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.
My project was to build a website that allows 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)

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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.
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.

Form variable use.

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

### iPhone App

![iPhone App Image]

#### Edit Link

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**Options**

| Open | Always in Safari |
iPhone App
iPhone App
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;?>`
URL variables

ColdFusion: #URL.myVar#
PHP: $_GET['myVar'];
ColdFusion vs. PHP

ColdFusion Queries

```cfquery
<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';
$user = mysql_query($sql);
?>
```

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

Quick Links

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Search Items by Barcode

[Search]

Search by Room

A1 [Search]
### Local Website

![Image of a computer keyboard and mouse with Union University logo]

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Local Website
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