1. **Requirements Document for Who’s Joe? Joe Coffee**

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**A1: Project Definition**

**A1.1 Purpose**

The general purpose of this project is to create a successful system that easily allows the users to quickly and efficiently clock in, request days off, and view and update the store’s inventory. The system will also allow the management to access the employee’s user’s information to schedule workdays and approve days off. Additionally, the management can view and update the store’s inventory and both management and employees can view food preparation instructions.

**A1.2 Problem**

Many stores across the country still relies on ancient systems to perform these functions. While some of these systems might still work, it might pose a challenge in maintaining these systems in the long term and training new users to use these systems. Thus, this project’s goal is to bring this store’s employee and inventory software back into the 21st by creating a simple, efficient, and quick way to handle schedules and inventory.

**A1.3 Project Scope**

The project scope will include, but will not be limited to:

* Creating an efficient means for management users to access their store’s inventory
* Allow employee users to perform basic work functions such as clocking in and out, request days off, and view schedule
* Allow management users to perform tasks listed in the previous bullet point and also can create work schedule, and edit employee’s hours, accept or reject days off.

**A2: Domain Analysis**

**A2.1 Introduction**

The domain for this system retail businesses and its employees. More specifically, this system enables a business’s employees to perform work related tasks with ease and with a small learning curve. The purpose of the domain analysis is ensuring our application provides a quick, efficient, and reliable service to a business (or in this case, a hypothetical popular coffee shop/gas station/ restaurant that is quickly expanding in Greensboro) and to relieve the workload of its employees.

**A2.2 Glossary**

Personal Identification Number (Pin): a number that is given to an individual that is used to gain access to their account.

Schedule: often called a rota or roster, is a list of employees, and associated information e.g. location, working times, responsibilities for a given time period.

Inventory: any item of property held in stock by a firm, including finished goods ready for sale, goods in the process of production, raw materials, and goods that will be consumed in the process of producing goods to be sold.

Management: often called supervisor, a type of user with supervising skills, or those in charge of a business or group with extra privileges and responsibilities.

Employee: a person employed for wages or salary, especially at nonexecutive level

Clock in and Clock out: To clock in is to record your time of arrival at work, usually by punching a time clock; to begin work. To clock out is to record your time of departure from work; to end work.

**A2.3 Knowledge**

It is important for a business to track its inventory, so the business won’t overproduce or sell out of product. Additionally, it is important for a business to record and track employee’s working time. First thing, it is the law to pay employees for every minute they work in the organization and it is important to have a centralized application so employees know where they can find the schedule. Any complications with the schedule will result in a business that is constantly under or over staffed and this will cause problems to a business solvency. Thus, is important to have an intuitive application to minimize these problems. Typically, these applications require a user to login with their credentials and based on what type of a user logged in, they will access to the portal. The most common credential is entering a personal identification number (PIN) and password. Additionally, a manager will have a different portal then an employee’s portal. The management and employee portal will have the same functions where the user can clock in or clock out, view the schedule and request days off, and view the business product instructions. The management portal will have additional functions where the user can perform management duties, such as creating schedule, modify employee’s hours, approve or deny requests, and view and update inventory.

**A2.4 Customers/Users**

The main and only buyers for our program will be businesses that needs to modernize there business software This can range from big corporations all the way down to mom and pop shops. This means most of the users who will interact with this software will be the business’s employees. Each user will have specific involvement with the program and the program will be designed to facilitate their needs.

**A2.5 The Environment**

This application is a web-based application that must run on most business computers. Thus, it must be light-weight and easy to run because a good portion of business computers are older or have low hardware specifications. Additionally, a huge portion of these computers runs on Windows 7 or newer.

**A2.6 Procedure/Tasks**

Our application will function along within these lines:

* A business computer with the application will be located in a convenient spot in the workers area and in a manager’s office.
* User gains access to their account after the validation process
* User can access his accounts and perform one of these functions
  + Clock in or Clock out
  + View Schedule
  + Request day off
* View instructions
* Management has the same functions above and have the following:
  + View or modify employee’s hours
  + View or modify inventory
  + Create or modify work schedule

**A2.7 Competing Software**

Businesses can simply pick an off a shelf software and make it compatible with their needs. This also allows the software to be generic across many business’s requirements or it can be specific to a bank’s needs. Furthermore, this has also allowed the software to have more features for its clients and better intelligence with its operations. Unfortunately, this creates a safety concern because it uses off the shelf software which hackers have experience in penetrating the software. Good example would be a fact that a good portion of current software runs on Windows XP, an operating system that no longer receives anti-malware upgrades from Microsoft since July 14, 2015. The operating system itself is ancient in software standards and its vulnerabilities is well known. Additionally, just because the software is off the shelf does not mean its ideal or modern. For example, there is a software called Kronos InTouch Timeclock that is offered today. Many of its users complain of its outdated GUI and it is unintuitive interface.

**A2.8 Similarities**

The system we are designing will share common elements with other systems

that are in market today. Our system will share the same features with all other systems that are in the market. It will allow a user to validate themselves in the system, it allows the user to gain access to their account, and it allows the user to perform actions on their own accounts. Our system will be designed to be generic with these aspects and more intuitive and easier to use.

**A3: Use Cases**

**A3.1 How will users use the system?**

· Employees will be able to clock in

· Employees will be able to clock out

· Employees will be able to view schedule

· Employees will be able to request days off

· Employees will be able to change password

· Employees will be able to view instructions

· Management will need to be able to view and modify inventory

· Management will be able to modify employee’s hours and create schedule

**A3.2 Use-Case Model**

**NOTE: Please note that in the following use cases, the “Actor” refers to an employee who is using the application.**

**Use Case: View Schedule**

1. (Actor) Opens application

2. (System) Prompt enter pin and password

3. (Actor) Enter pin and password

4. (System) Shows the main menu

5. (Actor) Selects view schedule

**Use Case: Clock in or Clock out**

1. (Actor) Opens application

2. (System) Prompt enter pin and password

3. (Actor) Enter pin and password

4. (System) Shows the main menu

5. (Actor) Selects clock in or out

6. (System) Shows the clock in or out button

7. (Actor) Clicks on the “punch” button to record their time

8 (System) Screen returns to main screen.

**Use Case: Request Day Off**

1. (Actor) Opens application

2. (System) Prompt enter pin and password

3. (Actor) Enter pin and password

4. (System) Shows the main menu

5. (Actor) Selects request day off

6. (System) Prompts user to enter date to request off

7. (Actor) User enters date to request off

8. (System) System inputs the date and returns to main screen

**Use Case: Instructions**

1. (Actor) Opens application

2. (System) Prompt enter pin and password

3. (Actor) Enter pin and password

4. (System) Shows the main menu

5. (Actor) Selects instructions

6. (System) A page pops up and prompts user for what instructions the user needs

7. (Actor) User searches for instructions

8. (System) System inputs a page with the instructions

**Use Case: CHANGE PASSWORD**

1. (Actor) Opens application

2. (System) Prompt enter pin and password

3. (Actor) Enter pin and password

4. (System) Shows the main menu

5. (Actor) Selects the Change Password option

6. (System) Prompt enter a new password

7. (Actor) Enter a password

**NOTE: Please note that in the remaining use cases, the “Actor” refers to manager who is using the system**

**Use Case: View or Modify Inventory**

1. (Actor) Opens application

2. (System) Prompt enter pin and password

3. (Actor) Enter pin and password

4. (System) Shows the main menu

5. (Actor) Selects view inventory

6. (System) A page pops up and displays the inventory. Prompts user if the user wants to modify the inventory

**Use Case: Create Schedule**

1. (Actor) Opens application

2. (System) Prompt enter pin and password

3. (Actor) Enter pin and password

4. (System) Shows the main menu

5. (Actor) Selects create schedule

6. (System) A work calendar pops up

7. (Actor) Populates the work calendar and click finish

8. (System) Creates the new schedule and returns to main page

**Use Case: Modify Schedule**

1. (Actor) Opens application

2. (System) Prompt enter pin and password

3. (Actor) Enter pin and password

4. (System) Shows the main menu

5. (Actor) Selects modify schedule

6. (System) A work calendar pops up

7. (Actor) Modifies the work calendar and click finish

8. (System) The modified schedule is ready to be viewed and returns to main page

**Use Case: Modify Hours**

1. (Actor) Opens application

2. (System) Prompt enter pin and password

3. (Actor) Enter pin and password

4. (System) Shows the main menu

5. (Actor) Selects modify employee hours

6. (System) A employee’s work calendar pops up

7. (Actor) Modifies the employee’s work calendar and click finish

8. (System) Returns to main page

**A4: Requirement Analysis**

**A4.1 Requirements:**

Functional requirements:

* The ability to view schedule
* The ability to clock in and clock out
* The ability to view instructions
* The ability to change password of said account
* The ability to view or modify inventory
* The ability to create or modify the schedule
* The ability to modify employee’s hours

Quality requirements**:**

* Making sure the system is fast, consistent, light weight, and there is no data lost
* Making sure the GUI is modern, clean, and easy to use and learn.

Platform requirements:

* Must be a web application. This web application communicates with a server that holds all the information
* Must be able to be compatible with modern business computers.

Process requirements:

* Expected to be implemented this application in the coming months

**A4.2 Difficulties:**

* Being able to safely secure and encrypt one’s information
* Making sure that there aren’t any errors or data loss
* Making sure the GUI is modern and easy to use.

**A4.3 Risks:**

One of the greatest risks for our system is the loss of important information like a person's account number. The system relies heavily on a database-like structure, so it is key to keep that information encrypted and secure while allowing itself to be accessed quickly by users. Another risk of this system is errors that could development from the system itself or from the users. We must make sure such errors do not happen and if it does happen then there must be an efficient error checking in place.

**A4.4 Key Stakeholders**

The most important stakeholders in this system are the businesses who implement this system and who can access the general users’ account, and the general users themselves.