Scope of Car Rental Management

1. This will strictly be a car management portal, with no customer login. Customers will be renting vehicles offline at the store over the counter.
2. There will be 3 roles for this system [Admin, Manager, Users]
3. Users will only be local signup or Admin given accounts. Oauth2 will not be implemented at this stage since there isn't any use for it and social login should not be used in company portal. Users able to view their own details and change/reset their passwords.
4. There will be one Admin for the portal, who will be overseeing and managing all the data in the system. Admin can create, modify and assign roles to Users. Users can be assigned more than one role. Admin will be able to reset password but not view the password.
5. Different pages/operations might require certain roles to access them.
6. Business Operations by Roles:
   a. User (Also the front staff to deal with customers)
      i. View personal account details
      ii. Reset/Change password
      iii. Data entry (able to view and add records for vehicle hire, however not able to delete)
      iv. Create new customers in database
      v. Maintain customer list
      vi. Search for available cars in database that suit the customer's needs.
      vii. When car is being selected or finalized in the process, car status should be set to Hold such that it will not be available to the other customers.
      viii. Rental fees are set at per day for now, with extension charged at daily rate and late return fee.
      ix. Rental period can be extended before expiry. After expiry, extension can still be entertained, however late penalty fee will still be charged.
      x. All hire records will be created on the spot and updated along the way till vehicle is returned.
      xi. Hire records should be registered with the User who handled the process.
      xii. The same will be applied when car is returned.
      xiii. Update status of vehicles
      xiv. (out of scope for now – printing of invoice to be available [details will be populated in a new page and allow for printing])
   b. User (Back end for vehicle management)
      i. View personal account details
      ii. Reset/Change password
      iii. Update status of vehicles
      iv. Able to send for maintenance
   c. Manager
      i. Same privileges as User
      ii. View/Edit/Delete data in the portal other than User information
      iii. Update vehicle log [like Maintenance schedule
      iv. View/Edit existing vehicles' information
      v. View/Edit hiring rates for vehicles.
   d. Admin
      i. Have the privileges of User and Manager
      ii. Able to issue user accounts to existing employees.

    iii. Manage the users database.
    iv. Able to delete vehicles from database.
    v. Able to add new vehicles to database.

7. Vehicles to have these statues [Available, Hired, Maintenance, Hold, Not Available]
    a. Available – ready for booking
    b. Hired – already out for use
    c. Maintenance – servicing, cleaning and etc after each booking
    d. Hold – put on hold so that there will not be double booking on the same vehicle [out of scope: make the session expires after 15 minutes and car status will be reverted back to available.]
    e. Not Available – vehicle out of service or having some other issue like insurance etc.
    f. Retired – vehicle out of commission
8. Vehicles database can include images of the cars for visual aid. Might implement this in the future with customer portal. Don't think it is of use for company portal.
    a. History of car details? When it was brought in. Date of servicing and end of life date.
9. Invoice should be able to contain more than 1 hire details, depends on how the customer has rented. (Maybe customer decide to change car after first rental period, etc)
10. Hire details should be able to capture employee who sign off the car and receive the car, as well as the rental date and end date.
11. Vehicle fees schedule
    a. Flat rate charged ($/day)
    b. Late return fee to be set at flat amount ($10) + percentage of flat rate prorated at additional time (round up to nearest hour?)
    c. Time start at submission of application and ends the next day (24h) dependant on rental period.
12. Vehicles listing for rental should only display those that are available. But there should be another listing where all vehicles are displayed, regardless of status.

Scope of portal

1. **Home page**
    a. Dashboard
        i. Sales Stats – Display Sales done per day and week?
        ii. Vehicle Stats – No of vehicles available for rental, rented out, maintenance
        iii. Customer Stats – Total customer, New customer weekly, Recurring customer?
        iv. Expiring rental contracts - display invoice number? Clickable to view it.
    b. 3 buttons for call to action
        i. Rent – link to the available vehicles listing page
            1. Each row of listing will have an active "Rent" button in the action column. On click, it will direct to hire details form with car reg No and Employee name filled in the Car Reg No and Emp Rent Out field.
            2. Some thoughts on this, maybe instead of the above, when rent is clicked, modal box pop up asking new or existing customer, if new redirect to new customer page then after creation direct to the available vehicles listing, passing custID as parameter to the hire details page. For existing customer, search and select customer from the "Select customer page"? where list of customers (id and name will be listed) with a button [proceed] at the end of each row. Clicking proceed will pass the custID as parameter to hire details page.
        ii. Return – link to rented out vehicles listing page
            1. Each row of listing will have an active "Return" button in the action column. On click, it will direct to hire details form with details already filled up. User has to fill in Employee Return and date return.
        iii. Generate Invoice – link to invoice creation form page
2. **Customer Page**
    a. Search bar on top of table
    b. Add new customer button – new form to add new customer
    c. Cust Table
        i. ID
        ii. Name
        iii. NRIC (add image of nric)
        iv. Contact No
        v. Email
        vi. Address
        vii. Date of Birth
        viii. Action Column
            1. Edit button (updating existing customer details)
            2. Delete button (delete customer) [only viewable to Manager and Admin]
    d. Child table which appends invoices from customer
    e. Form for update and new customer would be the same form, where the update form will have the information already furnished.
        i. Fields to fill
            1. Name

        2. NRIC (last 4 characters)
        3. Contact No
        4. Email
        5. Address
        6. Date of Birth
    ii. Submit button (redirect to customer page)
    iii. Cancel button (redirect to customer page)

3. **Vehicles**
    a. Search bar on top of table (with filter for status)
    b. Add Vehicle button (only visible to Admin)
        i. Add Vehicle Form
            1. Reg No
            2. Brand
            3. Model
            4. Rental Rate
            5. ID is auto generated. Status should be set to available upon addition
    c. Vehicle Table
        i. ID
        ii. Registration No
        iii. Brand
        iv. Model
        v. Rental Rate
        vi. Status
        vii. Action
            1. Rent (Active when status is available)
            2. Return (Active when status is Hired)
            3. Update (Information update for Manager and Admin, other users can only update status)
    d. Update Vehicle Information
        i. Reg No
        ii. Brand
        iii. Model
        iv. Rental Rate
        v. Status (Users are only allowed to edit this)
        vi. Submit button (redirect to vehicle page)
        vii. Cancel button (redirect to vehicle page)

4. **Hire Details**
    a. Search bar on top of table
    b. Add Hire Details button
        i. Redirect to a Hire Details Form
    c. Hire Details Rent Form
        i. Fields to fill
            1. Car ID/Car Reg No
            2. Cust ID/Full Name
            3. Emp Rent Out
            4. Date Out
            5. Expected Return Date

        6. Invoice ID (Maybe it should be auto updated once it is reference in the invoice?)
    ii. Submit button (redirect to generate invoice page?)
    iii. Cancel button (redirect to hire details page)
d. Hire Details Return Form
    i. Fields to fill
        1. Car ID/Car Reg No (Will be filled by which ever vehicle rent record from hire details page it was selected from)
        2. Cust ID/Full Name (Same as above)
        3. Emp Name Who Return
        4. Date In
        5. Invoice ID (Should be the same as the rent invoice ID)
    ii. Submit button (redirect to generate invoice page?)
    iii. Cancel Button (redirect to hire details page)
e. Hire Details Table
    i. ID
    ii. Car ID/Car Reg No
    iii. Cust ID/Full Name
    iv. Emp Rent Out
    v. Date Out
    vi. Emp Return
    vii. Date In
    viii. Invoice ID (will be empty until it's referred to in invoice)
    ix. Action Column
        1. Update button (direct to specific record hire details return form page)
        2. Delete button (only visible to Admin and Manager? So that if initial record was entered wrongly, employee has to inform manager to delete.)

5. **Invoices**
    a. Search bar on top of table
    b. Create invoice record button (link to invoice generation form)
    c. Invoices Table
        i. Invoice ID
        ii. Date of issue
        iii. Total
        iv. Payment Status
        v. Hire Details ID? (display multiple entries?)
        vi. Cust ID (Maybe display customer name)
        vii. Action Column
            1. Generate Invoice (link to invoice page)
            2. Print Invoice (Print invoice page)
    d. Invoice Generation Form
        i. Date of issue
        ii. Total Amount
        iii. Payment Status
        iv. Hire Details ID (Maybe drop down? Criteria to show only those linked to the cust ID)

v. Cust ID (Name probably)

e. Invoice Page
    i. Header with company name and address
    ii. Typical invoice page (probably will follow a template for it)
    iii. Details will be populated from the database.
        1. Date of Invoice
        2. Customer Name
        3. Hire Details
            a. Car Reg No
            b. Rental Fee
            c. Days rented
            d. Late fee (if any)
            e. Total Amount

6. **User Page /Admin Page (Only visible to Admin)**
    a. Search bar on top of table
    b. Create new user button
    c. New/Update User Form
        i. Username
        ii. Password (hidden field – set default password and request user to change upon login (redirect to reset password page) [maybe set condition if password matches default password then redirect to update password page for users])
        iii. Full Name
        iv. Email
        v. Phone No
        vi. Address
        vii. Job Title
        viii. Date of Birth
    d. Users Table
        i. User ID
        ii. Username
        iii. Full Name
        iv. Email
        v. Phone No
        vi. Address
        vii. Job Title
        viii. Date of Birth
        ix. Enabled?
        x. Roles
        xi. Action Column
            1. Edit (update details)
            2. Delete

7. **User Personal Details Page**
    a. User profile button will be on nav bar for users to click to view personal profile
    b. For now, editing the details can only be done through Admin
    c. Profile pic?
    d. Reset password button – link to reset password page
        i. Reset password page

1. 2 fields [New password and Confirm new password]