Project: RentABox Inc.
Freight Transport Vehicle Reservation System

General Overview:

This system equips the truck owners to lease their vehicles to freight carriers that need a truck between the two cities of their interest. A truck owner can make the truck available online with the information about its capacity, time and place it is available for, and the charges per mile along with other information necessary for leasing. An interested carrier can then reserve the truck for his use if the terms and conditions are agreed upon. Once the truck has been returned back to the destination, the carrier can release it and make the payments online with a credit card using a third party system.

User Profile Descriptions:

Both the truck owner and the carrier must be registered with the system. The following profiles are stored with the system:

User Profile:

- Name (First, Middle Initial, Last)
- Address (Street, Number, Apt or Suite Number, City, County, State)
- Phone (Day Time, Evening, Cell)
- Email
- Authorization (identification and password)
- Authentication

Vehicle Profile (to be provided by the owner):

- Owner - Name
- Vehicle Identification Number
- License Plate Number
- Registration state
- Make, Model, and Year
- Cargo Capacity
- Fuel type (Default: Diesel)
- Charges per mile
- Date of Last Inspection and result (Passed, Failed)
- Dates Available (Start and End)
- City Available in
- Any known limitations (plain text)

Carrier Profile:

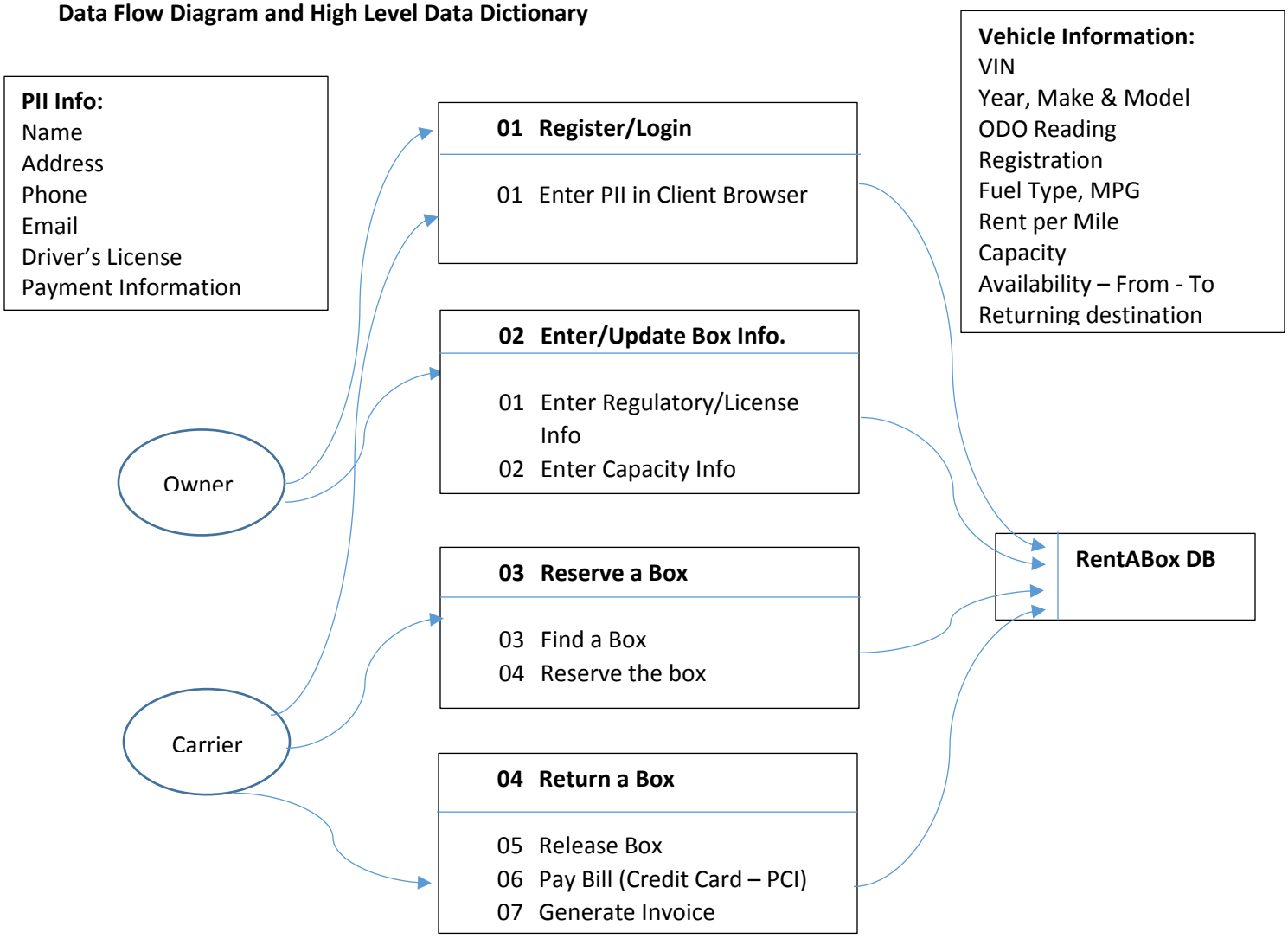
- Name (First, Middle Initial, Last)
- Address (Street, Number, Apt or Suite Number, City, County, State)
- Phone (Day Time, Evening, Cell)
- Driver-License Number
- Issuing State
- License Type
- Driving History- Major driving infractions by date

- Email
- Prior rental of this vehicle (if any)
- Insurance coverage – Insurance Company and Policy #

Login Profile (Owner and Carrier)

- User ID
- User Password
- Security Questions and answer (3 unique questions out of 5)
- Password hint
- CAPTCHA Verification (if any)
- Not a Robot Requirement – an algorithmic proof

Data Flow Diagram and High Level Data Dictionary



Usage Case Scenarios

Scenario 1 – Registration
USER (owner/carrier) registers with the system

Action 1	The user is able to browse to the site
Action 2	The user creates a profile according to the specifications
Action 3	User establishes a UserID and a password
Action 4	User establishes 3 security questions
Action 5	The user receives registration confirmation
Action 6	The user is logged out and requested to log back in

Scenario 2 – Login
USER (Owner/carrier) logs into to the system to register with the system

Action 1	The user is able to bring up the web page to login
Action 2	The user provides the security credential to the system Authorization and Authentication – UserId and Password
Action 3	If the user is logging first time from a new device the identity is validated using a security question
Action 4	The user proves that he/she is not a robot (CAPCHA)
Action 5	The user receives welcome message if the security credentials are verified
Action 6	The user gets another attempt to login if the security verification fails. A total of 3 unsuccessful attempts are permitted
Action 7	If user fails three attempts he/she is provided a password hint.

Scenario 3: As an owner I want to list my vehicle availability for renting
Precondition: The owner has successfully logged into the system
Post-condition: The vehicle included for rent is shown as available for rent

Action 1	The owner is able to bring up the “Vehicle Registration Form”
Action 2	The owner sees a drop down list with all his pre-registered vehicles and select a vehicle.
Action 3	If owner wants to use another vehicle OR enter the first vehicle, the vehicle registration page is provided.
Action 4	The owner provides relevant information and registers his/her vehicles
Action 4	The owner receives a confirmation that the vehicle has been added to the available list.

Scenario 4: As a carrier I want to reserve a vehicle

Precondition: The carrier has successfully logged into the system
Post-condition: The carrier has reserved a system. If there are no vehicles available the carrier has been informed.

Action 1	The carrier is able to bring up the “Reservation Form”

Action 2	The carrier provides the cargo information, dates (from-to), capacity, city (from-to)
Action 3	A list of vehicles that meets the carrier criteria and are available is provided to the carrier to choose from.
Action 4	The carrier selects a desired vehicle
Action 4	The carrier makes the down payment and checks out the vehicle
Action 5	If no vehicles are available the carrier is informed.

Scenario 5: As a carrier I want to return the vehicle.

Action 1	The carrier is able to bring up the “Return Form”
Action 2	The carrier is provided a drop down list of all vehicles he/she has rented
Action 3	The carrier selects a vehicle he/she wants to return
Action 4	The carrier completes the return form and adds his comments
Action 4	The carrier pays rental charges
Action 5	The carrier is informed that the vehicle has been returned successfully

Development of Use Case Scenarios:

Scenario 1 Registration:

Prerequisites:

1. The web site is up and can be reached by standard devices – laptop, mobile
2. The user is able to start the registration process

Security Acceptance Criteria:

1. All PII information is presented concisely in the same area for easy review.
2. Only business-necessary information is gathered from the client.
3. The form is protected from any injection attacks.
4. The user is required to confirm the PII on submission for repudiation purposes
5. The confidentiality of the data is maintained during transit.
6. The integrity of the data is maintained during transit.
7. The data stored in the database matches exactly with what was provided by the user.

Security Guidelines

RentaBox firmly believes that the customer security is very important. However, the cost of security should be weighed against the return the security measures provide. The goal is to:

- Maintain company image
- Take breech preventive measures
- Invest as necessary keeping the ROI high

Security Objectives

1. No breach of sensitive data – sensitive data refers to any data that causes personal or financial loss to biz environment.
2. In in the event a breach occurs a contingency plan should be activated that should address:
    - Damage Assessment
    - Maximum allowable recovery time
    - Reaching out to impacted clients and compensating them as appropriate
    - Approach to gain back the client trust
    - Plan to system hardening
3. Company reputation should be preserved at a moderate cost level
4. The system does not involve money transaction, any risk related to PCI or banking regulation are of very low importance.
5. System availability is not paramount since most people look for a vehicle well in advance.