the organization, the security of the operating system will include the confidentiality, integrity and availability between the organization and the stakeholders, some of the security features that will be implemented with the operating system will be authentication, authorization, encryption and auditing, the organization and the stakeholders will be trained to minimize security threats,

## Budget Planning and Restrictions

Owner Julie

* Budget 5000 dollars
* Able to get 2 servers to divide up workload (depending on networking budget may be able to install 3rd server)
* Cost to consider
  + Labor
    - Calculate vendor resources needed and local labor cost
  + Installation
    - Determine current workforce technical skill
    - Hire contractors for installation if needed
  + Support
    - System issues support
    - Planned maintenance updates.
  + Training
    - Employees will need training on web portal usage to assist customers
    - IT staff will need structural and functional system training to maintain system

## Conclusion

Open source software provides a flexible, stable and secure ecosystem that is able to handle the needs of a small to midsized network. The organization has enough money to buy the appropriate hardware, train the staff, and offer an unobtrusive experience.

The savings in licensing can be kept in the business and be used to further grow the organization.

# Mykes Comics

Mykes Comic Book Store has a budget of $8000, this budget must include the web and database servers, software and hardware components for the overall success of Mykes Comic Book Store.  
Owner Sander

Why Open Source  
Owner Julie

* Small to medium sized organization looking to increase business capabilities.
* Currently has not internet connectivity
* Needs Linux Distribution to improve performance
* Currently support Linux distribution on workstation and cash register

## What We Plan To Accomplish

Owner Sander

## How We Will Use OSS

The comic store will need an inventory management system, such as the open provided by OpenERP. This software platform supports a modular design and can be extended to work with many versatile scenarios.

In their plugin catalog there are support for extending the inventory management into the web site and e-comers platform. This would allow them to easily keep the website in sync with the items that are in stock.

After setting up OpenERP as the data source, the presentation layer would need to be created. This would first request setting up Apache web server. Apache is a common technology use to host web content. It offers many flexible configurations and plugins to customize scenarios as needed.

On top of Apache they would need to add a shopping cart system, there are numerous ones to choose all with no licensing fees and open source. These will require custom CSS and HTML templates to provide the unique look and feel of Mykes. The templates will be created using BlueFish, which is provided by OpenOffice to be a powerful web editor.

Owner Nate

## Budget Planning and Restrictions

**Web and Database Servers**. An analysis must be conducted for the requirements of Mykes Comic Book Store as well as the needs of the organization, the analysis would consist of the tasks that are to be performed, who will provide IT support, the hardware that is needed and who will be responsible for maintaining the data and supported access, the database servers must be secured, high performance, reliable and consistent Oracle, IBM and or Microsoft SQL may be options for Mykes Comic Book Store.

**Software/Hardware.** The hardware and software that should be considered are the requirements such as the disk space, the processor the memory, motherboards, application servers, web servers, web browser consideration and platform consideration, OTRS OpenBSD or Free BSD may also be options for this organization.

**Inventory System.** Mykes Comic Book Store wants to implement an inventory system, the inventory system will be responsible for tracking all activities, managing and locating data, the inventory system will also be responsible for the raw materials and or products that are available, the organization of files, the item descriptions, and the item numbers.

## Conclusion

There are plenty of opportunities for Mykes to grow their network using open source technologies. From the OS, to the web servers, to the inventory system, all the way to the back end databases.

Using closed source technologies can help reduce licensing costs, while still exposing a robust scalable environment for the end users and administrators alike.