Spring 2015

Network Inventory Application

Aaron M. Resch  
*St. John Fisher College*, aaron.resch@gmail.com

Matthew Begley  
*St. John Fisher College*

**How has open access to Fisher Digital Publications benefited you?**

Follow this and additional works at: [http://fisherpub.sjfc.edu/cs_undergrad](http://fisherpub.sjfc.edu/cs_undergrad)

Part of the [Software Engineering Commons](http://fisherpub.sjfc.edu/cs_undergrad)

**Recommended Citation**


Please note that the Recommended Citation provides general citation information and may not be appropriate for your discipline. To receive help in creating a citation based on your discipline, please visit [http://libguides.sjfc.edu/citations](http://libguides.sjfc.edu/citations).

This document is posted at [http://fisherpub.sjfc.edu/cs_undergrad/1](http://fisherpub.sjfc.edu/cs_undergrad/1) and is brought to you for free and open access by Fisher Digital Publications at St. John Fisher College. For more information, please contact fisherpub@sjfc.edu.
Network Inventory Application

**Document Type**
Undergraduate Project

**Department**
Computer Science

**First Supervisor**
Nicholas Bucciarelli

**Subject Categories**
Computer Sciences | Software Engineering

**Comments**
Final presentation for CSCI480: Senior Project.

This undergraduate project is available at Fisher Digital Publications: [http://fisherpub.sjfc.edu/cs_undergrad/1](http://fisherpub.sjfc.edu/cs_undergrad/1)
NETWORK INVENTORY APPLICATION
MATTHEW BEGLEY AND AARON RESCH
PROJECT OVERVIEW

- Project Objectives & Description
- System Technical Overview
- Engineering Process Methodology
- Engineering Test Methodology
- Engineering Key Work-Products
- Project Key Metrics
- Project Schedule/Key Milestones
- System Demonstration
- Academic Key Knowledge Acquired/Applied
- Strategic Value
- Questions
- Lessons Learned
PROJECT OBJECTIVES & DESCRIPTION

• **Objective**
  • Create an inventory management application for Android
  • View all inventory
  • Search for inventory items
  • Update inventory levels
  • Simple, easy to use interface

• **Description**
  • MySQL database to store inventory
  • Queries database to check inventory levels
  • Updates database when inventory is added or removed
SYSTEM TECHNICAL OVERVIEW

• XML files for User Interface
• Java files that interact with XML files and call PHP files
• PHP files stored on the internet that communicate with database
ENGINEERING PROCESS METHODOLOGY

• **Agile model**
  • Built template
  • Defined functionality
  • Developed functionality
  • Tested functionality
  • Repeat
ENGINEERING TEST METHODOLOGY

- Design purpose and functionality
- Backup current progress
- Implement additional code
- Test for compile errors
- Test functionality
- Test for logical errors
ENGINEERING KEY WORK-PRODUCTS

- Android Studio
PROJECT KEY METRICS

• Does the application function?
  • Does it compile?
  • Does it crash?

• Does it meet the project requirements?
  • Does it accomplish the goal?
  • Are there logical errors?

• User proof
  • Can invalid data be entered?
  • Can the user make it crash?
PROJECT SCHEDULE/KEY MILESTONES

• Executive Summary
  • 1/19/15
• Requirements
  • 2/2/15
• Prototype
  • 2/24/15
• Functional Application
  • 3/8/15
• Completed Application
  • 4/11/15
SYSTEM DEMONSTRATION
ACADEMIC KEY KNOWLEDGE ACQUIRED/APPLIED

• Coding
  • Java
  • PHP
  • XML
• Networking
  • Communicating with remote server
• Databases
  • MySQL
• Software Engineering
  • Agile model
STRATEGIC VALUE

• Allows multiple users to view and update inventory
  • Reduces time spent physically checking inventory
  • Increases productivity
• Expandability
  • Email alerts
  • Project requirements
  • Project history
QUESTIONS
LESSONS LEARNED

• Communication with Database
  • Attempted using JBDC to open remote MySQL database
  • Attempted using JSON feed
  • Used http: connection to PHP scripts on the web
    • Internet connection could not be done in main thread
    • Created worker threads to handle internet I/O

• Limitations and quirks of Android Studio
  • Required numerous tutorials and web queries
  • Many built in features did not function
    • Required work arounds