Project Plan

"The Grind"

Jason Zhou, Justin Hale, Kevin Lopez, Kuehan Lee

Professor Adkisson

SWE 3313

October 8th, 2022

TABLE OF CONTENTS

SCOPE

Customer's Record/Info

- Store customer information
- Adding Account to Database

Ordering

- Collecting Order Information
- Allow Customization to Drinks
- Allow Changes to the number of Drinks
- Allow Cancellation of Orders

Payment

- Provide prompt for card
- Provide prompt for award points if Customer is in the Database
- Add tax to total
- Notification if failure or success of payment
- Receipt Screen

Screens

Main Screen

- Order Drink Button
- Customer List Button
- Management Tools Button

Customer List Screen

- Add Customer Button
- Phone Number Field (To Find Customer)
- Displays Customer name & phone number (Sorted by the anonymous customer, then last name, then first name, then phone number)
- Displays number of reward points for each customer
- Order Drink Button**
- Return to Main Screen Button

Add Customer Screen

- First name, Last Name, Phone number fields
- Canceling Adding Customer Button
- Finish Adding Customer Button

Order Drink Screen

- Customize Drink Button

- Left side of screen – drink type and drink creator
- Right side of screen - Order Details including pricing and taxes
- Payment Button
- Cancel Order Button

Payment Screen

- Display Amount due
- Credit Card Payment Button
- Redeem Reward Points Button
- Cancel Order Button

Receipt Screen

- Displays Drinks ordered
- Display Price of Drinks
- Return to Main Screen Button
- Display reward points

Management Screen

- Generates Sales Report Button
- Return to Main Screen

SCHEDULE

Task	Work Breakdown Structure	Planned Start	Planned Finished	Workload Hours (Planned)	Workload Hours (Actually)	Progress Complete (%)1
1	Project Plan	Sep 30	Oct 9	24		
1.1	Scope	Sep 30	Oct 6	2	2	
1.2	Schedule	Sep 30	Oct 6	1	1	
1.3	Team Organization	Sep 30	Oct 6	1	1	
1.4	Team Roles	Sep 30	Oct 6	1	1	
1.5	Resumes	Oct 1	Oct 6	2	1	
1.6	Technical Description	Oct 1	Oct 6	3	1	
1.7	Data Management Plan	Oct 1	Oct 6	4	2	
1.8	Test Plan	Oct 1	Oct 6	4	2	
1.9	Final Revisions	Oct 6	Oct 9	2		
2	Final Color Scheme	Oct 10	Oct 14	2		0%
2.1	Final Input Fields	Oct 10	Oct 14	3		0%
2.3	Selection Processes	Oct 10	Oct 14	3		0%
2.4	Front Selection	Oct 10	Oct 14	2		0%
2.5	Icons/ Images	Oct 10	Oct 14	2		0%
2.6	Final App Layout	Oct 10	Oct 14	21		0%
2.7	Main Menu	Oct 15	Oct 24	3		0%
2.8	Menu/ Drink Selection	Oct 15	Oct 24	3		0%
3	Customize Drink	Oct 15	Oct 24	3		0%
3.1.0	Shopping Cart	Oct 15	Oct 24	2		0%

3.1.1	Checkout	Oct 15	Oct 24	2		0%
3.1.2	Order Confirmation	Oct 15	Oct 24	2		0%
3.1.3	Customer Records	Oct 15	Oct 24	2		0%
3.1.4	Order History	Oct 15	Oct 24	2		0%
3.2	GUI	Oct 25	Nov 25	155		0%
3.2.1	Main Menu	Oct 25	Nov 25	18		0%
3.2.2	Drink Selection	Oct 25	Nov 25	17		0%
3.2.3	Customize Drinks	Oct 25	Nov 25	15		0%
3.2.4	Shopping Cart	Oct 25	Nov 25	20		0%
3.2.5	Checkout	Oct 25	Nov 25	10		0%
3.2.6	Order Confirmation	Oct 25	Nov 25	10		0%
3.2.7	Customer Records	Oct 25	Nov 25	8		0%
3.2.8	Order History	Oct 25	Nov 25	10		0%
3.3	Database Structure	Oct 25	Nov 25	24		0%
3.3.1	Implementation	Oct 25	Nov 25	27		0%
3.3.2	Interface w/ App	Oct 25	Nov 25	30		0%
3.4	Final Review	Nov 25	Nov 28	6		0%

DELIVERABLES

Project Plan – Oct 9th

Requirements – Oct 14th

UI Design – Oct 24th

Technical Design – Nov 7th

Application (Coded) – Nov 27th

Peer Evaluation – Nov 30th

GANTT CHART

TEAM ORGANIZATION

Jason Zhou – Programmer, Writer

Justin Hale -

Kevin Lopez -

Kuhaun Lee – Progammer, Writer

Jeff Adkisson – Product Owner, Customer

RESUMES

Jason Zhou

Email: jzhou17@students.kennesaw.edu

Education:

- Bachelor of Science in Computer Science
- Kennesaw State University
- GPA: 3.69
- Expected Graduation: Spring 2024

Main Courses:

- Computer Organization Architecture
- Data Structures

Courses Taken in the Past:

- Programming and Problem Solving I & II
- Discrete Mathematics

Technical Skills:

- In-Depth knowledge of Java
- Working knowledge of C#, GitHub
- Skilled in working with OOP

Non-Technical Skills:

- Time Management
- Good Team Worker
- Good Communicator

Justin Hale

Email: jhale40@students.kennesaw.edu

Education:

- Bachelor of Science in Software Engineering
- Kennesaw State University
- Expected Graduation: Fall 2024

Current Courses:

- Intro to Software Engineering
- Discrete Structures

Courses Taken in the Past:

- Intro to Computing Principles
- Programming and Problem Solving I & II
- Calculus 1& II

Technical Skills:

- Basic knowledge of Java and Object-Oriented Programming
- Hands on Experience using various Point of Sale Systems

Non-Technical Skills:

- Good Team Worker
- Good Communicator
- Experience as a Customer Service Representative

TECHNICAL DESCRIPTION

This Point-of-Sale System (POS) will be written in C# programming language using Microsoft Visual Studio Integrated Development Environment (IDE). The POS system can run on PC and Mac computers using Windows, MacOS, or Linx Operating System. For storage requirements the average PC should suffice because most data will be stored in JSON files and require little space.

System:

- Visual Studio
- LinqPad
- WinForms

OS requirements:

- Windows
- MacOS
- Linux

Storage requirements:

- JSON

****Risks??**

DATA MANAGEMENT PLAN

- In the Main screen there is a customer list button, order drink button and a management tools button.
- By pressing the customer list button, it will display all the customer's information in the database. It will be ordered by first the last name, second first name, and third phone number. Additionally, the anonymous customer would be on the top of the list. To look up a customer, enter the phone number that is affiliated with the customer in the system. There will be an option to add a customer to the database. If this option is selected, then a first name, a last name, and a phone number must be inserted.
- In the menu, customers have various drinks options. Additionally, they can customize their drinks during their selection process. After the customer confirms their order and pays for the order, then a receipt will be printed including their total with their customized order. This will be added to a JSON file. There will only be one order processed at a time to prevent the database from making a mistake.
- By pressing the management tools button, it will lead to a screen that will include a button to generate a CSV sales report. If the button is clicked, then a CSV file of all sales will be generated and open a file in Excel
- Menu items and prices are going to be in a JSON file, which will also include the tax rate and reward points per dollar.
- Customers and their orders are also going to be stored in the CSV file, which will be implemented from the code.
- For the sales report the Total cost, Customer ID, Customer Name, phone number, reward points, and prices for each individual drink will be stored in an CSV file if a customer was added to the system. Each type of information above will be stored in different columns. This will be opened in excel. The order will be in the order of when the drinks were ordered. If the customer was an anonymous customer that is not in the database, then the order and customer name will be recorded in a JSON file.
- The sales report and CSV file will be read only.
- Adding a customer name, phone number, and drink orders will be written type only.
- When it comes to dealing with money and financial information, we will be using the decimal data type.

Data will be stored in three separate JSON files

1) **Configuration**

a) Application name, Tax rate, Reward point settings
    i) When the application first starts Configuration data will be loaded into memory. This data will not be modified by the application. Therefore, it has Read-only access.

2) **Customers**
    a) Customer record
        i) Customer ID, First name, Last name, Phone number, Rewards points
        ii) Read and Write access
    b) Sales Data
        i) Customer ID, Date/Time, tax, subtotal, total, payment method, and List of Drinks and Total Price.
        ii) Read-only access

3) **Drink Menu**
    a) Variety of drinks, Customization options
        i) Read-only access

TESTING PLAN

The testing process will ensure that all applications requested by the client requirements are met as well as to ensure all functional and nonfunctional requirements are met in the application. Various tests will be performed that test user experience as well as functionality of the application. Screens such as Main Menu, Customer List, add Customer, Order Drink, Payment, Receipt, and Management will All CSV information will be tested as well to ensure all customer data is stored and saved accurately into a JSON file. The customer reward program will be tested to ensure all customers saved in the system earn appropriate amount of reward points and can be redeemed.

An Agile process will be used to ensure that all possible changes made to the application are implemented. All requirements will be put into a requirements traceability document to make sure that all requirements are complete and tested. We will do Automated unit testing to decrease testing time as well as decrease possible risks. Testing will be done through various stages of the project to ensure a 100 percent success rate. During the testing, all software components will be tested to ensure that Windows and Mac OS are able to execute the program without issues and ensure an error-free user experience.

Front end testing will include button functionality, input field validation, and screen navigation. Black box testing will be used to test the applications usability, A tester without any background knowledge of the application will be asked to use the application. The tester will be monitored and questioned to ensure optimal user interface usability. During the Black Box testing the tester will be looking for possible user input error as well as input data validation to ensure that all data collected is accurate. To mitigate possible risks exception handling messages will be encoded to prevent the application from crashing.