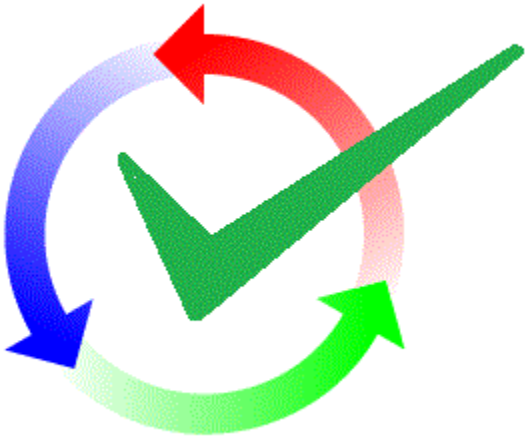
Instructional Technology Project Management System



Marcus Murphy

Report 14 on the work of Week 14

December 07, 2010

Application Development Section

Purpose

Context

The Instructional Technology Project Management System will inform both students and instructional technology assistants about the requirements of specific technology projects.

Goals

Instructional Technology Project Management System will allow students to communicate directly with instructional technology assistants. It would also allow instructional technology assistants to be informed about an upcoming project in which they will need to assist a particular student. This project management system will also inform students of the requirements of their project before they come to the lab to start working on it.

Audience

Many students at Berea College are assigned to create an informative video on a specific topic. These students have the opportunity to work on these projects in the Instructional Technology Labs in Hutchins Library. They may have no idea where to start or who to ask for help. Some may walk all the way from their dorm to the library just to find out that they do not have what they need to start on a video project. A project management system would fill in this communication gap between the students and instructional technology assistants.

Functionality

User functions

-Allows students to register (BNumber, Name, Project Description, etc)

-Allow students to contact admin and/or moderators via email or possibly chat system

-Allow students to know who can assist them at the lab by matching project start time with student work schedule

Admin functions

-Display list of students by name or BNumber

-Display list of projects by name or time/date

-Delete student or project entries

-Add, edit, or delete student work schedule

-Add, edit, or delete list of student workers

Student Worker (Moderators) functions

-View list of ongoing projects

Milieu

There are no existing products for project management systems for the Instructional Technology Labs.

Novelty

Currently, on campus, there are a few project management systems. The Help Desk database allows the IS&S Help Desk technicians to create work orders and manage them. What these systems lack is the ability to further communicate with the customers. One would usually have to send a series of emails back and forth. Instructional Technology Project Management System allows users to take a step further from making simple work orders. Communication is key when dealing with projects.

Resources

-PHP

-mySQL

-Apache Server

-Windows 7

Challenges

There will be various challenges during the development of the Instructional Technology Project Management System. There may be network restrictions regarding what the system can and cannot do. There also may not be enough time to develop a functioning chat system.

Measures

In order for the project to be considered successful it must have the following characteristics. The front-end must be easy to use for the students at Berea College. It must correctly submit all project information to the project database. The administrator must be able to add, edit, or delete all information added to the project management system. The students must be able to effectively communicate with the Instructional Technology Assistants.

Future Extensions

A chat system and various video-editing guides will be implemented in the project management system if time permits.

Inspiration

Motivation

With technology, I have the ability to make the world around me an easier place to live in and promote growth at the same time. I want to build the Instructional Technology Project Management System to leave my mark on Berea College. I currently work in the Instructional Technology department so I am familiar with its needs.

Profession

I wish to develop and later administrate databases as a career. This project will give me an opportunity to show my strengths in database development and work on my weaknesses. I will be able to use this project in my portfolio to showcase my skills to future employers.

Vision and Scope

Vision

The Instructional Technology Project Management System will allow students to communicate directly with Instructional Technology assistants. It would also allow Instructional Technology assistants to be informed about an upcoming project in which they will need to assist a particular student. This project management system will also inform students of the requirements of their project before they come to the lab to start working on it. This project management system will allow users to do all of the above in a simplified and organized fashion in which they could not do via email. Also, information will be easier to obtain, modify, and discard for the Project Supervisor.

Scope

All software requirements are within scope of the project. The Instructional Technology Project Management System should allow students to register. It should allow students to contact the administrator and/or moderators via email. It should allow students to know who can assist them at the lab by matching project start time with student work schedule. The administrator should be able to display list of students by name or BNumber (Berea College ID Number). He or she should be able to display a list of projects by name, status, or time/date added. The administrator should also be able to add, edit, or delete student or project entries, student work schedules, and a list of student workers. Student workers should be able to view ongoing projects. A chat system would be outside of the scope of the project. It is not necessary but may be anticipated by shareholders.

Preliminary Software Requirements Specifications

Functional Requirements

Requirement 01: Primary function

- FR-01

- Statement: The software will allow students to register their project information electronically.
- Evaluation: The software must successfully allow students to add their project information to the Instructional Technology Project Management System database.
- Dependency: None
- Priority: Essential
- Requirement Revision History: N/A

Requirement 02: Communication functionalities

- FR-02
- Statement: The software will allow students to effectively communicate with the workers and supervisor of Berea College Instructional Technology.
- Evaluation: The software must enable students to contact administrators and/or moderators of the database via an organized email form.
- Dependency: None
- Priority: High
- Requirement Revision History: N/A

Requirement 03: Administrative Privileges

- FR-03
- Statement: The administrator of the software's database must be able to add, edit, or delete some of information that is entered by the users.
- Evaluation: The administrator should be able to add, edit, or delete student or project entries, student work schedules, and a list of student workers.
- Dependency: FR-01
- Priority: High
- Requirement Revision History: N/A

Requirement 04: Schedule Matching System

- FR-04
- Statement: The software will allow students to know who can assist them at the lab.
- Evaluation: The software must be able to match the project start time with the student work schedule.
- Dependency: FR-03
- Priority: Medium
- Requirement Revision History: N/A

Requirement 05: Student Worker Privileges

- FR-05
- Statement: The software will allow students workers to view a list of ongoing projects.
- Evaluation: The software must be able to display a list of projects sorted by name, status, or date added.
- Dependency: FR-01
- Priority: Medium

- Requirement Revision History: N/A

Requirement 06: Project Guidance

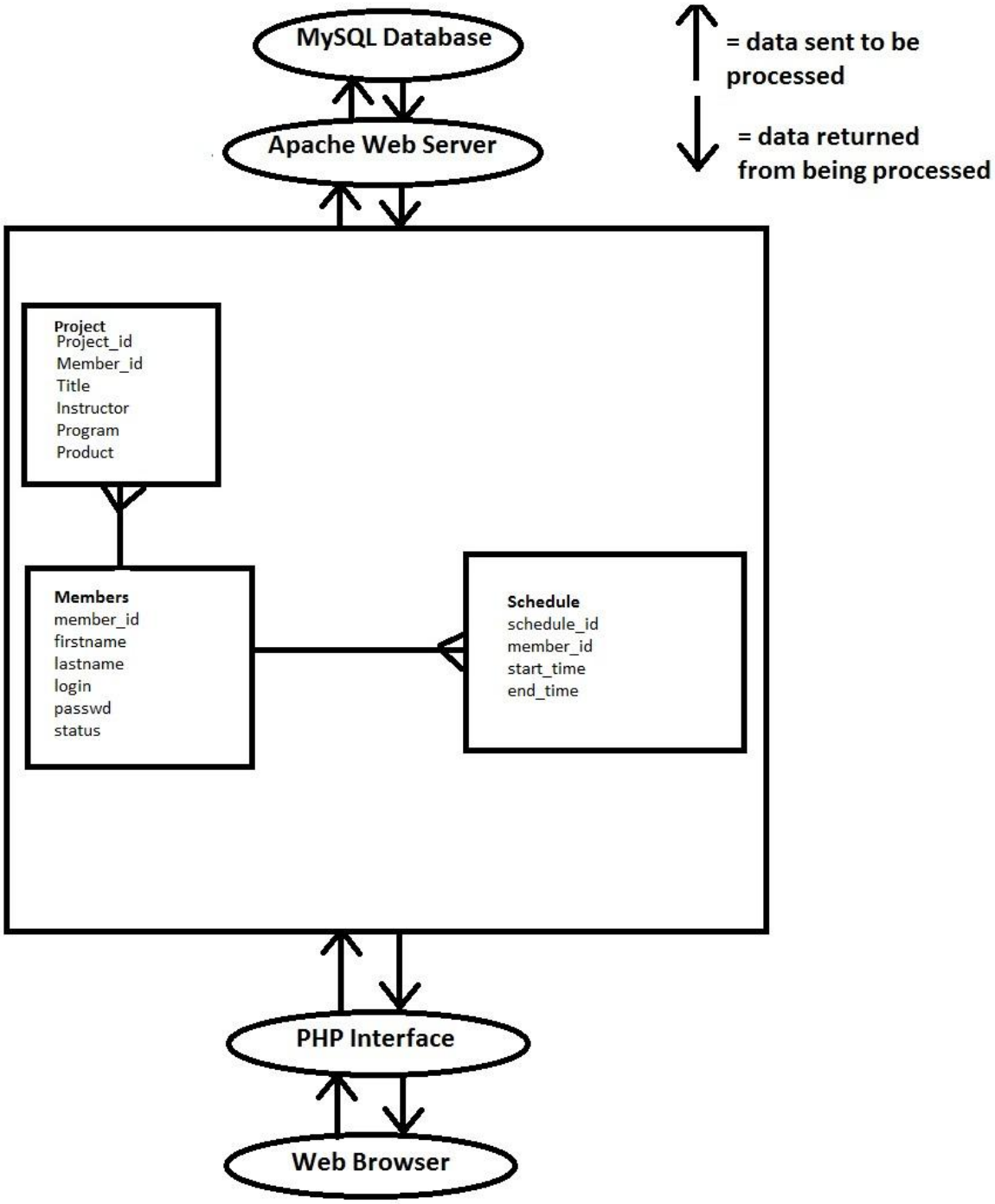
- FR-06
- Statement: The software will be able to offer guides to assist students with their projects.
- Evaluation: The software must be able to display a list of guides that can help students with their projects.
- Dependency: None
- Priority: Low
- Requirement Revision History: Added FR-06 on September 20, 2010

Non-Functional Requirements

Requirement 01: Server

- NFR-01
- Statement: The software will run on a server and will be accessible via internet browser (specifically Firefox, Internet Explorer, and Google Chrome) across campus.
- Evaluation: The software must be able to be accessed remotely around campus.
- Dependency: None
- Priority: Essential
- Requirement Revision History: N/A

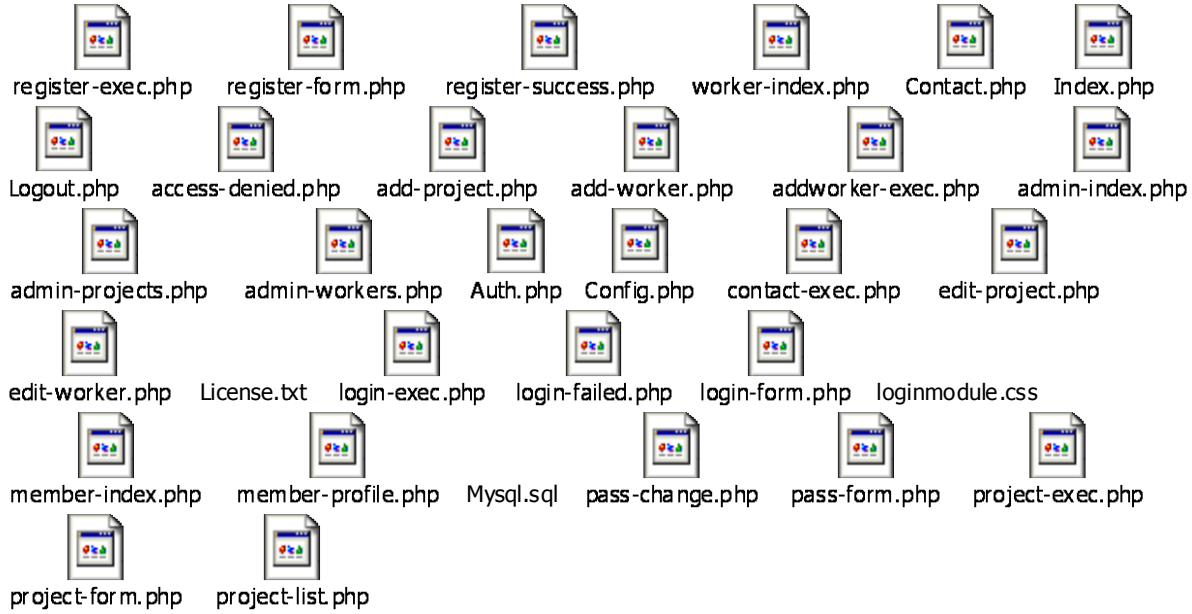
System Design and Architecture



Revised (12/07/10)

Implementation

Submitted Files:



Revised (12/07/10)

Marcus Murphy

Lead Developer

Marcus Murphy grew up in Pittsburgh, Pennsylvania where he took interest in computer science at a young age. He began to take programming courses in high school and then was accepted into Berea College in 2007 to pursue a bachelor's degree in Computer Science. At Berea, he began to experiment with web development and currently he is learning advanced web database programming. Marcus loves to DJ school parties, write poetry, and hang out with friends. After graduation, he plans to find a job working with web-based databases.

Preliminary Test Plan and Preliminary Test Cases

Name: TC-01-1
Requirement: FR-01: Register project electronically

Preconditions: Database must be set up and forms must send information to them
Steps: 1. Register
2. Log in
3. Fill out information
4. Check mySQL tables for the information that was entered
Expected results: There should be entries in the tables of the database.

Name: TC-02-1
Requirement: FR-01: Contact IT Supervisor
Preconditions: Database "Email" table must be set up and the email form must send information to it
Steps: 1. Click on Contact IT Supervisor
2. Fill out email form
3. Check Supervisor's email
Expected results The email should have been sent to the IT Supervisor.

Name: TC-03-1
Requirement: FR-01: Administrative Privileges
Preconditions: Must be a page assigned to the IT Supervisor
Steps: 1. Click on Administrator link
2. Log in
3. Use form to edit entries
Expected results: The page should allow the admin to edit table entries in the database.

Name: TC-04-1
Requirement: FR-04: Schedule Matching System
Preconditions: Must be a page and a table (Time) in the database assigned for student scheduling
Steps: 1. Click on Administrator link
2. Log in
3. Use form to edit student schedule
Expected results: The page should allow the admin to edit student schedule.

Name: TC-04-2
Requirement: FR-04: Schedule Matching System
Preconditions: Must be a page and a table (Time) in the database assigned for student scheduling
Steps: 1. Register
2. Log in
3. Fill out the required forms
Expected results the summary page should tell the user who will be available to assist them.

Name: TC-05-1
Requirement: FR-05: Student Worker Privileges
Preconditions: Must be a page assigned for student workers
Steps: 1. Click on Student Worker
2. Log in

Expected results the student worker page should display a list of ongoing projects.

Name TC-06-1
Requirement FR-06: Project Guidance
Preconditions: Must be pop up boxes that provide information regarding the project
Steps 1. Register
2. Log in
3. In the form, hover over some of the choices
Expected results a popup box should provide information regarding these choices.

Video Demo

Link: http://www.youtube.com/watch?v=lFokslDSYW4

The demo explains how to navigate the ITPMS. There are different types of users and features that will be introduced.

Executive Section

To: Dr. Jan Pearce, Project Director

From: Marcus Murphy

Subject: Instructional Technology Project Management System

Date: September 7, 2010

I developed the idea of a project management for my workplace during the summer. From then until now, I have thought about all the functionalities it should have. This week I did not have to come up with any new ideas because I have already thought about it for months.

The challenge with the development of the database is to create a schedule for the development process. Time is an important factor when developing software.

Project hours this week: 2

Project hours to date: 2

I spent 2 hours working on the project proposal.

My goal for next week is to plan the project development process. I will need to know what I should be doing in each week until December. I will also design the interface for the Instructional Technology Project Management System. It will be necessary to show my project advisor a layout of what I plan to do.

To: Dr. Jan Pearce, Project Director

From: Marcus Murphy

Subject: Instructional Technology Project Management System

Date: September 14, 2010

I developed a couple ideas for the interface of the project management system. I also worked on the vision, scope, and project requirements for the project.

The challenge with the development of the database is to create an effective interface for the project. I am still working on this.

Project hours this week: 3

Project hours to date: 5

I spent 3 hours working on the second project report and thinking about the interface.

My goal for next week is to complete the design of the database interface.

To: Dr. Jan Pearce, Project Director

From: Marcus Murphy

Subject: Instructional Technology Project Management System

Date: September 21, 2010

I added a functionality to the software that allows students to receive assistance from the software.

The challenge with this project is develop an accurate system design and architecture. Also, I still am in the process of creating the full interface.

Project hours this week: 3

Project hours to date: 8

My goal for next week is to complete the design of the database interface and the system design and architecture.

To: Dr. Jan Pearce, Project Director

From: Marcus Murphy

Subject: Instructional Technology Project Management System

Date: September 28, 2010

I created a diagram for the system design and architecture. It describes both the physical and conceptual aspects of the project management system.

The challenge with this project is start working on the PHP interface. I have coded with PHP in the past but I want to get much better at it.

Project hours this week: 3

Project hours to date: 11

My goal for next week is to program the interface for logging in and out of sessions. This will be an essential part of the project that I must get to function appropriately.

To: Dr. Jan Pearce, Project Director

From: Marcus Murphy

Subject: Instructional Technology Project Management System

Date: October 5, 2010

I thought about and created the README.txt as well as the basic components of a web database.

The challenge with this project is start working on the PHP interface. I have coded with PHP in the past but I want to get much better at it.

Project hours this week: 3

Project hours to date: 14

My goal for next week is to start programming the php files. I need to also make sure it works well with the mySQL database.

To: Dr. Jan Pearce, Project Director

From: Marcus Murphy

Subject: Instructional Technology Project Management System

Date: October 19, 2010

I designed and created on the user interface for the web database.

The challenge with this project is find enough time to really do what I want with it.

Project hours this week: 3

Project hours to date: 17

My goal for next week is to think about various ideas for the system administration aspect of the web database. I also want the database to be secure. So, I will have to implement security features as well.

To: Dr. Jan Pearce, Project Director

From: Marcus Murphy

Subject: Instructional Technology Project Management System

Date: October 26, 2010

I created all the tables and the interface now works fine.

The challenge with this project is find a way to create a email system.

Project hours this week: 10

Project hours to date: 27

My goal for next week is to think about various ideas for the system administration aspect of the web database. I also want the database to be secure. So, I will have to implement security features as well.

To: Dr. Jan Pearce, Project Director

From: Marcus Murphy

Subject: Instructional Technology Project Management System

Date: November 2, 2010

I thought about a couple of ideas for how I will implement some of my plans.

The challenge with this project is still to find a way to create an email system.

Project hours this week: 2

Project hours to date: 29

I still have the same goal. My goal for next week is to think about various ideas for the system administration aspect of the web database. I also want the database to be secure. So, I will have to implement security features as well.

To: Dr. Jan Pearce, Project Director

From: Marcus Murphy

Subject: Instructional Technology Project Management System

Date: November 16, 2010

The challenge with this project is still to find time to do it! I didn't have a chance to do anything! I am very frustrated.

Project hours this week: 2

Project hours to date: 31

I still have the same goal. My goal for next week is to think about various ideas for the system administration aspect of the web database. I also want the database to be secure. So, I will have to implement security features as well.

To: Dr. Jan Pearce, Project Director

From: Marcus Murphy

Subject: Instructional Technology Project Management System

Date: November 30, 2010

The challenge for this week is link all of my pages together and add additional features to my login system. So far, I have added a lot of the features that were listed in my requirements.

Project hours this week: 15

Project hours to date: 46

My goal for this week is to finish a complete version of the project and create the demo. Security features must be added. I also must contact Anthony Basham to prepare for future installation.

To: Dr. Jan Pearce, Project Director

From: Marcus Murphy

Subject: Instructional Technology Project Management System

Date: December 07, 2010

I linked all the pages together and added many features such as a change password option, admin privileges, and security features. I was not able to implement a scheduling system. I finished the demo as well.

Project hours this week: 15

Project hours to date: 61

In the future, I want to finish the scheduling system and work with Anthony Basham to install the software. I did not have as much time as I thought I did and was not able to complete the project like I wanted to.