

Project Report

Subject: Database Management System

Project Title: Car Rental System

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Introduction:

This project aims to provide a user-friendly platform for customers to rent cars quickly and efficiently. Our system includes a graphical user interface (GUI) built using Java Swing and a database designed using SQL to store all the necessary information about customers, cars, rentals, and payments.

Scope:

The scope of the Car Rental System project is to provide a software solution for car rental companies that allows them to manage their rental services more efficiently. The system includes a user-friendly graphical interface that lets customers easily make reservations, view available cars, and manage their rental history.

General Description:

The overall project is divided into two sections admin and customer.

Admin has given choices for registering a new car, checking a car's availability, updating the car's reservation status, and updating other information.

The customer can book a car, return a car, and see his/her history. The customer will be able to see a generated bill as soon as he/she returns the vehicle. If the customer does not return the car in the stipulated amount of time, he will be charged a fine as per requirement. New customers will have to register first in order to rent a car.

System and Software Requirements:

- Mysql shell
- Netbeans IDE

- JDK
- Mysql connector
- Swing library for user interface
- Operating system: Windows

Conclusion:

After completing the car rental system database management project, it can be concluded that a well-designed database is essential for the efficient management of a car rental business.

References:

[SQL Tutorial - W3Schools](#)

[Java Swing Tutorial - javatpoint](#)

Tables:

```
mysql> show tables;
```

```
+-----+
| Tables_in_library466 |
+-----+
| car                   |
| car_regi              |
| cust_registration     |
| rental                |
| return_table          |
| transaction           |
+-----+
6 rows in set (0.21 sec)
```

```
mysql> select * from car;
```

```
+-----+-----+-----+-----+
| car_id | car_model | availablity | rental_price |
+-----+-----+-----+-----+
| acg 1411 | swift    | Yes         | 1500          |
```

cgh 1412	tata nexa	2000	Yes
dfv 1412	tata breza	No	2200
qwe1231	suv	No	2500
srs 1412	tata nexa	Yes	2000

5 rows in set (0.00 sec)

```
mysql> select * from cust_registration;
```

cust_id	name	mob_no	email_id
1234567890	rushali	8788898195	rushali123
8788898195	smriti shingare	8956302244	abcd1234@
8956302244	sss	8788898195	sssss1111@
8956554834	vaibhavi	8788898195	vaibhavi123
748448227074	smriti	8956302244	smriti1412@

5 rows in set (0.00 sec)

```
mysql> select * from rental;
```

rental_id	cust_id	car_id	rent_dt	return_dt	rent
123	1234567890	qwe1231	2023-05-10	2023-05-25	37500
748	748448227074	NULL	2023-04-15	2023-04-25	5000
878	8788898195	cgh 1412	2023-05-10	2023-05-20	NULL

3 rows in set (0.00 sec)

```
mysql> select * from return_table;
```

return_id	current_dt	return_dt	fine
889	2023-05-10	2023-05-15	500

1 row in set (0.00 sec)

```
mysql> select * from transaction;
```

cust_id	name	rent	fine	total_rent	rent_dt
return_dt					

```
| 8956302244 | sss | 33000 | 1000 | 34000 | 2023-05-05 |
2023-05-20 |
+-----+-----+-----+-----+-----+-----+-----+
---+
1 row in set (0.00 sec)
```

Queries:

```
mysql> create table cust_registration(cust_id decimal(12) primary key, name
varchar(100), mob_no decimal(10), email_id varchar(100));
```

```
query ="insert into cust_registration(cust_id, name, mob_no, email_id)
values(?,?,?,?) ";
```

```
SELECT * FROM cust_registration WHERE name = ?
```

```
SELECT * FROM cust_registration WHERE cust_id = ?
```

```
create table car (car_id varchar(100) primary key, car_model varchar(100),
availability varchar(100), rental_price varchar(100));
```

```
insert into car (car_id, car_model, availability, rental_price ) values(?,?,?,?)
```

```
select * from car
```

```
create table rental(rental_id int primary key, cust_id decimal(12), car_id varchar(100)
, rent_dt date, return_dt date, foreign key(cust_id) references
cust_registration(cust_id), foreign key(car_id) references car(car_id));
```

```
"insert into rental (rental_id ,cust_id,rent_dt, return_dt ) values(?,?,?,?) "
```

```
select max(carNo) from car_regi;
```

```
mysql> create table cust_registration(cust_id decimal(12) primary key, name
varchar(100), mob_no
```

```
decimal(10), email_id varchar(100));
```

```
query ="insert into cust_registration(cust_id, name, mob_no, email_id)
values(?,?,?,?) ">
```

```
SELECT * FROM cust_registration WHERE name = ?
```

SELECT * FROM cust_registration WHERE cust_id = ?

create table car (car_id varchar(100) primary key, car_model varchar(100),
availability varchar(100),
rental_price varchar(100));

insert into car (car_id, car_model, availability, rental_price) values(?,?,?,?)

select * from car

create table rental(rental_id int primary key, cust_id decimal(12), car_id varchar(100)
, rent_dt date,
return_dt date, foreign key(cust_id) references cust_registration(cust_id), foreign
key(car_id)
references car(car_id));

"insert into rental (rental_id ,cust_id,rent_dt, return_dt) values(?,?,?,?) ";

select max(carNo) from car_regi;

SELECT rent_dt FROM transaction where cust_id =?

select sum(total_rent) as rental_amt from transaction

delete from car where cust_id = ?

alter table rental add column rent int after return_dt;

alter table rental set rent =? where rental_id =?

```
create table transaction (cust_id primary key, name varchar(100), rent int, fine,  
total_rent int,  
rent_dt date, return_dt date )
```

```
insert into transaction (cust_id, name, rent, fine, total_rent, rent_dt, return_dt)  
values(?,?,?,?,?,?,?)
```

```
SELECT fine FROM return_table where return_id =?
```

```
select sum(fine) as fine_amt from transaction
```

```
insert into rental (rental_id ,cust_id, car_id, rent_dt, return_dt ) values(?,?,?,?,?)
```

```
SELECT * FROM cust_registration WHERE cust_id = ?
```