**Statement /description for**

**Vehicle Rental and Management System**

**Team members:**

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1. **Introduction**

VHR Vehicle Rental Company is a vehicle rental company based in Iowa. It rent different types of vehicles to companies and individuals. The kind of vehicles include

* Automobiles
* Scooters
* Bikes
* Buses
* Motor Bikes
* Trucks and Lorries

VHR Vehicle Rental Company vehicle rental company manages and give services to it’s customers using a manual spreadsheet . Currently the company works as we stated below.

If a customer wants to book a vehicle they should show up physically at the company. The customer support at the front desk will hand them an album of vehicles so they can look at and choose a specific vehicle. Based on the customer’s choice the customer support will go through the spreadsheet and check for availability. If the car is available, then the customer will fill out a vehicle booking form.

But now a days , the company is growing and have many vehicles so not easy to manage the vehicles and also wants to make their service available to their customers without appearing in person.

**2. Positioning**

**2.1 Problem Statement**

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| --- | --- |
| The problem of | managing and renting company vehicles to many clients |
| Affects | The company, Company employees and the company clients |
| the impact of which is | Difficulty to track vehicle availability, must be manually maintained in spreadsheet,  And easier availability of service to clients |
| a successful solution would be | Develop a web application program (tool) that enables the company to easily and accurately track vehicle availability and will also allow company clients to book or rent car online. This web application program (tool) will have a Database and a user interface that is easy to use for the company employees and the company clients. |

**2.2 Product Position Statement**

|  |  |
| --- | --- |
| For | VHR Vehicle Rental Company |
| Who | Provide Vehicle rental services to companies and individuals*.* |
| The E-rental system | Is a Vehicle Rental and Management System |
| That | * Easier and Accurate way of tracking and managing vehicles * Easier way of booking or renting a vehicle * Reaching more clients |
| Unlike | * The use of excel spreadsheet and paper based forms |
| Our product | * Have a database so that data will be tracked * A good and easier user interface |

**3. Stakeholder Descriptions**

**3.1 Stakeholder Summary**

|  |  |  |
| --- | --- | --- |
| **Name** | **Description** | **Responsibility** |
| **Admin** | Manage front desk and employee. | Admin is responsible for register new vehicles, manage employee data |
| **Front Desk receptionist** | Can see the available vehicles for rent | Assign a vehicle to a customer choice |
| **Company Clients** | Book and rent a vehicle | Clients are responsible to sign up and fill out forms |
| **Developers** | Develop the system based on requirement and documentation | They are responsible for developing the intended system, fixing bugs and maintaining the system’s availability |
| **System Analyst** | Documents the user requirements | Responsible for requirements analysis and specification |
| **Architect** | Software architecture | Responsible for the identification of design classes, packages and system layering strategies |
| **Designer** | Refines and updates class diagram | Responsible for designing the use case diagrams, class diagram |
| **Testers** | Perform unit and integration tests | They are responsible for integration testing. |

**3.2 User Environment**

The car rental platform provide user in any device having access to internet connection on any web browser regardless of the any operating system and in the coming future mobile app IOS/Android . Each operation takes a few minutes or more depending on when a transaction is completed. Many users can be connected to the server, and each one of them is connected to its own device as its was alone using the rental System.

**4. Product Overview**

**4.1 Product Perspective**

This project is self-contained and independent. It's built using Spring and runs on Apache-Tomcat server and keeps the data on MySQL server. It is a web-based system implementing client-server model. E-rental will provide a simple mechanism for users to rent and drop a car. It will be made of

several modules/components working together to execute user's request; We will provide best user-friendly interface that will facilitate the user experience.

**4.2 Assumptions and Dependencies**

Our assumption on e-rental application users at the beginning of one year will not exceed more than 10,000. After a year

**4.3 Needs and Features**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No | Problem | Need | Priority | Features | Planned Release |
| **Admin** | | | | | |
| 1 | Rental company offers variety cars for rent | Cars must be arranged by year and model |  | Admin able to add and categorize the cars |  |
| 2 | Vehicles need to be services and maintained in a regular basis | Tracking milage on the vehicles and oil life and odometer |  | Admin should Schedule maintenance and send notification |  |
| 3 | Available vehicles should be managed | Add/remove a vehicle to the system |  | Admin should be able to add and remove vehicles from the system |  |
| 4 | Booking Prices are constantly changing as demands increases | Prices must be easily adjusted |  | Admin should be able to change booking prices in the system |  |
| **Front Desk Receptionist** | | | | | |
| 5 | One client can have multiple bookings | View all a booking without duplicate client information |  | Receptionist should be able to view all bookings belonging to one client |  |
| 6 | Company not able to effectively track booking payments | View and extract payment reports |  | Receptionist should be able to View and extract payment reports by client, date or vehicle category |  |
| 7 | Managing, handling and coordinating bookings is cumbersome | Dashboard showing all bookings and their status |  | Receptionist should be able to view all bookings and manage them from one dashboard |  |
| 8 | Reports are consolidated once every month and they are not accurate | Reporting module which allows reports to be generated at any time |  | Receptionist should be able to generate reports, daily, weekly, monthly and yearly |  |
| **Client** | | | | | |
| 8 | Payment for booking only in cash and client has to be physically present | Allow online payments |  | Client should be able to pay for booking online through the system |  |
| 9 | Company experiencing many late returns | Company needs to send reminders to clients whose booking period is nearly ending |  | Client should receive a reminder to return a vehicle on time |  |
| 9 | Client has to be present physically for vehicle booking | Need to allow booking to be placed remotely |  | Client should be able to access system from anywhere and place a booking |  |
| 10 | Client does not know which vehicles are available for booking without going to the company | Available Vehicles must be viewed together with the model, year etc |  | Client should be able to browse through and see all available vehicles |  |
| 11 | The organization normal work time schedule is from 9 am – 6:00pm; therefore the organization gives services for eight hours a day. | Avail some services 24/24 |  | Client should be able to check the availability of vehicles any time  Client should be able to book for cars any time |  |
|  |  |  |  |  |  |

**4.4 Alternatives and Competition**

**Excel and paper based system**

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| --- | --- |
| Strengths | Weaknesses |
| Client verification is more reliable | Reports are not accurate as they are difficult to consolidate. |
| No risks of system failure or breakdown | Tracking client information is difficult. |
|  | Services are not available all the time |
|  | No online payments and delivery service |
|  |  |

**5. Other Product Requirements**

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| --- | --- |
| **Requirement** | **Priority** |
| System should be usable, as the features will be useful to the company employees, clients and the system admin. | High |
| System should be able to handle many requests at the same time. | High |
| System should be accurate, | High |
| System requires a payment gateway | High |
| User Manual | High |
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