PROJECT REPORT

ON

CUSTOMER MANAGEMENT

Submitted by,

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Contents

Abstract

Our application is Customer management system where you can view the list of customers, search customers by their id or name, add new customers, update and delete the existing customer. The customers play a great role in the growth of a company so managing the customer details is every essential as well. Every organization, whether big or small, has human resource challenges to overcome. They have different customer management needs, therefore we have designed an exclusive customer management system. Customer management is defined as the process of managing the relationship between an organization, its people and its customers over time. The customer management system is a web based application. MySQL is used as database and Maven as a build tool for the project.

Introduction

Customer Management system is an application that allows to create and store Customer records. This application is helpful to the department of the organization which maintains data of customers of that organization .It stores all the customer’s information in a database. The main aim of Customer Management is to store the details of customers in a web-based system. The module of this system deals with a login page, here the manager in charge can log into the system by entering the password provided for them.

First create two tables login table and customer table. Then create new maven project. Add project dependency in pom.xml. Create deployment descriptor (web.xml) and spring configuration file (spring-mvc-crud-demo.xml). Next is creating Controller layer: CustomerController.java, HomeController.java, UserController.java. Then create Persistence layer: Customer.java, Login.java. Create DAO layer: CustomerDao.java, CustomerDaoImpl.java, UserDao.java, UserDaoImpl.java. Now create Service layer: CustomerService.java, CustomerServiceImpl.java, UserService.java, UserServiceImpl.java, LoginService.java. And finally jsp pages: welcome.jsp, login.jsp, customer-list.jsp, customer-form.jsp.

Requirement Specification

Hardware Requirements

PROCESSOR	Intel® Celeron® Processor 847, 1.10 GHz, or equivalent
STORAGE	Between 1.3 GB - 2.3 GB
RAM	Minimum of 512 MB. The recommended amount can vary depending on the number of users connected and other factors.
HARD DISK	3 GB of available hard-disk space for installation, additional free space is required during installation.

Software Requirements

1. Java 1.8+

JDK is an acronym for Java Development Kit. The Java Development Kit (JDK) is a software development environment which is used to develop java applications and applets. It physically exists. It contains JRE + development tools. JDK is an implementation of any one of the below given Java Platforms released by Oracle corporation: Standard Edition Java Platform, Enterprise Edition Java Platform, Micro Edition Java Platform. The JDK contains a private Java Virtual Machine (JVM) and a few other resources such as an interpreter/loader (Java), a compiler (javac), an archiver (jar), a documentation generator (Javadoc) etc. to complete the development of a Java Application.

2. Tomcat Server 7.0 or above

Tomcat is an application server designed to execute **Java** servlets and render web pages that use **Java** Server page coding. Accessible as either a binary or a source code version, Tomcat's been used to power a wide range of applications and websites across the Internet.As a Java Servlet container that provides extended functionality to interact with Java

Servlets, Tomcat is a powerful option to execute Java servlets and render web pages that use Java Server page coding. Tomcat enables a pure Java web server environment, bringing together Java-based technologies to run applications built on Java programming language. While its flexibility and interoperability enable Apache Tomcat to behave as a web application server under certain conditions, its true identity is primarily as a Java servlet container.

3. MySQL database 5.0 or above

MySQL is an Oracle-backed open source relational database management system (RDBMS) based on Structured Query Language (SQL). MySQL runs on virtually all platforms, including Linux, UNIX and Windows. Although it can be used in a wide range of applications, MySQL is most often associated with web applications and online publishing.

4. Eclipse IDE / STS 2018-2019

Eclipse is an integrated development environment (IDE) used in computer programming.[6] It contains a base workspace and an extensible plug-in system for customizing the environment. Eclipse is written mostly in Java and its primary use is for developing Java applications, but it may also be used to develop applications in other programming languages via plug-ins, including Ada, ABAP, C, C++, C#, Clojure, COBOL, D, Erlang, Fortran, Groovy, Haskell, JavaScript, Julia,[7] Lasso, Lua, NATURAL, Perl, PHP, Prolog, Python, R, Ruby (including Ruby on Rails framework), Rust, Scala, and Scheme. It can also be used to develop documents with LaTeX (via a TeXlipse plug-in) and packages for the software Mathematica. Development environments include the Eclipse Java development tools (JDT) for Java and Scala, Eclipse CDT for C/C++, and Eclipse PDT for PHP, among others.

5. Maven 3.0 or above

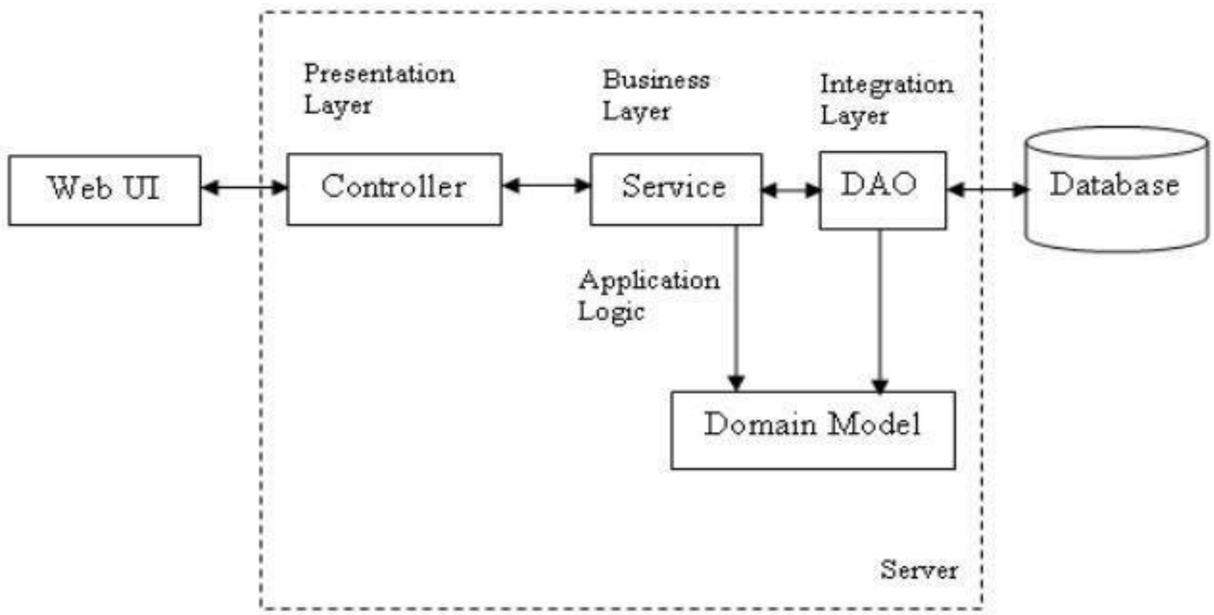
Maven is a software project management and comprehension tool. Based on the concept of a project object model (POM), Maven can manage a project’s build, reporting and documentation from a central place.

6. Junit 4

   JUnit is a unit testing framework for the Java programming language. JUnit has been important in the development of test-driven development, and is one of a family of unit testing frameworks. Its main use is to write repeatable tests for our application code units.

Architecture Design

Outline Of The Project



The whole software design can be divided mainly into 3 parts - WebUI, a middleware layer and a persistence layer. This project is developed for a customer manager where he is able to add new customer, update/delete the customer details. It also has a search module where the manager can search the customer details by entering the customer name or customer id.

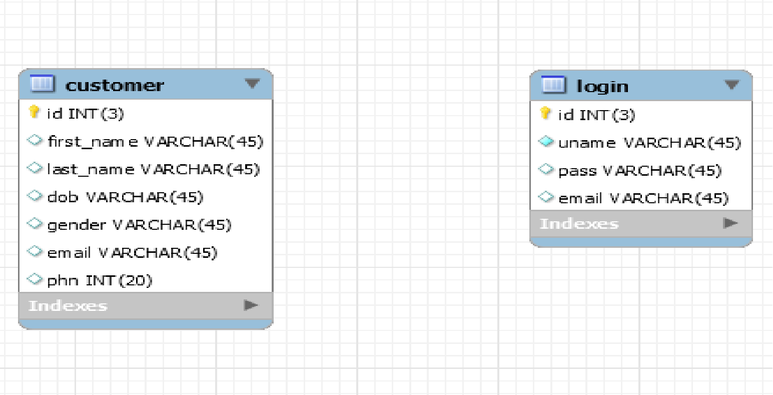
Technology across different layers:

Technology Layer	Category
Presentation Layer / Web UI	HTML5, CSS3, Javascript, JSTL, Spring MVC UI Components etc.
Middleware Layer	Spring MVC components
Persistence provider	Hibernate with MySQL 5+ version database

Relational Database Schema

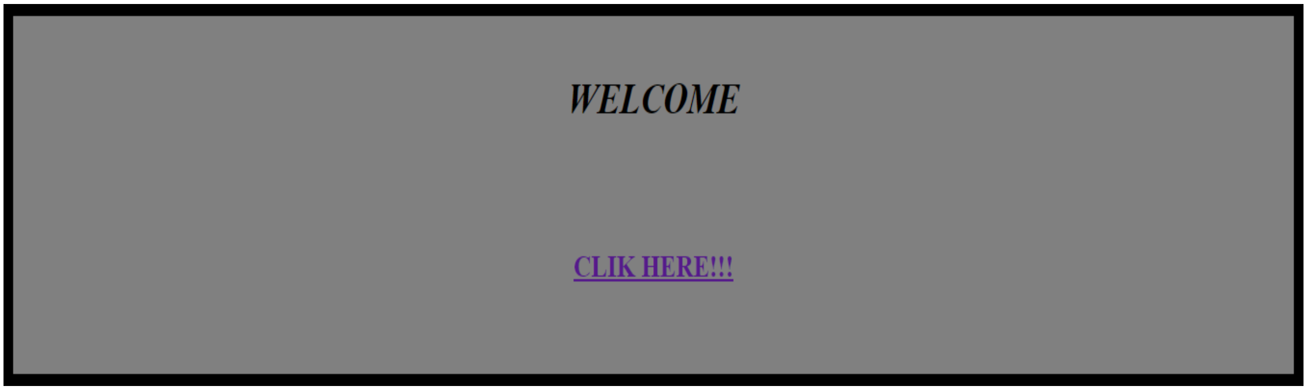
The data is stored in a database that is developed in MySQL. The database consists of two tables. Data of a customer means details such as ID, name, gender, email, date of birth and phone no with ID as the primary key which is placed in a table customer. The login table has the datas like username and password for login that enables to manipulate the information regarding each customer.

EER Diagram of Customer Project Database:

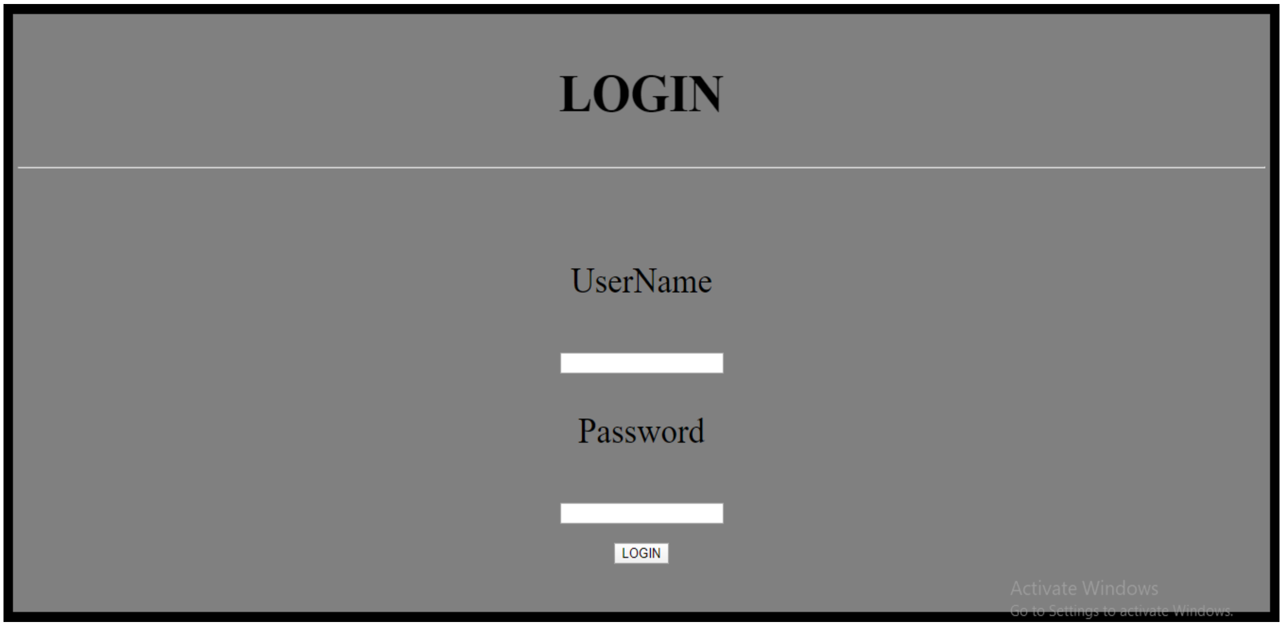


Snapshots

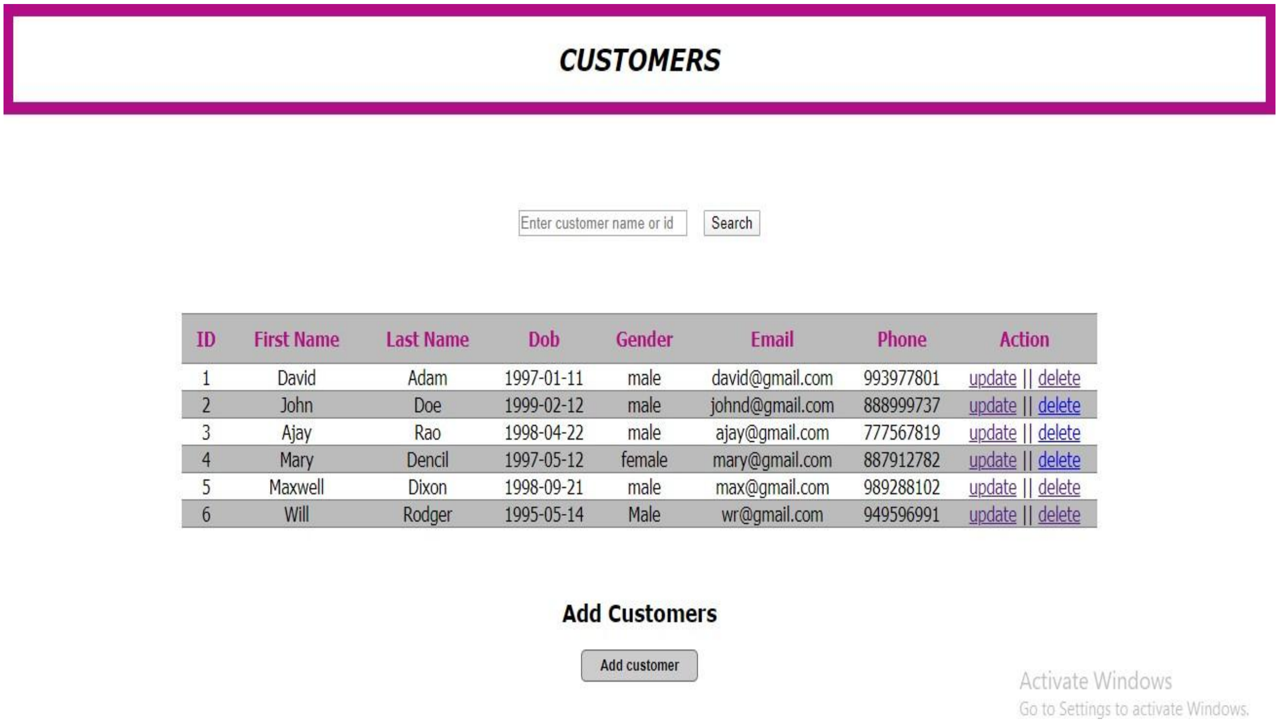
1) **Welcome page**



2) **Login page**



3) Customer List

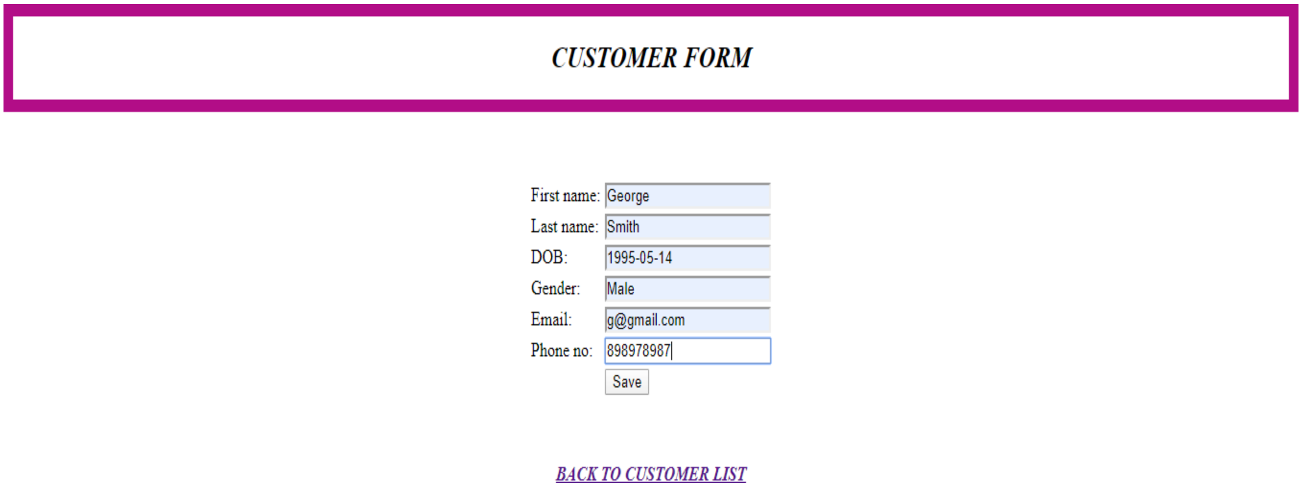


CUSTOMERS

ID	First Name	Last Name	Dob	Gender	Email	Phone	Action
1	David	Adam	1997-01-11	male	david@gmail.com	993977801	update || delete
2	John	Doe	1999-02-12	male	johnd@gmail.com	888999737	update || delete
3	Ajay	Rao	1998-04-22	male	ajay@gmail.com	777567819	update || delete
4	Mary	Dencil	1997-05-12	female	mary@gmail.com	887912782	update || delete
5	Maxwell	Dixon	1998-09-21	male	max@gmail.com	989288102	update || delete
6	Will	Rodger	1995-05-14	Male	wr@gmail.com	949596991	update || delete

Add Customers

4) Add Form

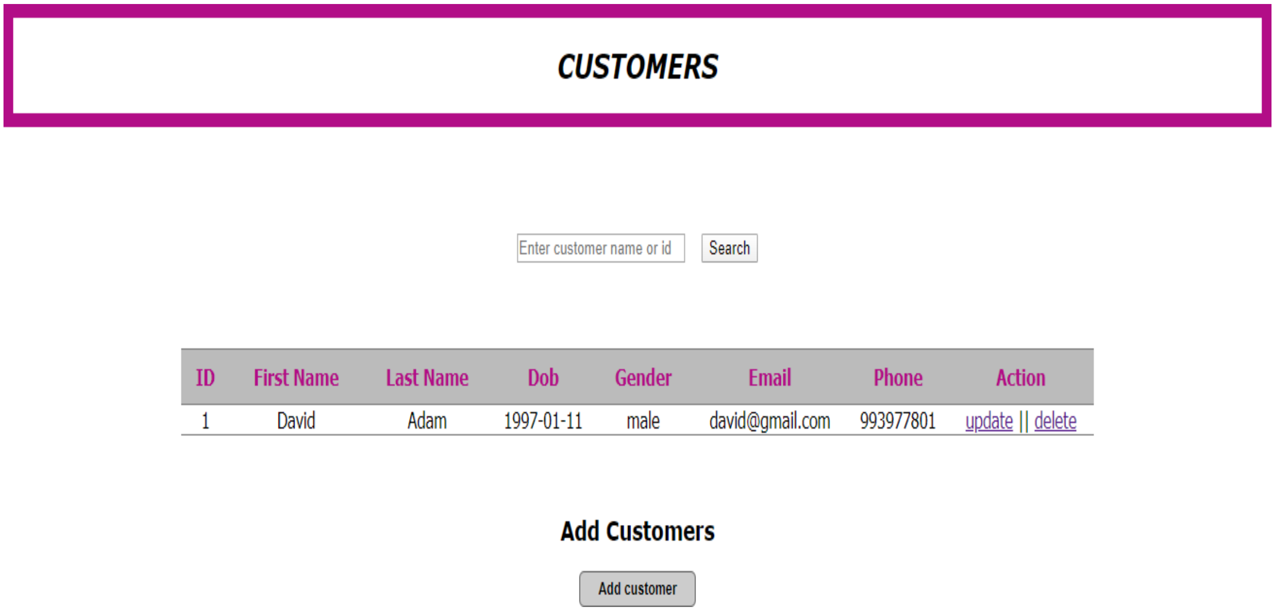


CUSTOMER FORM

First name:	George
Last name:	Smith
DOB:	1995-05-14
Gender:	Male
Email:	g@gmail.com
Phone no:	898978987

BACK TO CUSTOMER LIST

5) Search By Id or name



CUSTOMERS

ID	First Name	Last Name	Dob	Gender	Email	Phone	Action
1	David	Adam	1997-01-11	male	david@gmail.com	993977801	update || delete

Add Customers

Conclusion and Future Scope

In this project we have created an application in which the customer list is displayed, where the customer details can be updated and deleted. We can also add new customers. Even search the customers by their name or id. It also provides error messages while entering the invalid data.

In this world of growing technologies everything has been computerized. With large number of work opportunities the Human workforce has increased. Thus there is a need of a system which can handle the data of such a large number of Customers.

As a future work some additional stuff could be implemented and integrated into the application code making it much more reliable and flexible. Apparently role of such systems is basic and essential within each organization which wants to keep a really good control and record concerning data, functionality and performance in all levels of its structure. Nowadays every organization has a necessity of managing as the customers play a very great role in building up a company.

References

1. https://docs.spring.io/spring/docs/current/spring-framework-reference/

2. https://docs.spring.io/spring/docs/current/spring-framework-reference/core.html#spring-core

3. https://docs.spring.io/spring/docs/current/spring-framework-reference/web.html

4. https://hibernate.org/orm/documentation/5.0/

5. https://maven.apache.org/guides/getting-started/index.html