**Vision Document**

**Team members:**

1. Bereket Abraham ID: 109671
2. Kaleb Workneh ID: 109670
3. Samrawit Haile ID: 109666
4. Senait Habte ID: 109707
5. Yosief Teklemariam ID: 109633

**1. Introduction**

This vision document is prepared for an electronic/online car rental system, referred to as eCarRent from now on, that is designed to serve the operational automation needs of small scale, single hub and local car rental companies based in small cities and towns like Fairfield where large enterprise car rental companies don’t operate.

Mostly this kind of companies run all their rental operations by using excel files or other manual databases with multiple sheets or data sets handled separately. This data is often manually updated by a staff after each booking or rental. This process is prone to multiple errors and mishaps since the person responsible for handling the data often makes typical human errors. Common problems observed from the operation management side are

* missing to update all involved sheets after a booking or rental
* overlapping bookings on a single vehicle
* unnoticed or ignored vacancies on vehicles between rentals
* difficulty to go through all data every time a customer makes a request
* difficulty keeping track of vehicle returns
* inconsistent and out of date data
* poor data security

And, on the other very crucial aspect of providing quality customer service, the following issues are observed

* customers are forced to either call or come to the office in person to rent a car or make a booking which in today’s competitive market is considered as outdated.
* customers don’t have the option to easily see what is available and when
* all operational problems reflect on customer service directly or indirectly pushing them to other competitors.

eCarRent online car rental management system aims to mitigate the above-mentioned problems in addition to providing an efficient and convenient system for customers to browse through and make car rental reservations online.

Target auto rental companies has the following main common features

* Based in small cities and towns
* Single hub operation. All cars rented must be returned to the same hub.
* Rents three categories of vehicles; sedans, crossovers, and SUVs
* Maximum number of operational vehicles is 100
* Renting customers should at least be 18 years old and have a valid license.
* Daily rate is flat for each category and is calculated based on a 24 hours day.
* Renting customers between ages 18 and 25 pay an additional insurance related fee over the daily rate.
* Customers can pay for the reservation online or in person during pickup.
* All rental vehicles are signed off from service upon reaching 50,000 miles on the odometer.

**2. Positioning**

**2.1 Problem Statement**

|  |  |
| --- | --- |
| The problem of | Automating operation management and customer service of car rental companies for both the staff and customers |
| Affects | Staff and customers |
| the impact of which is | Booking is complex and manually operated. |
| a successful solution would be | A web-based application that can be accessed by both the staff and customers over the internet that   * Allows staff maintain an up to date information on each vehicle/resource with a database * Allows customers book a vehicle over the internet with a user-friendly interactive interface * Avoids booking errors by integrating all requirements, constraints and company rules |

**2.2 Product Position Statement**

|  |  |
| --- | --- |
| For | Residents of small towns like Fairfield where large corporate car rental companies are not available. |
| Who | Don’t have access for online booking and rental of vehicles from a pickup and return location in town. |
| The product name | eCarRent System |
| That | Provides an online car booking and renting service with the options to select specific car types for specific dates. Also provides an option for online payment and availability check. |
| Unlike | The currently available car rental companies in most small towns who don’t provide online services. |
| Our product | Provides an online car selection, booking and payment web application for customers with 24 Hr. access over the internet. The system will also upgrade the customer service of the company by automating internal operations. |

**3. Stakeholder Descriptions**

|  |  |  |
| --- | --- | --- |
| **Name** | **Description** | **Responsibilities** |
| Staff | System administrators and Office sales staff who serve walk in customers and handle vehicle handover | - Feed initial data to the system  - Update changes to the system  - Book and process car rentals for walk in customers  - Check reservations and handover booked cars  - Receive returned cars and update booking info  - Track customer rentals they processed |
| Customers | Renting customers | - Provide their profile information  - Book their choice of vehicle online  - Pay advance to confirm reservation  - Confirm receipt of rented vehicle |
| Developers | Application Developers | - Develop system features  - Fix bugs  - Maintain system availability |
| Testers | QC/QA | - Responsible for integrity testing |

**4. Product Overview**

**4.1 Product Perspective**

The eCarRent system is a self-contained application that is designed to serve the current needs of small-scale Auto Rental Companies at their central hub. At this stage, the design will not consider expansion and application integration. Though, the system will be flexibly modeled such that it can be replicated on another hub if there is a need to open a second or more rental offices.

**4.2 Assumptions and Dependencies**

It should be considered that the following requirements will be fulfilled by the Auto Rental Company for successful implementation of the system

* Computers equipped with windows or mac OS will be available for admin and sales staff.
* There will be a designated trained Systems Administration staff who will be responsible for monitoring and reporting.
* Legacy data on all resources is available for startup.
* There is a designated bank account for online transactions.
* Sales staff should be trainable to work on computer application programs.

**4.3 Needs and Features**

|  |  |  |  |
| --- | --- | --- | --- |
| **No** | **Problem** | **Need** | **Features** |
| **Staff** | | | |
| 1 | The companies currently own some number of rental vehicles with related active bookings | This current information must be captured | System Admin must be able to upload operational vehicles data and register associated bookings |
| 2 | The companies increase their fleet of rental vehicles at random times based on owners’ interest (Vehicle Purchase) | System database should be updated with incoming resource | System Admin must be able to add new vehicle information and update existing fleet information. |
| 3 | Vehicles are periodically signed off from service for scheduled service, on demand maintenance, or state inspection. Further, some vehicles might reach their allowed mileage limit for rental service and need to be removed. | System database should be updated with temporarily or permanently unavailable resource | System Admin must be able to remove vehicles either permanently or temporarily from the system. |
| 4 | Customers walk-in to book or rent vehicles | Walk in customers should be booked on the online system only | Sales staff should be able to book or rent vehicles on the system for the walk-in customers |
| 5 | Customers with bookings come to collect their rental vehicle | Booking record should be cross checked with customer information presented physically and vehicle should be handed over | Sales staff should have view and update access to all bookings and should be able to book incoming customers from their computer after receiving the required information from the client. |
| 6 | Customers come to return their rental vehicle | Booking record should be cross checked with customer information presented physically and vehicle should be checked and received |
| **Customers** | | | |
| 7 | Customers browse for vehicles of their interest | Customers should be able to search and get a list of vehicles based on their interest along with information on price, availability and other service features | Customers should be able to reach the systems website and able to search all the available vehicles. |
| 8 | Customers book/rent a vehicle for a future date | Customers should be able to reserve a vehicle online | Customers should able to reserve a car for rent by submitting the required information in the website. |
| 9 | Customers fill, and sign agreement form upon receiving a rented vehicle | Renting Customers should be able to confirm the receipt of the rented vehicle for the handing over staff | The system should be updated for the checked-out cars. |

**5. Other Product Requirements**

The ultimate goal of the eCarRent system is to fulfill client’s requirements of target Auto Rental companies. One way to do this is by monitoring, evaluating and acting on post deployment user (Staff and/or customers) feedback. Addressing these issues raised during feedbacks is crucial in developing a successfully marketable software. Hence, the system should include a feedback exchange mechanism with users and include a simple user manual specifically targeted for staff users.

The eCarRent system must also be multi-platform and support Windows, Linux, and Unix standard browsers.