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TIMESHARE VACATION (TIVAS)

**Project Assignment**

**Prepared by Group 5**

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# **Introduction**

## **Purpose**

This website struggles with reservation and booking management, user-friendly interface design, sales process streamlining, payment tracking, time-share purchase prioritization, staff-customer communication coordination, user authentication, and legal compliance in real estate and time-share industry. To overcome challenges, the website integrates robust reservation, user interface, and sales management systems. It includes secure payments, prioritizes time-share purchases, facilitates staff-customer communication, ensures user authentication, and complies with industry regulations.

## **Document**

No special typographical conventions are used in this SRS.

## **Project Scope and Product Features**

* Introduction Page: The website shall feature an information page introducing the investor's timeshare real estate projects, including details on upcoming, ongoing, and already implemented projects.
* Property Search Functionality: Customers shall have the capability to search for real estate properties for sale, filtering based on relevant criteria such as location, amenities, price range, etc.
* Reservation Management System: The system shall facilitate the management of the reservation process, enabling customers to make reservations for properties. It should track reservation details including dates, property preferences, and customer information.
* Sales Process Management: The system shall manage the entire sales process from the initiation of reservations to successful closure of purchases. This includes tracking the progress of contracts, facilitating communication between customers and sales representatives, and updating payment statuses according to contract milestones.
* Priority Setting for Investors: During the sales process, investors shall have the ability to set purchasing priorities for customers based on reservation information. This could include criteria such as reservation date, randomized selection, or other specified parameters.
* Dashboard and Reporting Features: The system shall provide a dashboard for investors and administrators to access key metrics and reports related to revenue statistics, project status, sales performance, and other relevant data. Reports should be customizable and offer insights into the performance of individual projects as well as overall business operations.

# **Overall Description**

## **Product Perspective**

Our vacation ownership real estate project management system seeks to redefine the timeshare market, providing a streamlined platform for investor and customers alike. Acting as a virtual hub for property exploration, our user-friendly website serves as a digital showroom, facilitating seamless browsing of available real estate projects. The Customer Dashboard offers personalized interactions, allowing customers to manage reservations and track purchase progress with ease. Simultaneously, the Admin Dashboard provides centralized control for efficient project management and oversight. Integrated payment processing ensures smooth transactions, while multi-device accessibility ensures convenience for users across various platforms. With a focus on providing a comprehensive solution, we aim to establish ourselves as the premier destination for vacation ownership real estate investment.

## **User Classes and Characteristics**

### **For Guests:**

Guests should have the ability to view resorts, view all typerooms of resort, view all timeshares. Additionally, they can see the comment and rating about the resorts..

### **For Customers:**

Customers should be provided with the capability to edit their profiles as needed. They must be able to utilise their Stripe wallet balance for making payments on the website. Furthermore, customers can buy reservation ticket for a resort, book timeshare with their reservation ticket, save their preferred resorts to a wishlist, track the progress of their orders, and view their order history.

### **For Admin:**

Admin needs to have secure login/logout functionalities. Admin should possess the authority to manage revenue, user accounts, resorts, typerooms of resort. Addtionally, admin can decide the time to open reservation for resort and open booking for timeshare in the resort. .

### **For Staffs:**

Staff members must be able to log in and out of the system. They can manage timeshare, contact with customers, config status of timeshare deal.

## **Operating Environment**

* Our system will be a web application developed with ReactJS, using Visual Studio Code. The back-end will be written in JavaScript, utilizing the ExpressJS library in Visual Studio Code, and connect together via API.
* The database will be built on a standard MySQL platform, utilizing MySQL.
* Users, including students and instructors, can access the platform on the internet using browsers such as Google Chrome (version 100 to 118) and Microsoft Edge (version 100 to 188).

## **Design and Implementation Constraints**

CO-1: The system’s design, code, and maintenance documentation shall conform to the *Process Impact Intranet Development Standard, Version 1.3* [2].

CO-2: The system shall use the current corporate standard Oracle database engine.

CO-3: All HTML code shall conform to the HTML 5.0 standard.

## **Assumptions and Dependencies**

For our system, the following design and implementation constraints apply:

* **Data Storage:** We utilize Microsoft SQL Server for data storage to ensure quality, durability, and reliability.
* **Website Functionalities:** All website functionalities are implemented using a RESTful API architecture with ExpressJS for the backend and ReactJS for the frontend. This choice ensures flexibility, scalability, and ease of maintenance.
* **Query-Data Retrieval (QDR) Performance:** Our system must efficiently process all user-generated data updates within a reasonable timeframe to maintain responsiveness and user satisfaction.
* **Setup and Maintenance:** The setup and maintenance of our system involve tasks such as installation, hosting, host-security configuration, and ongoing administration to ensure smooth operation and security.

# **System Features**

## **Use Case Diagram**

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## **ERD (Entity Relationship Diagram)**

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## **Screen flows/ Mock up**

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## **Sequence Diagrams**

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# **Quality Attributes**

## **Usability**

* The user interface should be intuitive and user-friendly to enhance the overall user experience.
* The website should be compatible with commonly used web browsers and responsive across various devices (laptop, tablet, mobile).

## **Performance**

* The system should have a 90% uptime, ensuring that it is available to users with minimal downtime.
* Backup and recovery mechanisms should be in place to protect against data loss in case of system failures.

## **Security**

* The system should be available 24/7 for users to browse products, place orders, and access account information.
* Scheduled maintenance activities should be communicated to users in advance, minimising any inconvenience.

## **Safety**

* The application should be scalable to accommodate an increase in the number of products, users, and transactions.
* It should be able to handle a growth rate of at least 20% in terms of user base and product catalogue.

## **Availability**

* User authentication and authorization mechanisms should ensure secure access to personal information and financial transactions.
* Data transmission should be encrypted using secure protocols (e.g. HTTPS) to protect sensitive information during communication.

## **Robustness**

* The system should handle unexpected inputs and errors gracefully, providing informative error messages to users and logging details for analysis.
* It should have built-in mechanisms to recover gracefully from failures, ensuring minimal disruption to user experience.
* The application should be resilient to high traffic loads, with measures in place to throttle or queue requests during peak usage periods.