**Project 13**

**Jot Bikes - Electric Bike Rentals & Sales Rental Management System**

**About the Client:**

Jot Bikes is an Electric Bike & Scooter retailer based in Redfern, Sydney.

Jot Bikes is Australia’s Number 1 electric bike, electric scooter, sale, repairs and rental shop. We offer the highest quality range of E-Bikes and E-Scooters with Fast Shipping Australia-wide and excellent customer service.

We specialise in a range of brands including Dragon, Kristall, NCM, The Cullen, Vamos, Bolzzen, Dulatron, Inokim, Kaabo, Mercane, Segway, Vsett, Xiaomi, Zero and many more!

Our products are shipped fast from our shop in Redfern, Sydney. You can visit our shop to browse the range, get repairs, rent an e-bike or e-scooter and get helpful advice.

**Project Brief:**

* **Modules:**

The system comprises of 3 major modules with their sub-modules as follows:

1. **Admin**

* **Login:** Admin can login with id and password
* **Manage Vendor:** Admin can add vendor, update his/her information and delete the vendor.
* **Manage Bike:** Admin can update, delete and add bike information.
* **View Booking:** Admin can see booking done.
* **View Users:** Admin can see user’s details.
* **View Feedback:** Admin can check the feedback

1. **User**

* **Registration:** User need to register to get login id and password.
* **Login:** User can login with Id and password.
* **Check Bike Availability:** User can check the bike availability.
* **Book & Pay:** User can book and pay for the bike on rent.

1. **Vendor**

* **Login:** Vendor can login with Id and password.
* **Manage Bike:** Vendor can update and delete the bike information.
* **View Bookings:** Vendor can check the booking done by users.
* **Advantages**
* Get bikes and scooters easily on rent
* **Limitation**
* Data need to be entered properly otherwise; outcome may won’t be accurate.
* **Application**
* This system can be used by the multiple peoples to get the counselling sessions online.

**Functional Requirements**

Find below more detailed breakdown of the functional requirements:

**Inventory Management:**

* **Tracking Bikes:**

The system should allow for the accurate tracking of all bikes, including type, model, size, condition, and availability.

* **Adding/Removing Bikes:**

Ability to easily add new bikes to the inventory and remove bikes that are no longer available for rental or sale.

* **Inventory Alerts:**

The system should provide alerts when inventory levels are low or when bikes need maintenance.

**Rental Management:**

* **Booking and Scheduling:**

Allow customers to book bikes online or through the system, including specifying dates, times, and bike types.

* **Rental Agreements:**

Generate and store rental agreements with customer information, bike details, and rental terms.

* **Payment Processing:**

Securely process rental payments through various methods (cash, credit card, etc.).

* **Rental Check-in/Check-out:**

Enable efficient check-in and check-out processes, including bike condition checks.

* **Extension of Rentals:**

Allow for easy extension of rental periods if needed.

**Sales Management:**

* **Product Catalog:** Display bikes available for sale with details, images, and pricing.
* **Sales Transactions:** Process sales transactions, including payment and order fulfillment.
* **Customer Database:** Store customer information, including purchase history, for future reference.

**Customer Relationship Management (CRM):**

* **Customer Profiles:**

Maintain customer profiles with contact information, rental history, and other relevant data.

* **Communication:**

Send automated emails or notifications to customers regarding bookings, payments, or other important information.

**Reporting and Analytics:**

* **Sales Reports:**

Generate reports on sales performance, including revenue, popular bike types, and customer demographics.

* **Rental Reports:**

Track rental activity, including occupancy rates, popular rental periods, and customer preferences.

* **Inventory Reports:**

Monitor inventory levels, identify slow-moving items, and track maintenance needs.

**Other Features:**

* Integration with Online Booking Platforms: Allow customers to book bikes through online platforms, if desired.
* User Roles and Permissions: Implement different user roles with varying levels of access to the system.
* Security: Ensure data security and protect sensitive customer information.
* Customization: Allow for customization of the software to meet the specific needs of the business.

Functional requirements are product features or functions that developers must implement to enable users to accomplish their tasks. So, it’s important to make them clear for the stakeholders. Generally, functional requirements describe system behavior under specific conditions.

The developers of this system must enhance the performance and efficiency of the system by adding 15 to 20 more functional requirements. Students need to do their own research to find how they can improve the system and which FRs need to added. The group must need a prior approval from the stakeholders/project supervisor before finalizing these Functional Requirements.

These enhanced FRs must be reflected separately in Final SRS Report after the approval.

**Non Functional Requirements**

There are a lot of software requirements specifications included in the non-functional requirements of the system, which contains various processes, namely Security, Performance, Maintainability, and Reliability.

**Security:**

* Patient Identification: The system needs the patient to recognize herself or himself using the phone.
* Logon ID: Any users who make use of the system need to hold a Logon ID and password.
* Modifications: Any modifications like insert, delete, update, etc. for the database can be synchronized quickly and executed only by the ward administrator.
* Front Desk Staff Rights: The staff at the front desk can view any data in the system, and add new patients record to the HMS but they don't have any rights to alter any data in it.
* Administrator rights: The administrator can view as well as alter any information in the system.
* Cybersecurity Implementation: Identify ethical risks in database design and implement the actions of mitigation.
* Cybersecurity Implementation: Provide evidence that you have implemented the data encryption and anonymization of data.
* Cybersecurity Implementation: Perform ‘Data Protection Impact assessment’ to help ensure compliance, facilitate a privacy by-design approach and identify better practice.
* Cybersecurity Implementation: Implement the secure methods for data encryption, data security and data breach to maintain the privacy of end users.

**Performance:**

* Response Time: The system provides acknowledgment in just one second once the 'patient's information is checked.
* Capacity: The system needs to support at least 1000 people at once.
* User-Interface: The user interface acknowledges within five seconds.
* Conformity: The system needs to ensure that the guidelines of the Microsoft accessibilities are followed.

**Maintainability:**

* Back-Up: The system offers efficiency for data backup.
* Errors: The system will track every mistake as well as keep a log of it.

**Reliability:**

* Availability: The system is available all the time.

Project should aim at Business process automation.

* + In computer system the person has to fill the various forms & number of copies of the forms should be easily generated at a time.
  + In computer system, it is not necessary to create the manifest but we can directly print it, which saves time.
  + To assist the staff in capturing the effort spent on their respective working areas.
  + To utilize resources in an efficient manner by increasing their productivity through automation.
* The system should generate types of information that can be used for various purposes.
* It satisfy the user requirement
* Be easy to understand by the user and operator
* Be easy to operate
* Have a good user interface
* Be expandable
* Delivered on schedule within the budget.

**Hardware Requirement: Should be recommended by the developers.**

**Software Requirement: Should be recommended by the developers.**