



A Project Work on Water Refilling Management System

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Abstract: The Purpose of “**Water Refilling Management System**” Design is to overcome difficulties in manual operation in refilling station. The difficulty in the manual system is one of The reasons why the efficiency in availing services of the clients is not satisfying and keeping of records is often misplaced and not secure. This system manages to display the data to be filled by the user according to the information of the customer in organize manner, such that their personal details, and the services they want to avail as well as the payment on the transaction they purchased. The system keeps the information of the customer and the details of what they purchased. The system coordinates the arrangement on the delivery of products. It consist all the records for the location of the clients, date of transaction, schedule of delivery, contact number and the person assigned to deliver and the payment of customer to the quantity of product that about to deliver.

I. INTRODUCTION

One of the fastest and expanding businesses today is water refilling station. Water refilling station is small water system that has its own water purification facility producing a portable drinking water. The aqua water refilling system has their own water tank and equipment that intend on their business. So, we design a system in this kind of business in order to be on to pedaling on the fast-growing business that is demand now a day. The purpose of water refilling management system is to overcome difficulties in manual operation in refilling station. The difficulty in manual system are one of the reasons why the efficiency in availing services of the clients is not satisfying and keeping of records is often misplaced and not secure. This system will be programmed to java that can enable the user to record things that are being purchased by the clients and it be created using MySQL database.

This system manages to display the data to be filled by the user according to the information of the customer in organize manner, such that their personal details, and the services they want to avail as well as the payment on the transaction they purchased. The system keeps the information of the customer and the details of what they purchased. The system coordinates the arrangement on delivery of products. It consists all the records for the location of the clients, date of transaction, schedule of delivery, contact number and the person assign to deliver and the payment of customer to the quantity of product that about to deliver. The system also views the information about the availability of the products as well as the containers. The system views the available containers to provide stocks again This system also manages the information of the employees that a refilling station must have just like front liner, cashier, technical assistant, and delivery an. It stores the information in organize so that it easy to the owner to access on the detail of his/her employee. Upon having this system, it will provide the capacity to the owner and clients to transact without spending time and effort.

OBJECTIVE

- To identify the existing system used by Aijem’s Water Refilling Station.
- To identify the problems encountered in the existing system.
- To describe the features of the system.
- To test the acceptability of the system



SCOPE OF THE PROJECT

- The system administrator will have access to the whole system including all administrative rights these includes; changes of passwords, addition, deletion and updating of information, reports viewing and access to transaction. Cashier can only perform transaction on the system it does not have administrative rights except adding and updating customer information.
- Customer Information
- Ordering and billing
- Sales summary report
- Summary of expenses report
- Reports for the list of customers for follow up

II. REQUIREMENTS SPECIFICATION

Introduction

To be used efficiently, all computer software needs certain hardware components or the other software resources to be present on a computer. These pre-requisites are known as (computer) system requirements and are often used as a guideline as opposed to an absolute rule. Most software defines two sets of system requirements: minimum and recommended. With increasing demand for higher processing power and resources in newer versions of software, system requirements tend to increase over time. Industry analysts suggest that this trend plays a bigger part in driving upgrades to existing computer systems than technological advancements.

Hardware Requirements

The most common set of requirements defined by any operating system or software application is the physical computer resources, also known as hardware. A hardware requirements list is often accompanied by a hardware compatibility list (HCL), especially in case of operating systems. An HCL lists tested, compatibility and sometimes incompatible hardware devices for a particular operating system or application. The following sub-sections discuss the various aspects of hardware requirements.

Hardware Requirements for Present Project

- PROCESSOR: i5/ryzen5
- RAM:4GB
- HARDDISK:250MB

Software Requirements

Software Requirements deal with defining software resource requirements and pre-requisites that need to be installed on a computer to provide optimal functioning of an application. These requirements or pre-requisites are generally not included in the software installation package and need to be installed separately before the software is installed.

Software Requirements For Present Project

- OPERATING SYSTEM: Windows XP/10/11
- FRONTEND: HTML, CSS, JS
- SERVERSIDE SCRIPT: PHP
- DATABASE: MySQL
- TOOL: Visual Studio

Implementation is the stage of the project when the 'Theoretical Design' is turned out into a 'Working System'. Thus, it can be considered to be the "Most Critical Stage" in achieving a 'Successful New System', and in giving User the Confidence, that the new system will work, be effective and satisfies the need of developing it. The Implementation stage involves careful planning, investigation of the existing system and its constraint and implementation, designing of methods to achieve change over and evaluation of changeover methods. However, the Implementation can be achieved only up to 90% when compared to that of the Theoretical Design. This doesn't mean that the working requirement can be



compromised. Though we cannot implement the Theoretical Design as it is, we should make sure that the desired working nature of the Project should get implemented to the most.

To Implement this “Water Refilling Management System”, we have used Front-end Technologies like HTML, CSS and Java Script, PHP as the Back-end Technology and MySQL as the Database Query Language. By Default, to integrate our codes written in different languages, we are making use of “XAMPP Server” to run our Project Code on the “Google Chrome” Web Browser.

III. ANALYSIS

Existing System

Water refilling plant currently use a manual system for the management and maintenance of critical information. The current system requires numerous paper forms, with data stores spread throughout the water refilling management infrastructure. Often information is incomplete or does not follow management standards. Form sore often lost in transit between departments requiring a comprehensive auditing process to ensure that no vitally formation is lost.

IV. PROPOSED SYSTEM

The Water Refilling Management System is designed for any water refilling plants to replace their existing manual paper based system. The new system is to control the information of users. Room availability, sales and sales items and user invoices. These services are to be provided in an efficient, cost effective manner, with the goal of reducing the time and resources currently required for such tasks.

SOFTWARE SPECIFICATION

HTML:

HTML or Hypertext Markup Language is the standard markup language used to create web pages. HTML is written in the form of HTML elements consisting of tags enclosed in angle brackets (like <html>). HTML tags most commonly come in pairs like <h1> and </h1>, although some tags represent empty elements and so are unpaired, for example . The first tag in a pair is the start tag, and the second tag is the end tag (they are also called opening tags and closing tags). Though not always necessary, it is best practice to append a slash to tags which are not paired with a closing tag.

The purpose of a web browser is to read HTML documents and compose them into visible or audible web pages. The browser does not display the HTML tags, but uses the tags to interpret the content of the page. HTML describes the structure of a website semantically along with cues for presentation, making it a markup language rather than a programming language.

Cascading Style Sheets (CSS):

It is a stylesheet language used for describing the look and formatting of a document written in a markup language. While most often used to style web pages and interfaces written in HTML and XHTML, the language can be applied to any kind of XML document, including plain XML, SVG and XUL.

CSS is a corner stone specification of the web and almost all web pages use CSS style sheets to describe their presentation. CSS is designed primarily to enable the separation of document content from document presentation, including elements such as the layout, colors, and fonts. [1]

This separation can improve content accessibility, provide more flexibility and control in the specification of presentation characteristics, enable multiple pages to share formatting, and reduce complexity and repetition in the structural content. CSS can also allow the same markup page to be presented in different styles for different rendering methods, such as on-screen, in print, by voice (when read out by a speech-based browser or screen reader) and on Braille-based, tactile devices.

It can also be used to allow the web page to display differently depending on the screen size or device on which it is being viewed. While the author of a document typically links that document to a CSS file, reader can use a different style sheet, perhaps one on their own computer, to override the one the author has specified. However if the author or the reader did not link the document to a specific style sheet the default style of the browser will be applied.



MySQL:

MySQL is developed, distributed, and supported by Oracle Corporation. MySQL is a database system used on the web it runs on a server. MySQL is ideal for both small and large applications. It is very fast, reliable, and easy to use. It supports standard SQL. MySQL can be compiled on a number of platforms. The data in MySQL is stored in tables. A table is a collection of related data, and it consists of columns and rows. Databases are useful when storing information categorically. MySQL is the world's most popular open-source database. Despite its powerful features, MySQL is simple to set up and easy to use. Below are some instructions to help you get MySQL up and running in a few easy steps. We also explain how to perform some basic operations with MySQL using the **mysql** client.

V. FEATURES OF MYSQL

Internals and portability

- Written in C and C++.
- Tested with abroad range of different compilers.
- Works on many different platforms.
- Tested with Purify (a commercial memory leakage detector) as well as with Val grind, a GPL tool.
- Uses multi-layered server design with in dependent modules.

Security

- A privilege and password system that is very flexible and secure, and that enables host-based verification.
- Password security by encryption of all password traffic when you connect to a server.

Connectivity

- Client scan connect to MySQL Server using several protocols
- Client scan connect using TCP/IP socket so many platform.
- On Windows systems in the NT family(NT,2000,XP,2003,orVista), clients can connect using named pipes if the server is started with the--enable-named-pipe option. In MySQL4.1 and higher, Windows servers also support shared-memory connections if started with the --shared-memory option.
- Clients can connect through shared memory by using the protocol memory option.
- On UNIX systems, clients can connect using Unix domain socket files.

Localization

- The server can provide error messages to clients in many languages.
- All data is saved in the chosen character set.

Clients and Tools

- MySQL includes several client and utility programs. These include both command-line programs such as mysql dump and mysql admin, and graphical programs such as MySQL Workbench.
- MySQL Server has built in support for SQL statements to check, optimize, and repair tables. These statements are available from the command line through the mysql check client. MySQL also includes myisam chk , a very fast command-line utility for performing these operations on MyISAM tables.
- MySQL programs can be invoked with the—help or-? option to obtain online assistance.

WHY TO USE MySQL:

- Leading open source RDBMS
- Ease of use–No frills
- Fast
- Robust
- Security



- Multiple OS support
- Free
- Technical support
- Support large database upto 50 million rows, file size limit up to 8 Million TB

VI. DESIGN

UML Design:

The Unified Modeling Language (UML) is a standard language specifying, visualizing, constructing, and documenting the software system and its components. It is a graphical language, which provides a vocabulary and set of semantics and rules. The UML focuses on the conceptual and physical representation of the system. It captures the decisions and understandings about systems that must be constructed. It is used to understand, design, configure, maintain, and control information about the systems.

The UML is a language for

- Visualizing
- Specifying
- Constructing
- Documenting

VII. SYSTEM IMPLEMENTATION

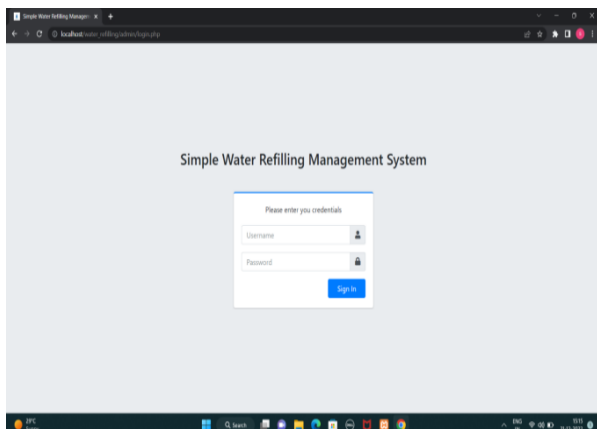
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The Implementation stage involves care full planning, investigation of the existing system and it’s constraints on implementation, designing of methods to achieve change over and evaluation of changeover methods. However, the Implementation can be achieved only up to 90% when compared to that of the Theoretical Design. This doesn’t mean that the working requirement can be compromised. Though we cannot implement the Theoretical Design as it is, we should make sure that the desired working nature of the Project should get implemented to the most.

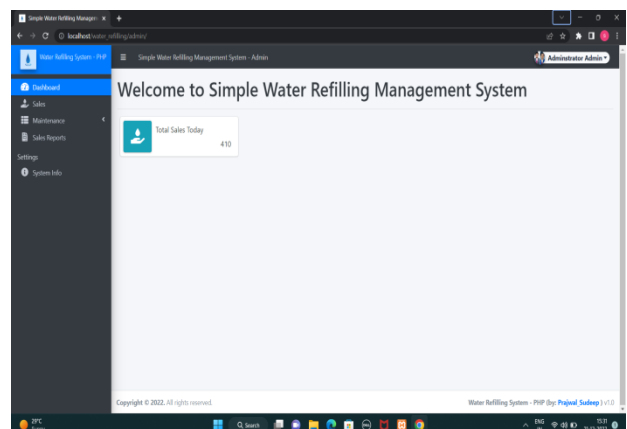
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Sample Screen Shots

LOGIN PAGE:



HOME PAGE:





SALES PAGE:

#	Date Created	Customer	Type	Status	Total Items	Amount	Action
1	2022-12-21 15:28:36	Prajwal	for delivery	Done	3	90.00	Action
2	2022-12-21 15:27:34	Siddesh	walk-in	Done	2	80.00	Action
3	2022-12-21 15:27:00	Sudheep	for delivery	Done	5	180.00	Action
4	2022-12-21 15:26:01	Aditya	walk-in	Done	2	60.00	Action

MAINTENANCE PAGE:

#	Date Created	Name	Description	Price	Action
1	2021-08-14 14:32:18	Round Container with Cap	Add some Cornstarch to your packaging with smooth glossy dome lid on these clear PET Polyethylene terephthalate Plastic Jar from Specialty Bottle	30	Action
2	2021-08-14 14:29:40	Slim Container with cap and faucet	Uniquely designed Container with Slim body and faucet that design you can get drinking water by gently pressing the faucet. The faucet New roller ring so last every about setting.	40	Action

SALES REPORTS PAGE:

#	Date	Customer	Type	Details	Total Amount
1	2022-12-21	Prajwal	Delivered	3 Round Container with Cap	90
2	2022-12-21	Siddesh	Walk-In	2 Slim Container with cap and faucet	80
3	2022-12-21	Sudheep	Delivered	3 Slim Container with cap and faucet	120
4	2022-12-21	Aditya	Walk-In	2 Round Container with Cap	60
Total					410

ADDING JAR TYPE AND PRICING:

VIII. CONCLUSION

The main purpose of water refilling management system of overcoming difficulties at manual operation in refilling station is fulfilled. The difficulty in manual system is one of the reasons, why the efficiency in availing services of the clients is not satisfying and keeping of records is often misplaced and not secure. This Problem is resolved by this System.

This system is programmed to java that enables the user to record things that are being purchased by the clients, created using MySQL database. This system manages to display the data to be filled by the user according to the information of the customer in organize manner, such that their personal details, and the services they want to avail as well as the payment on the transaction they purchased. The system keeps the information of the customer and the details of what they purchased.

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The system views the available containers to provide stocks again. We hereby conclude with the Guarantee that, Details of the users i.e., electronically entered in the "Water Refilling Management System", will be secured. Using this application, we can retrieve user's history with a single click; thus, processing information will be faster. This System ensures accurate maintenance of user details and easily reduces the book keeping task, thereby reducing the human effort and increasing accuracy as well as speed.



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