12-5-2016

Project FridgeFix

Andrew D. Inherst

Indiana University - Purdue University Fort Wayne

Follow this and additional works at: http://opus.ipfw.edu/etcs_seniorproj
Part of the Computer Sciences Commons, and the Engineering Commons

Opus Citation
http://opus.ipfw.edu/etcs_seniorproj/991
Project FridgeFix

Final Project Report

December 5, 2016

Andrew D. Inherst

Michelle Parker, Professor

Submitted to:

Michelle Parker, Professor ITC 481 Senior Design II

Department of Computer, Electrical and Information Technology

College of Engineering, Technology, and Computer Science

Indiana University-Purdue University Fort Wayne, Indiana
Abstract

Background: As a college student living independently, it's difficult to plan meals, go shopping for needed supplies, and then prepare meals in-between studying, homework, and attending class. The biggest issue revolved around not knowing the contents of the refrigerator or age of items inside. Instead of keeping a list of the items on paper, it was thought to be practical to have an application store necessary information that could be accessed at any time assuming the smartphone would be available.

Methods: With a limited background in programming, it was obvious that many materials would be needed. Several Android programming books were obtained and studied to get a basic foundation of how the language and IDE combined together. Many online video and text tutorials were followed and reviewed to piece together concepts and ideas for Project FridgeFix. Careful execution of proposing, planning, researching, and building was possible through the use of Microsoft software packages and on-hand materials.

Results: The final prototype reflects the majority of features and requirements found in the original planned documents. Many unforeseen problems surfaced once the building of FridgeFix began involving time and performance of the application. However, these issues were overcome through persistence and further time management. Thorough documentation is covered concerning project design, research, testing, and project management.

Conclusion: A working prototype has been created to allow users to inventory items going into the refrigerator. Due to time constraints, not all requirements are met, but the application does include necessary features for the user to view, add, edit, delete, and set reminders for items.

Keywords: Application, Software, Integrated Development Environment (IDE), Prototype
# Table of Contents

Abstract .................................................................................................................. 3
  Keywords: .............................................................................................................. 3
Table of Contents .................................................................................................. 4
Executive Summary ................................................................................................. 6
  Purpose of Project ............................................................................................... 6
  Project Time Period ............................................................................................. 6
  Final Deliverables ............................................................................................... 6
  Acknowledgement ............................................................................................... 7
  Keywords: .............................................................................................................. 7
Project Introduction ................................................................................................ 8
  Problem Topic ..................................................................................................... 8
  Background History ............................................................................................ 8
  Methodology Approach ....................................................................................... 8
  System Requirements ......................................................................................... 9
  Primary Purpose ................................................................................................. 10
  Overview ............................................................................................................. 10
Project Design Overview and Research ................................................................. 11
  Feasibility ........................................................................................................... 11
  Project Scope ..................................................................................................... 11
Hardware .................................................................................................................. 12
  Custom Computer .............................................................................................. 12
  Android Phone .................................................................................................. 12
  Dell Desktop ....................................................................................................... 12
  Dell Tablet .......................................................................................................... 12
Software .................................................................................................................... 13
  Android Application .......................................................................................... 13
  Software Architecture ......................................................................................... 13
  Programming Language ...................................................................................... 13
  Integrated Development Environment .............................................................. 13
  Main Components .............................................................................................. 13
  Activity Diagrams .............................................................................................. 15
  Activity Diagrams (Cont.) .................................................................................. 16