INSTITUTE FOR ADVANCED
COMPUTING AND
SOFTWARE DEVELOPMENT

NETCOM JAIPUR

Report On

"WATER PLANT MANAGEMENT SYSTEM"

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Submitted By:

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1. Introduction

Introduction contain the following sub categories

Existing System

The present system is a manual system. Manual system involves paper work in the form of maintaining various files and manuals. Maintaining critical information in the files and manuals is full of risk and a tedious process.

A manual system has following disadvantages
- It's a limited system and fewer users friendly.
- Searching of particular information is critical it takes lot of time.
- The existing system need to travel a location.
- The manual system gives us less security for saving data, some data may be lost due to mismanagement
- Customer from different locality not able to reach plant every time to give orders.

Proposed System

Online web application of Water Plant will provide benefits to customer as well as plant management Customer can use this like E-commerce and plant management can keep track and details of customers.

The system after careful analysis has been identified to be presented with the following modules:

- Customer Registration: customer can register himself for placing orders.
- Administration Access: Administration would be able to keep an eye on the records of customers.
- Authentication: Authentication of this application will be provided for only registered members.

Problem Statement

Unfortunately sufficient safe portable water is not available everywhere in the country, either harmful chemical substances are found in the layers of earth which enter in to water or it may be contaminated due to pathogenic micro-organisms. If such water is consumed, the body suffers from water born diseases. Due to this, it has become imperative to process and bottle safe portable water for the mankind in prevailing conditions. The demand for purified water becomes more during summer season. Although few companies have already entered in the bottling of safe portable water and mineralized water, but still huge gap is there in between demand and supply at all metropolitan cities and towns. The product is widely accepted in offices, restaurants, railway stations, airport, but stands, hospitals and to some extent in rich house-holds So there is good scope for establishing the units for processing and bottling plain and mineralized drinking water in different parts of the country.

Aims & Objectives

Specific goals are: -

- To produce a web-based system that allow the admin to add Customer and provide functionalities to its role.
- To ease Customer by providing different functionalities to it.

Overall Description

Product Perspective:

2.1.1 Existing system function:

Existing system for a society is based on our traditional way keeping records and details on paper and registers. Access of these details and papers are not granted to common member in absence of the authority. For voting for various designations (secretary, treasurer, chairman, etc) in society members need to be present on site for voting. Due to some unavoidable reasons some members cannot cast vote. Proposed system has a facility for voting online which will provide anytime anywhere access. Booking a hall for celebration in a society was tedious work as details were on paper and were only accessible only to the authority which may create confusion when two or more people want to celebrate in same hall. We studied Housing Society Management System. This software system generates bill automatically and manually. It creates bill of all members at single click. In this system bills can be generated as per multiple of months i.e. monthly, quarterly half yearly etc. due day of bills can be assigned. Housing Society Management System does not allow user to cast vote or manage nominees and does not have a provision for hall allocation.

- **III. PROPOSED SYSTEM**

Product functionality:

Water Plant Management System provides the features for admin and customer. It includes several functionalities describes as below:

Admin Management:

It provides facility to add, update, delete and view the Customer who are purchasing a particular products. We can view their details and also update it if that particular product is sold to any new customer.

Benefits of Water Plant Management System

- This online Water Plant Management System is fully functional and flexible.
- It is very easy to use.
- Eco-friendly: The monitoring of the water plant management and the overall business becomes easy and includes the least of paper work
- It saves a lot of time, money and labour.
- It increases the efficiency of the management at offering quality services to the customers.
- The application acts as an office that is open 24/7.
- It provides custom features development and support with the application.

Users and Characteristics:

Admin:

- Admin can login to the system.
- View the list of Orders.
- Add new Orders.
- Delete Orders.
- Update Products.
- View Water Storage.
- Manage Customers.

Customer:

- Customer can login to the system.
- View his/her details.
- View Products.
- Customer Can Manage Cart.
- Place Orders.
- View Orders.

Operating Environment:

Server Side:

Processor: Intel® Xeon® processor 3500 series

HDD: Minimum 500GB Disk Space

RAM: Minimum 2GB

OS: Windows 8.1, Linux 6

Database: Oracle 11g

Client Side (minimum requirement):

Processor: Intel Dual Core

HDD: Minimum 80GB Disk Space

RAM: Minimum 1GB

OS: Windows 7, Linux

Design and Implementation Constraints:

- The application will use Spring Boot, JavaScript, jQuery and css as main web technologies.
- Several types of validations make this web application a secured one and SQL Injections can also be prevented.

- Since Water plant Management system is a web-based application, internet connection must be established.
- The Society Management System will be used on PCs and will function via internet.

Specific Requirement

External Interface Requirements:

User Interfaces:

- All the users will see the same page when they enter in this website. This page asks the users a username and a password.
- After being authenticated by correct username and password, user will be redirect to their corresponding profile where they can do various activities.
- The user interface will be simple and consistence, using terminology commonly understood by intended users of the system. The system will have simple interface, consistence with standard interface, to eliminate need for user training of infrequent users.

Hardware Interfaces:

- No extra hardware interfaces are needed.
- The system will use the standard hardware and data communication resources.
- This includes, but not limited to, general network connection at the server/hosting site, network server and network management tools.

Application Interfaces:

OS: Windows 7, Linux

Web Browser:

The system is a web-based application; clients need a modern web browser such as Mozilla Firebox, Internet Explorer, Opera, and Chrome. The computer must have an Internet connection in order to be able to access the system.

Communications Interfaces:

- This application will communicate with the database that holds all the booking information. Users can contact with server side through HTTP protocol by means of a function that is called HTTP Service. This function allows the application to use the data retrieved by server to fulfil the request fired by the user.

System Design

Activity Diagram

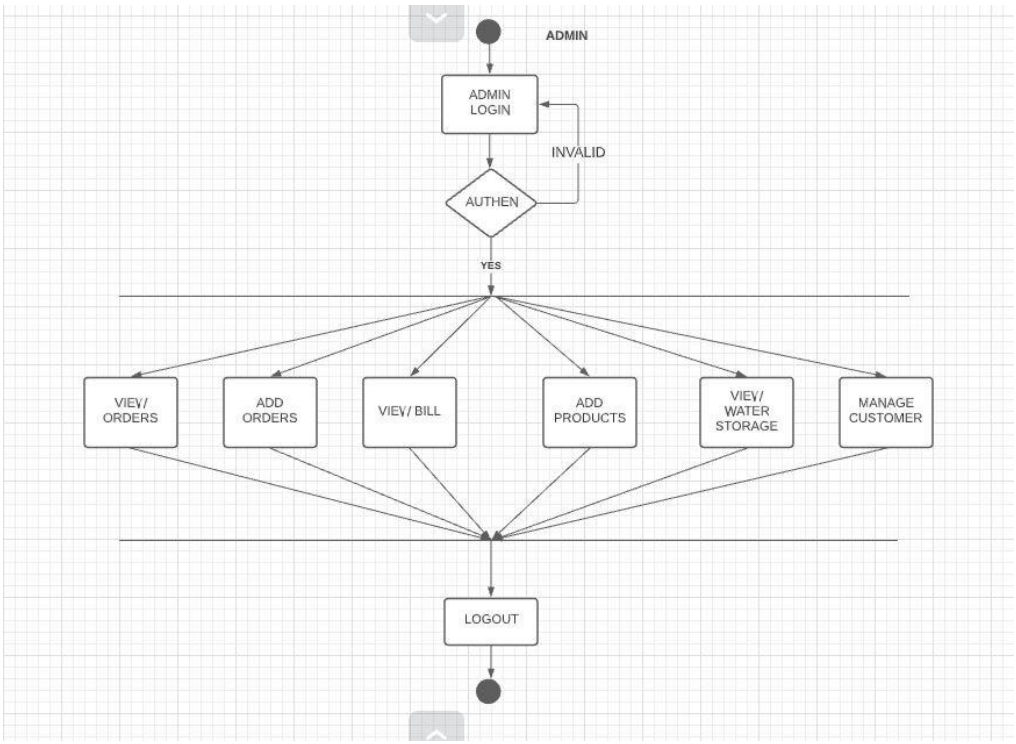


Figure 1: Admin Activity Diagram

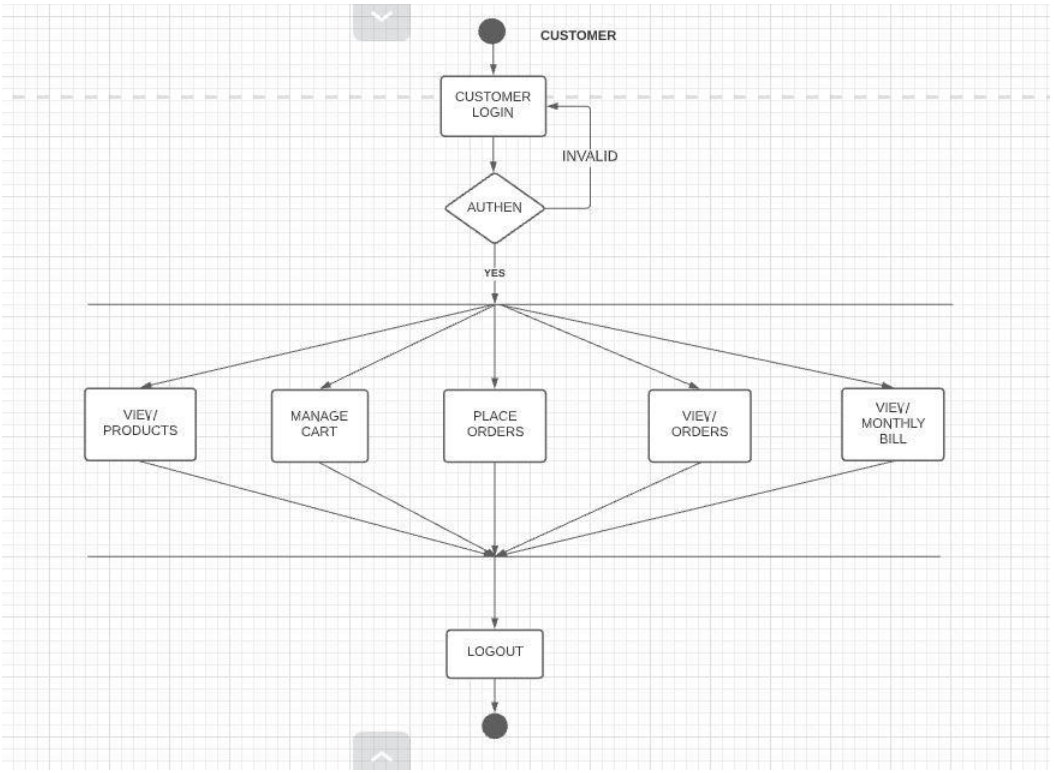


Figure 2: Customer Activity Diagram

Data Flow Diagram

Figure 3: Level 0 Data Flow Diagram

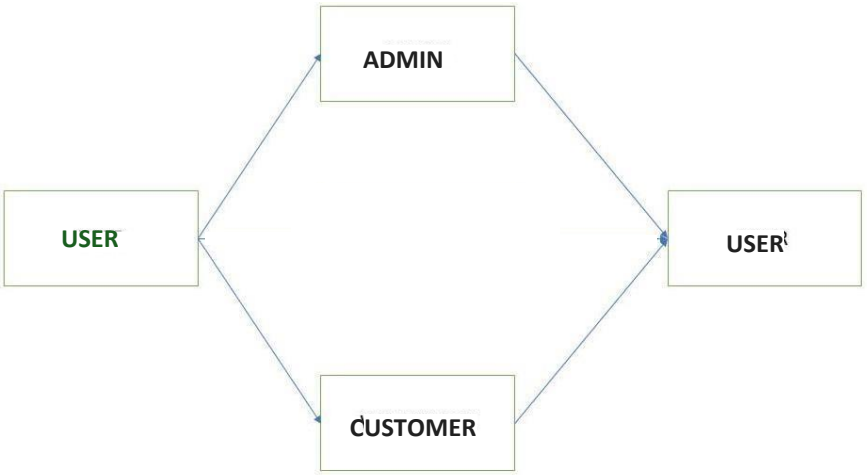


Figure 4: Level 1 Data Flow Diagram

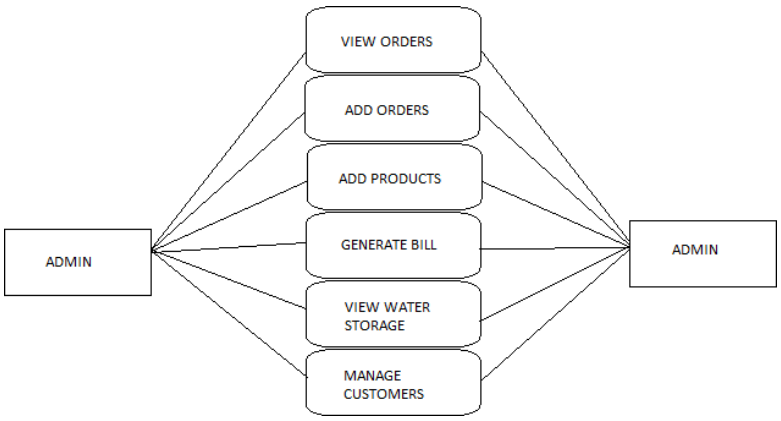


Figure 5: Level 2 Data Flow Diagram for Admin

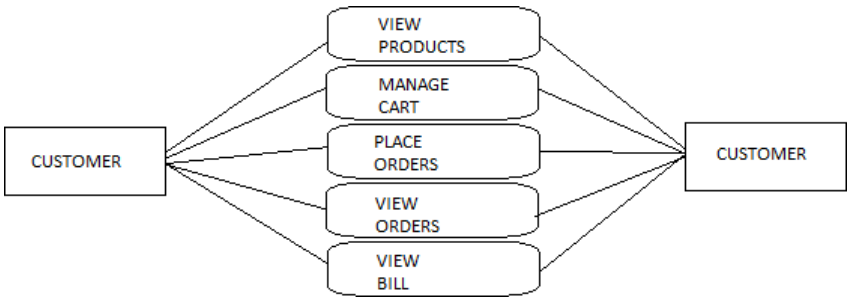


Figure 6: Level 2 Data Flow Diagram for Customer

Class Diagram

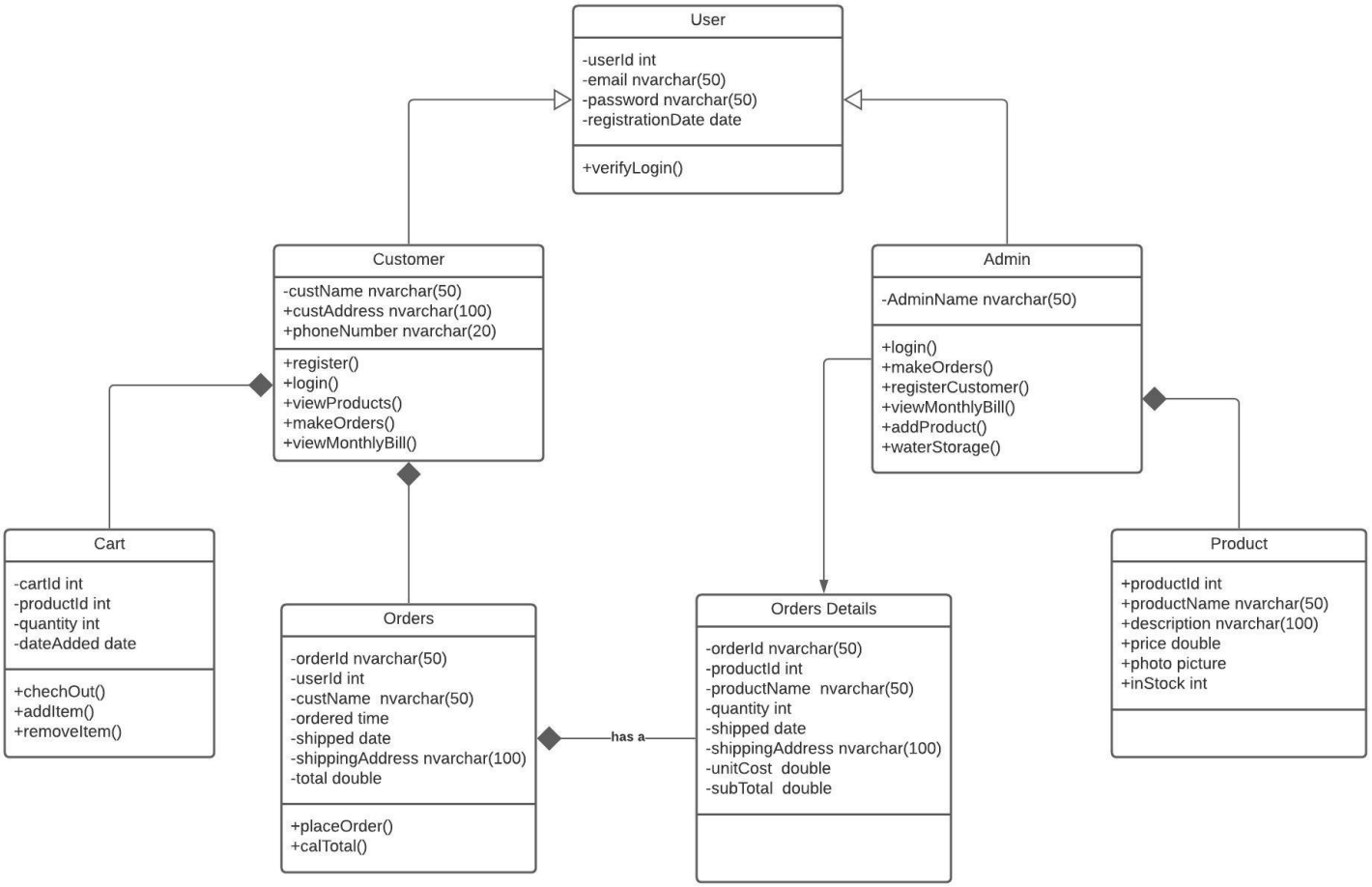
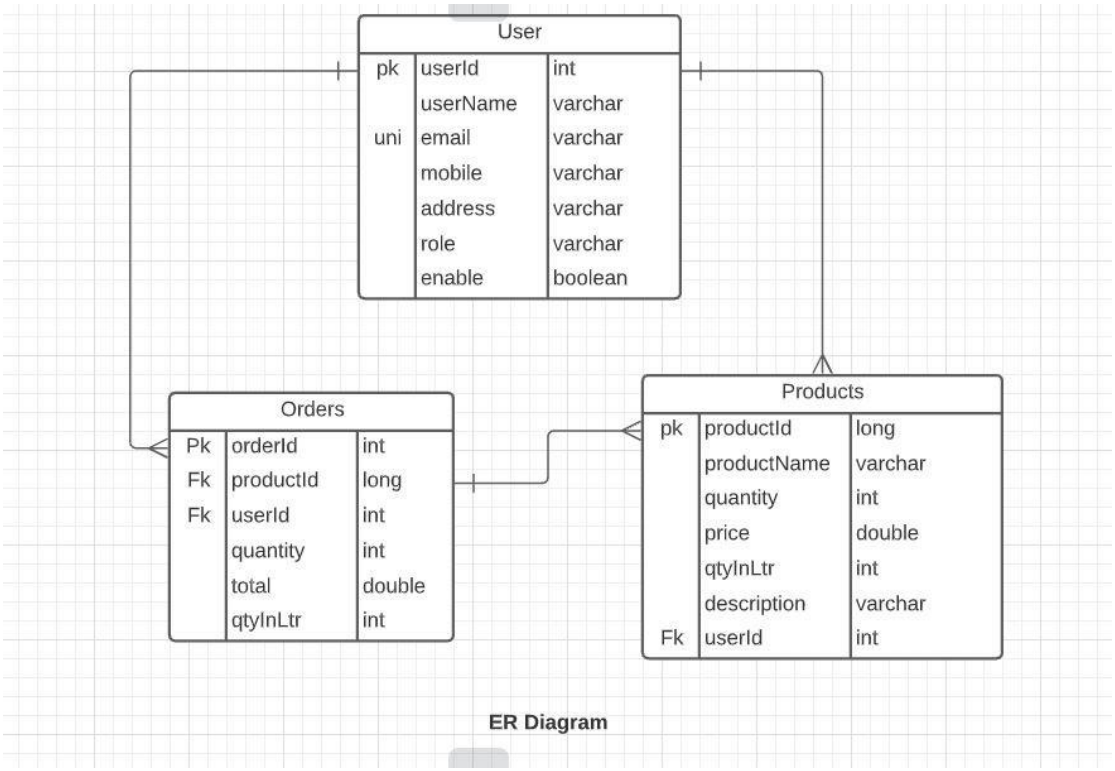


Figure 9: Class Diagram

Entity Relationship Diagram



ER Diagram

Use Case Diagram

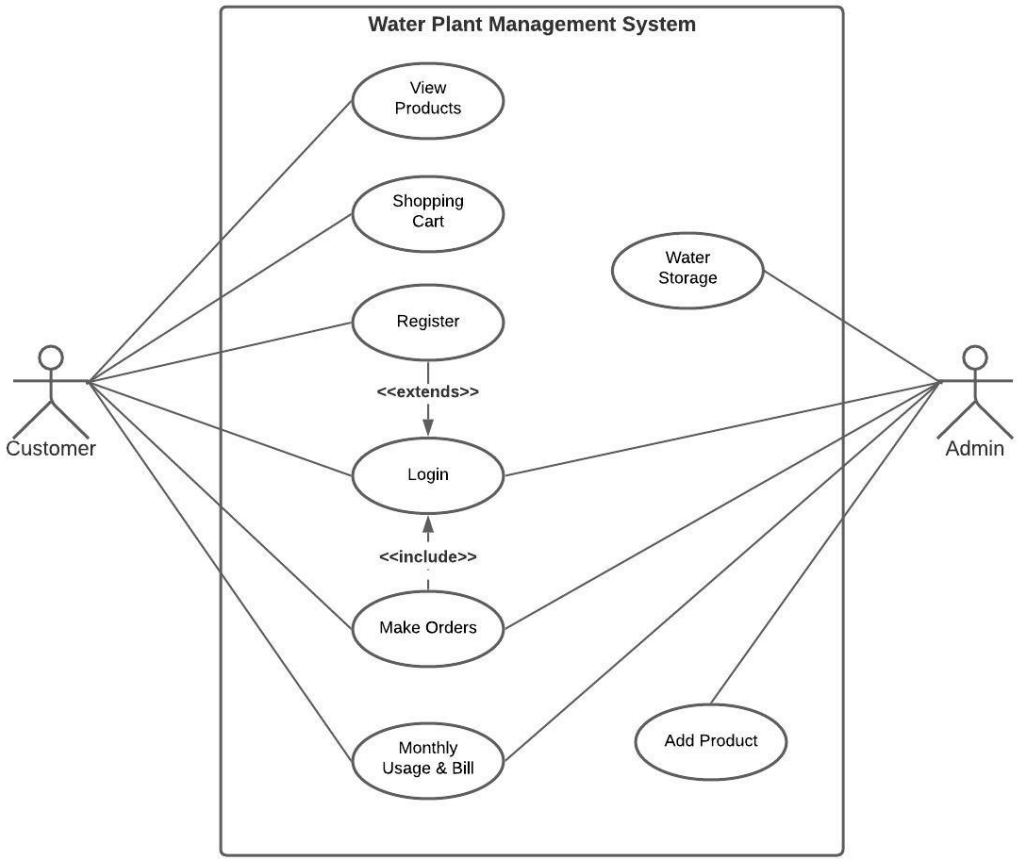


Figure 10: Use Case Diagram

Table Structure

USER:

Field	Type	Null	Key	Default	Extra
user_id	number(11)	NO	PRI	NULL	Auto_increment
addresss	varchar2(30)	NO		NULL	
email	varchar2(30)	NO	UNI	NULL	
password	varchar2(30)	NO		NULL	
phonenumber	number(10)	NO		NULL	
user_name	varchar2(10)	NO		NULL	

hibernate_sequence:

Field	Type	Null	Key	Default	Extra
next_val	Bigint	YES		NULL	

Order:

Field	Type	Null	Key	Default	Extra
order_id	number(11)	NO	PRI	NULL	Auto_increment
amount	number(11)	NO		NULL	
address	varchar2(20)	NO		NULL	
user_id	number(10)	NO		NULL	

Products:

Field	Type	Null	Key	Default	Extra
product_id	number(11)	NO	PRI	NULL	Auto_increment
description	varchar2(20)	NO		NULL	
price	number(10)	NO		NULL	
product_name	varchar2(20)	NO		NULL	

Future Scope

1. This Project can be further extended to supplier role where different supplier can add their products to site

2. Online payment and verification facility can be added to user.

3. Water for industry, hospitals, events in bulk quantity will be provided by water plant .

Conclusion

Water Plant management system puts forth the actual working of a water plant in traditional way. Putting water plant at online mode for customers and management is main key feature for project. Customers and can online products and admin can manage orders at ease through this project using this website anywhere and anytime for their own comfort.