Project Documentation

Project Title – Online Service Booking System

On fulfillment of

Digital Internship in

Exavalu

BY - Group E

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Introduction

An online Service booking system is a software solution that allows potential guests to self-book and pay through your website, and other channels, while giving you the best tools to run and scale your operation, all in one place.

Objective

Since it is online, your booking system is always available and customers can book at any time and from anywhere. It meets your customers' expectations as it is online, easy to use, and easy to access on any device. ... Ultimately, having an online and mobile booking system can increase your spa's revenue.

Benefits

A booking system can help you do way more than just passively accept bookings and payments online. Reservation technology (res-tech) has evolved to the point that it's become a central hub for managing every aspect of your business, from marketing to distribution to operations.

Here are just a few things you can do:

- Track your growth with real-time reporting
- Avoid double bookings with channel management
- Keep track of your partnership commissions
- Assign inventory and staff to individual activities
- Gather details about your guests before they arrive
- Break down your day-to-day priorities
- The list goes on and on

Features

Our Online Service Booking System web application has following key features

- ★ People can easily register on our website using his/her Email Id
- ★ Registered users can log in on website using his/her Email and OTP
- ★ Users can see all the available services with their relative prices
- ★ Registered users can easily buy or order several services with few clicks
- ★ Admin can easily add , delete or update any service related things of his/her   company.
- ★ Admin can update the availability and price of any services of his/her company.
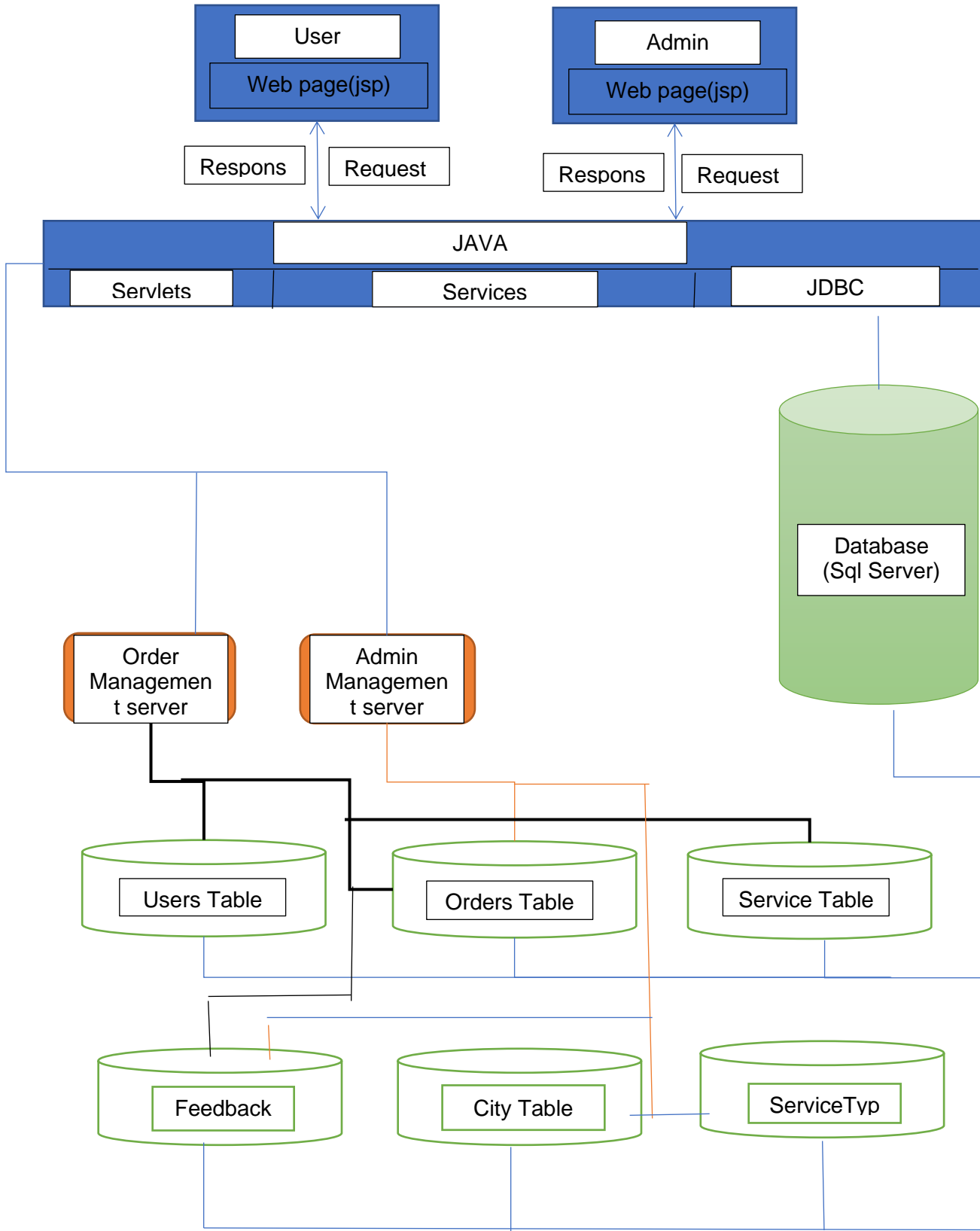
THEORETICAL BACKGROUND

The Project is comprised of the following :-

1. **HTML**: -The **Hypertext Markup Language**, or **HTML** is the standard markup language for documents designed to be displayed in a web browser. It can be assisted by technologies such as Cascading Style Sheets (CSS) and scripting languages such as JavaScript.

2. **CSS**: -**Cascading Style Sheets** (**CSS**) is a style sheet language used for describing the presentation of a document written in a markup language such as HTML.[1] CSS is a cornerstone technology of the World Wide Web, alongside HTML and JavaScript.

3. **JSP: -**JSP technology is used to create web application just like Servlet technology. It can be thought of as an extension to Servlet because it provides more functionality than servlet such as expression language, JSTL, etc.

4. **JS: -JavaScript** is a programming language that is one of the core technologies of the World Wide Web, alongside HTML and CSS. Over 97% of websites use JavaScript on the client side for web page behavior, often incorporating third-party libraries. All major web browsers have a dedicated JavaScript engine to execute the code on users' devices.

5. **jQuery: -**jQuery is a fast, small, and feature-rich JavaScript library. It makes things like HTML document traversal and manipulation, event handling, animation, and Ajax much simpler with an easy-to-use API that works across a multitude of browsers. With a combination of versatility and extensibility, jQuery has changed the way that millions of people write JavaScript.

6. **AJAX: -**is a set of web development techniques that uses various web technologies on the client-side to create asynchronous web applications. With Ajax, web applications can send and retrieve data from a server asynchronously (in the background) without interfering with the display and behavior of the existing page. By decoupling the data interchange layer from the presentation layer, Ajax allows web pages and, by extension, web applications, to change content dynamically without the need to reload the entire page.[3] In practice, modern implementations commonly utilize JSON instead of XML.

7. **JAVA: -**Java is a programming language and a platform. Java is a high level, robust, object-oriented and secure programming language.

   Java was developed by *Sun Microsystems* (which is now the subsidiary of Oracle) in the year 1995. *James Gosling* is known as the father of Java. Before Java, its name was *Oak*. Since Oak was already a registered company, so James Gosling and his team changed the name from Oak to Java.

8. **Model Used**: -
    a. Struts2
    b. Bootstrap

9. **Database Used**: - MySQL.

System Architecture

User
Web page(jsp)

Admin
Web page(jsp)

Respons   Request

Respons   Request

JAVA
Servlets	Services	JDBC

Database
(Sql Server)

Order
Management
server

Admin
Management
server

Users Table

Orders Table

Service Table
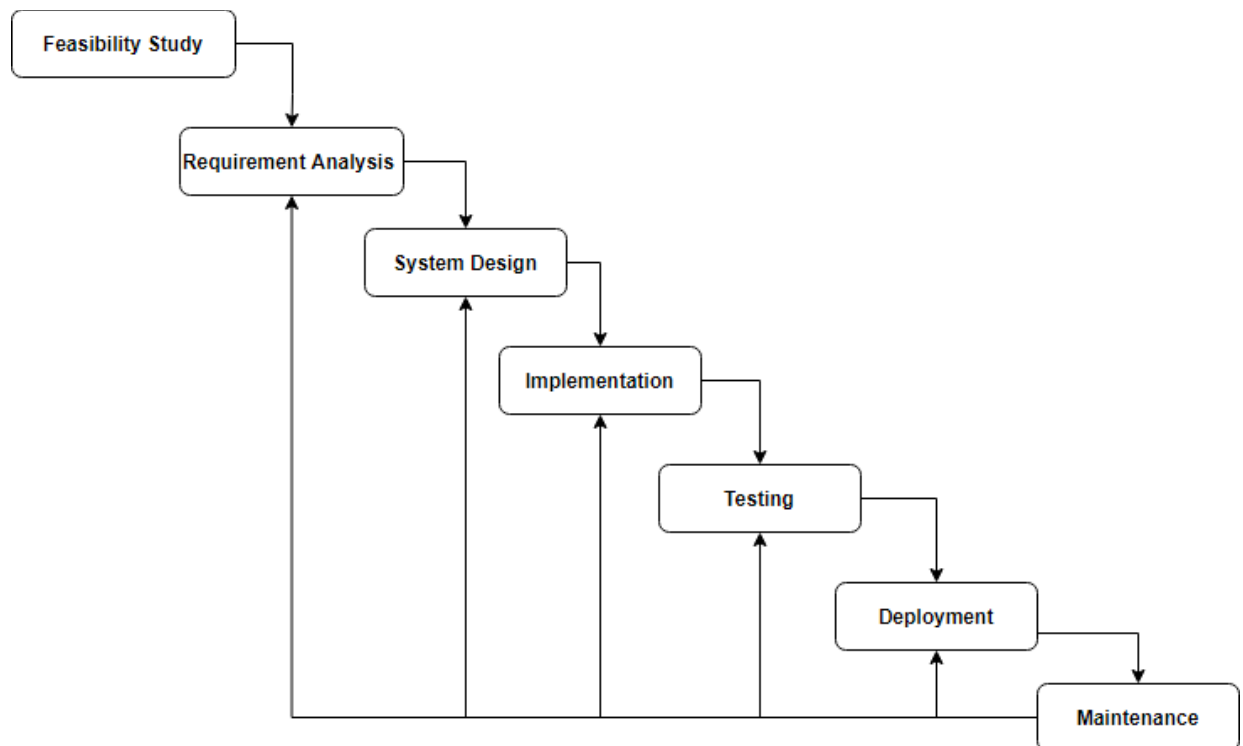
Feedback

City Table

ServiceTyp

Software Model

In this project, we are using Iterative waterfall model as our software model. We are using Iterative waterfall model as it is the extension of Waterfall model. The iterative waterfall model provides feedback path from each phase to its previous phase, which make the project handling easy. For every new version of the application, we can iterate through the beginning and make changes wherever there is needed. Every release of the Iterative Model finishes in an exact and fixed period that is called iteration.

There are different phases of Iterative model and they are as follow: -

1. **Requirement gathering & analysis:** In this phase, we gathered the requirements, according to the project need. After requirement gathering, we move ahead with the next steps

2. **Design:** In the design phase, we design the software by the different diagrams like Data Flow diagram, activity diagram, class diagram, state transition diagram, etc.

3. **Implementation:** In the implementation, we write the requirements in the coding language and transformed into computer programs which are called Software.

4. **Testing:** After completing the coding phase, software testing starts using different test methods. We are using Junit for testing.

5. **Deployment:** After completing all the phases, software is deployed to its work environment.

6. **Review:** In this phase, after the product deployment, we started review phase in which we check the behavior and validity of the developed product. And if there are any error found then the process starts again from the requirement gathering.

7. **Maintenance:** In the maintenance phase, after deployment of the software in the working environment there may be some bugs, some errors or new updates are required

Iterative Waterfall model diagram

Why we are using Iterative model: -

- **Feedback Path** – In the classical waterfall model, there are no feedback paths, so there is no mechanism for error correction. But in the iterative waterfall model feedback path from one phase to its preceding phase allows correcting the errors that are committed and these changes are reflected in the later phases.
- **Simple** –Iterative waterfall model is very simple to understand and use.
- **Cost-Effective** –It is highly cost-effective to change the plan or requirements in the model.
- **Well-organized** –In this model, less time is consumed on documenting and the team can spend more time on development and designing.

Database Structure

We have used 06 database tables for our project namely **users, cities, feedback, orders, services, service type.**

 The **ER Diagram** looks like this: -
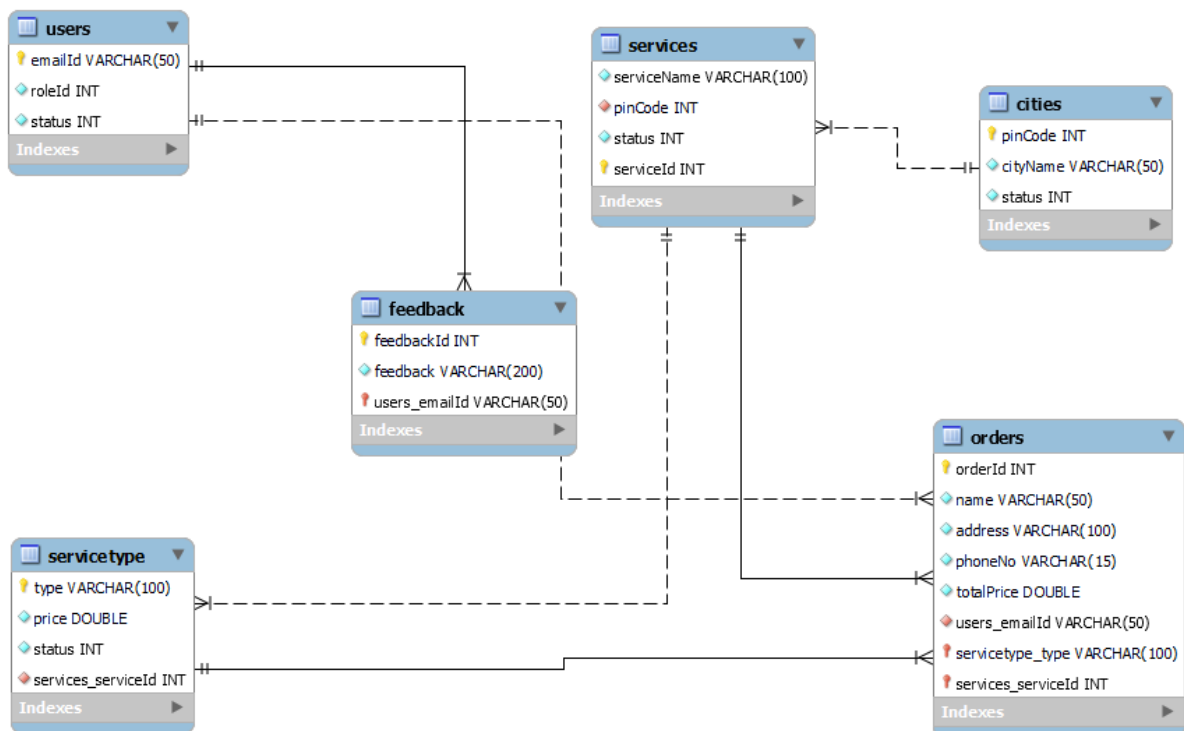
Future Scope

The User interaction with the application can be made more user friendly by providing virtual assistant using latest technologies like AI (like Siri for apple).

In future we can enhance our application with new services, cities and new features.

In future we can implement the professional or employee site of this application.

In future we can add several new features on this application, which will be more useful for customers.

Conclusion

Online Service booking system is an application where the customer can book a service online and 24*7 hours a day from anyplace in the world. Customers can order some services and company's executives will go their place and give those services. Online Service booking also takes feedback from customers for enhance or improve their services. System performance is also found to be satisfactory. This is a user-friendly application. Through this application, the cost can be reduced and efficiency is increased. There are several services that can be selected by customers. With the help of this application admin can set services, service type, cities available and can see the customer details and order list.