We are designing and implementing a project that tracks the inventory for a small business who distributes their nutrition bars to local stores.

Food Inventory Group – Report 1

Summer 2018 (June 8, 2018)

Joshua Vasil, Tanaja Lloyd, Cofi Tiggs, Edward Cochran, Stephen Elmore

Small Business Food Inventory Project

Semester: Summer 2018

Group Members: Joshua Vasil, Cofi Tiggs, Tanaja Lloyd, Edward Cochran, Stephen Elmore

Date: June 8, 2018

Team and Project Description: For our project ideas, we brainstormed different categories that would fit an appropriate scope for the time given to complete the necessary work. Ultimately we decided to create a project for a hypothetical private business that sells food through local grocery stores and distributes their product through this network. Our code and database would have to track inventory throughout the multiple partners' locations and record the stock of our product, so our supply chain runs smoothly and our product is always available at all hypothetical stores. When the database indicates that a store is running low on our product, we would send a new shipment. For this initial report, we brainstormed that our company would sell nutrition bars, and is partnered with local health food stores to distribute this product.

Technical Outline: At the time of this initial report, we have hypothesized that this project will require the use of Java and a MySQL database to effectively complete the goals required during the engineering process. The database would track the inventory of our product at our local partners.

Team Organization and Roles: We have consulted between each other on the best way to organize our team, and so far, have decided to run it democratically, so all ideas must have a consensus before being acted upon. One person is designated as the team "coordinator" to interact with the Instructor in terms of turning in documents and asking questions.

Table

*******within our group, everyone's role is dynamic and we expect people will take part in a variety of tasks throughout the project, despite what they may be listed as in the initial report

Food Inventory Group				
Joshua Vasil	Tanaja Lloyd	Cofi Tiggs	Edward Cochran	Stephen Elmore
Role: Team Coordinator, MySQL Database Management, Java Programmer	Role: Java Programmer, MySQL Database Management, Project Designer	Role: Project Tester and Debugger, Java Programmer, Project Designer	Role: Java Programmer, Report Writer, Project Designer	Role: Project Design, Database Management, Report Writer

Individual Resumes

Joshua Vasil

My name is Joshua, and I am a Bachelors student at GSU pursuing a BS in Computer Science. This is my junior year and I specialize in Java and Python development, focusing on these languages in my classes and believe I am proficient in executing tasks using these languages. Some classes I have taken include Data Structures, System Level Programming, Computer Org, and others related to this major.

I have taken part in several projects to further my education, mostly using Java and Python. One included tracking a satellite using Python and displaying it on a map as it orbited the Earth. Another, using Java, was a text based game simulator that allowed you to play simplified versions of Blackjack or Poker. Listed below are skills I have proficiency in.

- Languages: Java, Python, JavaScript, C
- Skills and Programs: Excel, Word, Matlab, MySQL Database Management
- OS: Linux (Ubuntu, Debian), MacOS, Windows

I also have some experience in Web Development, taking part in the design and programming of a local business who needed their page redesigned.

Tanaja Lloyd

Education

Computer Science

Georgia State, Atlanta, GA

- Data Structures
- JAVA Programming
- Computer Architecture
- Design and Analysis
- Web Programming (HTML, JavaScript, PHP), MySQL

Technical Skills

Skilled at JAVA Programming: data structures, analysis.

Web Development: Notepad++, Visual Studios, HTML, PHP, CSS, XML, MySQL, and JavaScript.

Microsoft Suite: Word, Excel, PowerPoint.

Server: Ubuntu, MAMP, SSH tool through Terminal or Putty.

Experience

- Developed a blog website that restricted access for different levels of users using information from SQL database: my part was to create, alter, compare input against, and display the database contents onto the website pages.
- Developed an app that enabled students to register for classes.

Cofi Tiggs

Hello, my name is Cofi. I've almost graduated, so, naturally, I've taken a lot of CS courses, including, but not limited to, the following:

- Design/Analysis of Algorithms
- Data Structures
- Computer Org. (with Mussa)

Personally, I'd like to describe myself as an average coder. This will be my first non-hackathon project that I've finished with a team. I prefer to use Java as its my most comfortable language, but I can also learn another for convenience of the project. So, as far as my role on the team, I would be flexible in my assignment. I don't really prefer to code because I hate the pressure (sometimes it makes me panic really bad) and my time this summer isn't consistent as it possibly should be. But, I'll have to make time somewhere, so I guess that's a moot point. Also, I am big on grammar, spelling, etc., so I can type up reports that we need if necessary.

Skills:

- Proficient at Java
- Web: HTML, CSS
- Office Suite: Word, Excel, PowerPoint

Experience:

- Developed a Sudoku web app (without reusing logic code)
- Developed app to simulate a vending-machine

Edward Cochran

Education **Computer Science**

Georgia State, Atlanta, GA

- Data Structures
- JAVA
- Computer Architecture
- Design and Analysis

- Computer Org

Technical Skills

Proficient in Java

Microsoft Suite: Word, Excel, PowerPoint.

Server: Ubuntu and SSH tool through Terminal or Putty.

Experience

- Created a vending machine stocking program that read which items were most popular, checked sales per item and let me know how many of each item are left in the machine

Stephen Elmore

Education

- Georgia State University (Current Enrollment): Bachelors in Computer Science
  - JAVA Programming
  - Assembly Language
- Ola High School (2013)

Skills

- Experience in JAVA
- Basic knowledge in Assembly Language with Visual Studio, UNIX, and C#

Small Business Food Inventory Project – Report 2

Requirement Engineering

Semester: Summer 2018

Group Members: Joshua Vasil, Cofi Tiggs, Tanaja Lloyd, Edward Cochran, Stephen Elmore

Date: June 15, 2018

Core Tasks and Milestones: To complete our project within the timeframe given, we must stick to a schedule that lays out core tasks to be completed each week and pace our work. At this point in the process, we are two weeks in and have completed a general outline for our project and laid out the requirements engineering part of the process that sets a schedule, tasks to be completed, and collaboration system for all team members.

- The software and hardware requirements for our system will be minimal, as it must run on a basic computer within the means of the company we are creating the project for. In terms of software, you must be able to run a Java program and access a MySQL database with an internet connection. Our hardware is also minimal, a computer with a modern CPU will be able to run the software.

Challenges and Risks:

- Our most serious challenge developing the product on this timeframe is going to be the design and implementation phase, where we must create a functioning system that can track inventory and manage the communications between a database and its nodes. This will take a rigorous application of our programming knowledge to create a finished product that meets all requirements and expectations.
- The best way to minimize risk for this type of project is constant communication between the team to ensure all work is being done on time and per schedule, so we can account and adapt to any problems that may arise throughout the process without compromising the overall ability to meet our deadline.
- The objective overall for our product is to streamline and make more efficient the system in which our business interacts with the stores it distributes product to.

Scheduling:

Food Inventory Group				
Task	Effort	Duration	Dependencies	Assigned To
Database Design	Creating a visual, identifying tech requirements	One week	none	Stephen

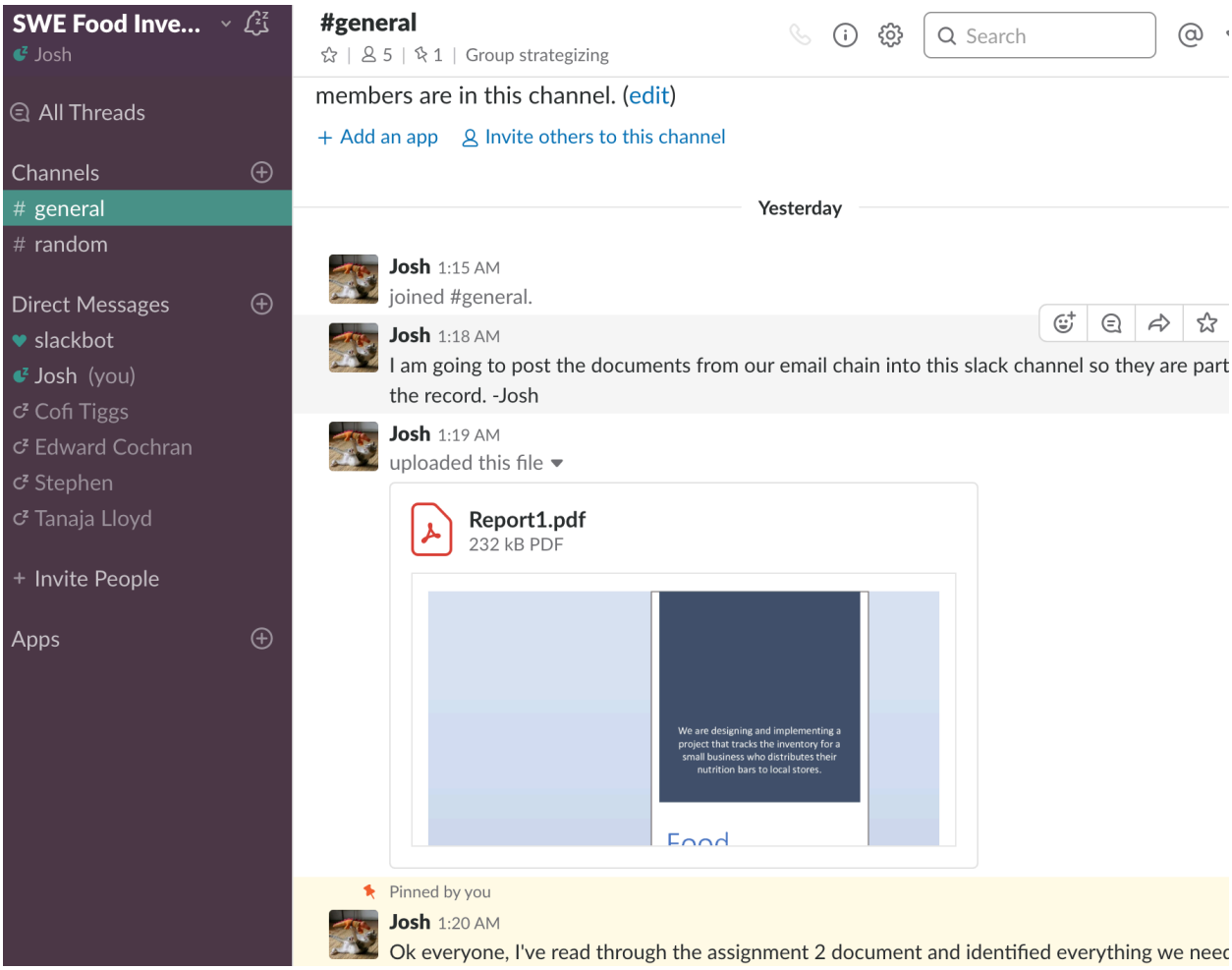
Database Creation	Setting up MySQL database	One week	Design completed	Josh
Server Set up	Identifying communication method between database	One week	none	Tanaja
MySQL Programming	Programming database connections	Two weeks	Database created	Josh and Edward
Connecting DB Nodes (stores with database)	Integrating stores with our database	Two weeks	Database functional	Josh
Java Communicating with Database	Using java to speak with the database	Two weeks	Database functional	Cofi and Tanaja
UI Design	Sketching out and designing user interface	One week	none	Stephen
UI Programming	Programming UI in JAVA	One week	none	Cofi and Edward
Final Debugging	Testing complete system	One week	none	Stephen and Tanaja

Collaboration (Appendix)

Github: The link to our Github can be found here.

Slack: The link to our Slack logs can be found here.

Video: The link to our video can be found here.



Problem Statement:

- At a high level, our product is simply a database with nodes corresponding to stores that carry product that needs to be tracked, and some complimentary code that connects all of this together and shows the end user a comprehensive display of their inventory in all locations.
- This product is for a food company that makes nutrition bars and distributes them to local health food stores. They need a way to track their inventory in all these locations.
- The product solves the problem of not having an efficient way to track inventory. Without our product, the food company would have to contact each store individually and have a human tell them how much inventory was in stock.
- There are a few alternatives, such as manually tracking inventory without the use of technology, or finding a competing product, perhaps offered by a third party, and attempting to integrate their alternative product into the inventory network specified by our outline in Report 1.
- This product is compelling and worth developing because it saves time, money, and effort for the end user. It is a simple but effective program that integrates important information into one location allowing the end user to make critical decisions.

System Requirements: Our system will require interaction between several components and modules. They are listed here.

- Main database connecting all data
- Nodes at each store supplied with our product
- Our business who determines product distribution

Use Case: Below is a use case diagram displaying the multiple different actors, systems, and tasks at hand that interact together to form our product. As shown, you can see humans and the actual system included in the diagram.