ITCM Data Management System

Luke Ferguson

Special Thanks

Dr. James Kirk and Michael Camden Tracy.

Also, to Josh Simmons and Leland Lyerla for letting me, hopefully, improve the system that they had.

Project Overview

The Instructional Technology & Campus Media (ITCM) Department

- Coordinates events
- Provides classroom assistance
- Check items in/out.

ITCM has used a whiteboard to inventory its items.

Project Overview

My project was to build a website allows for student workers to check in/out items for organizations and professors.

Professors and organizations can now reserve equipment online through the website.

The website will soon go live.

Outline

- Web application software used
  - Why ColdFusion?
- Database software used
  - Microsoft Access
  - Microsoft SQL
  - MySQL
- Relationship with client
  - Requirements
- Mobile
- Demonstration of local website

Spreadsheet (PAC)

Room	TV Serial	Projector Barcode	Projector Serial	Install Date	PC Serial	Doc Cam Serial	iPanel Serial	Notes
A1		4230	SC0410030	8/1/2010	1S3269A1UMJRGG94	66746 10030P		
A2		4231	SC0410034	8/1/2010	1S3269A1UMJVYV75	66914 10030P		
A5		4232	SC0360012	8/1/2010		66747 10030P		
A7		4234	SC8520138	2/1/2010		67419 10040P		
A9		4235	SC9330066	8/1/2009		67421 10040P		
A11		4236	SC0360015	8/1/2010		66353 10040P		
A72		4237	SC0410031	8/1/2010		66564 10040P		
B20		4225				58633 09050P	W643828A0C21K0011	
B21		4226	SC0320010	8/1/2009		66693 10030P		
B25		4227		2/1/2010				
B26		4228	F0BU00819	2/1/2011		61235 10050P		HITACHI
B26		4229	SC0440064	2/1/2011		61235 10050P		PANAS
C1		4215		8/1/2010				
C2		4216		8/1/2010				
C3		4217		8/1/2010				
C6		4212	SD8220078	8/1/2009		41032 7100	W643817A0C11K0024	
C8		4211	SC8450137	8/1/2009		57904 08080P	08-07-1710A-0042	
C12		4210	SC8520140	8/1/2010		61006 10010P	W643817A0C11K0001	
C13		4209						
C15		4208	SC0320040	8/1/2010		67137 10040P		
C16		4213	SC0410016	8/1/2010		66973 10030P		
C17		4214	SC9430095	8/1/2010		66773 10040P		
C18		4207	SC9440005	8/1/2010		61685 8020		
C24		4206	SC0440023	8/1/2010		66918 10030P	W643947A0C31K0113	
D3		4248	SC0616067	2/1/2010		56968 08070P	08-05-1710A-00309	
D48		4223	SC9330042	8/1/2010		51955 09060P		
D49		4221	SC0410001	8/1/2010		66921 10030P		
D50		4222	SC0410032	8/1/2010		66560 10040P		
D52		4220	SC0410033	8/1/2010		66743 10030P		
D53		4219	QDC064200111	8/1/2008		58651 09050P	07-10-1710A-00237	
D54		4218	QDC074801219	8/1/2008		45156 7090	07-10-1710A-00238	
H40		4238	SC0410035			61320 10050P		

Web Application

Static vs. dynamic.

ColdFusion was used for this project.

The university already owns Adobe ColdFusion Server.

Since the project will eventually be hosted on the server, it was a natural choice.

What is ColdFusion?

CFML - ColdFusion Markup Language.

ColdFusion is a rapid web application development platform.

It was created by Jeremy and JJ Allaire at Adobe Systems in 1995.

Compares to ASP and PHP.

Why ColdFusion?

Union only had to pay an initial amount for the ColdFusion Server Edition.

Features:
- Simplified database access
- Conversion from HTML to PDF and FlashPaper
- Task Scheduling

ColdFusion

Who uses it?

- Bank of America
- AT&T Wireless
- Sprint
- Pepsi
- US Bank
- Hasbro

ColdFusion is currently in use at 75 of the Fortune 100 companies.

Choosing database software

Microsoft Access was initially used.

Access provided a straightforward developing environment.

In the coming weeks, the database will be converted to Microsoft SQL, so that it can be hosted on Union's web server.

Choosing database software

For presenting my project today, I used a program that converts Microsoft Access to MySQL.

The program produces a MySQL dump file.

Then, I used XAMMP to host the SQL.

Finally, I was able to link the database with ColdFusion.

Database Relationships

iPhone App

ZBar iPhone Barcode Scanner

Open-Source Project

You can add new links to the list of links provided (which will contain URL variables).

For ITCM, the app allows students and full-time staff to view item information using the barcode.

iPhone App

Form variable use.

http://10.0.1.9:8500/ows/ITCM/admin/forms/search.cfm?form.search={data}

iPhone App

iPhone App

iPhone App

iPhone App

Relationship with client

ITCM requested a barcode driven system that allowed for requests, checkouts, and check ins.

The database is scalable, and will be able to hold information on all items across the three campuses.

Since the website will be hosted on Union's server, they will be able to update the items

Demonstration

Show website locally.

Questions?

ColdFusion vs. PHP

Variable declaration

```
Coldfusion: <cfset myVar = 0>
PHP: <?php $myVar = 0?>
```

ColdFusion vs. PHP

URL variables

```
Coldfusion: #URL.myVar#
PHP: $_GET['myVar'];
```

ColdFusion vs. PHP

ColdFusion Queries

```
<cfquery datasource="myDatasource" name="getUser">
SELECT * FROM USER
</cfquery>
```
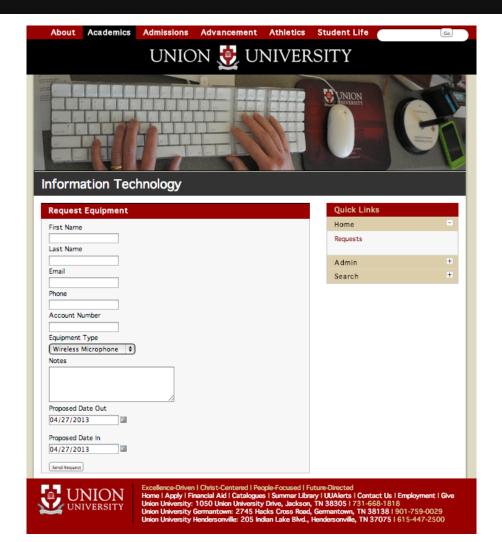
ColdFusion vs. PHP

PHP Queries

```php
<?php
// Connection's Parameters
$db_host="localhost";
$db_name="database_name";
$username="database_username";
$password="database_password";
$db_con=mysql_connect($db_host,$username,$password);
$connection_string=mysql_select_db($db_name);
// Connection
mysql_connect($db_host,$username,$password);
mysql_select_db($db_name);

// Query
$sql = 'SELECT * FROM USER';
$getUser = mysql_query($sql);
?>
```

http://bit.ly/13rEHI1

ColdFusion vs. PHP

ColdFusion query output

```
<cfoutput query="getUser">
#name#, #email#, #city#
</cfoutput>
```
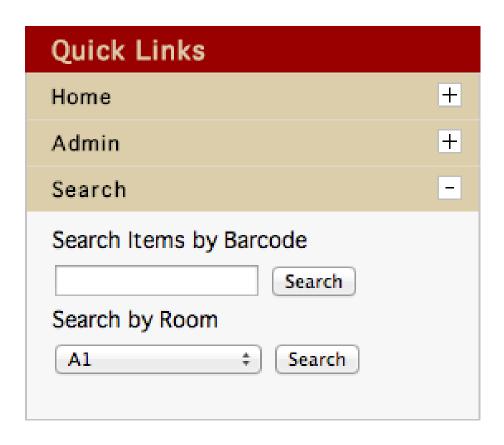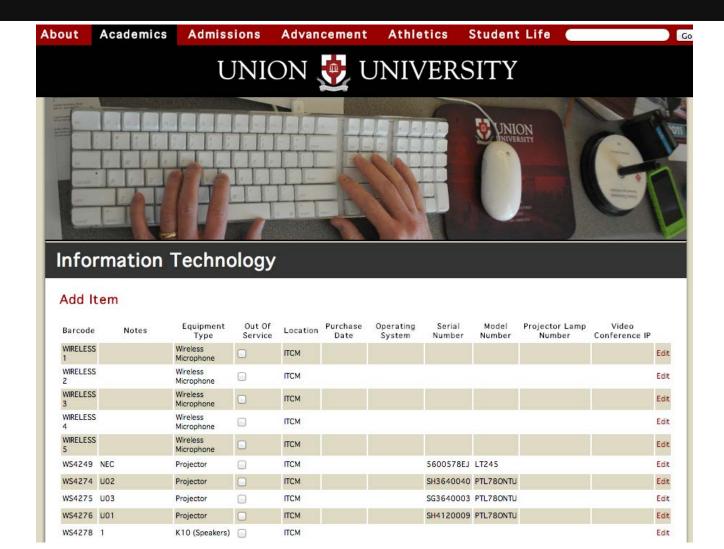
ColdFusion vs. PHP

PHP query output

```php
<?php
while ($row = mysql_fetch_array($getUser)){
echo $row['name'] . ',' ;
echo $row['email'] . ',' ;
echo $row['city'] . ',' ;
}
?>
```
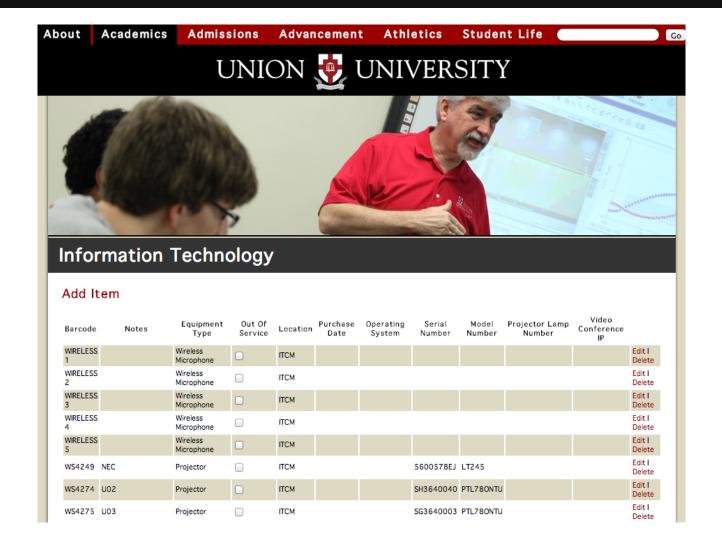
Local Website

Local Website

Local Website

Local Website

Local Website

Local Website

The End