Online Gas Station

Requirements Specification
Version 1

Contents

1. Executive Summary

1.1 Project Overview

Any business can be successful only when there is a consistent management of organizational and financial data with an efficient information system. Most of the companies have seen a drift in the process of workflow due to the accuracy and reliability. This raised the need to innovate and develop a system that can be implemented to make information accurate, that can be quickly accessed on demand. An effective information system can entitle a business with better planning, decision-making and hence desired results. Our system aims the same. Managing a gas station is really tough and as a result gaining a competitive advantage in this industry is very difficult.

Offering the cheapest rates when the gas prices are on the rise is obviously the cherry on top which attracts costumers but behind such an easy-appearing solution lies a top management level applied in all sections of the business. For this reason, an online system that covers the work and needs of all the possible users is crucial to achieve prosperity. This system will keep record of the ongoing activities of the station like gas sale, gas meter, generator consumption and monthly credit billing and accounts book preparations up to profit/loss and balance sheet. The system provides features for point of sale, monitoring, inventory, payables, and purchases. The online system will be fully controllable by the administrator which in our case is also the owner as demanded by him. He will have access to his managers and economists which will register and check employee's performance, inventory and financial reports. Every employee can clock in/out, check his/her hours, and other features according to the type of job of each employee.

1.2 Purpose and Scope of this Specification

The scope of this project is an online system that supports the administration of all the activities of the gas station through its managers, economists as well as through the existing employees. The system requests users to log in to use the system. After the authentication, the system allows each user to view their respective features based on their type of job in the business. The system restricts users from accessing other features depending on the user's level of permissions.

The purpose of the Software Requirements Specification is to outline the requirements for the online system to be built for the gas station.

The implementation of a new database system is part of the project. The system accepts data from the files of previous inventory system and the new data added by the user one after the other or by bulk operation.

Issues of website security, other than password, files and data protection within the site, are not part of this project.

2. Product/Service Description

"GEGA Oil" is a gas station in Albania which sells fuel and other products to drivers and passengers. As a business which has a very long time operating in our country but also having a lot of branches, it has faced difficulties in keeping a real time, fair and constant organization of all its operating activities. So a good system will be a

great help not only for each party of the business, from the headquarters and down to the employees as well.

Our idea consists in an online system that covers the activities of the entire business and keeps records of the work of each user. Saying so, our system is a friendly, functional and practical system for each user. We strongly believe that from all the research done from the team this system will be a great one in improving the management of the business and achieving a competitive advantage in its industry.

2.1 Product Context

Our online system aims to provide help on all of its activities of the existing business "GEGA Oil". The software is related only and directly with the business, it operates in behalf of the business, keeping data only related to the business and the services/products it provides in its relationship with the employees, suppliers or customers. It is to be used by all business employees whose functionalities will differ based on their type of job.

2.2 User Characteristics

The administrator:
Since the administrator in our case is the owner this means that he will have control over each and every data or report generated or kept in the database of the system.
- Is able to create and delete accounts for the employees and the economist/manager.
- Is able to see and manage financial reports, such as payments, expenses, funds etc.,
- Is able to see and edit the inventory
- Is able to see and edit the list of suppliers, and products
- Is able to see the reports/statistics
- Is able to see, manage and edit the list of the employees

The manager:
- Verifies that every employee closes/ opens their shift rightfully
- Rewards employees based on their contribution
- Decides upon wage amount
- Conducts interviews to hire new employees
- Reviews financial reports

The economist:
- Is able to see and manage financial reports
- Is able to see the reports/statistics
- Is able to see the inventory
- Is able to access the list of suppliers
- Is able to see the list of products
- Is able to see the list of employees

The client:
- Is able to see the products available for sale
- Is able to see points for each product
- Is able to calculate points for all products purchased
- Is able to get discount based on points calculated

- Is able to see his points balance and the future discounts available

The employees:
Their access and visibility will depend on their job position.
Fuel attendant:
- Is able to see the gas pumps, the left amount of fuel on each of them
- Is able to register and see its receipts
- Is able to close his/her shift
- Is able to check his working hours
- Is able to see his wage
- Reports extra hours of work

Cashier:
- Is able to register and see its receipts
- Is able to open/close his/her shift
- Is able to check his working hours
- Is able to see his wage

Janitor/Security:
- Is able to open/close his/her shift
- Is able to check his working hours
- Is able to see his wage
- Reports extra hours of work

Fuel delivery driver
- Reports any delivery
- Able to view new orders
- Reports extra hours of work
- Closes/opens shift

2.3 Assumptions

On this software:
- It is assumed that the gas station has all data necessary related to its employees/suppliers.
- It is assumed that all users have Internet Connection.
- It is assumed that each user has a personal account in the system.
- It is assumed that all data in the system will be fully managed and confidentially controlled by the administrator.
- It is assumed that the manager and the economist will have access to certain data of employees, suppliers and products.
- It is assumed that each supplier that will be part of the system has been registered and verified as a business.
- It is assumed that the administrator/manager/economist can make any necessary changes and can use the data stored in the database of the system in regard to the functionalities that the system allows them to do, according to the type of user that they perform in the system. Changes may include employees and/or suppliers/products.
- It is assumed that the manager sets the weekly schedule for all employees.

- It is assumed that employees can have access only to their personal data and no other data.

2.4 Constraints

The system will have the following constraints:

- The administrator and the employees must login using their respective username and password

- Users must have basic knowledge on the usage of web applications in order to use this system efficiently

- A pc/laptop is needed to access this gas station system

- A stable internet connection is required to access the product

- This web application must be accessed through a modern **web** browser such as Chrome, Firefox, Internet Explorer 10+, and Microsoft Edge

2.5 Dependencies

List dependencies that affect the requirements:

- The administrator is the only one that has the authority to create/delete employee accounts

- The administrator must specify a series of attributes for the employees such as ID, First Name, Last Name, Username, Job Position, Email and Phone number and a Default Password

- Access to the system is restricted only to the pre-assigned usernames by the admin

- Only the economist and admin are able to manage the financial reports

- The admin, economist and manager cannot generate reports/statistics if the employees have not updated their activity

- The manager cannot reward the employees if they have not updated their extra shift hours

- The manager cannot verify the employee's working hours and shifts if the employees do not confirm their respective shift

- The employees cannot confirm shifts that have already taken place

- The fuel attendant is the only user that has access toward the fuel dispensers

- The cashier and the fuel attendant are obliged to register the receipts

3. Requirements

3.1 Functional Requirements

Req#	Requirement	Comments	Priority	Date Rvwd	SME Reviewed / Approved
BR_01	The system should have different accounts, each with a username and a password.	All accounts of the users will be stored in the database and their passwords will be hashed.			
BR_02	The software works as an online system used by 4 main users: the administrator, the manager, the economist and the employees.	This is the main web application which will be used by all users.			
BR_03	The administrator is the user with the most functionalities and privileges.	The administrator can view, control and modify all the other user accounts, documents generated and receipts collected.			
BR_04	All documents generated within the business and reported in the system will be available at any time only to the users they were created from, and to the administrator.	Documents are an important part of the business and they should be available in order for decisions to be taken.			
BR_05	System gives the right only to the administrator and manager to add other/new users.	Other users represent a type of job provided by the business which currently are: economist, cashier, fuel attendant, driver, janitor, security.			
BR_06	The manager is responsible for the employees, their accounts and functionalities.	The manager should be in day-to-day contact with all employees checking on their reported hours, extra hours and daily reports if any.			
BR_07	Each new employee to be added in the system is registered by the manager or the administrator by taking his/her personal data, experience and so creating their accounts.	Personal data entered in the system is stored in the database of the system accessible only to the employee himself and to the administrator/manager.			

Req#	Requirement	Comments	Priority	Date Rvwd	SME Reviewed / Approved
BR_08	The manager has full control over the products and suppliers.	Every time the business signs a contract with a supplier, a new product list is generated for the manager.			
BR_09	The manager is provided with a list of all orders of the day, week, etc.	From the list of orders, he signs new contracts with the suppliers over new products to be purchased which only the manager and administrator has contact with.			
BR_10	The economist supervises the contracts with the suppliers over new products and sets the necessary features for the products to be sold within the business.	Every economic aspect is supervised by the economist including here contracts but also basic aspects like the price or taxation of the products to be sold.			
BR_11	The economist prepares reports and statistics which analyze the wellbeing of the business at a specific moment in time.	Every report or statistic is checked by the manager/administrator who then take decisions.			
BR_12	The economist gets a view of the employee's accounts which includes only their hours of working and wages.	Every wage payment of each employee is prepared by the economist and then finalized by the manager.			
BR_13	The economist checks the inventory and reports its balance when preparing the financial statements of the business.	Every change in the list of products is reflected in the inventory and so every time it gets updated by the economist.			
BR_14	The administrator, manager or economist can create new empty documents based on their main tasks.	If the current document opened by them contains unsaved changes then the system allows these users to save changes before closing the document.			
BR_15	The system allows the 3 main users to save the opened document into a file.	This document can also be exported to an Excel/ Word file in order to be accessible even offline.			
BR_16	The system allows the 3 main users to attach images, graphs or lists to the document opened.	The system allows users to save attachments to the file before closing the document.			
BR_17	Each list that is part in the account of a user or generated by them maintains data in ascending/descending order chosen by the users themselves.	This makes data from lists quickly accessible from their users.			

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BR_18	Each change made anywhere in the system shall contain author, date & time, and description of the change.	The system shall allow users to expand and collapse all changes in the History pane.			
BR_19	The system should display updated values within 2s after user triggers the edit operation.	This will be a maximum edit response time, the optimal time is 1s.			
BR_20	Every user that has access to the New operation shall have his work registered by system while the operation is ongoing.	The user may discard or save the changes made in the window opened by the New operation.			
BR_21	Logout operation shall close the account of the user and not make it accessible for him anymore.	To go back online, every user shall enter the username and password.			
BR_22	The system shall encrypt the persistent system data.	All personal data is protected based on regulatory and security requirements.			
BR_23	The system shall sanitize any data input or imported by users.	All data is maintained within a sense of security and does not exploit the security holes.			
BR_24	When logout operation performed, the system transfers the user to the home page.	"Logged out successfully" will be displayed and system updates the information in Audit file.			
BR_25	Is a user is logged in but not performing any action, system must be terminated automatically.	System terminates the session if unused for 30 minutes.			
BR_26	Cashier can view the list of products purchased and currently in the inventory of the business.	A list with all products and their respective price, quantity and taxation is available for the cashier.			
BR_27	Cashier and the fuel attendant can generate receipts.	Each receipt is supervised by the economist by checking on each item sold.			
BR_28	Each employee representing a user in the system shall report their daily hours of working.	Every employee starting its shift must clock in and clock out in order for his/her hours to be recorded by the system. In this way not only the standard working day hours are recorded but also any other extra hour.			
BR_29	Each user has access to an edit operation.	User clicks on Edit link next to the record which he/she wants to modify within their scopes and functionalities in the system.			

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BR_30	After clicking Edit system opens the window of the record chosen to be edited.	After user starts editing, he can click on Submit to save changes or cancel to abort changes.			
BR_31	When Submit is click, system checks if barcode is unique.	If yes, system updates the action in the appropriate database.			
BR_32	If barcode is not unique, system displays an error message.	System asks user to repeat changes again.			
BR_33	Cashier and fuel attendant can edit their receipts being generated.	Changes include products being sold or their quantity.			
BR_34	The administrator and the manager can edit the list of employees, suppliers, products and the content of documents.	Every document generated by user can be edited by the administrator or the manager.			
BR_35	The economist can edit the content of the documents, reports made by himself only.	Every edit made is viewed by the manager and the administrator.			
BR_36	The fuel attendant has access to the fuel amount available.	Every time a fuel receipt is recorded the amount changes as well.			
BR_37	The driver has an option to see orders coming into the business and their locations	Orders list shows the driver only the kind of products ordered and the amount to be transported to the client.			
BR_38	The driver has an option to see deliveries, incoming products in the business.	The delivery list shows all products to be collected from suppliers and delivered in the business within the shift.			
BR_39	The driver can edit its deliveries or orders.	He can open the list containing orders/deliveries and tick the ones already completed. Information is directly transmitted to the manager under the driver's account.			
BR_40	Janitor and Security are basic users of the system	They can clock in/out, see hours worked and wage balance.			
BR_41	Cashier, fuel attendant, driver, janitor and security employees have access to a Report operation.	Report when clicked opens a window where each user can report any unusual activity recorded during their shift. Every change made in the window is recorded automatically in their account and viewed by the manager.			

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BR_42	Every user that has access to open a window that contains information (so the document) can also print it.	The device in which they operate should be connected to a printer and if not, the document can be downloaded in their device instead.			
BR_43	In the homepage a New operation is present, and the operation can be performed only the administrator or the manager.	Every other user can just view the information inserted, which may be a notification for employees.			
BR_44	A New operation is present at each account of the users also.	This time New opens an exact window as the one it has near where users can insert new data and submit it.			
BR_45	In the homepage, when a user clicks login after entering the username and password the respective account will be opened only if data entered matches the database data.	If information is true, system opens the session of the account. If not than it displays "Login Failure" information, which stands for either a database error or an invalid username/password.			
BR_46	Each client is registered in the system.	Each client's username, password and credit card (if he uses a credit card to pay instead of cash) information is stored in the database.			
BR_47	Client can login in the system with the correct username and password.	Username and password should match those stored in the database.			
BR_48	Client performs a human or robot control test.	Client should fill it in order to be sent to his/her respective account's page.			
BR_49	Client can view the products list.	The products shown are the ones the business has in storage and available for sale.			
BR_50	Each product is associated with a number of points.	Every time the client purchases a product its number of points is also registered and added up.			
BR_51	A certain number of points is associated with a discount amount.	The discount amount in the price of the products purchased is determined by the number of points collected by each client.			
BR_52	Client can logout from the system anytime.	A message displaying "logged out successfully" is displayed.			

Req#	Requirement	Comments	Priority	Date Rvwd	SME Reviewed / Approved
BR_53	Each product is stored based on its name or id.	Each product is placed into categories based on its id/name.			
BR_54	Every new supplier is registered based on its id or name.	In the registration of each supplier, data like name, id, contract beginning and ending date and other contract details are stored in the database.			
BR_55	Each user, except client, can access the information regarding their wage from their account.	They can view all transactions made during their working time in the business and their latest transaction made.			
BR_56	Each user can change his/her password.	This can be done by entering the old password, typing a new one, confirming it and saving the changes made.			
BR_57	If while trying to login a user has problems by typing the right password, they can change it.	The database system will save their phone number as well associated with their confidential information, so they can reset or put a new password through their phone number.			
BR_58	For each extra hour a compensation will be calculated for each employee.	At their extra hours, employees can see their total extra hours worked, the compensation per hour and the full compensation.			
BR_59	All product orders made will be recorded based on the product name or id.	Each product based on its name/ id will be classified into categories as well with respective id's.			
BR_60	Each purchase/ delivery made by the driver f the business is reports by him only.	The information entered by the driver will be checked by the admin, manager and economist.			
BR_61					
BR_62					
BR_63					

Req#	Requirement	Comments	Priority	Date Rvwd	SME Reviewed / Approved
BR_64					
BR_65					

3.2 Non-Functional Requirements

3.2.1 Product Requirements

3.2.1.1 User Interface Requirements

To construct a good user interface, the specific target group should be specified first. The online gas station will be built to ease day to day operations for the staff of our chosen business and help the administrator/owner have a better control over employees and their contribution to the business on a daily basis.

1. Login credentials

In the first page of the web app, the login interface will show the logo of the chosen gas station and below it will consist of the two text fields where each user will log their username along with password. In case the user doesn't have an existing account, he will be able to sign up by clicking a button below and after their information is verified by the administrator their account will be activated.

2. Home page

In this page, users will be able to enter their side of the application. Every employee will be able to log into their interface and put the necessary information. The categories in the menu page will be:

- Economist
- Fuel attendant
- Administrator
- Janitor
- Security
- Cashier
- Manager

The home page includes a settings button, where every employee can have the option of changing their password or email addresses, along with their phone numbers and other personal information.

➢ In the economist's page, in the top left corner will be displayed statistics and records of the businesses sales during a pre-specified date. The date will be chosen through a calendar box that will include day, month and year. In the right corner will be displayed Inventory management which will include gas, motor oil, windshield cleaning fluid, jumper cables and other car products and accessories. The economist will also have access to report his/her own shift, just like any other employee in the software.

- The fuel attendant's page will include several features. He will be able to view and edit each gas and oil tank at the center of the page where every tank will be displayed separately. Clicking on the tanks will generate their actual levels of oil in them. He will be able to view his wage and enter his shift in the right corner of the page, or logout at the bottom. He can enter and print receipts for each customer.
- The administrator will have access to every employee's information, their shift, their working hours and their reports. A **+ /-** sign will be displayed in the screen to add new employees or remove one. The administrator will be able to view and edit wages. In this page there will be a search box to help the administrator search and contact employees about different issues that arise.
- The janitor will be able to enter shift hours, report any damage by clicking at the **report** button which requires fields to be filled regarding the damage. He/ she will be able to view wage and also require equipment through **equipment** button at the bottom corner.
- Security guards will enter their shift and view wage and also have the Report button to report any unusual activity of the night in charge.
- Manager will be able to view the economist and each employee activity. He will have full control over the products on sale and of orders recorded by the cashier and the invoices taken by the fuel attendant.
- Cashier will be able to have a full view of the product lists, their prices and amount of taxes applied on each item if any. He can generate, edit or save new receipts. He will have to report his full hours or extra and check his wage.

3.2.1.2 Usability

The GUI should be easy to learn and use by users of any technical background. A built-in help feature should be available in all pages, to guide the users with the available functions on that page. An easy to understand documentation should be provided with the system.

Privacy

The gas station system will be designed in order to have relevant information and alerts regarding privacy issues and for them to be easily accessible and visible at all time. However, the information and alerts must be displayed in a way that does not disturb the user or affect his workload. Each employee's personal information should be visible only by him and accessed easily at any time.

Accessibility

The information should maintain an extensive and universally acceptable form, and it must be compliant with accessibility standards. Inaccessibility can slow the company's process and cause financial losses since employees cannot access their information or interact with their supervisor.

Consistency

The gas station should be consistent at both levels of visuality and functionality. The elements must be designed accordingly to the globally recognized patterns and guidelines. Consistency is an important component of our system because patterns of inconsistency may trigger feelings of frustration and cause misunderstandings between users.

Adaptability

The system will be adaptable to user inter action with the interface. So when a user logs in for the first time their username and password are remembered by the

system. The adaptability should apply in cases where settings are changed and the system has to adapt and prioritize the new regulations.

<u>Learnability</u>

The learnability of the software is a crucial element and very significant aspect of user interactivity. The easier it is for the user to learn and understand the program the better their performance and efficiency. By having a easy to learn software we help user reduce their average task time.

3.2.1.3 Efficiency

The efficiency of the system must be at the level where it ensures the interactivity of users at all time. The system should provide users with relevant information constantly so that it is reliable. Our online gas station system must be efficient meaning that administrator will easily contact his employees at any time during working hours, the economist can be in touch consistently with the fuel attendant and cashier and discuss any issues that arise through daily sales. The data in reference to inventory and transactions should be automatically updated and in accordance with the actual state of the business.

3.2.1.3.1 Performance

In order to create a good performance evaluation, we should go over each of these parameters to find out what performance is our system offering:

- <u>Response time</u> is the average time it takes the system to reply to a request, our system must response within a 500 millisecond interval.
- <u>Throughput</u> is the number of tasks the system processes within a defined time interval, in our case the system should support the use of all users at once.
- <u>System availability</u> is the percentage of times the system is responsive to requests in difference with the percentage of times it is not. The system should be available 99.5% of the time, on average.

A quick way to test these parameters is through online pages that provide these services like gtmetrix.com, tools.pingdom.com, websiteoptimization.com etc. which also help solve optimization issues.

3.2.1.3.2 Space requirements

- Disk space, when discussing space, we need to take into consideration the number of pages the software will have and the amount of photos, interactive images, CSS files and email accounts in it. The more pages and the more files in a web page the more disk space it will need, but the number of visitors also affect space. Disk space of the software should be based on this information and considering the low prices of web hosting resources these days it can be purchased in gigabytes. On average, our software will most likely need less than 10 Gb per month including financial statements and inventory that take up more space than the other factors.
- Bandwidth, on the other hand, is the number of data a system can transfer from the website to end users. In our case, the activity of the users will be centered around the interaction between the employee and the system so

bandwidth needs to be at least 20 Gb in order for the web page to support every communication and documentation needed.

3.2.1.4 Dependability

To make our website more reliable and trusted there are several things to be avoided and things to look for:
- Looking for established institutions to partner with, these institutions must be prestigious and should have been around for a while to gain recognition.
- Staying away from commercials is key, since many advertisements popping up at once makes the app uninteresting and not trusted.
- Displaying up-to-date information at all time is also important
- Check for the sites overall look, it should look professional and avoid any misspelling or sloppy writing.

3.2.2.5 Manageability/Maintainability

3.1.2.5.1 Monitoring and Operations

The system should work reliably, with automatic backup and recovery features. In case of unexpected termination of a session, the unsaved data should be recovered without loss and displayed to the respective users for saving into the system or continuing with the work. At any time, audit file and all db and mailing information are required to be updated in the backup.
The system, at any time, should be accessed only by the authenticated users. Network communications should use cryptographic protocols such as SSL. Automated responses should be restricted using CAPTCHA. The system is required to end the session automatically, when an open session is not used for a specific period of time

3.2.2.5.2 Maintenance

The system should be easy for the users who execute the system day to day, for the developers who wish to edit or develop further, and for the personnel who is in charge of the maintenance.

3.2.2.6 Security

The data in this gas station system is considered to be sensitive and we assure the

users that we will be able to protect the data and provide a high security for this

application.

3.2.2.6.1 Protection

In order to protect the system, we will take the following measures:

- The password will be encrypted using **MD5 (Message-Digest Algorithm)** which is a widely used hash function

- The gas station system will validate the input data

- SQL filtering will be used in order to prevent any case of SQL injection

- Each user will see only the information which is related to his respective page

- The employees will be able to change their default password according to their choices

3.2.2.6.2 Authorization and Authentication

- The authentication will be the username, password, reCaptcha and each user will be able to log in using its respective credentials
- Only the pre-assigned employees will be able to log into the system
- Each user is authorized to access only the corresponding information depending on the user type
- If the credentials are invalid an error message will be shown to the user

3.2.2.7 Data Management

3.2.2 System Interface/Integration

3.2.3 Standards Compliance

3.2.4 Organizational Requirements

3.2.4.1 Environmental Requirements

Environmental requirements specify the operating environment of the system.

- Gas Station facilities operate for 24 hours a day and as a result we estimate that the application shall be available for access 24/7
- The program will available to every pc/laptop device connected to internet and will be accessed through modern browsers (Chrome, Firefox, Internet Explorer 10+, and Microsoft Edge)
- The system will not be forced to encounter a downtime and downtimes will not interrupt the work process or slow it down
- Maintenance will be scheduled and it will not affect the system's functionality, unscheduled maintenance will not last more than 45 minutes

3.2.4.2 Operational Requirements

This gas station system will be a web-based application that provides the management of a filling station facility. Thus, this system should be able to allow the employees to manage their work and maintain their information on their corresponding page.

The main operations that will be provided to the manager, economist and other employees related to their respective job position are as follows:

- Accessing operations according to their specific job position
- Monitoring their working hours, wage and shift schedule
- Reviewing various financial reports (the manager and the economist)
- Reporting their overtime activity

The main operations that will be available to the administrator are as follows:

- CRUD functionalities related to all the employee accounts
- Viewing and Editing inventory, the list of employees, suppliers and products
- Generating and Managing financial reports/statistics and the list of workers
- Monitoring operations

3.2.4.3 Development Requirements

1) Client-Side Programming (Front-End)

Client-side indicates to everything that is displayed or takes place on end user

device. This includes what the user sees, such as text, images, and the rest of the

UI, along with any actions that an application performs within the user's browser.

The technologies to be used in client-side are as follows:

- HTML (Hypertext Markup Language)
- CSS (Cascading Style Sheets)
- Bootstrap 4 will be used to maintain HTML and CSS
- JS (JavaScript)
    - Execute always on client environment to save a bandwidth and make execution process fast
    - Makes the web application more interactive. Including here buttons, hover-interactivity, menu functionality, animation, and other stapes of the modern web experience
    - Is supported by all modern browser

2) Server- Side Programming (Back-End)

- Programming Language to be used: PHP

- Database: MySQL database
- Server: APACHE

3.2.5 External Requirements

3.2.5.1 Regulatory Requirements

Regulations are responsible for impacting both functional and nonfunctional requirements legacy and new system, every business must be sure that the software they purchase satisfies all the relevant rules and regulations to avoid risk of serious brand damage, costly penalties and lost reputation resulting from noncompliance. Regulatory compliance refers to the discipline and ensures that a software follows the laws enforced by the government based on the industry standards. Our system should be licensed by the "Drejtoria e Pergjithshme e Pronesise Industriale (DPPI)" so we can operate in Albania and to be certified as compliant.

- Personal data is information that could be used to identify an employee. Many emerging laws, particularly those dealing with privacy and personal data, require that businesses themselves comply and report on compliance and any breaches that might occur. We should ensure our customer that their and their employees personal date are safe and protected with our product, since we need those data for login purpose also for accounting and managerial purpose.
- One of the most important developments in this area is the General Data Protection Regulation (GDPR), designed to strengthen data protection for individuals within the European Union, since one of the main requirements and duties that EU has for Albania is to follow its rules and legislation. GDPR requires that data about individuals (such as "a name, a home address, a photo, an email address, bank details, posts on social networking websites, medical information, or a computer's IP address") be maintained on servers within the EU and not transferred out of it. It also requires that companies notify individuals of any data breaches, and mandates that companies have a data protection officer (DPO). Other countries have, or are developing, similar types of regulations. Every security policy of the system will be in full agreement with the provisions pf Law No. 9887, dated 10.03.2008 "On the Protection of Personal Data". The Online System that we provide requires data such as a name, an address, a phone number, salary details for the employees, suppliers and clients we should maintain this data on servers and not use them out of this server for any other purpose.

3.2.5.2 Ethical Requirements

1. All users accept full responsibility for their own work.
2. All interests of the administrator, manager and economist respect the public good.
3. The ultimate effect of the work of the users will be to the public good.
4. Any actual or potential danger to the users, the public or the environment, that they believe to be associated with the software will be disclosed to the appropriate persons or authorities.

5. Software will be fair in all its related statements and documents, its methods and tools.

6. Passwords, files and information that is confidential to the employee or confidential to others is ensured according to respective policies and procedures.

7. Every property of the client, employer or supplier is used only in ways properly authorized, and with the client's, employer's or supplier's knowledge and consent. Every data to be used is ensured to be accurate and derived by ethical and lawful means.

8. Every confidential information gained in their professional work is kept private where such confidentiality is consistent with the public interest and consistent with the law.

9. An adequate testing, debugging and review of the documents and the software as a whole is ensured.

10. Documents to be endorsed include only those prepared under the supervision of the administrator or within the areas of competence of a specific employee and with which the administrator is in agreement.

3.2.5.3 Legislative Requirements

3.2.5.3.1 Accounting Requirements

General

1. System enables the economist and cashier to create invoices and receipts.

2. System enables a direct deposit of their employee's net into their debit cards.

3. System provides facilities to support the entire budget process, including budget preparation, approval, amendments, change history, monitoring and reporting.

4. System tracks phases and costs associated with jobs.

Customer invoices and sales orders

1. Update fields of information for a customer.

2. Offer different pricing levels to different customer types based on a criteria.

3. Store credit card information; receive and track credit card payments.

4. Enter payments during invoice entry.

5. Option to print invoice on paper.

6. Generate purchase orders from the sales order screen.

7. Make some items on an invoice taxable and others non-taxable. Calculate the tax amount based on the type of item taxable.

General Ledger

1. Step-by-step verification of transactions and activity within the accounting system.

2. Generate and edit checks and deposits, make adjustments. Make sure that reconciled balance equals the financial statements.

3. Set up ledger accounts and sub-accounts.

Customer Payments

1. Receive and track credit card payments.

2. Approve and process credit cards with integrated credit card processing.

3. Edit, delete payments; enter overpayments on account.

Inventory

1. Specification on each item how the calculation of the price will be done.

2. Transfer inventory items from one location/warehouse to another.

3. Take physical inventory counts to update the on hand quantities and adjust for accuracy.

4. Give inventory items optional names for easier lookup of name variations.

5. Use multiple units of measure for default, stocking, purchasing and selling.

6. Store a picture of inventory items in the system.

7. Track suppliers and orders per item.

Ordering Products

1. Manage shipment of purchases orders.

2. Track vendor partner number by detail line.

3. Receive purchase orders receipts.

3.2.5.3.2 Security Requirements

3.2.6 Portability

The system should support new versions of the related browsers. The administrative and server technologies should be standard and supported by most platforms.
To develop our Gas Online Management system, we will use PHP language as our main language for the back-end and for the front-end we will use mostly HTML, CSS, JavaScript etc. We have decided to develop an online web application system. Our program will be available on any browser that has internet connection that can be accessed from any pc, laptop, mobile devices etc. Also it will operate the same despite of the operating system, since PHP is available in any platform. Later on we hope to develop a mobile application based on our web application format.

3.3 Domain Requirements

Our Online Management System when used by admin should be able to manage employees, finance reports, products, suppliers, inventory and statistics. The admin can create, edit and delete accounts for the employees, including the manager. Also he can edit, add or delete the list of products, clients, suppliers and inventory (the updates will be stored in the database). The economist and the manager of the Gas Station will have access as well as the admin for the finance reports and statistics, for the list of the employees, suppliers and clients with some features being showed only to the manager/administrator. Other users such as cashier, janitor etc. will be able to see their salary and shifts also register the start time of their shift. This system will work as a manager for the station where everything will be recorded in

order to make it easy for the owner and employees to see their progress and manage better and easier their business and their shifts (for the employees).

4. Software Design

4.1 User Scenarios / Use Cases

1. Successful Login
   a. User enters username and password.
   b. Information is checked with the information stored in the database of the system.
   c. If information true, show successfully logged in.
   d. Redirect the user to his/her account.
2. Failure Login
   a. User enters username and password.
   b. Information is checked with the information stored in the database of the system.
   c. If information false, show Login Failure or Invalid Username/Password.
   d. User is redirected to login page.
   e. User tries again.
3. Admin Login
   a. Admin enters username and password.
   b. If Login information is true, he is redirected to his account's main page.
   c. Main page includes View Users, New, Edit, Shop, Change Password, Logout.
   d. In very window opened by performing an operation from the main page, has a "admin" button on the top right which returns admin to the main page.
3.1 Admin clicks View Users
   a. Admin is logged in.
   b. He clicks View Users.
   c. It opens a window showing the list of all users, admin has control over: Manager, Economist, Client and other employees (Cashier, Fuel Attendant, Janitor/Security, Driver).
   d. If he clicks over one of the users, it sends him to each user's account showing their work by the information submitted by each user.
3.2 Admin clicks New
   a. Admin is logged in.
   b. The window opened contains Role, Contract and Details write fields, save and cancel operations.
   c. Roles accepted by the system are manager, economist, client, and other employees.
   d. Contract field contains date of beginning and ending of the contract and its terms.
   e. Details field saves other details regarding the contract.
3.2.1 Admin clicks Save
   a. Admin is logged in.

b. Admin is in New window.
c. Admin clicks Save.
d. All information in the fields is saved in the database of the system in the category defined by the name entered in the Role Field.

3.2.2 Admin clicks Cancel
a. Admin is logged in.
b. Admin is in New window.
c. Admin clicks Cancel.
d. Information entered in the fields is not saved.

3.3 Admin clicks Edit
a. Admin is logged in.
b. The Edit window contains users, shop, supplier, save and cancel operations.

3.3.1 Admin clicks Users
a. Admin is in Edit window.
b. Admin clicks users.
c. Admin can now open each user's account and edit their features.
d. he can save or cancel the changes made by Save and Cancel buttons.

3.3.2 Admin clicks Shop
a. Admin is in Edit window.
b. Admin clicks Shop.
c. Shop window is opened.
d. Shop window contains Products, Inventory, Orders, Deliveries/Purchases, New Product and New Supplier.

3.3.2.1 Admin clicks Products
a. Admin is in Shop window.
b. Admin clicks Products.
c. Products window is opened showing products list and their features recorded.

3.3.2.2 Admin clicks Inventory
a. Admin is in Shop window.
b. Admin clicks Inventory.
c. Inventory window is opened showing all information entered by the economist.

3.3.2.3 Admin clicks Orders
a. Admin is in Shop window.
b. Admin clicks Orders.
c. Orders window is opened showing all information entered by the cashier or fuel attendant.

3.3.2.4 Admin clicks Deliveries
a. Admin is in Shop window.
b. Admin clicks Deliveries.
c. Deliveries window is opened showing all the information of the deliveries taken into the business/purchases made by the driver.

3.3.2.5 Admin clicks New Product
a. Admin is in Shop window.
b. Admin clicks New Product.
c. New product window is opened and it has product name/id, supplier, contract, details fields and save or cancel operations.
d. If any information is entered in the fields it can be saved by Save button or canceled by Cancel button.

3.3.2.6 Admin clicks New Supplier
a. Admin is in Shop window.

    b. Admin clicks New Supplier.

    c. New Supplier window contains supplier id/name, contract: begin/end, product id/name, category id, amount, price, taxation fields and save or cancel operations.

    d. If any information entered in the fields it can be saved by Save button and canceled by Cancel button.

3.3.3 Admin clicks Supplier

    a. Admin is in Edit window.

    b. Admin clicks Supplier.

    c. Supplier window is opened showing all characteristics saved for each supplier in the database.

3.4 Admin clicks Shop

    a. Admin is logged in.

    b. admin clicks Shop in main page.

    c. Shop window is opened containing products, inventory, orders, deliveries, new product and new supplier.

    d. All functions are same as the windows opened for each from the edit window but only new product and new supplier can be changed, other windows can just show their information and not be edited.

3.5 Admin clicks Change Password

    a. Admin is logged in.

    b. Admin clicks change password.

    c. Change password window opens and contains current password, new password, confirm new password fields, cancel and save operations.

    d. If any information entered in the fields it can be saved by Save button and canceled by Cancel button.

    e. If saved the new information is saved in the database.

3.6 Admin clicks Logout

    a. Admin is logged in.

    b. Admin clicks logout.

    c. If system is working correctly, admin is logged out and "Logged out successfully" appears.

4. Manager Login

    a. Manager enters username and password.

    b. If Login information is true, he is redirected to his account's main page.

    c. Main page includes View Users, New, Edit, Shop, Shift, Wage, Extra, Change Password, Logout.

    d. In very window opened by performing an operation from the main page, has a "manager" button on the top right which returns manager to the main page.

4.1 Manager clicks View Users

    a. Manager is logged in.

    b. He clicks View Users.

    c. It opens a window showing the list of all users, Manager has control over: Economist, Client and other employees (Cashier, Fuel Attendant, Janitor/Security, Driver).

    d. If he clicks over one of the users, it sends him to each user's account showing their work by the information submitted by each user.

4.2 Manager clicks New

    a. Manager is logged in.

b. The window opened contains Role, Contract and Details write fields, save and cancel operations.
c. Roles accepted by the system are economist, client, and other employees.
d. Contract field contains date of beginning and ending of the contract and its terms.
e. Details field saves other details regarding the contract.

4.2.1 Manager clicks Save
a. Manager is logged in.
b. Manager is in New window.
c. Manager clicks Save.
d. All information in the fields is saved in the database of the system in the category defined by the name entered in the Role Field.

4.2.2 Manager clicks Cancel
a. Manager is logged in.
b. Manager is in New window.
c. Manager clicks Cancel.
d. Information entered in the fields is not saved.

4.3 Manager clicks Edit
a. Manager is logged in.
b. The Edit window contains users, shop, supplier, save and cancel operations.

4.3.1 Manager clicks Users
a. Manager is in Edit window.
b. Manager clicks users.
c. Manager can now open each user's account and edit their features.
d. He can save or cancel the changes made by Save and Cancel buttons.

4.3.2 Manager clicks Shop
a. Manager is in Edit window.
b. Manager n clicks Shop.
c. Shop window is opened.
d. Shop window contains Products, Inventory, Orders, Deliveries/Purchases, New Product and New Supplier.

4.3.2.1 Manager clicks Products
a. Manager is in Shop window.
b. Manager clicks Products.
c. Products window is opened showing products list and their features recorded.

4.3.2.2 Manager clicks Inventory
a. Manager is in Shop window.
b. Manager clicks Inventory.
c. Inventory window is opened showing all information entered by the economist.

4.3.2.3 Manager clicks Orders
a. Manager is in Shop window.
b. Manager clicks Orders.
c. Orders window is opened showing all information entered by the cashier or fuel attendant.

3.3.2.4 Manager clicks Deliveries
a. Manager is in Shop window.
b. Manager clicks Deliveries.
c. Deliveries window is opened showing all the information of the deliveries taken into the business/purchases made by the driver.

4.3.2.5 Manager clicks New Product

a. Manager is in Shop window.
b. Manager clicks New Product.
c. New product window is opened and it has product name/id, supplier, contract, details fields and save or cancel operations.
d. If any information is entered in the fields it can be saved by Save button or canceled by Cancel button.

4.3.2.6 Manager clicks New Supplier
a. Manager is in Shop window.
b. Manager clicks New Supplier.
c. New Supplier window contains supplier id/name, contract: begin/end, product id/name, category id, amount, price, taxation fields and save or cancel operations.
d. If any information entered in the fields it can be saved by Save button and canceled by Cancel button.

4.3.3 Manager clicks Supplier
a. Manager is in Edit window.
b. Manager clicks Supplier.
c. Supplier window is opened showing all characteristics saved for each supplier in the database.

4.4 Manager clicks Shop
a. Manager is logged in.
b. Manager clicks Shop in main page.
c. Shop window is opened containing products, inventory, orders, deliveries, new product and new supplier.
d. All functions are same as the windows opened for each from the edit window but only new product and new supplier can be changed, other windows can just show their information and not be edited.

4.5 Manager clicks Shift
a. Manager is logged in.
b. Manager clicks Shift.
c. Shift window has clock in and clock out operations.
d. If manager clicks clock in, he enters date and starting working hour and clicks submit which saves the information entered in the database.
e. If manager clicks clock out, he enters date, ending working hour and total working hours and clicks submit which saves the information entered in the database.

4.6 Manager clicks Wage
a. Manager is logged in.
b. Manager clicks Wage.
c. Wage window is opened and it shows the list of transactions, the latest transaction and all the transactions made up to that moment; and a request raise operation which is controlled by the admin.

4.7 Manager clicks Extra
a. Manager is logged in.
b. Manager clicks Extra.
c. Extra window is opened and shows the extra hours worked or registers new extra hours.
d. It has New operation which includes date, hours worked, begin, end and compensation per hour field. If any information entered it is saved by the Save button and canceled by the Cancel button.

e. It has All operation showing all extra hours registered up to that moment by the manager.
4.8 Manager clicks Change Password
  a. Manager is logged in.
  b. Manager clicks change password.
  c. Change password window opens and contains current password, new password, confirm new password fields, cancel and save operations.
  d. If any information entered in the fields it can be saved by Save button and canceled by Cancel button.
  e. If saved the new information is saved in the database.
4.9 Manager clicks Logout
  a. Manager is logged in.
  b. Manager clicks logout.
  c. If system is working correctly, Manager is logged out and "Logged out successfully" appears.
  d.

Economist – Logs in

  a. The economist opens the Home page
  b. The economist is asked to enter his/her respective credentials(username/password)
  c. The economist takes the reCaptcha human verification test
  d. The economist clicks on the Login button
  e. If the economist's credentials match with the corresponding data in the database, he/she logs in
  f. The economist is redirected to his/her own Dashboard
  g. In this page the economist views graphs and histograms about total revenue, sales overview, and statistics

Economist – Fails to log in

  a. The economist opens the Home page
  b. The economist is asked to enter his/her respective credentials(username/password)
  c. The economist takes the reCaptcha human verification test
  d. The economist clicks on the Login button
  e. The economist's credentials fail to match with the corresponding data in the database or the data have not been found
  f. An error message is displayed on the screen explaining the problem

Economist – Logs out

  a. The economist is logged
  b. The economist clicks on the Logout button
  c. This button is present in every page that the economist access
  d. The session is over and he/she is redirected on the Log in/ Home page

Economist – Changes the password

  a. The economist firstly is logged in the system

b. The economist clicks "Options" at the side of the Dashboard
c. The economist can view his/her own profile information
d. The economist clicks on the Change Password button
e. The economist sees the Change Password page
f. After changing the password and confirming it, he/she clicks the Save button
g. The new password is saved on the database

Economist – Views Employees

a. The economist is logged in
b. The economist clicks "Employees" in the navigation bar
c. The economist clicks "List" option and views the list of employees
d. The economist views the ID number, name of employees and their job position
e. The economist also views the working hours of each of the employees displayed on the list

Economist – Prepares Payroll

a. The economist is logged in
b. The economist clicks "Employees" in the navigation bar
c. The economist views the list of employees
d. The economist clicks on the "Payroll" option next to "List" up on the page
e. The economist calculates the wage of all employees
f. The economist clicks the Save button and saves the payroll report
g. The economist clicks the Export button and export the report as either excel or word file by choosing one of the options displayed

Economist – Views Reports

a. The economist is logged in
b. The economist clicks "Reports" in the navigation bar
c. The economist clicks "View Reports" option and a dropdown menu appears
d. The economist chooses one of the options below:
   o Payroll Report
   o Employee's Reports
   o Balance Sheet
   o Income Statement
   o Cash Flow Statement
e. After choosing one option the list of payrolls is displayed and the economists clicks the report file he/she wants to view

Economist – Creates Reports

a. The economist is logged in
b. The economist clicks "Reports" in the navigation bar
c. The economist clicks the "Create Reports" option which is next to the "View Reports" one
f. The economist chooses one of the options below:

- o Payroll Report
- o Employee's Reports
- o Balance Sheet
- o Income Statement
- o Cash Flow Statement
d. The economist chooses the type of report and is directed to a new page
e. The economist can click the "New" button for creating a new report
f. The economist can click the "Open" button to open documents from the pc and save them as newly created reports

Economist –Edits Reports

a. The economist is logged in
b. The economist clicks "Reports" in the navigation bar
c. The economist clicks "View Reports" option and a dropdown menu appears
d. The economist chooses one of the options
e. After choosing one option the list of the corresponding reports is displayed
f. The economist clicks the Edit button next to the report file he/she wants to edit
g. The economist then clicks the Apply button and saves the changes made

Economist – Views Inventory

a. The economist is logged in
b. The economist clicks "Inventory" in the navigation bar
c. The economist checks the inventory list displayed
d. The economist makes records or necessary changes in the inventory list
e. The economist clicks the "Save" button and saves the inventory record
f. The economist clicks "Export" and download the record

Economist – Views Products

a. The economist is logged in
b. The economist clicks on Products in the navigation bar
c. The economist views all the products and their respective information on the products list displayed

Economist – Views Suppliers

a. The economist is logged in
b. The economist clicks "Suppliers" option in the navigation bar
c. The economist views the suppliers list

Economist – Views Suppliers' Contracts

a. The economist is logged in
b. The economist clicks "Suppliers" option in the navigation bar
c. The economist clicks on the contract file on the chosen supplier in the list displayed
d. The chosen contract opens in a new page

Client – Logs in

h.   The client opens the Home page
i.   The client is asked to enter his/her respective credentials(username/password)
j.   The client takes the reCaptcha human verification test
k.   The client clicks on the Login button
l.   If the client's credentials match with the corresponding data in the database, he/she logs in
m.   The client is redirected to his/her page

Client – Fails to log in

a.   The client opens the Home page
b.   The client is asked to enter his/her respective credentials(username/password)
c.   The client takes the reCaptcha human verification test
d.   The client clicks on the Login button
g.   The client's credentials fail to match with the corresponding data in the database or the data have not been found
h.   An error message is displayed on the screen explaining the problem

Client – Logs out

a.   The client is logged in
b.   The client clicks on the Logout button
c.   The session is over and he/she is redirected on the Log in/ Home page

Client – Views Discount

a.   The client is logged in
b.   The client clicks "View" and he sees the list of the products that he has purchased and the points of each product that he/she have calculated
c.   The client clicks "Show Discount" button and the points convert into discount rate
d.   The client views the discount rate displayed

Client – Changes the password

a.   The client firstly is logged in the system
b.   The client clicks "Options" at the side of the Dashboard
c.   The client can view his/her own profile information
d.   The client clicks on the Change Password button
e.   The client sees the Change Password page
f.   After changing the password and confirming it, he/she clicks the Save button
g.   The new password is saved on the database

Fuel Attendant

- Opens the web application main page "Log in"
- Enters his/hers username and password
- His Fuel Attendant Page opens, where his user functionalities such as AMOUNT, RECEIPT, SHIFT and New, Edit and Logout are displayed.

Scenario 1 – *Unsuccessful Login*

The user enters his username and password. If the credentials are not correct and they don't match with the data in database, a message informing the user saying "Username or password is incorrect!". Then he can refresh the page and enter the correct data.

Scenario 2– *Logged in successfully*

The user, fuel attendant, enters his username and password. If the credentials are correct and correspond with the ones in database, the user will be logged in to the Fuel Attendant Page.

Scenario 3– *Fuel Attend check tanks oil/gas amount*

The fuel attendant is logged in the system. He/she clicks on the "AMOUNT" tab and will be redirected to the Amount Details Page. There he can click the Oil/Gas Tank button and a window will pop-up where he can see (let suppose the Oil Tank 1) the amount of the oil at the beginning in liters, the current amount and its price. The user can edit the data, save or cancel the changes in the amount table/window. After saving the changes the new data will be updated on the database and change on the amount table.

Scenario 4– *An error occurs when the Fuel Attend edits the amount table*

The fuel attendant is logged in the system. He/she clicks on the "AMOUNT" tab and will be redirected to the Amount Details Page. There he can click the Oil/Gas Tank button and a window will pop-up where he can see (let suppose the Oil Tank 1) the amount of the oil at the beginning in liters, the current amount and its price. The user can edit the data, save or cancel the changes in the amount table/window. The user clicks on "Edit" tab and enters new data or change current data on the Oil/Gas Tank table and then he saves the changes. If the system detects any anomaly in the filled data an error message will be displayed. For example, he enters a bigger value on the actual amount than the amount at the begging the system will show an error message saying "Incorrect Action!". The user enters the data again and if no errors are detected if can save the changes.

Scenario 5– *Fuel Attend check his/her shift*

The user must be logged in the system in order to open the SHIFT button displayed in his main page. After clicking the SHIFT button, the user will be redirected to the My shift page, where in a table are listed the date, time, hours, extra hours and select. Using "select "the user can check his shift and edit the data. As well he can add new data and extra working hours using the "Add" button and print them, by clicking "Print". The user can save or cancel the changes. After saving the changes or the new data entered, they will be updated or stored in the database of the system and after submit will be shown on the "My shift" table. On the same page will be displayed a table of the wage, working hours' ad calculated salary of the user.

Scenario 6– *An error occurs when the Fuel Attend enters new data in the Shift Table*
The user must be logged in the system in order to open the SHIFT button displayed in his main page. After clicking the SHIFT button, the user will be redirected to the My shift page, where in a table are listed the date, time, hours, extra hours and select. The user checks a row in his shift table and edits the data provided by using the "Edit" button. After the user makes his changes and saves them, if he has made any mistakes during the edit the system will display an error message saying "Incorrect data!". Same will happen if when he adds new data makes a mistake. When he repeats the action and if the values are correct the action will be registered and saved both in table and database.

Scenario 7– *Fuel Attend registers receipts*
The user must be logged in the system in order to open the Receipt page. On the My Receipt page will be shown a table where all the receipts will be listed by their number, tank (number), product(oil/gas), date, time, quantity and value. Also he will enter the time and date when he starts registering receipts and when he ends. The user can edit, save, cancel and print data. When he registers a new receipt he will fill the information receipt number, date, time, tank used, product, quantity and value. After he save his action the data will be stored in the database and the new receipt will be listed on the table. Also if the fuel attendant edits on of his receipts the new values will be updated on the table and the database.

Scenario 7– *An error occurs when the Fuel Attend registers receipts*
The user must be logged in the system in order to open the Receipt page. The user clicks "Add" to register a new receipt and enters the receipt number, tank number, product sold, date and time, quantity sold and the value. After he clicks "Save" and an error was detected on the data the system will display an error message saying "Incorrect data! Please check the data again!". Same scenario when he edits the receipts and provides incorrect data. When he repeats the action and if the values are correct the action will be registered and saved both in table and database.

Cashier
- Opens the web application main page "Log in"
- Enters his/her username and password
- His/hers Cashier Page opens, where his user functionalities such as PRODUCTS, RECEIPT, SHIFT and New, Edit and Logout are displayed.

Scenario 1 – *Unsuccessful Login*
The user enters his username and password. If the credentials are not correct and they don't match with the data in database, a message informing the user saying "Username or password is incorrect!". Then he can refresh the page and enter the correct data.
Scenario 2– *Logged in successfully*
The user, cashier, enters his/her username and password. If the credentials are correct and correspond with the ones in database, the user will be logged in to the Cashier Page.
Scenario 3– *Cashier check product list*

The cashier is logged in the system. He/she clicks on the "PRODUCTS" tab and will be redirected to the Product List Page. There will be shown a table with the list of the products, listed by number, code, unit, price, quantity sold, quantity and tax. The user can only see the list.

Scenario 4– *Cashier check his/her shift*

The user must be logged in the system in order to open the SHIFT button displayed in his main page. After clicking the SHIFT button, the user will be redirected to the My shift page, where in a table are listed the date, time, hours, extra hours and select. Using "select "the user can check his shift and edit the data. As well he can add new data and extra working hours using the "Add" button and print them, by clicking "Print". The user can save or cancel the changes. After saving the changes or the new data entered, they will be updated or stored in the database of the system and after submit will be shown on the "My shift" table. On the same page will be displayed a table of the wage, working hours' ad calculated salary of the user.

Scenario 5– *An error occurs when the cashier enters new data in the Shift Table*

The user must be logged in the system in order to open the SHIFT button displayed in his main page. After clicking the SHIFT button, the user will be redirected to the My shift page, where in a table are listed the date, time, hours, extra hours and select. The user checks a row in his shift table and edits the data provided by using the "Edit" button. After the user makes his changes and saves them, if he has made any mistakes during the edit the system will display an error message saying "Incorrect data!". Same will happen if when he adds new data makes a mistake. When he repeats the action and if the values are correct the action will be registered and saved both in table and database.

Scenario 6– *Cashier registers receipts*

The user must be logged in the system in order to open the Receipt page. On the My Receipt page will be shown a table where all the receipts will be listed by their number, product, date and time, quantity, value, note and select. Also he will enter the time and date when he starts registering receipts and when he ends. The user can edit, save, cancel and print data. When he registers a new receipt he will fill the information receipt number, date and time, product, quantity, value and note if needed. After he save his action the data will be stored in the database and the new receipt will be listed on the table. If the user wants to edit one of the receipts he can check the "Select" cell of the receipts he wants to edit. After the changes are done and saved they will be updated on the table and database.

Scenario 7– *An error occurs when the cashier registers receipts*

The user must be logged in the system in order to open the Receipt page. The user clicks "Add" to register a new receipt and enters the receipt number, product sold, date and time, quantity sold, value and a note if needed. After he clicks "Save" and an error was detected on the data the system will display an error message saying "Incorrect data! Please check the data again!". Same scenario when he edits the receipts and provides incorrect data. When he repeats the action and if the values are correct the action will be registered and saved both in table and database.

1. **Janitor/security**
   User logs in
   User is directed to their main page
   App displays search box
   App displays go back button
   User clicks on go back button
   Previous page is submitted
   User opens options
   The app directs the user to the page to change the password
   The user enters current password
   The user enters new password
   The user confirms new password
   The user clicks on change button
   If the passwords don't match the program displays: "Passwords don't match"
   The user logs out

2. **Janitor/security**
   User logs in
   User is directed to main page
   App displays search box
   App displays go back button
   User clicks on go back button
   Previous page is submitted
   User clicks on Start/end shift button
   App displays the start shift page
   User inserts date
   User inserts starting hour
   User inserts ending hour
   Number of hours is displayed automatically
   User submits form
   If a field is empty program displays: "Complete all fields"
   The user logs out

3. **Janitor/security**
   User logs in
   User is directed to main page
   App displays search box
   App displays go back button
   User clicks on go back button
   Previous page is submitted
   User clicks on view wage button
   User is directed on the wage page
   The program displays all transactions made up to date
   The user logs out

4. **Janitor/security**
   User logs in

User is directed to main page
App displays search box
App displays go back button
User clicks on go back button
Previous page is submitted
User clicks on "enter extra hours"
User is directed to extra hours page
User enters extra hours worked
User clicks on calculate
The program displays compensation based on number of hours worked
The user logs out

5. **Fuel delivery driver**
    User logs in
    User is directed to main page
    App displays search box
    App displays go back button
    User clicks on go back button
    Previous page is submitted
    User clicks on view orders button
    App opens view orders page
    App displays orders in numerical order
    Orders display type, quantity, location and price
    User clicks on complete
    Order is marked as completed
    User clicks on next page
    Next page is displayed
    User clicks on previous page
    Previous page is displayed
    User clicks on open maps
    App redirects user to google maps
    The user logs out

6. **Fuel delivery driver**
    User logs in
    User is directed to main page
    App displays search box
    App displays go back button
    User clicks on go back button
    Previous page is submitted
    User clicks on report delivery button
    App opens report delivery page
    User inserts delivery number
    User inserts supplier name
    User inserts condition/state
    User inserts complaints
    User inserts delays
    User clicks on new delivery
    App generates new report form
    User clicks on report

Report is submitted
User clicks on next page
Next page is displayed
User clicks on previous page
Previous page is displayed
The user logs out