**RDBMS MINI PROJECT**

**(SPRINT 1 &2)**

**CAR RENTAL SYSTEM**

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1. **Introduction**

This document outlines a mini project for the RDBMS LOT. The project is to design the database, reports the queries related to **CAR RENTAL SYSTEM**. This document contains information about the attributed that will be taking rentals in the agencies and payment details of those customers.

* 1. **Setup Checklist for Mini Project**

Minimum System Requirements

* Physical Memory (RAM) - 1GB Minimum
* Virtual Memory - Double the amount of RAM
* Disk space - Total 5 GB
* Processor - 550 MHz minimum
* Video Adapter - 256 colors
  1. **Instructions**
* Follow standards while coding
* Create a directory by your name in drive <drive>. In this directory, create a subdirectory MiniProject. Store your Project here.
* You can refer to your course material.
* The total time required to complete this mini project is 10 hrs.
* Maintain the code.

1. **Problem Statement**
   1. **Objective**

The main objective of the application car Rental System require a temporary vehicle, for example those who do not own their own car, or owners of damaged or destroyed vehicles who are awaiting repair or insurance compensation or travelers who are out of town.

* 1. **Abstract of the Project**

Our AIM is to design and create a data management system for a **Car Rental Company.** This enables admin can rent a vehicle that can be used by a customer. Here I am providing three agencies records of particular company.

* 1. **Functional components of the project**

Design the normalized relational database using the following details. You can make appropriate assumptions wherever required. Some of the attributes are given below with the restrictions on data it can contain. Find the required attributes for all the tables and create appropriate constraints on it. (For Ex. Primary key, Foreign key, etc.)

Some of the entities and attributes are as follows:

* **Agency** – Agency\_Id, Agency\_Loc- The locations are Hyderabad, Chennai and Bangalore.
* **Customers** -Customerid, Customer\_Name, Cust\_Address, Cust\_Number, Agency\_Id
* **Rentals**- Rental\_Id, Rent\_Srt\_Date, Rent\_Ret\_Date, Customerid, Agency\_Id
* **Vechicles**- Vechicle\_Id,Vechicle\_Name
* **Rent\_Payment**- Rental\_Id,Customerid,Payment,Mod\_Id
* **Mod\_Pay**- Mod\_Id,Mod\_Payment

Some of the guidelines/protocols are given below:-

* + One customer can be assigned for one single agency which in turn comprises a number of rentals.
  + One customer can take only one rental at a time.
  + Every rental history has to be maintained in system such as its rental start date and return date.
  + Rent period must be 90 days.
  + Fine will be added to your payment when you exceed your rental return date.
  1. **Technology Used**

Databases:

Oracle 11G Express Edition

1. **Implementation in RDBMS LOT:**
   1. **Guidelines on the functionality to be built:**

**SPRINT 1 -**

1. Create a procedure it will provide the payment details of the particular customer when we give the rental ID of that customer (if any fine is there then it will also include with the payment)?
2. Create a function which gets customer id as input and generate a receipt which shows the information about the rentals, the payment, the rent start date and return date of the rent, the customer name the customer id.
3. Create a query to display the number of rentals done in particular year of all agencies?
4. Create a query to display the details of the customers (customer id, customer name, rental id) who took the maximum number of rentals of that particular year?
5. Create a procedure to display the details of the rentals (rental id, customer id, customer name, agency id, rent start date) done in particular month of the particular agency?
6. Create a trigger which gets triggered when there is any inserting or updating on phone number column of the customer table and this trigger has to capture the customer number and check that number having 10 digits or not.

**SPRINT 2**

1. Perform performance tuning on the database and the pl/sql code built.
2. Create the entire database in mongo db.
3. **Evaluation and assessment parameters:**
   1. **Evaluation**

* Evaluation will be done at the end of Oracle training
* Total Marks: 100
* Marks Distribution mentioned below.

This Mini project will be done individually. Implement the Software development life cycle for the project and develop code for the respective functionality. Evaluation will be done using online presentation mode, where participant will present their work.

This project shall be evaluated in two parts:

* Marks distribution is for one part of project evaluation (Marks: 90)
* Project Presentation is another part of project evaluation (Marks: 10)