SOFTWARE REQUIREMENT SPECIFICATION

FOR

POLYCLINIC MANAGEMENT SYSTEM

Submitted By:

- Dishant Kumar Khushwaha(1623110034)
- Vantika Agarwal(1623110118)
- Anjali Yadav(1623110015)
- Shivani Bharti(1623110053)
- Ashwani Kumar(1678310007)

Acknowledgement

The final year project is able to be completed within the time frame given.Secondly thanks to all the lecturers Faculty of Science Computer and Information Technology for be a good lecturer helps me to finish my final year project. Special thanks to the supervisor Sir Mohammad vakil and Ravita ma'am for the advices and time that he spends to help improve my final year project. For all the participant that involve in evaluation and system testing, thank you very much.I really appreciate your cooperation and time spend during that session Finally my deepest gratitude goes to my parents who have given me much needed comfort,support, encouragement and inspiration for completing this project.
To all my friends thanks for the ideas and all the comments that has been given. I really appreciate. Finally thanks to all the people that helps me in completing the final year project.

Abstract:

The purpose of Polyclinic Management System with Symptom checker is to automate the existing system by providing end to end solution for various departments by dividing the complete application into multiple modules. The primary objective is to provide essential online medical assistance to users irrespective of their location. The diagnosis of a disease in most cases depends on a complex combination of clinical and pathological data; this complexity leads to the excessive medical costs affecting the quality of the medical care. This system helps the patient in the initial diagnosis based on the symptoms and allows users to interact with doctors based on the diagnosis report.

Smart Health Care System with Symptom Checker, as described above can lead to error free, secure, reliable and fast management system. In this system, identifying medical disease is based upon the symptoms given by the user. We mainly focus on symptoms and diseases, and the relation that exists between these two entities. The system identifies the disease based upon the symptoms specified, extracts the information from the data set by comparing user given symptoms with all diseases in the database, decodes the relation that exists between Symptoms-Disease and finally present classified information to user.

Table of Contents:

2.7 Scripting Language

List of Figures:

- Zero Level DFD
- First Level DFD
- Second Level DFD

Chapter 3:

- Benefits of proposed System
- Existing System
- Proposed System-Module Description
- Hardware Requirements
- Software Requirements

Chapter 1: Introduction

1.1 Introduction

Nowadays many systems have been developed to make life easier. The system
will include database that will record all the data. For the private hospital, usually they are using digital system to record the patient information and other information that related to the hospital. There are many systems for clinic management system, but it does not meet the local user requirement that is still new in the electronic system. Here, it will be more explanation of the system.

1.2 Project description

PolyClinic Registration System is developed to improve the clinic management and automates the workflow that happens in the clinic. This system is considering all the activities in the clinic.
Patient will make registration first. If the patient never registered before, patient
information collected and stored in the database. However, if it is an existing patient the patient data is search-using IC (identification card) no. This will improve the record of the patient and save the time during the registration. At this time, patient is assign to the doctor
Once the patient gets the treatment, the doctor will send the report including the

medicine name. The staff will view the report and complete the patient record. After that,the staff will prepare the bills for the patient. The patient can choose mode to pay cash or maybe the clinic is panel doctor for the patient. Then the staff will update the medicine stock and the patient record will be kept in database.

The Polyclinic management system is very beneficial for a clinic/doctor. It will stores complete patient record. The most important thing is it will make it easier for the retrieval of history information of the patient. In case, if patient is allergic for certain medicine, the doctor may detect what type of medicine.
For the security, before the user enters the system they have to input their
username and password before log in to the system. The system has different access for the difference user.
For the management of the clinic, they may view the daily report of clinic.

1.3 Problems Statement

Before this, the management of the Polyclinic is done manually. There are some problem arise especially for the data retrieval. Clinic has a problem of loss of patient data. There is also redundant patient data if the patient not sure whether they have come to the clinic before. So the clerk consider the patient as a new patient and add new data.
Currently, the inventory for the medicine is done manually. The management of the Polyclinic also have to takes times to check for the medicine inventory.

1.4 Objectives

When developing the system, some objective has been outlined. First, to fulfill the requirement for the final year project .From the technical view, the system
will help to make it easier to maintain the record of patient, doctor and medicine. It will help to reduce the number of lost record for the patient. At the same time, it will improve the data retrieval. It will be easier for the staff of the Polyclinic to retrieve back the record of
existing patient and doctor may view the patient history. For the doctor, it will record all the profile of doctor if the Polyclinic has more than one doctor. Furthermore, the inventory modules for the medicine will help in check the balance medicine and the information of the medicine such as medicine manufacture and price. The system will display if the medicine

is running out of stock. The most important thing is the management can view
the payment record for the clinic.
At the same time, the system may generate report for the operation of the clinic.
For example, report about the number of patient per day and total income for the clinic per day.

1.5 Scope

The scope for the system will involve staff, doctor and management of the Polyclinic.
The staff will register the patient. The doctor will diagnose the patients and give the medication while the management will view the daily report of clinic operation. The communication between the staff is done using the local clinic network.

1.6 Methodologies

During the development of the system, System Development Life Cycle (SDLC) procedures will be followed.
In the System Development Life Cycle (SDLC), Structured Systems Analysis and Design Methodology (SSADM) will be applied. SSADM phased includes Planning,Analysis, Design and Implementation and Testing.

1.6.1 Planning

During this phase, the objectives and goals of the system were defined clearly
include the project scoped. In this case, the objectives and goals of the system are to improve the management process in clinic and at the same way to improve process of recording data and data retrieval. After this, the risks of the system are been identified and evaluated. Identify the tools that going to use in the development process

1.6.2 Analysis

This phase includes identifying the data, the functions of the system, and the
requirements for the system. This phase is divided into for sub-phases, which is content analysis, interaction analysis, functional analysis, and configuration analysis. The content analysis will identify the content that will be provided for the user. For the clinic

management system, it will record data for patient, medicine inventory and so on. As for the interaction analysis, interaction between the user and the system is very important.
Therefore, there will be an interfaces for the clerk to register patient, doctor to view the patient and billing to customer. The functional analysis consists of interaction analysis that defines operations that will be manipulated to the content. The configuration analysis describes the environment and infrastructure in which the system will reside. It also includes the review of the existing web base applications system used for government and private organizations and the comparison between them.

1.6.3 Design
In this phase, development of the system is based on the information during
planning and analysis phases. The design will include data storage, interface design, architecture design and program design the development. The Entity relation diagram will be used to show the relationship between the entities in the overall system.
Meanwhile data flow diagram is design here to show the process that will take place in the system.

1.6.4 Implementation
At this phase, all the design is transfer into the programming language.Prototyping approach will be used in the implementation phased. means that the systemwill be keep on building and testing until the system meet the requirement during thedesign phased.

1.7 Expected Outcome
The system will be able to improve the workflow of the clinic starting from
registration until billing to the patient. At the same time, it will maintain all the data that can be accessed anytime.
The report generated will help the owner of the clinic to view the summary daily operation of the clinic.

1.8 Significance of Project
The clinic management system will improve clinic operation for both staff and the patient
For the staff, it will make it easy during registration process. If the patient is an
existing patient, they can easily retrieve back the record of the patient.

For the doctor they can view history record of patient. In case, if the patient allergy with the certain medicine, the doctor will give an alternative medicine for the patient.
For the management, it will help them view the report operation of the clinic. The other thing is it will maintain the account for the clinic.

1.9 Conclusion

Project introduction is the first step in building a system. Basically it will tell
what is the application or a system that we are intended to build, what it will look like,brief describe on the proposed project, setting up the project scope, defining projectobjective, problem statements of the project and also the expected outcome. This stage
will be used as a reference to ensure system meet the project scope and project objective.

Chapter 2: Background

2.1 Introduction

Currently the oversea company has developed most of the clinic management
system. However, the features and functions for the system are advanced for the local user because clinic is still using manual system. Besides that, the system that was developed is very expensive. This system developed to meet the local requirement . This chapter will elaborate more on how the existing works and the tools and terms that makes the service
works.

2.2 Client/server

Client/server describes the relationship between two computer programs in which one program, the client, makes a service request from another program, the server, which fulfills the request. In a network, the client/server model provides a convenient way to interconnect programs that are distributed efficiently across different locations. Computer transactions using the client/server model are very common. In the usual client/server
model, one server, sometimes called a daemon, is activated and awaits client requests.

2.3 Web Server

A Web server is a program that, using the client/server model and the World
Wide Web's Hypertext Transfer Protocol (HTTP), serves the files that form Web pages to Web users (whose computers contain HTTP clients that forward their requests). Every computer on the Internet that contains a Web site must have a Web server program.
Considerations in choosing a Web server include how well it works with the operating system and other servers, its ability to handle server-side programming, security
characteristics, and publishing, search engine, and site building tools that may come with it.

2.4 Java Web Server

Java Web Server is using Servlets technology to enable server-side Java applications that are easily available to users, employees and suppliers over the web. It is specially design for e-commerce activity and developed by Sun Microsystem Inc. Java web server is written in Java programming language
Java Web Server enables developers to create interactive and extensible web sites. The best thing is it provides GUI based tools for easy installation , management and maintenanace.

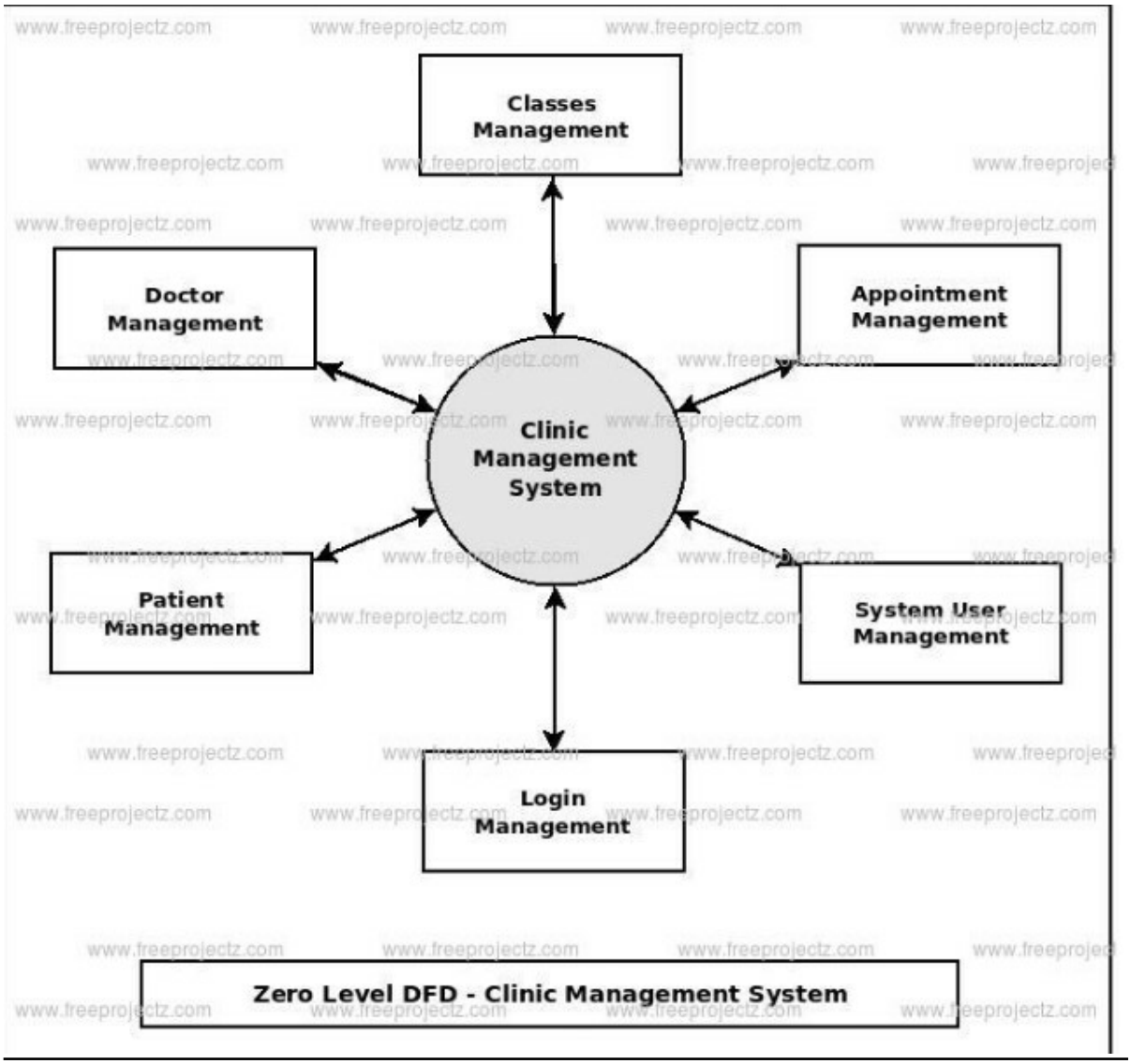
2.6 MySQL

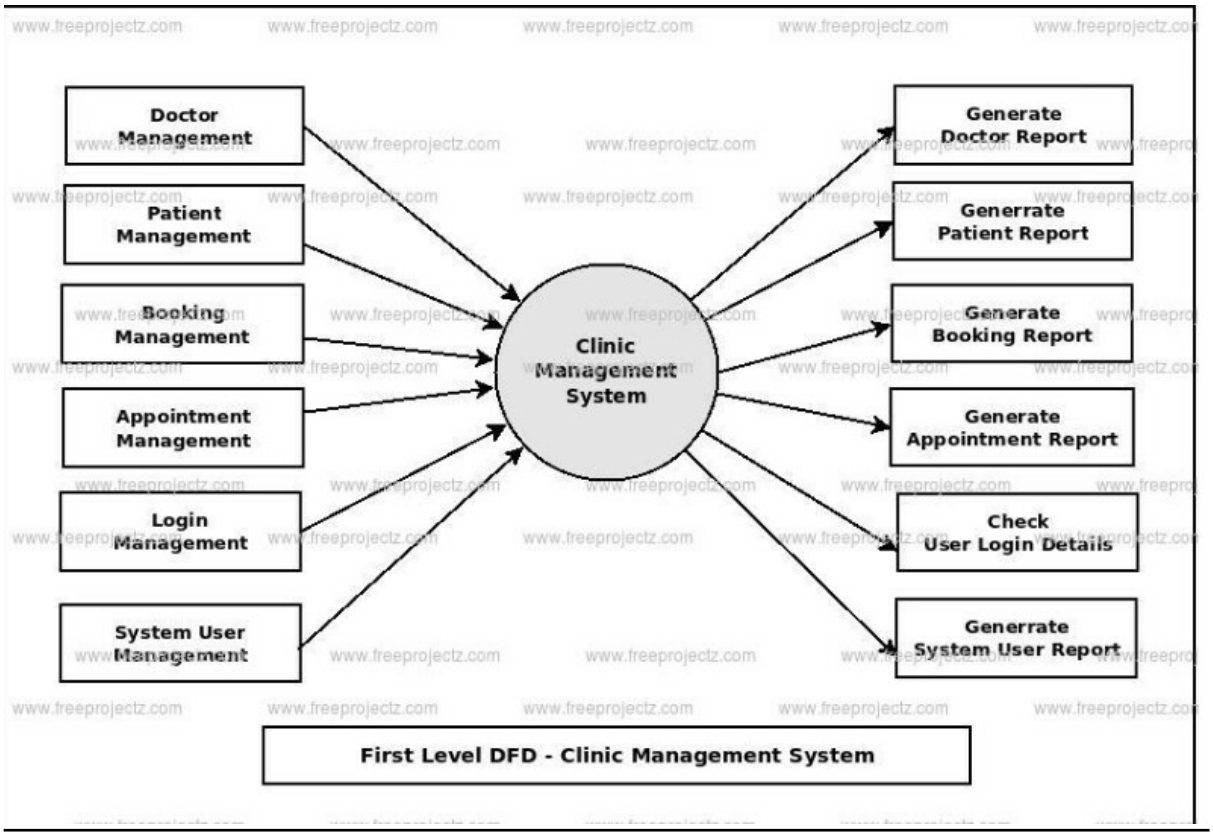
MySQL is an open source relational database management system. It is based on the structure query language (SQL), which is used for adding, removing, and modifying information in the database. Standard SQL commands, such as ADD, DROP, INSERT and UPDATE used in MySQL.
MySQL used for a variety of applications but it usually used on Web servers. A
website that uses MySQL may include Web pages that access information from a database.

2.7 Scripting Language

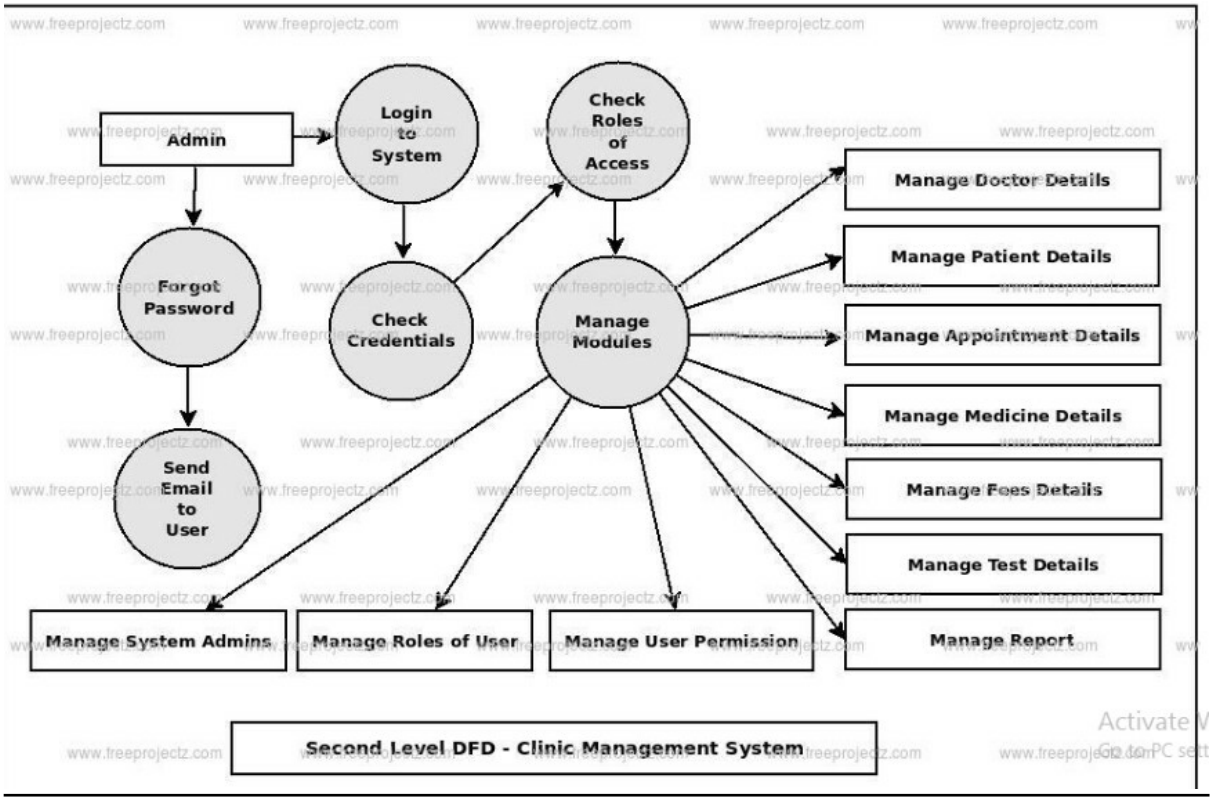
In computer programming, a script is a program or sequence of instructions that is interpreted or carried out by another program rather than by the computer processor (as a compiled program).
In the context of the web-based, script languages are written to handle forms input or other services for a system and are processed on the Web server.

DFD'S FOR POLYCLINIC MANAGEMENT





First Level DFD - Clinic Management System



Second Level DFD - Clinic Management System

Benefits of the proposed system:

- Provides reliable symptom checker.
- User/Patient can self-diagnosis if aware of the symptoms.
- Provides interaction between patients and doctors.
- Provides complete end to end solution for business automation.

Existing System:

The potential benefits of having an existing system are: Health information recording and clinical data repositories that provide immediate access to patient diagnoses, allergies that enable better and time-efficient medical decisions but do not aid the users/patients about the initial diagnosis of the disease, neither do they provide any communication with the doctors.

Drawback of existing systems are:

- People cannot get the direct information about the disease.
- There is no reliable information.
- Does not have Symptom checker for initial diagnosis.
- Patients/Users cannot directly interact with the doctors.

Proposed System-Module Description:

After careful analysis, the system has been identified to have the following modules:

- Admin Module
- Doctor Module
- Patient Module
- Disease Identification Module

Admin Module: In the proposed architecture, Admin is the data owner. Admin has complete control over Patient Management, Doctor Management, Appointment Management, Feedback Management. Admin maintains the site database.

Doctor Module: In this module, Doctor can manage his/her profile, can view his/her schedule, manage appointments, reply to the user queries and provide feedback.

Patient module: In this module, Patient can sing up, edit his/her profile, make an appointment, pay bills, view his/her medical report, provide feedback about the medical service.

Disease Identification Module: In this proposed architecture, this module provides the most efficient Symptom checker for self-diagnosis. User is going to give the symptoms as input and system outputs the related disease name. The user is provided an option to interact with the doctor based on diagnosis report.

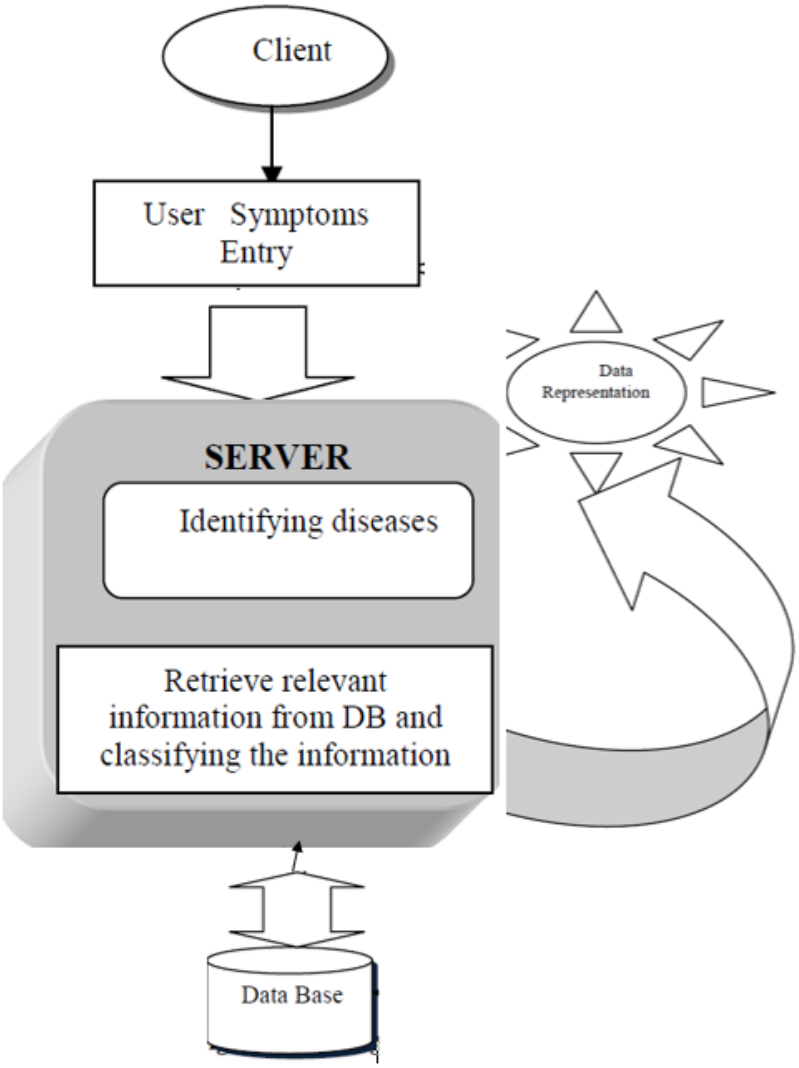


Figure: Disease Identification Module

Hardware Requirements:

Processor	:	Dual Core
RAM	:	1GB
Hard Disk Space	:	20 GB

Software Requirements:

Operating System	:	Windows
Technology	:	Java, JSP, Java Servlet
Web Technologies	:	HTML, JavaScript, CSS
Web Server	:	Apache Tomcat
Database	:	MySql