

**Dr. AMBEDKAR INSTITUTE OF
TECHNOLOGY**

Near Jnana Bharathi Campus, Bengaluru-560 056.

(An Autonomous Institution, Aided by Government of Karnataka)



**MINI PROJECT REPORT
ON
“CAR RENTAL MANAGEMENT
SYSTEM”
BACHELOR OF ENGINEERING
IN
COMPUTER SCIENCE AND ENGINEERING
SUBMITTED
D BY
KRUTHIK B 1DA19CS077**

UNDER THE GUIDANCE OF

**Mr. Vinod Kumar K P
Assistant.Prof,
Dept. of CSE Dr.AIT**

**Mr. Harish
Kumar HC
Assistant.Prof,
Dept. of CSE
Dr.AIT**

**Department of Computer Science & Engineering
2021-22**

**Dr. AMBEDKAR INSTITUTE OF
TECHNOLOGY**

Near Jnana Bharathi Campus, Bengaluru-560 056.

(An Autonomous Institution, Aided by Government of Karnataka)



CERTIFICATE

This is to certify that the project entitled “**CAR RENTAL MANAGEMENT SYSTEM**” submitted in the partial fulfillment of the requirement of the 5th semester DBMS laboratory curriculum during the year 2021-22 is a result of bonafide work carried out by-

KRUTHIK B

1DA19CS07

7

Signature of the guide

Mr. Vinod Kumar K P

Assistant. Prof.,

Dept. of CSE Dr. AIT

Mr. Harish

Kumar H C

Assistant.

Prof.,

Dept. of CSE

Dr. AIT

1. Internal Examiner _____

2. External Examiner _____

Dr. Siddaraju,
Head of Department

**Dr. AMBEDKAR INSTITUTE OF
TECHNOLOGY**

Near Jnana Bharathi Campus, Bengaluru-560 056.

(An Autonomous Institution, Aided by Government of Karnataka)

Department of CSE,

Dr.AIT

ACKNOWLEDGEMENT

The sense of contention and elation that accompanies the success of this seminar and the report could be incomplete without mentioning the names of people who have helped me in accomplishing them, people whose constant guidance, support and encouragement resulted in the realization.

We consider ourselves privileged to express our gratitude and respect towards all those who guided us through the project, “**CAR RENTAL MANAGEMENT SYSTEM**”.

We take this opportunity to thank **Dr. M Meenkashi, PRINCIPAL Dr. Ambedkar Institute of Technology, Bengaluru** for his support and encouragement.

We are grateful to **Dr. Siddaraju, Head of Department, CSE, Dr. Ambedkar Institute of Technology, Bengaluru** for providing encouragement and support.

We consider ourselves privileged to express our gratitude and respect towards our guide **Mr. Vinod Kumar K P, Assistant.Proffessor, Department of CSE, Dr. Ambedkar Institute of Technology** and **Mr. Harish Kumar H C, Assistant.Proffessor, Department of CSE Dr.Ambedkar Institute of Technology** for constant guidance and support for the completion of the project.

Lastly, we thank all the members of the staff both teaching and non-teaching, friends and last but not the least our parents and family, for helping me directly or indirectly in the completion of the project.

KRUTHIK B

ABSTRACT

The paper developed an automated system that is used to manage car information and its administration. This was with a view to eliminate the problem of inappropriate data keeping, inaccurate reports, time wastage in storing, processing and reserving information encountered by the traditional car rental system in order to improve the overall efficiency of the organization. The design provides excellent car rental management service and improved information structure.

CONTENTS

<u>Chapter No.</u>	<u>Title</u>	<u>Page No.</u>
Chapter 1	Introduction	1
Chapter 2	Literature Review	2
2.1	Database Management System	2
2.2	Structured Query Language	3
2.3	MySQL	3
2.3.1	MySQL Workbench	4
2.4	Entity Relationship Diagram	4
2.5	Relational Schema	6
2.6	Normalization	7
2.7	Uses of DBMS	8
2.8	Application of Database	8
Chapter 3	Requirement Specification	9
3.1	Hardware Requirements	9
3.2	Software Requirements	9
Chapter 4	Description	10
4.1	E-R Diagram	11
4.2	Relational Schema	12
Chapter 5	Coding	15
5.1	Table Creation and Insertion	15
5.2	Queries	20
5.3	Front-end Code and Snapshots	24
	Conclusion	70
	Bibliography	71

CHAPTER 1

INTRODUCTION

A Car Rental Management System is looking to develop a state-of-the-art car rental portfolio management system which is able to track their car rental booking history and billing and car details. This system facilitates the owner of the Car Rental Company to retrieve, update and track and delete the bookings and cars efficiently. At the same time, can utilize this system to monitor their financial management. Currently, different locations of the car rental company have their own separated systems leading to lack of communication and inefficient data sharing. For example, the car rental company located in Mumbai uses simple Microsoft Excel to keep the record of their customers, cars and insurance of their cars which is inconvenient to retrieve and update the cars and customer's information. In the car rental company located at Dharwad, maintain a book-based ledger to keep a record of their customers and cars and the insurance for the same. The main branch of the company located in Bengaluru has to keep the customer and car details of all their branch offices on their own computer system. While each statement serves a distinctive process, there is no coordination, assimilation and representation of data. The systems may have duplicate data which leads to waste of space. The different systems also may have different application programs which cause incompatible files.

Due to these disadvantages of the current system, a car rental management system is proposed. Car Rental Management System is a database management system (DBMS) which is based on computer networks, using the advance database technology to construct, maintain and update various kinds of data in data base system. The DBMS can track and update all the information of the cars available and customers during a particular time span. The major advantages of the DBMS are easy to retrieve and update information, efficient data sharing and communication and reliable backup and security. Information about cars is done by just writing the car name, car model and insurance details. Whenever a new car is added to the company its information is stored freshly. Bills are generated by recording the usage of the car by the customer. Details of the customer are updated on a written sheet and at last, they all summed up. Car usage details are recorded on the document, which contains the customer information. It is destroyed after sometime time period to decrease the paper load in the office. The admin themselves have to track the car details and customer details which is a tedious job.

CHAPTER 2

LITERATURE REVIEW

2.1 DATABASE MANAGEMENT SYSTEM

Data can be defined as a representation of facts, concepts, or instructions in a formalized manner, which should be suitable for communication, interpretation, or processing by human or electronic machine.

A database is an organized collection of structured information, or data, typically stored electronically in a computer system. A database is usually controlled by a database management system. Let us discuss few examples. An online telephone directory uses a database to store data of people, phone numbers, and other contact details. Your electricity service provider uses a database to manage billing, client-related issues, handle fault data, etc. Let us also consider Facebook. It needs to store, manipulate, and present data related to members, their friends, member activities, messages, advertisements, and a lot more. We can provide a countless number of examples for the usage of databases.

Database Management System (DBMS) is a software for storing and retrieving users' data while considering appropriate security measures. It consists of a group of programs which manipulate the database. The DBMS accepts the request for data from an application and instructs the operating system to provide the specific data. In large systems, a DBMS helps users and other third-party software to store and retrieve data. DBMS allows users to create their own databases as per their requirement. The term "DBMS" includes the user of the database and other application programs. It provides an interface between the data and the software application. There are 4 major types of DBMS. Let's look into them in detail.

HIERARCHICAL -In a Hierarchical database, model data is organized in a tree-like structure.

Data is Stored Hierarchically (top down or bottom up) format. Data is represented using a parent- child relationship. In Hierarchical DBMS parent may have many children, but children have only one parent.

NETWORK DBMS -The network database model allows each child to have multiple parents. It helps you to address the need to model more complex relationships like as the orders/parts many- to-many relationship. In this model, entities are organized in a graph which can be accessed through several paths.

RELATIONAL MODEL-Relational DBMS is the most widely used DBMS model because it is one of the easiest. This model is based on normalizing data in the rows and columns of the tables. Relational model stored in fixed structures and manipulated using SQL.

OBJECT-ORIENTED MODEL-In Object-oriented Model data stored in the form of objects. The structure which is called classes which display data within it. It defines a database as a collection of objects, which stores both data members values and operations.

2.2 SQL – STRUCTURED QUERY LANGUAGE

SQL is a domain-specific language used in programming and designed for managing data held in a relational database management system (RDBMS), or for stream processing in a relational data stream management system (RDSMS). It is particularly useful in handling structured data, i.e., data incorporating relations among entities and variables. SQL is used to communicate with a database. According to ANSI (American National Standards Institute), it is the standard language for relational database management systems. SQL statements are used to perform tasks such as update data on a database, or retrieve data from a database. Some common relational database management systems that use SQL are: Oracle, Sybase, Microsoft SQL Server, Access, Ingres, etc. Although most database systems use SQL, most of them also have their own additional proprietary extensions that are usually only used on their system.

2.3 MySQL

MySQL is a relational database management system based on the Structured Query Language, which is the popular language for accessing and managing the records in the database. MySQL is open-source and free software under the GNU license. It is supported by **Oracle Company**.

MySQL is currently the most popular database management system software used for managing the relational database. It is open-source database software, which is supported by Oracle Company. It is fast, scalable, and easy to use database management system in comparison with Microsoft SQL Server and Oracle Database. It is commonly used in conjunction with PHP scripts for creating powerful and dynamic server-side or web-based enterprise applications. It is developed, marketed, and supported by **MySQL AB, a Swedish company**, and written in C programming language and C++ programming language. Many small and big companies use MySQL. MySQL supports many Operating Systems like Windows, Linux, MacOS, etc. with C, C++, and Java languages.

MySQL is a Relational Database Management System (RDBMS) software that provides many things, which are as follows:

It allows us to implement database operations on tables, rows, columns, and indexes.

It defines the database relationship in the form of tables (collection of rows and columns), also known as relations.

It provides the Referential Integrity between rows or columns of various tables.

It allows us to update the table indexes automatically.

It uses many SQL queries and combines useful information from multiple tables for the end-users.

2.3 MySQL Workbench

MySQL Workbench is a unified visual database designing or graphical user interface tool used for working with database architects, developers, and Database Administrators. It is developed and maintained by Oracle. It provides SQL development, data modeling, data migration, and comprehensive administration tools for server configuration, user administration, backup, and many more. We can use this Server Administration for creating new physical data models, E-R diagrams, and for SQL development (run queries, etc.). It is available for all major operating systems like Mac OS, Windows, and Linux.

With MySQL Workbench, you use an intuitive, browser-based interface, to:

- Administer the database
- Create tables, views, and other database objects
- Import, export, and view table data
- Run queries and SQL scripts
- Generate reports.

2.4 ENTITY RELATIONSHIP DIAGRAM

An entity can be a real-world object, either animate or inanimate, that can be easily identifiable. For example, in a school database, students, teachers, classes, and courses offered can be considered as entities. All these entities have some attributes or properties that give them their identity.

The properties that are used to describe an entity are known as Attributes; for example, an Employee entity may have a Name, Gender, Date of Birth of his/her attributes.

If book is regarded as an entity then Author's name, Price, published by, etc. are its various attributes.

A specific entity will have a value for each of its attributes. Thus, an entity has a value for each attribute. A diagram representing entities and relationships among them is known as entity relationship diagram. The major elements used in ER diagram are entities, attributes, identifiers and relationships that express a reality for which database is designed.

Symbol	Meaning
	Entity
	Weak Entity
	Relationship
	Identifying Relationship
	Attribute
	Key Attribute
	Multivalued Attribute
	Composite Attribute
	Derived Attribute

Fig. 2.4.1 - ER Diagram

ENTITY TYPE:

It symbolizes anything in the real world that has multiple existence.

WEAK ENTITY TYPE: The weak entity in DBMS do not have a primary key and are dependent on the parent entity. It mainly depends on other entities.

RELATIONSHIP TYPE: A diamond box is used to represent the relationship between two entities. Relationships can be one-to-one, one-to-many or many-to-many.

IDENTIFYING RELATIONSHIP TYPE: The relationship type that is used to relate a weak entity type to its owner is shown by double lined diamond shaped box.

ATTRIBUTE:

Entities are represented by means of their properties, called **attributes**. All attributes have values. For example, a student entity may have name, class, and age as attributes. There exists a domain or range of values that can be assigned to attributes. For example, a student's name cannot be a numeric value. It has to be alphabetic. A student's age cannot be negative, etc.

KEY ATTRIBUTE: A key attribute is one for which each entity has a unique value. It is represented by an oval shape with the attribute name underlined.

MULTI VALUED ATTRIBUTE: An entity that has multiple values for that attribute is called multivalued attribute.

DERIEVED ATTRIBUTE: As discussed earlier, an attribute whose value depends upon the value of the stored attribute. It is represented using a dashed oval shape.

In a database system, we deal with various types of keys as follows:

CANDIDATE KEY: Minimal set of attributes that uniquely identifies each occurrence of an entity type.

PRIMARY KEY: Candidate key selected to uniquely identify each occurrence of an entity type.

UNIQUE KEY: Can accept unique or null values.

COMPOSITE KEY: A key that consists of two or more attributes and removal of even one of them would result in loss of intended information.

2.5 RELATIONAL SCHEMA

The relational schema is the primary element of the relational database. These databases are managed using language and structure that is consistent with first-order logic. This allows for database management based on entity relationships, making them easy to organize according to volume. Relational schema refers to the meta-data that describes the structure of data within a certain domain. It is the blueprint of a database that outlines the way its structure organizes data into tables. There are two steps to creating a relational database schema: creating the logical schema and creating the physical schema. The logical schema depicts the structure of the database, showing the tables, columns and relationships with other tables in the database and can be created with modeling tools or spreadsheet and drawing software. The physical schema is created by actually generating the tables, columns and relationships in the relational database management software (RDBMS).

2.6 NORMALIZATION

Database Normalization is a technique of organizing the data in the database. Normalization is a systematic approach of decomposing tables to eliminate data redundancy(repetition) and undesirable characteristics like Insertion, Update and Deletion Anomalies. It is a multi-step process that puts data into tabular form, removing duplicated data from the relation tables. Here are the most commonly used normal forms.

First Normal Form

Second Normal Form

Third Normal Form

Boyce & Codd Normal Form.

First Normal Form (1NF)

For a table to be in the First Normal Form, it should follow the following 4 rules:

It should only have single(atomic) valued attributes/columns.

Values stored in a column should be of the same domain

All the columns in a table should have unique names.

The order in which data is stored, does not matter.

Second Normal Form (2NF)

For a table to be in the Second Normal Form, it should follow the following 4 rules:

It should be in the First Normal form.

It should not have Partial Dependency.

Third Normal Form (3NF)

A table is said to be in the Third Normal Form when,

It is in the Second Normal form.

It doesn't have Transitive Dependency.

Boyce and Codd Normal Form (BCNF)

Boyce and Codd Normal Form is a higher version of the Third Normal form. This form deals with certain type of anomaly that is not handled by 3NF. A 3NF table which does not have multiple overlapping candidate keys is said to be in BCNF. For a table to be in BCNF, following conditions must be satisfied:

R must be in 3rd Normal Form

For each functional dependency ($X \rightarrow Y$), X should be a super key.

2.7 USES OF DBMS

Data that is well organized and integrated is very useful in decision making. We can infer some of the following uses of DBMS.

Effective and efficient management of data.

Query processing and management.

Easy to understand and user friendly.

Security and integrity of data.

Better decision making.

Data sharing and storage.

Better access to accurate data.

Ensures error free information.

2.8 APPLICATIONS OF DATABASE

Databases are used to support internal operations of organizations and to underpin online interactions with customers and suppliers' databases are used to hold administrative information and more specialized data, such as engineering data or economic models.

Databases touch all aspects of our lives. Some of the major areas of application are as follows:

Banking

Airlines

Universities

E- Commerce

Human Resources

CHAPTER 3

REQUIREMENT SPECIFICATION

The hardware and software components of a computer system that are required to install and use software efficiently are specified in the SRS. The minimum system requirements need to be met for the programs to run at all times on the system.

3.1 HARDWARE REQUIREMENTS

The hardware requirements specify the necessary hardware which provides us the platform to implement our programs.

2.2 GHz processor (Pentium).

GB RAM (System Memory).

20 GB of hard-drive space.

VGA capable of 1024 x 768 screen resolution.

Necessary computer peripherals such as keyboard etc.

3.2 SOFTWARE REQUIREMENTS

The software requirement specifies the pre-installed software needed to run the code being implemented in this project.

Windows Operating System

MySQL Workbench

MySQL Shell

MySQL Server

Connector/J

IDE – Apache NetBeans

CHAPTER 4**DESCRIPTION**

A Car Rental Management System is looking to develop a state-of-the-art car rental portfolio management system which is able to track their car rental booking history and billing and car details. This system facilitates the owner of the Car Rental Company to retrieve, update and track and delete the bookings and cars efficiently. At the same time, can utilize this system to monitor their financial management.

Currently, different locations of the car rental company have their own separated systems leading to lack of communication and inefficient data sharing. For example, the car rental company located in Basveshwarnagar uses simple Microsoft Excel to keep the record of their customers, cars and insurance of their cars which is inconvenient to retrieve and update the cars and customer's information. In the car rental company located at Whitefield, maintain a book-based ledger to keep a record of their customers and cars and the insurance for the same. The main branch of the company located in Rajajinagar has to keep the customer and car details of all their branch offices on their own computer system. While each statement serves a distinctive process, there is no coordination, assimilation and representation of data. The systems may have duplicate data which leads to waste of space. The different systems also may have different application programs which cause incompatible files.

Due to these disadvantages of the current system, a car rental management system is proposed. Car Rental Management System is a database management system (DBMS) which is based on computer networks, using the advance database technology to construct, maintain and update various kinds of data in data base system. The DBMS can track and update all the information of the cars available and customers during a particular time span. The major advantages of the DBMS are easy to retrieve and update information, efficient data sharing and communication and reliable backup and security.

4.1 E-R DIAGRAM

<i>Entity</i>	<i>Attributes</i>
Login	Password , Username
Car_reg	<u>Id</u> , car_reg , make , model , available
Customer	<u>Id</u> , cust_id , name , address , mobile
Rental	<u>Id</u> , car_id , cust_id, fee , date , due
Returncar	<u>Id</u> , car_id , cust_id , return_date , elp , fine

Fig. 4.1.1 - E-R Diagram

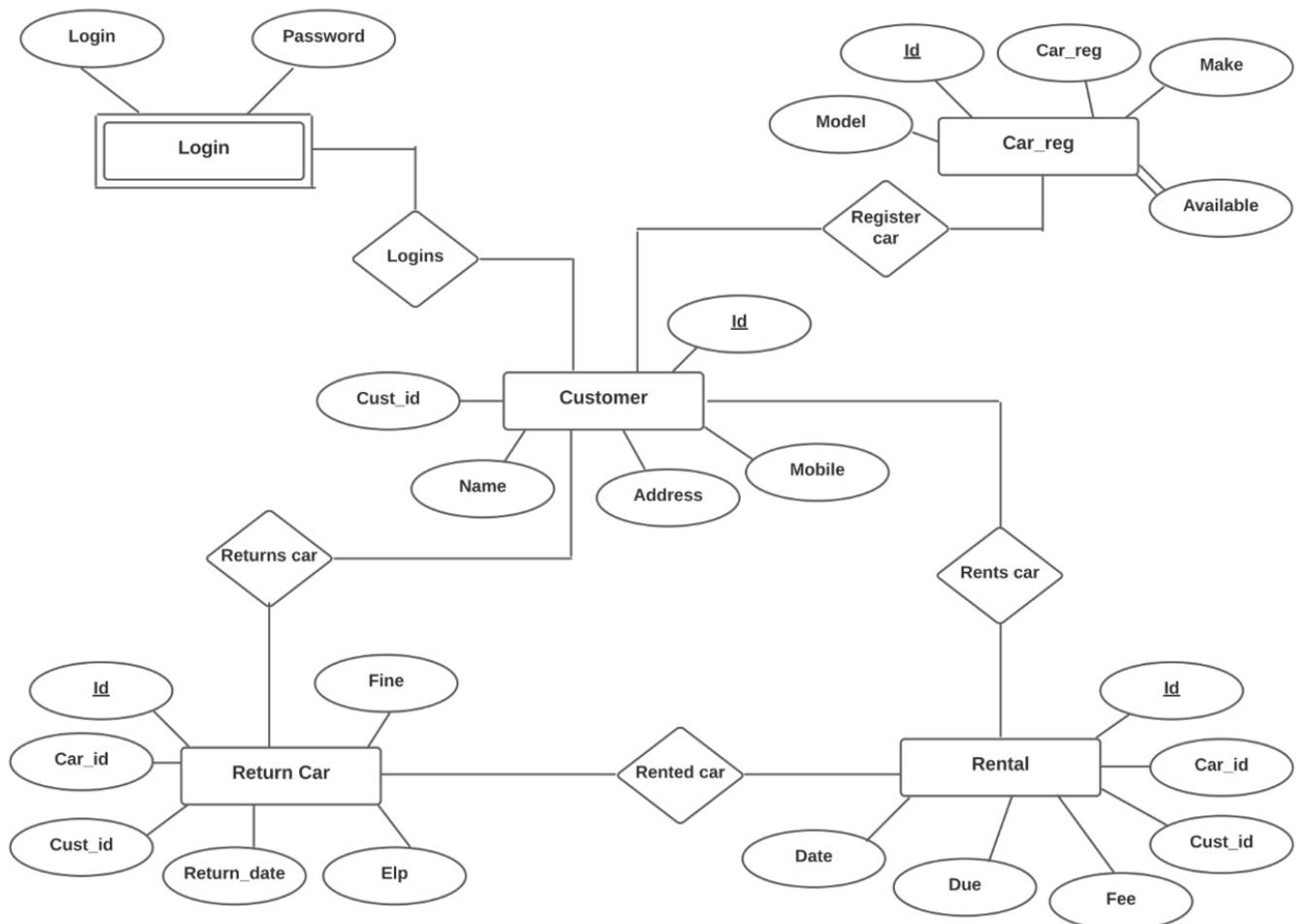


Fig. 4.1.1 - E-R diagram for “CAR RENTAL MANAGEMENT SYSTEM”

4.2 RELATIONAL SCHEMA

Login

password	username
----------	----------

Car_reg

id	car_reg	make	model	available

Customer

id	cust_id	name	address	mobile

Rental

id	car_id	cust_id	fee	date	due

Retruncar

id	car_id	cust_id	retrun_date	elp	fine

Fig. 4.2.1
Relation
Schema
for “Car
rental”

Management System”

LOGIN TABLE:**LOGIN**

Password	Username
----------	----------

Attributes:

Password: Password is of type int, and it is used in login page to enter the main page.

Username: Is used to enter the login page is of type varchar.

CAR REGISTRATION TABLE:**Car_reg**

<u>Id</u>	Car_reg	Make	Model	Available
-----------	---------	------	-------	-----------

Attributes:

Id: This is used to uniquely identify a row in the table. It is of the type int.

Car_reg: Every car has a car registration number which is used to identify that individual car uniquely. It is of the type varchar.

Make: This gives the information of the manufacturer. It is of the type varchar.

Model: Every car is different from one another because the model is different. It is of the type varchar.

Available: This gives the field whether the car is available or not. It is of the type varchar

CUSTOMER TABLE:**Customer**

<u>Id</u>	Cust_id	Name	Address	Mobile
-----------	---------	------	---------	--------

Attributes:

Id: Every customer row is unique and it should be uniquely identified. It is of the type int.

Cust_id: Every customer has an id. It is of the type varchar.

Name: Every customer has name to be identified differently. It is of the type varchar.

Address: Every customer has an address on where they stay. It is of the type text.

Mobile: Every customer has a phone no. through which they can be contacted. It is of the type int.

CAR RENTAL TABLE:**Rental**

<u>Id</u>	<u>Car_id</u>	<u>Cust_id</u>	<u>Fee</u>	<u>Date</u>	<u>Due</u>
------------------	----------------------	-----------------------	-------------------	--------------------	-------------------

Attributes:

Id: Every Rental row is unique and it should be uniquely identified. It is of the type int.

Car_id: If we are renting a car the id should be considered for the rented car and it is the foreign key of the table. It is of the type int.

Cust_id: Customer id play a major role on who has rented the car and it is also a foreign key of the table. It is of the type varchar.

Fee: Each rented car after returning it will be charged a fee based on the number of days used . It is of the type int.

Date: It is the starting date of renting a car. It is of the type int.

Due: It is the last date of returning a car It is of the type int.

RETURNING THR CAR TABLE:**Returncar**

<u>Id</u>	<u>Car_id</u>	<u>Cust_id</u>	<u>Return_date</u>	<u>Elp</u>	<u>Fine</u>
------------------	----------------------	-----------------------	---------------------------	-------------------	--------------------

Attributes:

Id: Every Rental row is unique and it should be uniquely identified. It is of the type int.

Car_id: If we are renting a car the id should be considered for the rented car and it is the foreign key of the table. It is of the type int.

Cust_id: Customer id play a major role on who has rented the car and it is also a foreign key of the table. It is of the type varchar.

Return_date: It is the last date of returning a car It is of the type varchar.

Elp: It is the time elapsed on after the return date of the car was passed. It is of the type int.

Fine: Is the amount of money that has been deducted as a fine. It is of the type int.

CHAPTER 5

CODING

5.1 Table Creation and Insertion

Login Table:

```
CREATE TABLE `login` (
  `password` varchar(10) NOT NULL,
  `username` varchar(10) NOT NULL
);
```

Field	Type	Null	Key	Default	Extra
username	varchar(10)	YES		NULL	
password	varchar(10)	YES		NULL	

Inserting:

```
INSERT INTO `login` (`username`, `password`) VALUES('kruthik', 1234);
INSERT INTO `login` (`username`, `password`) VALUES('shreyas', 5678);
```

username	password
kruthik	1234
shreyas	5678

Car_reg Table:

```
CREATE TABLE `car_reg` (
  `id` int(11) NOT NULL,
  `car_reg` varchar(255) NOT NULL,
  `make` varchar(255) NOT NULL,
  `model` varchar(255) NOT NULL,
  `available` varchar(255) NOT NULL
);
```

Field	Type	Null	Key	Default	Extra
id	int	NO	PRI	NULL	auto_increment
car_reg	varchar(255)	NO		NULL	
make	varchar(255)	NO		NULL	
model	varchar(255)	NO		NULL	
available	varchar(255)	NO		NULL	

Inserting:

```
INSERT INTO `car_reg` (`id`, `car_reg`, `make`, `model`, `available`) VALUES(1, 'KA52TZ5289', 'Maruti Suzuki', 'Alto 800', 'No');
```

```
INSERT INTO `car_reg` (`id`, `car_reg`, `make`, `model`, `available`) VALUES(2, 'KA01MN7456', 'Hyundai Motors', 'Hyundai i10', 'Yes');
```

```
INSERT INTO `car_reg` (`id`, `car_reg`, `make`, `model`, `available`) VALUES(3, 'KA02QP1023', 'Hyundai Motors', 'Hyundai i20', 'Yes');
```

```
INSERT INTO `car_reg` (`id`, `car_reg`, `make`, `model`, `available`) VALUES(4, 'KA53XY1151', 'Tata', 'Tiago', 'Yes');
```

```
INSERT INTO `car_reg` (`id`, `car_reg`, `make`, `model`, `available`) VALUES(5, 'KA48PN3289', 'Tata', 'Tigor', 'No');
```

```
INSERT INTO `car_reg` (`id`, `car_reg`, `make`, `model`, `available`) VALUES(6, 'KA01AD7690', 'Toyato', 'Camry', 'Yes');
```

```
INSERT INTO `car_reg` (`id`, `car_reg`, `make`, `model`, `available`) VALUES(7, 'KA51ML8281', 'Honda', 'City', 'Yes');
```

id car_reg make model available
1 KA52TZ5289 Maruti Suzuki Alto 800 No
2 KA01MN7456 Hyundai Motors Hyundai i10 Yes
3 KA02QP1023 Hyundai Motors Hyundai i20 Yes
4 KA53XY1151 Tata Tiago Yes
5 KA48PN3289 Tata Tigor No
6 KA01AD7690 Toyato Camry Yes
7 KA51ML8281 Honda City Yes

Customer Table:

```
CREATE TABLE `customer` (
  `id` int(11) NOT NULL,
  `cust_id` varchar(255) NOT NULL,
  `name` varchar(255) NOT NULL,
  `address` text NOT NULL,
  `mobile` int(11) NOT NULL
);
```

Field Type Null Key Default Extra
id int NO PRI NULL auto_increment
cust_id varchar(255) NO NULL
name varchar(255) NO NULL
address text NO NULL
mobile int NO NULL

Inserting:

```
INSERT INTO `customer` (`id`, `cust_id`, `name`, `address`, `mobile`) VALUES(1, 'C0001', 'Anurag', 'Bellary Karnataka', 94523436);
INSERT INTO `customer` (`id`, `cust_id`, `name`, `address`, `mobile`) VALUES(2, 'C0002', 'Tejaswi', 'Raichur Karnataka', 86636811);
INSERT INTO `customer` (`id`, `cust_id`, `name`, `address`, `mobile`) VALUES(3, 'C0003', 'Thoyaj', 'Mysore Karnataka', 91326742);
INSERT INTO `customer` (`id`, `cust_id`, `name`, `address`, `mobile`) VALUES(4, 'C0004', 'Vallabh', 'Manglore Karantaka', 65457601);
INSERT INTO `customer` (`id`, `cust_id`, `name`, `address`, `mobile`) VALUES(5, 'C0005', 'Likith', 'Banglore Rural Karantaka', 65973898);
INSERT INTO `customer` (`id`, `cust_id`, `name`, `address`, `mobile`) VALUES(6, 'C0006', 'Varun', 'Banglore Karnataka', 64251931);
```

id cust_id name address mobile
1 C0001 Anurag Bellary Karnataka 94523436
2 C0002 Tejaswi Raichur Karnataka 86636811
3 C0003 Thoyaj Mysore Karnataka 91326742
4 C0004 Vallabh Manglore Karantaka 65457601
5 C0005 Likith Banglore Rural Karantaka 65973898
6 C0006 Varun Banglore Karnataka 64251931

Rental Table:

```
CREATE TABLE `rental` (
  `id` int(11) NOT NULL,
  `car_id` varchar(255) NOT NULL,
  `cust_id` varchar(255) NOT NULL,
  `fee` int(11) NOT NULL,
  `date` varchar(255) NOT NULL,
  `due` varchar(255) NOT NULL
);
```

Field Type Null Key Default Extra
id int NO PRI NULL auto_increment
car_id varchar(255) NO NULL
cust_id varchar(255) NO NULL
fee int NO NULL
date varchar(255) NO NULL
due varchar(255) NO NULL

Inserting:

```
INSERT INTO `rental` (`id`, `car_id`, `cust_id`, `fee`, `date`, `due`) VALUES(1, 'KA01MN7456', 'C0002', 5000, '2019-02-16', '2019-02-20');
```

```
INSERT INTO `rental` (`id`, `car_id`, `cust_id`, `fee`, `date`, `due`) VALUES(2, 'KA02QP1023', 'C0001', 4000, '2019-02-17', '2019-02-22');
```

```
INSERT INTO `rental` (`id`, `car_id`, `cust_id`, `fee`, `date`, `due`) VALUES(3, 'KA53XY1151', 'C0004', 5000, '2019-02-17', '2019-02-18');
```

```
INSERT INTO `rental` (`id`, `car_id`, `cust_id`, `fee`, `date`, `due`) VALUES(4, 'KA01AD7690', 'C0001', 3000, '2019-10-14', '2019-10-15');
```

```
INSERT INTO `rental` (`id`, `car_id`, `cust_id`, `fee`, `date`, `due`) VALUES(5, 'KA01MN7456', 'C0006', 1000, '2020-06-17', '2020-06-20');
```

id car_id cust_id fee date due
1 KA01MN7456 C0002 5000 2019-02-16 2019-02-20
2 KA02QP1023 C0001 4000 2019-02-17 2019-02-22
3 KA53XY1151 C0004 5000 2019-02-17 2019-02-18
4 KA01AD7690 C0001 3000 2019-10-14 2019-10-15
5 KA01MN7456 C0006 1000 2020-06-17 2020-06-20

Returncar Table:

```
CREATE TABLE `returncar` (
  `id` int(11) NOT NULL,
  `car_id` varchar(255) NOT NULL,
  `cust_id` varchar(255) NOT NULL,
  `return_date` varchar(255) NOT NULL,
  `elp` int(11) NOT NULL,
  `fine` int(11) NOT NULL
);
```

Field Type Null Key Default Extra
id int NO PRI NULL auto_increment
car_id varchar(255) NO NULL
cust_id varchar(255) NO NULL
return_date varchar(255) NO NULL
elp int NO NULL
fine int NO NULL

Inserting:

```
INSERT INTO `returncar` (`id`, `car_id`, `cust_id`, `return_date`, `elp`, `fine`) VALUES(1, 'KA01MN7456', 'C0001', '2019-02-04', 12, 1200);
INSERT INTO `returncar` (`id`, `car_id`, `cust_id`, `return_date`, `elp`, `fine`) VALUES(2, 'KA02QP1023', 'C0002', '2019-02-21', 0, 0);
INSERT INTO `returncar` (`id`, `car_id`, `cust_id`, `return_date`, `elp`, `fine`) VALUES(3, 'KA53XY1151', 'C0005', '2019-02-19', 0, 0);
INSERT INTO `returncar` (`id`, `car_id`, `cust_id`, `return_date`, `elp`, `fine`) VALUES(4, 'KA01AD7690', 'C0001', '2019-02-06', 11, 1100);
INSERT INTO `returncar` (`id`, `car_id`, `cust_id`, `return_date`, `elp`, `fine`) VALUES(5, 'KA01MN7456', 'C0006', '2019-10-15', 0, 0);
```

id car_id cust_id return_date elp fine
1 KA01MN7456 C0001 2019-02-04 12 1200
2 KA02QP1023 C0002 2019-02-21 0 0
3 KA53XY1151 C0005 2019-02-19 0 0
4 KA01AD7690 C0001 2019-02-06 11 1100
5 KA01MN7456 C0006 2019-10-15 0 0

5.2 QUERIES

The most common operation in SQL, the query, makes use of the declarative SELECT statement. SELECT retrieves data from one or more tables, or expressions. Standard SELECT statements have no persistent effects on the database. Some non-standard implementations of SELECT can have persistent effects, such as the SELECT INTO Syntax provided in some databases.

Queries allow the user to describe desired data, leaving the database management system (DBMS) to carry out planning, optimizing, and performing the physical operations necessary to produce that result, normally immediately following the SELECT keyword. An asterisk ("*") can be used to specify that the query should return all columns of the queried tables. Select is the most complex statement in SQL, with optional keywords and clauses that include:

- The **FROM** clause, which indicates the table(s) to retrieve data from. The **FROM** clause can include optional JOIN subclauses to specify the rules for joining tables.
- The **WHERE** clause includes a comparison predicate, which restricts the rows returned by the query. The **WHERE** clause eliminates all rows from the result set where the comparison predicate does not evaluate to True.
- The **GROUP BY** clause projects rows having common values into a smaller set of rows. **GROUP BY** is often used in conjunction with SQL aggregation functions or to eliminate duplicate rows from a result set. The **WHERE** clause is applied before the GROUP BY clause.
- The **HAVING** clause includes a predicate used to filter rows resulting from the **GROUP BY** clause. Because it acts on the results of the **GROUP BY** clause, aggregation functions can be used in the **HAVING** clause predicate.
- The **ORDER BY** clause identifies which column[s] to use to sort the resulting data, and in which direction to sort them (ascending or descending). Without an **ORDER BY** clause, the order of rows returned by an SQL query is undefined.
- The **DISTINCT** keyword eliminates duplicate data.

QUERY 1

- Display the details of the cars available from car_reg.
- Display the details of the cars available in Hyundai motors.

```
mysql> select * from car_reg;
+----+-----+-----+-----+-----+
| id | car_reg | make      | model    | available |
+----+-----+-----+-----+-----+
| 1  | KA52TZ5289 | Maruti Suzuki | Alto 800  | No        |
| 2  | KA01MN7456 | Hyundai Motors | Hyundai i10 | No        |
| 3  | KA02QP1023 | Hyundai Motors | Hyundai i20 | Yes       |
| 4  | KA53XY1151 | Tata       | Tiago     | Yes       |
| 5  | KA48PN3289 | Tata       | Tigor     | No        |
| 6  | KA01AD7690 | Toyato     | Camry    | Yes       |
| 7  | KA51ML8281 | Honda     | City     | Yes       |
+----+-----+-----+-----+-----+
7 rows in set (0.00 sec)

mysql> select * from car_reg where available='Yes';
+----+-----+-----+-----+-----+
| id | car_reg | make      | model    | available |
+----+-----+-----+-----+-----+
| 3  | KA02QP1023 | Hyundai Motors | Hyundai i20 | Yes       |
| 4  | KA53XY1151 | Tata       | Tiago     | Yes       |
| 6  | KA01AD7690 | Toyato     | Camry    | Yes       |
| 7  | KA51ML8281 | Honda     | City     | Yes       |
+----+-----+-----+-----+-----+
4 rows in set (0.01 sec)

mysql> select * from car_reg where make='Hyundai Motors' and available='Yes';
+----+-----+-----+-----+-----+
| id | car_reg | make      | model    | available |
+----+-----+-----+-----+-----+
| 3  | KA02QP1023 | Hyundai Motors | Hyundai i20 | Yes       |
+----+-----+-----+-----+-----+
1 row in set (0.00 sec)
```

QUERY 2

Update mobile number of a customer where id is 3.

```
mysql> select * from customer;
+----+-----+-----+-----+
| id | cust_id | name      | address          | mobile   |
+----+-----+-----+-----+
| 1  | C0001   | Anurag    | Bellary Karnataka | 94523436 |
| 2  | C0002   | Tejaswi  | Raichur Karnataka | 86636811 |
| 3  | C0003   | Thoyaj    | Mysore Karnataka | 91326742 |
| 4  | C0004   | Vallabh  | Manglore Karantaka | 65457601 |
| 5  | C0005   | Likith    | Banglore Rural Karantaka | 65973898 |
| 6  | C0006   | Varun    | Banglore Karnataka | 64251931 |
+----+-----+-----+-----+
6 rows in set (0.00 sec)

mysql> update customer set mobile='78792728' where id='3';
Query OK, 1 row affected (0.13 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> select * from customer;
+----+-----+-----+-----+
| id | cust_id | name      | address          | mobile   |
+----+-----+-----+-----+
| 1  | C0001   | Anurag    | Bellary Karnataka | 94523436 |
| 2  | C0002   | Tejaswi  | Raichur Karnataka | 86636811 |
| 3  | C0003   | Thoyaj    | Mysore Karnataka | 78792728 |
| 4  | C0004   | Vallabh  | Manglore Karantaka | 65457601 |
| 5  | C0005   | Likith    | Banglore Rural Karantaka | 65973898 |
| 6  | C0006   | Varun    | Banglore Karnataka | 64251931 |
+----+-----+-----+-----+
6 rows in set (0.03 sec)
```

QUERY 3:

Get information of customers where the customer has paid fee more than 4000.

```
mysql> select * from customer;
+---+-----+-----+-----+
| id | cust_id | name      | address          | mobile   |
+---+-----+-----+-----+
| 1  | C0001   | Anurag    | Bellary Karnataka | 94523436 |
| 2  | C0002   | Tejaswi   | Raichur Karnataka | 86636811 |
| 3  | C0003   | Thoyaj    | Mysore Karnataka  | 78792728 |
| 4  | C0004   | Vallabh   | Manglore Karantaka | 65457601 |
| 5  | C0005   | Likith    | Banglore Rural Karantaka | 65973898 |
| 6  | C0006   | Varun     | Banglore Karnataka | 64251931 |
+---+-----+-----+-----+
6 rows in set (0.00 sec)

mysql> select * from rental;
+---+-----+-----+-----+
| id | car_id | cust_id | fee   | date       | due      |
+---+-----+-----+-----+
| 1  | KA01MN7456 | C0002   | 5000 | 2019-02-16 | 2019-02-20 |
| 2  | KA02QP1023 | C0001   | 4000 | 2019-02-17 | 2019-02-22 |
| 3  | KA53XY1151 | C0004   | 5000 | 2019-02-17 | 2019-02-18 |
| 4  | KA01AD7690 | C0001   | 3000 | 2019-10-14 | 2019-10-15 |
| 5  | KA01MN7456 | C0006   | 1000 | 2020-06-17 | 2020-06-20 |
| 23 | KA01MN7456 | C0007   | 12000 | 2022-01-02 | 2022-01-11 |
+---+-----+-----+-----+
6 rows in set (0.00 sec)

mysql> select name,address,mobile from customer where cust_id in (select cust_id from rental where fee>4000 );
+-----+-----+-----+
| name      | address          | mobile   |
+-----+-----+-----+
| Tejaswi   | Raichur Karnataka | 86636811 |
| Vallabh   | Manglore Karantaka | 65457601 |
+-----+-----+-----+
2 rows in set (0.00 sec)
```

QUERY 4

Retrieve information of customers where the customer has paid fine.

```
mysql> select * from customer;
+---+-----+-----+-----+
| id | cust_id | name      | address          | mobile   |
+---+-----+-----+-----+
| 1  | C0001   | Anurag    | Bellary Karnataka | 94523436 |
| 2  | C0002   | Tejaswi   | Raichur Karnataka | 86636811 |
| 3  | C0003   | Thoyaj    | Mysore Karnataka  | 78792728 |
| 4  | C0004   | Vallabh   | Manglore Karantaka | 65457601 |
| 5  | C0005   | Likith    | Banglore Rural Karantaka | 65973898 |
| 6  | C0006   | Varun     | Banglore Karnataka | 64251931 |
+---+-----+-----+-----+
6 rows in set (0.00 sec)

mysql> select * from rental;
+---+-----+-----+-----+
| id | car_id | cust_id | fee   | date       | due      |
+---+-----+-----+-----+
| 1  | KA01MN7456 | C0002   | 5000 | 2019-02-16 | 2019-02-20 |
| 2  | KA02QP1023 | C0001   | 4000 | 2019-02-17 | 2019-02-22 |
| 3  | KA53XY1151 | C0004   | 5000 | 2019-02-17 | 2019-02-18 |
| 4  | KA01AD7690 | C0001   | 3000 | 2019-10-14 | 2019-10-15 |
| 5  | KA01MN7456 | C0006   | 1000 | 2020-06-17 | 2020-06-20 |
| 23 | KA01MN7456 | C0007   | 12000 | 2022-01-02 | 2022-01-11 |
+---+-----+-----+-----+
6 rows in set (0.00 sec)

mysql> select * from returncar;
+---+-----+-----+-----+-----+
| id | car_id | cust_id | return_date | elp | fine |
+---+-----+-----+-----+-----+
| 1  | KA01MN7456 | C0001   | 2019-02-04 | 12 | 1200 |
| 2  | KA02QP1023 | C0002   | 2019-02-21 | 9 | 900 |
| 3  | KA53XY1151 | C0005   | 2019-02-19 | 0 | 0 |
| 4  | KA01AD7690 | C0001   | 2019-02-06 | 11 | 1100 |
| 5  | KA01MN7456 | C0006   | 2019-10-15 | 5 | 500 |
+---+-----+-----+-----+-----+
5 rows in set (0.00 sec)

mysql> select * from customer where cust_id in (select cust_id from rental where car_id in (select car_id from returncar where fine!=0));
+---+-----+-----+-----+
| id | cust_id | name      | address          | mobile   |
+---+-----+-----+-----+
| 1  | C0001   | Anurag    | Bellary Karnataka | 94523436 |
| 2  | C0002   | Tejaswi   | Raichur Karnataka | 86636811 |
| 6  | C0006   | Varun     | Banglore Karnataka | 64251931 |
+---+-----+-----+-----+
3 rows in set (0.00 sec)
```

QUERY 5

Create a view of customers who have rented more than one car and retrieve the data of those customers.

```
mysql> create view rentedcar as select cust_id,count(cust_id) as count from rental group by cust_id order by count(cust_id)>1;
Query OK, 0 rows affected (0.13 sec)

mysql> select * from rentedcar;
+-----+-----+
| cust_id | count |
+-----+-----+
| C0002   |    1 |
| C0004   |    1 |
| C0006   |    1 |
| C0007   |    1 |
| C0001   |    2 |
+-----+-----+
5 rows in set (0.00 sec)

mysql> select * from customer where cust_id in (select cust_id from rentedcar where count>1);
+---+-----+-----+-----+
| id | cust_id | name   | address        | mobile   |
+---+-----+-----+-----+
| 1  | C0001   | Anurag | Bellary Karnataka | 94523436 |
+---+-----+-----+-----+
1 row in set (0.00 sec)
```

5.3 Front end Code and Snapshots

We have 6 java classes with their source code and Design that are under the package car that is being imported in starting of every code.

Login.java (Which uses user name and password to login into the Main java source and design file)
Main.java (Which has links to other four java classes)
Carreg.java (Where we can add cars to be registered for rental agreement)
Customer.java(Where we have info about the customers and which car they have rented)
Rental.java (Where we have info about the car that are rented and for how many days)
Duepay.java (Where we have info about the car returned date and time elapsed and fine that is collected)

So that we can access every code from anywhere. In Main.java we have created a function which on clicking opens the individual design and runs the code of that particular java class.

```
private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {  
  
    carreg add = new carreg();  
    add.setVisible(true);  
}  
  
private void jButton2ActionPerformed(java.awt.event.ActionEvent evt) {  
  
    customer add = new customer();  
    add.setVisible(true);  
}  
  
private void jButton3ActionPerformed(java.awt.event.ActionEvent evt) {  
  
    rental add = new rental();  
    add.setVisible(true);  
}  
  
private void jButton4ActionPerformed(java.awt.event.ActionEvent evt) {  
  
    Duepay add = new Duepay();  
    add.setVisible(true);  
}
```

Login.java

```
package car;

import java.sql.*;
import javax.swing.JOptionPane;

public class Login extends javax.swing.JFrame {

    public Login() {
        initComponents();
    }

    @SuppressWarnings("unchecked")
    // <editor-fold defaultstate="collapsed" desc="Generated Code">
    private void initComponents() {

        jLabel3 = new javax.swing.JLabel();
        jPanel1 = new javax.swing.JPanel();
        jLabel1 = new javax.swing.JLabel();
        jLabel2 = new javax.swing.JLabel();
        txtuser = new javax.swing.JTextField();
        txtpass = new javax.swing.JPasswordField();
        jButton1 = new javax.swing.JButton();
        jButton2 = new javax.swing.JButton();

        setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);

        jLabel3.setFont(new java.awt.Font("Tahoma", 1, 36)); // NOI18N
        jLabel3.setText("Car Rental");

        jPanel1.setBorder(javax.swing.BorderFactory.createTitledBorder("Login"));

        jLabel1.setText("Username");

        jLabel2.setText("Password");

        jButton1.setText("Login");
        jButton1.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                jButton1ActionPerformed(evt);
            }
        });

        jButton2.setText("Cancel");
        jButton2.addMouseListener(new java.awt.event.MouseAdapter() {
            public void mouseClicked(java.awt.event.MouseEvent evt) {
                jButton2MouseClicked(evt);
            }
        });

        javax.swing.GroupLayout jPanel1Layout = new javax.swing.GroupLayout(jPanel1);
        jPanel1.setLayout(jPanel1Layout);
        jPanel1Layout.setHorizontalGroup(
            jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addGroup(jPanel1Layout.createSequentialGroup()
                .addContainerGap()
                .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
                    .addComponent(jLabel3, javax.swing.GroupLayout.PREFERRED_SIZE, 180, javax.swing.GroupLayout.PREFERRED_SIZE)
                    .addGroup(jPanel1Layout.createSequentialGroup()
                        .addComponent(jLabel1)
                        .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)
                        .addComponent(txtuser))
                    .addGroup(jPanel1Layout.createSequentialGroup()
                        .addComponent(jLabel2)
                        .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)
                        .addComponent(txtpass))
                    .addGroup(jPanel1Layout.createSequentialGroup()
                        .addComponent(jButton1)
                        .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)
                        .addComponent(jButton2)))
                .addContainerGap())
        );
        jPanel1Layout.setVerticalGroup(
            jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addGroup(jPanel1Layout.createSequentialGroup()
                .addContainerGap()
                .addComponent(jLabel3, javax.swing.GroupLayout.PREFERRED_SIZE, 180, javax.swing.GroupLayout.PREFERRED_SIZE)
                .addGap(18, 18, 18)
                .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
                    .addComponent(jLabel1)
                    .addComponent(txtuser, javax.swing.GroupLayout.PREFERRED_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))
                .addGap(18, 18, 18)
                .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
                    .addComponent(jLabel2)
                    .addComponent(txtpass, javax.swing.GroupLayout.PREFERRED_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))
                .addGap(18, 18, 18)
                .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
                    .addComponent(jButton1)
                    .addComponent(jButton2)))
            .addContainerGap())
        );

        javax.swing.GroupLayout layout = new javax.swing.GroupLayout(getContentPane());
        getContentPane().setLayout(layout);
        layout.setHorizontalGroup(
            layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addGroup(layout.createSequentialGroup()
                .addContainerGap()
                .addComponent(jPanel1, javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
                .addContainerGap())
        );
        layout.setVerticalGroup(
            layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addGroup(layout.createSequentialGroup()
                .addContainerGap()
                .addComponent(jPanel1, javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
                .addContainerGap())
        );
    }

    // Variables declaration - do not modify//GEN-BEGIN:variables
    private javax.swing.JButton jButton1;
    private javax.swing.JButton jButton2;
    private javax.swing.JLabel jLabel1;
    private javax.swing.JLabel jLabel2;
    private javax.swing.JLabel jLabel3;
    private javax.swing.JPanel jPanel1;
    private javax.swing.JPasswordField txtpass;
    private javax.swing.JTextField txtuser;
    // End of variables declaration//GEN-END:variables
}
```

```
javax.swing.GroupLayout jPanel1Layout = new javax.swing.GroupLayout(jPanel1);
jPanel1.setLayout(jPanel1Layout);
jPanel1Layout.setHorizontalGroup(
    jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
    .addGroup(jPanel1Layout.createSequentialGroup()
        .addGap(75, 75, 75)
        .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addGroup(jPanel1Layout.createSequentialGroup()
                .addComponent(jLabel1)
                .addComponent(jLabel2))
            .addGap(52, 52, 52)
            .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING, false)
                .addComponent(txtuser, javax.swing.GroupLayout.DEFAULT_SIZE, 199, Short.MAX_VALUE)
                .addComponent(txtpass))
            .addGap(88, Short.MAX_VALUE))
        .addGroup(jPanel1Layout.createSequentialGroup()
            .addGap(18, 18, 18)
            .addComponent(jButton1, javax.swing.GroupLayout.PREFERRED_SIZE, 86, javax.swing.GroupLayout.PREFERRED_SIZE)
            .addGap(18, 18, 18)
            .addComponent(jButton2, javax.swing.GroupLayout.PREFERRED_SIZE, 82, javax.swing.GroupLayout.PREFERRED_SIZE)
            .addGap(18, 18, 18))
        .addGroup(jPanel1Layout.createSequentialGroup()
            .addGap(34, 34, 34)
            .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
                .addComponent(jLabel1)
                .addComponent(txtuser, javax.swing.GroupLayout.PREFERRED_SIZE, 30, javax.swing.GroupLayout.PREFERRED_SIZE))
            .addGap(18, 18, 18)
            .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.TRAILING)
                .addComponent(jButton1, javax.swing.GroupLayout.PREFERRED_SIZE, 32, javax.swing.GroupLayout.PREFERRED_SIZE)
                .addComponent(txtpass, javax.swing.GroupLayout.PREFERRED_SIZE, 32, javax.swing.GroupLayout.PREFERRED_SIZE))
            .addGap(18, 18, 18)
            .addGroup(jPanel1Layout.createSequentialGroup()
                .addGap(34, 34, 34)
                .addComponent(jButton2, javax.swing.GroupLayout.PREFERRED_SIZE, 34, javax.swing.GroupLayout.PREFERRED_SIZE)
                .addGap(34, 34, 34)
                .addComponent(txtuser, javax.swing.GroupLayout.PREFERRED_SIZE, 34, javax.swing.GroupLayout.PREFERRED_SIZE)
                .addGap(34, 34, 34)
                .addComponent(txtpass, javax.swing.GroupLayout.PREFERRED_SIZE, 34, javax.swing.GroupLayout.PREFERRED_SIZE)))
        .addGroup(jPanel1Layout.createSequentialGroup()
            .addGap(34, 34, 34)
            .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
                .addComponent(jButton1, javax.swing.GroupLayout.PREFERRED_SIZE, 36, Short.MAX_VALUE)
                .addComponent(jButton2, javax.swing.GroupLayout.PREFERRED_SIZE, Short.MAX_VALUE))
            .addGap(34, 34, 34))
        .addGap(34, 34, 34)
    )
);
jPanel1Layout.setVerticalGroup(
    jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
    .addGroup(jPanel1Layout.createSequentialGroup()
        .addGap(75, 75, 75)
        .addGroup(jPanel1Layout.createSequentialGroup()
            .addComponent(jLabel1)
            .addComponent(jLabel2))
        .addGap(52, 52, 52)
        .addGroup(jPanel1Layout.createSequentialGroup()
            .addGap(18, 18, 18)
            .addComponent(jButton1, javax.swing.GroupLayout.PREFERRED_SIZE, 86, javax.swing.GroupLayout.PREFERRED_SIZE)
            .addGap(18, 18, 18)
            .addComponent(jButton2, javax.swing.GroupLayout.PREFERRED_SIZE, 82, javax.swing.GroupLayout.PREFERRED_SIZE)
            .addGap(18, 18, 18))
        .addGroup(jPanel1Layout.createSequentialGroup()
            .addGap(34, 34, 34)
            .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
                .addComponent(jLabel1)
                .addComponent(txtuser, javax.swing.GroupLayout.PREFERRED_SIZE, 30, javax.swing.GroupLayout.PREFERRED_SIZE))
            .addGap(18, 18, 18)
            .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.TRAILING)
                .addComponent(jButton1, javax.swing.GroupLayout.PREFERRED_SIZE, 32, javax.swing.GroupLayout.PREFERRED_SIZE)
                .addComponent(txtpass, javax.swing.GroupLayout.PREFERRED_SIZE, 32, javax.swing.GroupLayout.PREFERRED_SIZE))
            .addGap(18, 18, 18)
            .addGroup(jPanel1Layout.createSequentialGroup()
                .addGap(34, 34, 34)
                .addComponent(jButton2, javax.swing.GroupLayout.PREFERRED_SIZE, 34, javax.swing.GroupLayout.PREFERRED_SIZE)
                .addGap(34, 34, 34)
                .addComponent(txtuser, javax.swing.GroupLayout.PREFERRED_SIZE, 34, javax.swing.GroupLayout.PREFERRED_SIZE)
                .addGap(34, 34, 34)
                .addComponent(txtpass, javax.swing.GroupLayout.PREFERRED_SIZE, 34, javax.swing.GroupLayout.PREFERRED_SIZE)))
        .addGroup(jPanel1Layout.createSequentialGroup()
            .addGap(34, 34, 34)
            .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
                .addComponent(jButton1, javax.swing.GroupLayout.PREFERRED_SIZE, 36, Short.MAX_VALUE)
                .addComponent(jButton2, javax.swing.GroupLayout.PREFERRED_SIZE, Short.MAX_VALUE))
            .addGap(34, 34, 34))
        .addGap(34, 34, 34)
    )
);
});
```

```
javax.swing.GroupLayout layout = new javax.swing.GroupLayout(getContentPane());
getContentPane().setLayout(layout);
layout.setHorizontalGroup(
    layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
    .addGroup(layout.createSequentialGroup()
        .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addGroup(layout.createSequentialGroup()
                .addGap(20, 20, 20)
                .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
                    .addComponent(jLabel3)
                    .addComponent(jPanel1, javax.swing.GroupLayout.PREFERRED_SIZE,
                        javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))
                .addGap(Short.MAX_VALUE))
            .addGroup(layout.createSequentialGroup()
                .addGap(22, 22, 22)
                .addComponent(jLabel3)
                .addGap(18, 18, 18)
                .addComponent(jPanel1, javax.swing.GroupLayout.PREFERRED_SIZE,
                    javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))
            .addGap(35, Short.MAX_VALUE)))
    .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.TRAILING, true)
        .addGroup(layout.createSequentialGroup()
            .addGap(22, 22, 22)
            .addComponent(jLabel3)
            .addGap(18, 18, 18)
            .addComponent(jPanel1, javax.swing.GroupLayout.PREFERRED_SIZE,
                javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))
        .addGroup(layout.createSequentialGroup()
            .addGap(20, 20, 20)
            .addComponent(jLabel3)
            .addGap(18, 18, 18)
            .addComponent(jPanel1, javax.swing.GroupLayout.PREFERRED_SIZE,
                javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))
        .addGap(35, Short.MAX_VALUE)))
)
layout.setVerticalGroup(
    layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
    .addGroup(layout.createSequentialGroup()
        .addGap(22, 22, 22)
        .addComponent(jLabel3)
        .addGap(18, 18, 18)
        .addComponent(jPanel1, javax.swing.GroupLayout.PREFERRED_SIZE,
            javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))
    .addGroup(layout.createSequentialGroup()
        .addGap(20, 20, 20)
        .addComponent(jLabel3)
        .addGap(18, 18, 18)
        .addComponent(jPanel1, javax.swing.GroupLayout.PREFERRED_SIZE,
            javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))
    .addGap(35, Short.MAX_VALUE)))
);
layout.setHorizontalGroup(
    layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
    .addGroup(layout.createSequentialGroup()
        .addGap(20, 20, 20)
        .addComponent(jLabel3)
        .addGap(18, 18, 18)
        .addComponent(jPanel1, javax.swing.GroupLayout.PREFERRED_SIZE,
            javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))
    .addGroup(layout.createSequentialGroup()
        .addGap(22, 22, 22)
        .addComponent(jLabel3)
        .addGap(18, 18, 18)
        .addComponent(jPanel1, javax.swing.GroupLayout.PREFERRED_SIZE,
            javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))
    .addGap(35, Short.MAX_VALUE)))
);
pack();
setLocationRelativeTo(null);
}// </editor-fold>

private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {

    String user = txtuser.getText().trim();
    String pass = txtpass.getText().trim();
    if(user.equals("kruthik") && pass.equals("1234")) || (user.equals("shreyas") && pass.equals("5678")))
    {
        Main m = new Main();
        this.hide();
        m.setVisible(true);
    }
    else
    {
        JOptionPane.showMessageDialog(this,"Username and Password do not match");
    }
}

private void jButton2MouseClicked(java.awt.event.MouseEvent evt) {

    System.exit(0);
}

public static void main(String args[]) {

    try {
        for (javax.swing.UIManager.LookAndFeelInfo info :
        javax.swing.UIManager.getInstalledLookAndFeels()) {
            if ("Nimbus".equals(info.getName())) {
                javax.swing.UIManager.setLookAndFeel(info.getClassName());
                break;
            }
        }
    } catch (Exception ex) {
        java.util.logging.Logger.getLogger(Login.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);
    }
}
}
```

```
        }
    } catch (ClassNotFoundException ex) {
        java.util.logging.Logger.getLogger(Login.class.getName()).log(java.util.logging.Level.SEVERE, null,
ex);
    } catch (InstantiationException ex) {
        java.util.logging.Logger.getLogger(Login.class.getName()).log(java.util.logging.Level.SEVERE, null,
ex);
    } catch (IllegalAccessException ex) {
        java.util.logging.Logger.getLogger(Login.class.getName()).log(java.util.logging.Level.SEVERE, null,
ex);
    } catch (javax.swing.UnsupportedLookAndFeelException ex) {
        java.util.logging.Logger.getLogger(Login.class.getName()).log(java.util.logging.Level.SEVERE, null,
ex);
    }
//</editor-fold>

java.awt.EventQueue.invokeLater(new Runnable() {
    public void run() {
        new Login().setVisible(true);
    }
});
}

// Variables declaration - do not modify
private javax.swing.JButton jButton1;
private javax.swing.JButton jButton2;
private javax.swing.JLabel jLabel1;
private javax.swing.JLabel jLabel2;
private javax.swing.JLabel jLabel3;
private javax.swing.JPanel jPanel1;
private javax.swing.JPasswordField txtpass;
private javax.swing.JTextField txtuser;
// End of variables declaration
}
```

Main.java

```
package car;

public class Main extends javax.swing.JFrame {
    public Main() {
        initComponents();
    }

    @SuppressWarnings("unchecked")
    //<editor-fold defaultstate="collapsed" desc="Generated Code">
    private void initComponents() {

        jButton1 = new javax.swing.JButton();
        jButton2 = new javax.swing.JButton();
        jButton3 = new javax.swing.JButton();
        jButton4 = new javax.swing.JButton();
        jLabel1 = new javax.swing.JLabel();
        jButton5 = new javax.swing.JButton();

        setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);

        jButton1.setText("Car Registration");
        jButton1.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                jButton1ActionPerformed(evt);
            }
        });
        });

        jButton2.setText("Customer");
        jButton2.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                jButton2ActionPerformed(evt);
            }
        });
        });

        jButton3.setText("Rental");
        jButton3.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                jButton3ActionPerformed(evt);
            }
        });
        });

        jButton4.setText("Return");
        jButton4.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                jButton4ActionPerformed(evt);
            }
        });
        });

        jLabel1.setFont(new java.awt.Font("Tahoma", 1, 36)); // NOI18N
        jLabel1.setForeground(new java.awt.Color(0, 0, 255));
        jLabel1.setText("Car Rental");
    }
}
```

```
jButton5.setText("Logout");
jButton5.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        jButton5ActionPerformed(evt);
    }
});

javax.swing.GroupLayout layout = new javax.swing.GroupLayout(getContentPane());
getContentPane().setLayout(layout);
layout.setHorizontalGroup(
    layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
    .addGroup(layout.createSequentialGroup()
        .addGap(142, Short.MAX_VALUE)
        .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addGroup(layout.createSequentialGroup()
                .addComponent(jButton1, javax.swing.GroupLayout.DEFAULT_SIZE,
                    javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
                .addComponent(jButton3, javax.swing.GroupLayout.Alignment.TRAILING, javax.swing.GroupLayout.PREFERRED_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
                .addComponent(jButton4, javax.swing.GroupLayout.Alignment.TRAILING, javax.swing.GroupLayout.PREFERRED_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
                .addComponent(jButton2, javax.swing.GroupLayout.Alignment.TRAILING, javax.swing.GroupLayout.PREFERRED_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
                .addComponent(jButton5, javax.swing.GroupLayout.Alignment.TRAILING, javax.swing.GroupLayout.PREFERRED_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))
            .addGroup(layout.createSequentialGroup()
                .addGap(182, javax.swing.GroupLayout.PREFERRED_SIZE)
                .addComponent(jButton5, javax.swing.GroupLayout.PREFERRED_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
                .addGap(18, javax.swing.GroupLayout.PREFERRED_SIZE)
                .addComponent(jButton2, javax.swing.GroupLayout.PREFERRED_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
                .addGap(18, javax.swing.GroupLayout.PREFERRED_SIZE)
                .addComponent(jButton3, javax.swing.GroupLayout.PREFERRED_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
                .addGap(18, javax.swing.GroupLayout.PREFERRED_SIZE)
                .addComponent(jButton4, javax.swing.GroupLayout.PREFERRED_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
                .addGap(18, javax.swing.GroupLayout.PREFERRED_SIZE)
                .addComponent(jButton1, javax.swing.GroupLayout.PREFERRED_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)))
        .addGapGap(131, 131, 131))))
);

layout.setVerticalGroup(
    layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
    .addGroup(layout.createSequentialGroup()
        .addGap(24, 24, 24)
        .addComponent(jButton1, javax.swing.GroupLayout.PREFERRED_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
        .addGap(35, 35, 35)
        .addComponent(jButton2, javax.swing.GroupLayout.PREFERRED_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
        .addGap(18, 18, 18)
        .addComponent(jButton3, javax.swing.GroupLayout.PREFERRED_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
        .addGap(18, 18, 18)
        .addComponent(jButton4, javax.swing.GroupLayout.PREFERRED_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
        .addGap(18, 18, 18)
        .addComponent(jButton5, javax.swing.GroupLayout.PREFERRED_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))
    .addGroup(layout.createSequentialGroup()
        .addGap(55, javax.swing.GroupLayout.PREFERRED_SIZE)
        .addComponent(jButton5, javax.swing.GroupLayout.PREFERRED_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
        .addGap(52, javax.swing.GroupLayout.PREFERRED_SIZE)
        .addComponent(jButton2, javax.swing.GroupLayout.PREFERRED_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
        .addGap(55, javax.swing.GroupLayout.PREFERRED_SIZE)
        .addComponent(jButton3, javax.swing.GroupLayout.PREFERRED_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
        .addGap(54, javax.swing.GroupLayout.PREFERRED_SIZE)
        .addComponent(jButton4, javax.swing.GroupLayout.PREFERRED_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
        .addGap(54, javax.swing.GroupLayout.PREFERRED_SIZE)
        .addComponent(jButton1, javax.swing.GroupLayout.PREFERRED_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)))
    .addGroup(layout.createSequentialGroup()
        .addGap(20, Short.MAX_VALUE)
        .addGapGap(131, 131, 131)))
);

pack();
setLocationRelativeTo(null);
```

```
}// </editor-fold>

private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {

    carreg add = new carreg();
    add.setVisible(true);
}

private void jButton2ActionPerformed(java.awt.event.ActionEvent evt) {

    customer add = new customer();
    add.setVisible(true);
}

private void jButton3ActionPerformed(java.awt.event.ActionEvent evt) {

    rental add = new rental();
    add.setVisible(true);
}

private void jButton4ActionPerformed(java.awt.event.ActionEvent evt) {

    Duepay add = new Duepay();
    add.setVisible(true);
}

private void jButton5ActionPerformed(java.awt.event.ActionEvent evt) {
    // TODO add your handling code here:
    Login lo = new Login();
    this.hide();
    lo.setVisible(true);
}

public static void main(String args[]) {
    /* Set the Nimbus look and feel */
    // <editor-fold defaultstate="collapsed" desc=" Look and feel setting code (optional) " >
    /* If Nimbus (introduced in Java SE 6) is not available, stay with the default look and feel.
     * For details see http://download.oracle.com/javase/tutorial/uiswing/lookandfeel/plaf.html
     */
    try {
        for (javax.swing.UIManager.LookAndFeelInfo info :
            javax.swing.UIManager.getInstalledLookAndFeels()) {
            if ("Nimbus".equals(info.getName())) {
                javax.swing.UIManager.setLookAndFeel(info.getClassName());
                break;
            }
        }
    } catch (ClassNotFoundException ex) {
        java.util.logging.Logger.getLogger(Main.class.getName()).log(java.util.logging.Level.SEVERE, null,
```

```
ex);
} catch (InstantiationException ex) {
    java.util.logging.Logger.getLogger(Main.class.getName()).log(java.util.logging.Level.SEVERE, null,
ex);
} catch (IllegalAccessException ex) {
    java.util.logging.Logger.getLogger(Main.class.getName()).log(java.util.logging.Level.SEVERE, null,
ex);
} catch (javax.swing.UnsupportedLookAndFeelException ex) {
    java.util.logging.Logger.getLogger(Main.class.getName()).log(java.util.logging.Level.SEVERE, null,
ex);
}
//</editor-fold>

java.awt.EventQueue.invokeLater(new Runnable() {
    public void run() {
        new Main().setVisible(true);
    }
});
}

// Variables declaration - do not modify
private javax.swing.JButton jButton1;
private javax.swing.JButton jButton2;
private javax.swing.JButton jButton3;
private javax.swing.JButton jButton4;
private javax.swing.JButton jButton5;
private javax.swing.JLabel jLabel1;
// End of variables declaration
}
```

```
package car;

import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.PreparedStatement;
import java.sql.ResultSet;
import java.sql.ResultSetMetaData;
import java.sql.SQLException;
import java.sql.Statement;
import java.util.Vector;
import java.util.logging.Level;
import java.util.logging.Logger;
import javax.swing.JOptionPane;
import javax.swing.table.DefaultTableModel;

public final class carreg extends javax.swing.JFrame {

    PreparedStatement insert;
    Connection con;

    public carreg() {
        initComponents();
        table_update();
        autoID();
    }

    @SuppressWarnings("unchecked")
    // <editor-fold defaultstate="collapsed" desc="Generated Code">
    private void initComponents() {

        jPanel1 = new javax.swing.JPanel();
        jLabel1 = new javax.swing.JLabel();
        txtregno = new javax.swing.JTextField();
        jLabel2 = new javax.swing.JLabel();
        txtmake = new javax.swing.JTextField();
        jLabel3 = new javax.swing.JLabel();
        txtmodel = new javax.swing.JTextField();
        jButton1 = new javax.swing.JButton();
        jLabel4 = new javax.swing.JLabel();
        jComboBox1 = new javax.swing.JComboBox();
        jButton2 = new javax.swing.JButton();
        jButton3 = new javax.swing.JButton();
        jButton4 = new javax.swing.JButton();
        jScrollPane1 = new javax.swing.JScrollPane();
        jTable1 = new javax.swing.JTable();

        setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);
        setUndecorated(true);

        jPanel1.setBorder(javax.swing.BorderFactory.createTitledBorder(null, "CarRegister", javax.swing.border.TitledBorder.DEFAULT_JUSTIFICATION, javax.swing.border.TitledBorder.DEFAULT_POSITION, new java.awt.Font("Tahoma", 1, 14))); // NOI18N

        jLabel1.setFont(new java.awt.Font("Tahoma", 0, 18)); // NOI18N
        jLabel1.setText("Car Reg No");

        javax.swing.GroupLayout jPanel1Layout = new javax.swing.GroupLayout(jPanel1);
        jPanel1.setLayout(jPanel1Layout);
        jPanel1Layout.setHorizontalGroup(
            jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addGroup(jPanel1Layout.createSequentialGroup()
                .addContainerGap()
                .addComponent(jLabel1)
                .addContainerGap())
        );
        jPanel1Layout.setVerticalGroup(
            jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addGroup(jPanel1Layout.createSequentialGroup()
                .addContainerGap()
                .addComponent(jLabel1)
                .addContainerGap())
        );

        txtregno.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                txtregnoActionPerformed(evt);
            }
        });

        jLabel2.setFont(new java.awt.Font("Tahoma", 0, 18)); // NOI18N
        jLabel2.setText("Car Model");

        txtmake.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                txtmakeActionPerformed(evt);
            }
        });

        jLabel3.setFont(new java.awt.Font("Tahoma", 0, 18)); // NOI18N
        jLabel3.setText("Car Make");

        txtmodel.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                txtmodelActionPerformed(evt);
            }
        });

        jButton1.setText("Insert");
        jButton1.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                jButton1ActionPerformed(evt);
            }
        });

        jLabel4.setFont(new java.awt.Font("Tahoma", 0, 18)); // NOI18N
        jLabel4.setText("Car Registration No");

        jComboBox1.setModel(new javax.swing.DefaultComboBoxModel(new String[] {"Select", "Audi", "BMW", "Fiat", "Honda", "Toyota"}));
        jComboBox1.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                jComboBox1ActionPerformed(evt);
            }
        });

        jButton2.setText("Update");
        jButton2.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                jButton2ActionPerformed(evt);
            }
        });

        jButton3.setText("Delete");
        jButton3.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                jButton3ActionPerformed(evt);
            }
        });

        jButton4.setText("Exit");
        jButton4.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                jButton4ActionPerformed(evt);
            }
        });

        jScrollPane1.setViewportView(jTable1);

        javax.swing.GroupLayout layout = new javax.swing.GroupLayout(getContentPane());
        getContentPane().setLayout(layout);
        layout.setHorizontalGroup(
            layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addGroup(layout.createSequentialGroup()
                .addContainerGap()
                .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
                    .addGroup(layout.createSequentialGroup()
                        .addComponent(jPanel1, javax.swing.GroupLayout.PREFERRED_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
                        .addGap(18, 18, 18)
                        .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
                            .addGroup(layout.createSequentialGroup()
                                .addComponent(jLabel2)
                                .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)
                                .addComponent(txtmake, javax.swing.GroupLayout.PREFERRED_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))
                            .addGroup(layout.createSequentialGroup()
                                .addComponent(jLabel3)
                                .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)
                                .addComponent(txtmodel, javax.swing.GroupLayout.PREFERRED_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)))
                        .addGap(18, 18, 18)
                        .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
                            .addGroup(layout.createSequentialGroup()
                                .addComponent(jButton1)
                                .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)
                                .addComponent(jComboBox1, javax.swing.GroupLayout.PREFERRED_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))
                            .addGroup(layout.createSequentialGroup()
                                .addComponent(jLabel4)
                                .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)
                                .addComponent(txtregno, javax.swing.GroupLayout.PREFERRED_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)))
                        .addGap(18, 18, 18)
                        .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
                            .addGroup(layout.createSequentialGroup()
                                .addComponent(jButton2)
                                .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)
                                .addComponent(jButton3))
                            .addGroup(layout.createSequentialGroup()
                                .addComponent(jButton4)
                                .addGap(18, 18, 18)
                                .addComponent(jScrollPane1, javax.swing.GroupLayout.PREFERRED_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))))
                    .addComponent(jButton1)
                    .addComponent(jButton2)
                    .addComponent(jButton3)
                    .addComponent(jButton4))
                .addContainerGap())
        );
        layout.setVerticalGroup(
            layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addGroup(layout.createSequentialGroup()
                .addContainerGap()
                .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
                    .addGroup(layout.createSequentialGroup()
                        .addComponent(jPanel1, javax.swing.GroupLayout.PREFERRED_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
                        .addGap(18, 18, 18)
                        .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
                            .addComponent(jLabel2)
                            .addComponent(txtmake, javax.swing.GroupLayout.PREFERRED_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))
                        .addGap(18, 18, 18)
                        .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
                            .addComponent(jLabel3)
                            .addComponent(txtmodel, javax.swing.GroupLayout.PREFERRED_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))
                        .addGap(18, 18, 18)
                        .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
                            .addComponent(jButton1)
                            .addComponent(jComboBox1, javax.swing.GroupLayout.PREFERRED_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))
                        .addGap(18, 18, 18)
                        .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
                            .addComponent(jLabel4)
                            .addComponent(txtregno, javax.swing.GroupLayout.PREFERRED_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))
                        .addGap(18, 18, 18)
                        .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
                            .addComponent(jButton2)
                            .addComponent(jButton3)))
                    .addComponent(jButton1)
                    .addComponent(jButton2)
                    .addComponent(jButton3)
                    .addComponent(jButton4))
                .addContainerGap())
        );

        pack();
    }

    private void txtregnoActionPerformed(java.awt.event.ActionEvent evt) { }

    private void txtmakeActionPerformed(java.awt.event.ActionEvent evt) { }

    private void txtmodelActionPerformed(java.awt.event.ActionEvent evt) { }

    private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) { }

    private void jComboBox1ActionPerformed(java.awt.event.ActionEvent evt) { }

    private void jButton2ActionPerformed(java.awt.event.ActionEvent evt) { }

    private void jButton3ActionPerformed(java.awt.event.ActionEvent evt) { }

    private void jButton4ActionPerformed(java.awt.event.ActionEvent evt) { }

    private void table_update() {
        DefaultTableModel model = (DefaultTableModel) jTable1.getModel();
        model.setRowCount(0);
        try {
            String query = "SELECT * FROM car";
            insert = con.prepareStatement(query);
            ResultSet rs = insert.executeQuery();
            while (rs.next()) {
                Vector v = new Vector();
                v.add(rs.getString("RegNo"));
                v.add(rs.getString("Model"));
                v.add(rs.getString("Make"));
                v.add(rs.getString("Category"));
                model.addRow(v);
            }
        } catch (Exception e) {
            JOptionPane.showMessageDialog(null, e);
        }
    }

    private void autoID() {
        try {
            String query = "SELECT MAX(RegNo) AS ID FROM car";
            insert = con.prepareStatement(query);
            ResultSet rs = insert.executeQuery();
            if (rs.next()) {
                int id = rs.getInt("ID");
                id++;
                String idString = String.valueOf(id);
                txtregno.setText(idString);
            }
        } catch (Exception e) {
            JOptionPane.showMessageDialog(null, e);
        }
    }
}
```

```
jLabel2.setFont(new java.awt.Font("Tahoma", 0, 18)); // NOI18N
jLabel2.setText("Car Name");

jLabel3.setFont(new java.awt.Font("Tahoma", 0, 18)); // NOI18N
jLabel3.setText("Available");

jButton1.setFont(new java.awt.Font("Tahoma", 0, 14)); // NOI18N
jButton1.setText("Add");
jButton1.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        jButton1ActionPerformed(evt);
    }
});

jLabel4.setFont(new java.awt.Font("Tahoma", 0, 18)); // NOI18N
jLabel4.setText("Model");

jComboBox1.setFont(new java.awt.Font("Tahoma", 1, 14)); // NOI18N
jComboBox1.setModel(new javax.swing.DefaultComboBoxModel<>(new String[] { "Yes", "No" }));

jButton2.setText("Cancel");
jButton2.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        jButton2ActionPerformed(evt);
    }
});

jButton3.setText("Edit");
jButton3.addMouseListener(new java.awt.event.MouseAdapter() {
    public void mouseClicked(java.awt.event.MouseEvent evt) {
        jButton3MouseClicked(evt);
    }
});
jButton3.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        jButton3ActionPerformed(evt);
    }
});

jButton4.setText("Delete");
jButton4.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        jButton4ActionPerformed(evt);
    }
});

javax.swing.GroupLayout jPanel1Layout = new javax.swing.GroupLayout(jPanel1);
jPanel1.setLayout(jPanel1Layout);
jPanel1Layout.setHorizontalGroup(
    jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
    .addGroup(jPanel1Layout.createSequentialGroup()
        .addGap(25, 25, 25)
        .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addComponent(jLabel1)
            .addComponent(jLabel2))
        .addGap(25, 25, 25)
        .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addComponent(jComboBox1, javax.swing.GroupLayout.PREFERRED_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
            .addComponent(jButton1, javax.swing.GroupLayout.PREFERRED_SIZE, 100, javax.swing.GroupLayout.PREFERRED_SIZE)))
    .addGap(25, 25, 25)
    .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
        .addComponent(jButton2, javax.swing.GroupLayout.PREFERRED_SIZE, 100, javax.swing.GroupLayout.PREFERRED_SIZE)
        .addComponent(jButton3, javax.swing.GroupLayout.PREFERRED_SIZE, 100, javax.swing.GroupLayout.PREFERRED_SIZE)
        .addComponent(jButton4, javax.swing.GroupLayout.PREFERRED_SIZE, 100, javax.swing.GroupLayout.PREFERRED_SIZE))
    .addGap(25, 25, 25)
)
```

```
.addComponent(jLabel4)
.addComponent(jLabel3))
.addGap(18, 18, 18)
.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING, false)
.addComponent(txtregno)
.addComponent(txtmake)
.addComponent(txtmodel)
.addComponent(jComboBox1, 0, 146, Short.MAX_VALUE))
.addContainerGap(javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE))
.addGroup(jPanel1Layout.createSequentialGroup())
.addContainerGap()
.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.TRAILING, false)
.addComponent(jButton3, javax.swing.GroupLayout.Alignment.LEADING,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
.addComponent(jButton1, javax.swing.GroupLayout.Alignment.LEADING,
javax.swing.GroupLayout.DEFAULT_SIZE, 106, Short.MAX_VALUE))
.addGap(18, 18, 18)
.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
.addGroup(jPanel1Layout.createSequentialGroup()
.addGap(0, 0, Short.MAX_VALUE)
.addComponent(jButton2, javax.swing.GroupLayout.PREFERRED_SIZE, 99,
javax.swing.GroupLayout.PREFERRED_SIZE))
.addComponent(jButton4, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE))
.addGap(77, 77, 77))
);
jPanel1Layout.setVerticalGroup(
 jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
.addGroup(jPanel1Layout.createSequentialGroup()
.addGap(29, 29, 29)
.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
.addComponent(jLabel1)
.addComponent(txtregno, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))
.addGap(18, 18, 18)
.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
.addComponent(jLabel2)
.addComponent(txtmake, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))
.addGap(24, 24, 24)
.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
.addComponent(txtmodel, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
.addComponent(jLabel4))
.addGap(18, 18, 18)
.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
.addComponent(jLabel3)
.addComponent(jComboBox1, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))
.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED, 27, Short.MAX_VALUE)
.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
.addComponent(jButton2, javax.swing.GroupLayout.PREFERRED_SIZE, 35,
javax.swing.GroupLayout.PREFERRED_SIZE)
.addComponent(jButton1, javax.swing.GroupLayout.PREFERRED_SIZE, 35,
javax.swing.GroupLayout.PREFERRED_SIZE))
.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)
```

```
.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING, false)
.addComponent(jButton3, javax.swing.GroupLayout.DEFAULT_SIZE, 31, Short.MAX_VALUE)
.addComponent(jButton4, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE))
.addContainerGap())
);

jTable1.setModel(new javax.swing.table.DefaultTableModel(
new Object [][] {
},
new String [] {
    "CarRegNo", "Make", "Model", "Available"
}
) {
Class[] types = new Class [] {
    java.lang.Integer.class, java.lang.String.class, java.lang.String.class, java.lang.String.class
};

public Class getColumnClass(int columnIndex) {
    return types [columnIndex];
}
});
jTable1.addMouseListener(new java.awt.event.MouseAdapter() {
    public void mouseClicked(java.awt.event.MouseEvent evt) {
        jTable1MouseClicked(evt);
    }
});
jScrollPane1.setViewportView(jTable1);

javax.swing.GroupLayout layout = new javax.swing.GroupLayout(getContentPane());
getContentPane().setLayout(layout);
layout.setHorizontalGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
.addGroup(layout.createSequentialGroup()
.addComponent(jPanel1, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
.addGap(18, 18, 18)
.addComponent(jScrollPane1, javax.swing.GroupLayout.PREFERRED_SIZE, 423,
javax.swing.GroupLayout.PREFERRED_SIZE)
.addContainerGap(17, Short.MAX_VALUE))
);
layout.setVerticalGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
.addGroup(layout.createSequentialGroup()
.addComponent(jPanel1, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
.addContainerGap(37, Short.MAX_VALUE))
);
pack();
setLocationRelativeTo(null);
```

```
}// </editor-fold>
```

```
private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {  
    // TODO add your handling code here:  
    try {  
        String name =txtregno.getText();  
        String make =txtmake.getText();  
        String model =txtmodel.getText();  
        String available = jComboBox1.getSelectedItem().toString();  
        Class.forName("com.mysql.jdbc.Driver");  
        con = DriverManager.getConnection("jdbc:mysql://localhost:3306/carrental?" +  
"autoReconnect=true&useSSL=false","root","qwert");  
        insert = con.prepareStatement("insert into car_reg (car_reg,make,model,available)values(?, ?, ?, ?)");  
        insert.setString(1,name);  
        insert.setString(2,make);  
        insert.setString(3,model);  
        insert.setString(4,available);  
        insert.executeUpdate();  
        JOptionPane.showMessageDialog(this, "Sucsessfully Saved");  
        txtmake.setText("");  
        txtmodel.setText("");  
        table_update();  
  
    } catch (ClassNotFoundException | SQLException ex) {  
        Logger.getLogger(carreg.class.getName()).log(Level.SEVERE, null, ex);  
    }  
}
```

```
private void jButton2ActionPerformed(java.awt.event.ActionEvent evt) {  
  
    setVisible(false);  
    dispose();  
}
```

```
private void jButton3ActionPerformed(java.awt.event.ActionEvent evt) {  
  
    DefaultTableModel model = (DefaultTableModel) jTable1.getModel();  
    int selectedIndex = jTable1.getSelectedRow();  
    try {  
  
        String id = model.getValueAt(selectedIndex, 0).toString();  
        String make =txtmake.getText();  
        String mod =txtmodel.getText();  
        String status = jComboBox1.getSelectedItem().toString();  
        Class.forName("com.mysql.jdbc.Driver");  
        con = DriverManager.getConnection("jdbc:mysql://localhost:3306/carrental?" +  
"autoReconnect=true&useSSL=false","root","qwert");  
        insert = con.prepareStatement("update car_reg set make= ?,model= ?,available =? where car_reg = ?");  
        insert.setString(1,make);  
        insert.setString(2,mod);  
        insert.setString(3,status);  
        insert.setString(4,id);  
        insert.executeUpdate();  
  
        JOptionPane.showMessageDialog(this, "Record Updated");  
  
        jButton3.setEnabled(false);  
    }
```

```
jButton1.setEnabled(true);
table_update();
} catch (ClassNotFoundException | SQLException ex) {
    Logger.getLogger(carreg.class.getName()).log(Level.SEVERE, null, ex);
}
}

private void jButton3MouseClicked(java.awt.event.MouseEvent evt) {

DefaultTableModel model = (DefaultTableModel) jTable1.getModel();
int selectedIndex = jTable1.getSelectedRow();
String id = model.getValueAt(selectedIndex, 0).toString();
String make = txtmake.getText();
String model1 = txtmodel.getText();
String status = jComboBox1.getSelectedItem().toString();
try
{
Class.forName("com.mysql.jdbc.Driver");
con = DriverManager.getConnection("jdbc:mysql://localhost:3306/carrental?" +
"autoReconnect=true&useSSL=false","root","qwerty");
insert = con.prepareStatement("update car_reg set make= ?,model= ?,available=? where car_reg= ?");
insert.setString(1,make);
insert.setString(2,model1);
insert.setString(3,status);
insert.setString(4,id);
insert.executeUpdate();
JOptionPane.showMessageDialog(this, "Record Updated");

jButton3.setEnabled(false);
jButton1.setEnabled(true);
} catch (ClassNotFoundException | SQLException ex) {
    Logger.getLogger(carreg.class.getName()).log(Level.SEVERE, null, ex);
}
}

private void jTable1MouseClicked(java.awt.event.MouseEvent evt) {

DefaultTableModel d1 = (DefaultTableModel)jTable1.getModel();
int selectIndex = jTable1.getSelectedRow();

txtregno.setText(d1.getValueAt(selectIndex, 0).toString());
txtmake.setText(d1.getValueAt(selectIndex, 1).toString());
txtmodel.setText(d1.getValueAt(selectIndex, 2).toString());
jComboBox1.setSelectedItem(d1.getValueAt(selectIndex, 3).toString());
}
public void autoID()
{
try {
    Class.forName("com.mysql.jdbc.Driver");
    con = DriverManager.getConnection("jdbc:mysql://localhost:3306/carrental?" +
"autoReconnect=true&useSSL=false","root","qwerty");
    Statement s = con.createStatement();

    ResultSet rs = s.executeQuery("select Max(car_reg) from car_reg");
    rs.next();
    rs.getString("Max(car_reg)");
}
```

```
if(rs.getString("Max(car_reg)")==null)
{
    txtregno.setText("A0001");
}
else
{
    long id =
Long.parseLong(rs.getString("Max(car_reg)").substring(2,rs.getString("Max(car_reg)").length()));
    id++;
    txtregno.setText("A0" + String.format("%03d", id));
}
} catch (ClassNotFoundException | SQLException ex) {
    Logger.getLogger(carreg.class.getName()).log(Level.SEVERE, null, ex);
}
}

private void jButton4ActionPerformed(java.awt.event.ActionEvent evt) {
    DefaultTableModel model = (DefaultTableModel) jTable1.getModel();
    int selectedIndex = jTable1.getSelectedRow();
    try {
        String id = model.getValueAt(selectedIndex, 0).toString();
        int dialogResult = JOptionPane.showConfirmDialog (null, "Do you want to Delete the
record","Warning",JOptionPane.YES_NO_OPTION);
        if(dialogResult == JOptionPane.YES_OPTION){
            Class.forName("com.mysql.jdbc.Driver");
            con = DriverManager.getConnection("jdbc:mysql://localhost:3306/carrental?" +
"autoReconnect=true&useSSL=false","root","qwerty");
            insert = con.prepareStatement("delete from car_reg where car_reg = ?");
            insert.setString(1,id);
            insert.executeUpdate();
            JOptionPane.showMessageDialog(this, "Record Delete");
            jButton3.setEnabled(false);
            table_update();
        }
        jButton1.setEnabled(true);
        jButton3.setEnabled(false);
    } catch (ClassNotFoundException | SQLException ex) {
        Logger.getLogger(carreg.class.getName()).log(Level.SEVERE, null, ex);
    }
}

private void table_update() {
    int CC;
    try {
        Class.forName("com.mysql.jdbc.Driver");
        con = DriverManager.getConnection("jdbc:mysql://localhost:3306/carrental?" +
"autoReconnect=true&useSSL=false","root","qwerty");
        insert = con.prepareStatement("SELECT * FROM car_reg");
        ResultSet Rs = insert.executeQuery();
        ResultSetMetaData RSMD = Rs.getMetaData();
        CC = RSMD.getColumnCount();
        DefaultTableModel DFT = (DefaultTableModel) jTable1.getModel();
        DFT.setRowCount(0);

        while (Rs.next()) {
            Vector v2;
            v2 = new Vector();
            for (int i = 1; i <= CC; i++) {
                v2.add(Rs.getString(i));
            }
            DFT.addRow(v2);
        }
    } catch (SQLException ex) {
        Logger.getLogger(carreg.class.getName()).log(Level.SEVERE, null, ex);
    }
}
```

```
        for (int ii = 1; ii <= CC; ii++) {
            v2.add(Rs.getString("car_reg"));
            v2.add(Rs.getString("make"));
            v2.add(Rs.getString("model"));
            v2.add(Rs.getString("available"));
        }

        DFT.addRow(v2);
    }
} catch (ClassNotFoundException | SQLException e) {
}
}

public static void main(String args[]) {
    //<editor-fold defaultstate="collapsed" desc=" Look and feel setting code (optional) ">
    /* If Nimbus (introduced in Java SE 6) is not available, stay with the default look and feel.
     * For details see http://download.oracle.com/javase/tutorial/uiswing/lookandfeel/plaf.html
     */
    try {
        for (javax.swing.UIManager.LookAndFeelInfo info :
javax.swing.UIManager.getInstalledLookAndFeels()) {
            if ("Nimbus".equals(info.getName())) {
                javax.swing.UIManager.setLookAndFeel(info.getClassName());
                break;
            }
        }
    } catch (ClassNotFoundException ex) {
        java.util.logging.Logger.getLogger(carreg.class.getName()).log(java.util.logging.Level.SEVERE, null,
ex);
    } catch (InstantiationException ex) {
        java.util.logging.Logger.getLogger(carreg.class.getName()).log(java.util.logging.Level.SEVERE, null,
ex);
    } catch (IllegalAccessException ex) {
        java.util.logging.Logger.getLogger(carreg.class.getName()).log(java.util.logging.Level.SEVERE, null,
ex);
    } catch (javax.swing.UnsupportedLookAndFeelException ex) {
        java.util.logging.Logger.getLogger(carreg.class.getName()).log(java.util.logging.Level.SEVERE, null,
ex);
    }
    //</editor-fold>
    java.awt.EventQueue.invokeLater(new Runnable() {
        @Override
        public void run() {
            new carreg().setVisible(true);
        }
    });
}

// Variables declaration - do not modify
```

```
private javax.swing.JButton jButton1;
private javax.swing.JButton jButton2;
private javax.swing.JButton jButton3;
private javax.swing.JButton jButton4;
private javax.swing.JComboBox<String> jComboBox1;
private javax.swing.JLabel jLabel1;
private javax.swing.JLabel jLabel2;
private javax.swing.JLabel jLabel3;
private javax.swing.JLabel jLabel4;
private javax.swing.JPanel jPanel1;
private javax.swing.JScrollPane jScrollPane1;
private javax.swing.JTable jTable1;
private javax.swing.JTextField txtmake;
private javax.swing.JTextField txtmodel;
private javax.swing.JTextField txtregno;
// End of variables declaration
}
```

```
package car;

import java.awt.event.KeyEvent;
import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.PreparedStatement;
import java.sql.ResultSet;
import java.sql.ResultSetMetaData;
import java.sql.SQLException;
import java.sql.Statement;
import java.util.Vector;
import java.util.logging.Level;
import java.util.logging.Logger;
import javax.swing.JOptionPane;
import javax.swing.table.DefaultTableModel;

public class customer extends javax.swing.JFrame {

    public customer() {
        initComponents();
        table_update();
        autoID();
    }

    Connection con;
    PreparedStatement pst;
    ResultSet rs;

    @SuppressWarnings("unchecked")
    // <editor-fold defaultstate="collapsed" desc="Generated Code">
    private void initComponents() {

        jPanel1 = new javax.swing.JPanel();
        jLabel1 = new javax.swing.JLabel();
        jLabel2 = new javax.swing.JLabel();
        jLabel3 = new javax.swing.JLabel();
        jLabel4 = new javax.swing.JLabel();
        txtcustid = new javax.swing.JTextField();
        jScrollPane1 = new javax.swing.JScrollPane();
        txtaddress = new javax.swing.JTextArea();
        txtname = new javax.swing.JTextField();
        txtmobile = new javax.swing.JTextField();
        jButton1 = new javax.swing.JButton();
        jButton2 = new javax.swing.JButton();
        jScrollPane2 = new javax.swing.JScrollPane();
        jTable1 = new javax.swing.JTable();

        setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);
        setUndecorated(true);

        jPanel1.setBorder(javax.swing.BorderFactory.createTitledBorder("Customer"));

        jLabel1.setText("Customer ID");

        jLabel2.setText("Customer Name");

        jLabel3.setText("Address ");

        javax.swing.GroupLayout jPanel1Layout = new javax.swing.GroupLayout(jPanel1);
        jPanel1.setLayout(jPanel1Layout);
        jPanel1Layout.setHorizontalGroup(
            jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addGroup(jPanel1Layout.createSequentialGroup()
                .addContainerGap()
                .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
                    .addComponent(jLabel1)
                    .addComponent(jLabel2)
                    .addComponent(jLabel3))
                .addGap(18, 18, 18)
                .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
                    .addComponent(txtcustid, javax.swing.GroupLayout.PREFERRED_SIZE, 150, javax.swing.GroupLayout.PREFERRED_SIZE)
                    .addComponent(txtname, javax.swing.GroupLayout.PREFERRED_SIZE, 150, javax.swing.GroupLayout.PREFERRED_SIZE)
                    .addComponent(txtmobile, javax.swing.GroupLayout.PREFERRED_SIZE, 150, javax.swing.GroupLayout.PREFERRED_SIZE))
                .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED, 100, javax.swing.GroupLayout.PREFERRED_SIZE)
                .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
                    .addComponent(jButton1)
                    .addComponent(jButton2))
                .addContainerGap())
        );
        jPanel1Layout.setVerticalGroup(
            jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addGroup(jPanel1Layout.createSequentialGroup()
                .addContainerGap()
                .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
                    .addComponent(jLabel1)
                    .addComponent(txtcustid, javax.swing.GroupLayout.PREFERRED_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
                    .addComponent(jButton1))
                .addGap(18, 18, 18)
                .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
                    .addComponent(jLabel2)
                    .addComponent(txtname, javax.swing.GroupLayout.PREFERRED_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
                    .addComponent(jButton2))
                .addGap(18, 18, 18)
                .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
                    .addComponent(jLabel3)
                    .addComponent(txtmobile, javax.swing.GroupLayout.PREFERRED_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)))
        );

        jScrollPane1.setViewportView(txtaddress);

        jScrollPane2.setViewportView(jTable1);

        javax.swing.GroupLayout layout = new javax.swing.GroupLayout(getContentPane());
        getContentPane().setLayout(layout);
        layout.setHorizontalGroup(
            layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addGroup(layout.createSequentialGroup()
                .addContainerGap()
                .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
                    .addComponent(jScrollPane1, javax.swing.GroupLayout.PREFERRED_SIZE, 450, javax.swing.GroupLayout.PREFERRED_SIZE)
                    .addComponent(jScrollPane2, javax.swing.GroupLayout.PREFERRED_SIZE, 450, javax.swing.GroupLayout.PREFERRED_SIZE))
                .addContainerGap())
        );
        layout.setVerticalGroup(
            layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addGroup(layout.createSequentialGroup()
                .addContainerGap()
                .addComponent(jScrollPane1, javax.swing.GroupLayout.PREFERRED_SIZE, 450, javax.swing.GroupLayout.PREFERRED_SIZE)
                .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)
                .addComponent(jScrollPane2, javax.swing.GroupLayout.PREFERRED_SIZE, 450, javax.swing.GroupLayout.PREFERRED_SIZE)
                .addContainerGap())
        );
    }

    private void table_update() {
        try {
            String query = "SELECT * FROM customer";
            pst = con.prepareStatement(query);
            ResultSet rs = pst.executeQuery();
            DefaultTableModel model = (DefaultTableModel) jTable1.getModel();
            model.setRowCount(0);
            while (rs.next()) {
                Vector v = new Vector();
                v.add(rs.getString("Customer ID"));
                v.add(rs.getString("Customer Name"));
                v.add(rs.getString("Address"));
                model.addRow(v);
            }
        } catch (Exception e) {
            JOptionPane.showMessageDialog(null, e);
        }
    }

    private void autoID() {
        try {
            String query = "SELECT MAX(Customer ID) AS MAX_ID FROM customer";
            pst = con.prepareStatement(query);
            ResultSet rs = pst.executeQuery();
            if (rs.next()) {
                int id = rs.getInt("MAX_ID");
                id++;
                txtcustid.setText(Integer.toString(id));
            }
        } catch (Exception e) {
            JOptionPane.showMessageDialog(null, e);
        }
    }

    private void initComponents() {
        jPanel1 = new javax.swing.JPanel();
        jLabel1 = new javax.swing.JLabel();
        jLabel2 = new javax.swing.JLabel();
        jLabel3 = new javax.swing.JLabel();
        jLabel4 = new javax.swing.JLabel();
        txtcustid = new javax.swing.JTextField();
        jScrollPane1 = new javax.swing.JScrollPane();
        txtaddress = new javax.swing.JTextArea();
        txtname = new javax.swing.JTextField();
        txtmobile = new javax.swing.JTextField();
        jButton1 = new javax.swing.JButton();
        jButton2 = new javax.swing.JButton();
        jScrollPane2 = new javax.swing.JScrollPane();
        jTable1 = new javax.swing.JTable();

        setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);
        setUndecorated(true);

        jPanel1.setBorder(javax.swing.BorderFactory.createTitledBorder("Customer"));

        jLabel1.setText("Customer ID");

        jLabel2.setText("Customer Name");

        jLabel3.setText("Address ");

        javax.swing.GroupLayout jPanel1Layout = new javax.swing.GroupLayout(jPanel1);
        jPanel1.setLayout(jPanel1Layout);
        jPanel1Layout.setHorizontalGroup(
            jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addGroup(jPanel1Layout.createSequentialGroup()
                .addContainerGap()
                .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
                    .addComponent(jLabel1)
                    .addComponent(jLabel2)
                    .addComponent(jLabel3))
                .addGap(18, 18, 18)
                .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
                    .addComponent(txtcustid, javax.swing.GroupLayout.PREFERRED_SIZE, 150, javax.swing.GroupLayout.PREFERRED_SIZE)
                    .addComponent(txtname, javax.swing.GroupLayout.PREFERRED_SIZE, 150, javax.swing.GroupLayout.PREFERRED_SIZE)
                    .addComponent(txtmobile, javax.swing.GroupLayout.PREFERRED_SIZE, 150, javax.swing.GroupLayout.PREFERRED_SIZE))
                .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED, 100, javax.swing.GroupLayout.PREFERRED_SIZE)
                .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
                    .addComponent(jButton1)
                    .addComponent(jButton2))
                .addContainerGap())
        );
        jPanel1Layout.setVerticalGroup(
            jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addGroup(jPanel1Layout.createSequentialGroup()
                .addContainerGap()
                .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
                    .addComponent(jLabel1)
                    .addComponent(txtcustid, javax.swing.GroupLayout.PREFERRED_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
                    .addComponent(jButton1))
                .addGap(18, 18, 18)
                .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
                    .addComponent(jLabel2)
                    .addComponent(txtname, javax.swing.GroupLayout.PREFERRED_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
                    .addComponent(jButton2))
                .addGap(18, 18, 18)
                .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
                    .addComponent(jLabel3)
                    .addComponent(txtmobile, javax.swing.GroupLayout.PREFERRED_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)))
        );

        jScrollPane1.setViewportView(txtaddress);

        jScrollPane2.setViewportView(jTable1);

        javax.swing.GroupLayout layout = new javax.swing.GroupLayout(getContentPane());
        getContentPane().setLayout(layout);
        layout.setHorizontalGroup(
            layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addGroup(layout.createSequentialGroup()
                .addContainerGap()
                .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
                    .addComponent(jScrollPane1, javax.swing.GroupLayout.PREFERRED_SIZE, 450, javax.swing.GroupLayout.PREFERRED_SIZE)
                    .addComponent(jScrollPane2, javax.swing.GroupLayout.PREFERRED_SIZE, 450, javax.swing.GroupLayout.PREFERRED_SIZE))
                .addContainerGap())
        );
        layout.setVerticalGroup(
            layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addGroup(layout.createSequentialGroup()
                .addContainerGap()
                .addComponent(jScrollPane1, javax.swing.GroupLayout.PREFERRED_SIZE, 450, javax.swing.GroupLayout.PREFERRED_SIZE)
                .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)
                .addComponent(jScrollPane2, javax.swing.GroupLayout.PREFERRED_SIZE, 450, javax.swing.GroupLayout.PREFERRED_SIZE)
                .addContainerGap())
        );
    }
}
```

```
jLabel4.setText("Mobile");

txtcustid.addKeyListener(new java.awt.event.KeyAdapter() {
    public void keyPressed(java.awt.event.KeyEvent evt) {
        txtcustidKeyPressed(evt);
    }
});

txtaddress.setColumns(20);
txtaddress.setRows(5);
jScrollPane1.setViewportView(txtaddress);

jButton1.setText("OK");
jButton1.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        jButton1ActionPerformed(evt);
    }
});

jButton2.setText("Cancel");
jButton2.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        jButton2ActionPerformed(evt);
    }
});

javax.swing.GroupLayout jPanel1Layout = new javax.swing.GroupLayout(jPanel1);
jPanel1.setLayout(jPanel1Layout);
jPanel1Layout.setHorizontalGroup(
    jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
        .addGroup(jPanel1Layout.createSequentialGroup()
            .addGap(24, 24, 24)
            .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
                .addGroup(jPanel1Layout.createSequentialGroup()
                    .addGap(24, 24, 24)
                    .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
                        .addComponent(jButton1, javax.swing.GroupLayout.PREFERRED_SIZE, 106,
                               javax.swing.GroupLayout.PREFERRED_SIZE)
                        .addComponent(jButton2, javax.swing.GroupLayout.PREFERRED_SIZE, 106,
                               javax.swing.GroupLayout.PREFERRED_SIZE))
                .addGroup(jPanel1Layout.createSequentialGroup()
                    .addGap(26, 26, 26)
                    .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
                        .addComponent(jLabel1)
                        .addComponent(jLabel2)
                        .addComponent(jLabel3)
                        .addComponent(jLabel4)))
                .addGroup(jPanel1Layout.createSequentialGroup()
                    .addGap(26, 26, 26)
                    .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
                        .addComponent(txtname, javax.swing.GroupLayout.DEFAULT_SIZE, 175,
                                   Short.MAX_VALUE)
                        .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
                            .addComponent(txtcustid))
                        .addComponent(jScrollPane1, javax.swing.GroupLayout.PREFERRED_SIZE, 175,
                               javax.swing.GroupLayout.PREFERRED_SIZE)))
            .addGap(26, 26, 26)
            .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
                .addGroup(jPanel1Layout.createSequentialGroup()
                    .addGap(26, 26, 26)
                    .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
                        .addComponent(txtname, javax.swing.GroupLayout.DEFAULT_SIZE, 175,
                                   Short.MAX_VALUE)
                        .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
                            .addComponent(txtcustid)
                            .addComponent(jScrollPane1, javax.swing.GroupLayout.PREFERRED_SIZE, 175,
                                   javax.swing.GroupLayout.PREFERRED_SIZE)))
                .addGroup(jPanel1Layout.createSequentialGroup()
                    .addGap(26, 26, 26)
                    .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
                        .addComponent(txtname, javax.swing.GroupLayout.DEFAULT_SIZE, 175,
                                   Short.MAX_VALUE)
                        .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
                            .addComponent(txtcustid)
                            .addComponent(jScrollPane1, javax.swing.GroupLayout.PREFERRED_SIZE, 175,
                                   javax.swing.GroupLayout.PREFERRED_SIZE)))))))
);
```

```
.addComponent(txtmobile, javax.swing.GroupLayout.PREFERRED_SIZE, 175,
javax.swing.GroupLayout.PREFERRED_SIZE)))
.addComponent(jLabel1)
);
jPanel1Layout.setVerticalGroup(
jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
.addGroup(javax.swing.GroupLayout.Alignment.TRAILING, jPanel1Layout.createSequentialGroup()
.addGap(25, 25, 25)
.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
.addComponent(jLabel1)
.addComponent(txtcustid, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))
.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
.addGroup(jPanel1Layout.createSequentialGroup()
.addComponent(jLabel2)
.addComponent(txtname, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))
.addGroup(jPanel1Layout.createSequentialGroup()
.addComponent(jLabel3)
.addComponent(jScrollPane1, javax.swing.GroupLayout.PREFERRED_SIZE, 73,
javax.swing.GroupLayout.PREFERRED_SIZE)))
.addGap(28, 28, 28)
.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
.addComponent(jLabel4)
.addComponent(txtmobile, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))
.addGap(18, 18, 18)
.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
.addComponent(jButton2, javax.swing.GroupLayout.PREFERRED_SIZE, 38,
javax.swing.GroupLayout.PREFERRED_SIZE)
.addComponent(jButton1, javax.swing.GroupLayout.PREFERRED_SIZE, 35,
javax.swing.GroupLayout.PREFERRED_SIZE))
.addContainerGap(24, Short.MAX_VALUE))
);
jTable1.setModel(new javax.swing.table.DefaultTableModel(
new Object [][] {
},
new String [] {
"CustomerID", "CustomerName", "Address", "Mobile"
}
) {
Class[] types = new Class [] {
java.lang.Integer.class, java.lang.String.class, java.lang.String.class, java.lang.Integer.class
};
public Class getColumnClass(int columnIndex) {
return types [columnIndex];
}
});
```

```
});  
jScrollPane2.setViewportView(jTable1);  
  
javax.swing.GroupLayout layout = new javax.swing.GroupLayout(getContentPane());  
getContentPane().setLayout(layout);  
layout.setHorizontalGroup(  
    layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)  
    .addGroup(layout.createSequentialGroup()  
        .addGap(25, 25, 25)  
        .addComponent(jPanel1, javax.swing.GroupLayout.PREFERRED_SIZE,  
        javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)  
        .addGap(18, 18, 18)  
        .addComponent(jScrollPane2, javax.swing.GroupLayout.PREFERRED_SIZE, 471,  
        javax.swing.GroupLayout.PREFERRED_SIZE)  
        .addContainerGap(20, Short.MAX_VALUE))  
);  
layout.setVerticalGroup(  
    layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)  
    .addGroup(javax.swing.GroupLayout.Alignment.TRAILING, layout.createSequentialGroup()  
        .addGap(14, 14, 14)  
        .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING, false)  
            .addComponent(jPanel1, javax.swing.GroupLayout.DEFAULT_SIZE,  
            javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)  
            .addComponent(jScrollPane2, javax.swing.GroupLayout.PREFERRED_SIZE, 0,  
            Short.MAX_VALUE))  
            .addGapGap(36, 36, 36))  
);  
  
pack();  
setLocationRelativeTo(null);  
}// </editor-fold>
```

```
private void table_update() {  
    int CC;  
    try {  
        Class.forName("com.mysql.jdbc.Driver");  
        con = DriverManager.getConnection("jdbc:mysql://localhost:3306/carrental?" +  
"autoReconnect=true&useSSL=false", "root", "qwerty");  
        pst = con.prepareStatement("SELECT * FROM customer");  
        ResultSet Rs = pst.executeQuery();  
        ResultSetMetaData RSMD = Rs.getMetaData();  
        CC = RSMD.getColumnCount();  
        DefaultTableModel DFT = (DefaultTableModel) jTable1.getModel();  
        DFT.setRowCount(0);
```

```
        while (Rs.next()) {  
            Vector v2 = new Vector();
```

```
            for (int i = 1; i <= CC; i++) {  
                v2.add(Rs.getString("cust_id"));  
                v2.add(Rs.getString("name"));  
            }
```

```
v2.add(Rs.getString("address"));
v2.add(Rs.getString("mobile"));
}

DFT.addRow(v2);
}
} catch (Exception e) {
}
}

private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {
// TODO add your handling code here:

try {
String custid =txtcustid.getText();
String name =txtname.getText();
String address =txtaddress.getText();
String mobile =txtmobile.getText();
Class.forName("com.mysql.jdbc.Driver");
con = DriverManager.getConnection("jdbc:mysql://localhost:3306/carrental?" +
"autoReconnect=true&useSSL=false","root","qwerty");
pst = con.prepareStatement("insert into customer (cust_id,name,address,mobile)values(?,?,?,?)");
pst.setString(1,custid);
pst.setString(2,name);
pst.setString(3,address);
pst.setString(4,mobile);
pst.executeUpdate();
JOptionPane.showMessageDialog(this, "Sucsessfully Saved");
txtname.setText("");
txtaddress.setText("");
txtmobile.setText("");
table_update();

} catch (ClassNotFoundException ex) {
Logger.getLogger(carreg.class.getName()).log(Level.SEVERE, null, ex);
} catch (SQLException ex) {
Logger.getLogger(carreg.class.getName()).log(Level.SEVERE, null, ex);
}
}

public void autoID()
{
try {
Class.forName("com.mysql.jdbc.Driver");
con = DriverManager.getConnection("jdbc:mysql://localhost:3306/carrental?" +
"autoReconnect=true&useSSL=false","root","qwerty");
Statement s = con.createStatement();

ResultSet rs = s.executeQuery("select Max(cust_id) from customer");
rs.next();
rs.getString("Max(cust_id)");

if(rs.getString("Max(cust_id)")==null)
{
txtcustid.setText("C0001");
}
}
}
```

```
        }
    else
    {
        long id =
Long.parseLong(rs.getString("Max(cust_id)").substring(2,rs.getString("Max(cust_id)").length()));
        id++;
        txtcustid.setText("C0" + String.format("%03d", id));
    }
} catch (ClassNotFoundException ex) {
    Logger.getLogger(carreg.class.getName()).log(Level.SEVERE, null, ex);
} catch (SQLException ex) {
    Logger.getLogger(carreg.class.getName()).log(Level.SEVERE, null, ex);
}

}

private void txtcustidKeyPressed(java.awt.event.KeyEvent evt) {

}

private void jButton2ActionPerformed(java.awt.event.ActionEvent evt) {

    setVisible(false);
    dispose();
}

/***
 * @param args the command line arguments
 */
public static void main(String args[]) {
    /* Set the Nimbus look and feel */
    //<editor-fold defaultstate="collapsed" desc=" Look and feel setting code (optional) ">
    /* If Nimbus (introduced in Java SE 6) is not available, stay with the default look and feel.
     * For details see http://download.oracle.com/javase/tutorial/uiswing/lookandfeel/plaf.html
     */
    try {
        for (javax.swing.UIManager.LookAndFeelInfo info :
javax.swing.UIManager.getInstalledLookAndFeels()) {
            if ("Nimbus".equals(info.getName())) {
                javax.swing.UIManager.setLookAndFeel(info.getClassName());
                break;
            }
        }
    } catch (ClassNotFoundException ex) {
        java.util.logging.Logger.getLogger(customer.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);
    } catch (InstantiationException ex) {
        java.util.logging.Logger.getLogger(customer.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);
    } catch (IllegalAccessException ex) {
        java.util.logging.Logger.getLogger(customer.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);
    } catch (UnsupportedLookAndFeelException ex) {
        java.util.logging.Logger.getLogger(customer.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);
    }
}
```

```
}

//</editor-fold>

/* Create and display the form */
java.awt.EventQueue.invokeLater(new Runnable() {
    public void run() {
        new customer().setVisible(true);
    }
});

// Variables declaration - do not modify
private javax.swing.JButton jButton1;
private javax.swing.JButton jButton2;
private javax.swing.JLabel jLabel1;
private javax.swing.JLabel jLabel2;
private javax.swing.JLabel jLabel3;
private javax.swing.JLabel jLabel4;
private javax.swing.JPanel jPanel1;
private javax.swing.JScrollPane jScrollPane1;
private javax.swing.JScrollPane jScrollPane2;
private javax.swing.JTable jTable1;
private javax.swing.JTextArea txtaddress;
private javax.swing.JTextField txtcustid;
private javax.swing.JTextField txtmobile;
private javax.swing.JTextField txtname;
// End of variables declaration
}
```

Rental.java

```
package car;

import java.awt.event.KeyEvent;
import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.PreparedStatement;
import java.sql.ResultSet;
import java.sql.SQLException;
import java.text.SimpleDateFormat;
import java.util.logging.Level;
import java.util.logging.Logger;
import javax.swing.JOptionPane;

public class rental extends javax.swing.JFrame {

    public rental() {
        initComponents();

        LoadCategory();
        txtdate.setDateFormatString("yyyy/MM/dd");
        txtdue.setDateFormatString("yyyy/MM/dd");
    }

    Connection con;
    PreparedStatement pst = null;
    PreparedStatement pst1 = null;
    PreparedStatement pst2 = null;
    ResultSet rs;
    ResultSet rs1;
    public void LoadCategory() {
        try {
            Class.forName("com.mysql.jdbc.Driver");
            con = DriverManager.getConnection("jdbc:mysql://localhost:3306/carrental?" +
"autoReconnect=true&useSSL=false", "root", "qwerty");
            //"jdbc:mysql://localhost/carrental"
            pst = con.prepareStatement("SELECT * FROM car_reg");
            rs = pst.executeQuery();
            jComboBox1.removeAllItems();

            while (rs.next()) {
                jComboBox1.addItem(rs.getString(2));
            }
        } catch (Exception e) {
            e.printStackTrace();
        }
    }

    @SuppressWarnings("unchecked")
    // <editor-fold defaultstate="collapsed" desc="Generated Code">
    private void initComponents() {

        dateChooserDialog1 = new datechooser.beans.DateChooserDialog();
        dateChooserDialog2 = new datechooser.beans.DateChooserDialog();
        dateChooserDialog3 = new datechooser.beans.DateChooserDialog();
```

```
dateChooserDialog4 = new datechooser.beans.DateChooserDialog();
jPanel1 = new javax.swing.JPanel();
jComboBox1 = new javax.swing.JComboBox();
jLabel1 = new javax.swing.JLabel();
jLabel2 = new javax.swing.JLabel();
txt_custid = new javax.swing.JTextField();
jLabel3 = new javax.swing.JLabel();
txtname = new javax.swing.JTextField();
jLabel4 = new javax.swing.JLabel();
jLabel5 = new javax.swing.JLabel();
jButton1 = new javax.swing.JButton();
txtavl = new javax.swing.JTextField();
jButton2 = new javax.swing.JButton();
jLabel6 = new javax.swing.JLabel();
txtfee = new javax.swing.JTextField();
jLabel7 = new javax.swing.JLabel();
txtdate = new com.toedter.calendar.JDateChooser();
txtdue = new com.toedter.calendar.JDateChooser();

setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);
setUndecorated(true);

jPanel1.setBorder(javax.swing.BorderFactory.createTitledBorder(null, "Rental",
        javax.swing.border.TitledBorder.DEFAULT_JUSTIFICATION,
        javax.swing.border.TitledBorder.DEFAULT_POSITION, new java.awt.Font("Tahoma", 1, 14))); // NOI18N

jComboBox1.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        jComboBox1ActionPerformed(evt);
    }
});

jLabel1.setText("Car ID");
jLabel2.setText("Customer ID");

txt_custid.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        txt_custidActionPerformed(evt);
    }
});

txt_custid.addKeyListener(new java.awt.event.KeyAdapter() {
    public void keyPressed(java.awt.event.KeyEvent evt) {
        txt_custidKeyPressed(evt);
    }
});

jLabel3.setText("Customer Name");
jLabel4.setText("Date");
jLabel5.setText("Due Date");

jButton1.setText("ok");
jButton1.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
```

```
        jButton1ActionPerformed(evt);
    }
});

jButton2.setText("Cancel");
jButton2.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        jButton2ActionPerformed(evt);
    }
});

jLabel6.setText("Rental fee");

jLabel7.setFont(new java.awt.Font("Tahoma", 1, 18)); // NOI18N
jLabel7.setText("Available");

javax.swing.GroupLayout jPanel1Layout = new javax.swing.GroupLayout(jPanel1);
jPanel1.setLayout(jPanel1Layout);
jPanel1Layout.setHorizontalGroup(
    jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
    .addGroup(javax.swing.GroupLayout.Alignment.TRAILING, jPanel1Layout.createSequentialGroup()
        .addContainerGap(javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
        .addComponent(jButton1, javax.swing.GroupLayout.PREFERRED_SIZE, 88,
        javax.swing.GroupLayout.PREFERRED_SIZE)
        .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)
        .addComponent(jButton2, javax.swing.GroupLayout.PREFERRED_SIZE, 89,
        javax.swing.GroupLayout.PREFERRED_SIZE)
        .addGap(23, 23, 23))
    .addGroup(jPanel1Layout.createSequentialGroup()
        .addContainerGap()
        .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addGroup(jPanel1Layout.createSequentialGroup()
                .addGap(0, 0, 0)
                .addGroup(jPanel1Layout.createSequentialGroup()
                    .addComponent(jLabel3)
                    ..addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)
                    .addComponent(txtname, javax.swing.GroupLayout.PREFERRED_SIZE, 140,
                    javax.swing.GroupLayout.PREFERRED_SIZE))
                .addComponent(jLabel6))
            .addComponent(ContainerGap(javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)))
        .addGroup(jPanel1Layout.createSequentialGroup()
            .addGap(0, 0, 0)
            .addGroup(jPanel1Layout.createSequentialGroup()
                .addComponent(jLabel2)
                .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)
                .addGroup(jPanel1Layout.createSequentialGroup()
                    .addGap(0, 0, 0)
                    .addGroup(jPanel1Layout.createSequentialGroup()
                        .addComponent(jComboBox1, 0, 140, Short.MAX_VALUE)
                        .addComponent(txt_custid)))
                    .addGap(0, 0, 0)
                    .addGroup(jPanel1Layout.createSequentialGroup()
                        .addComponent(jButton1, javax.swing.GroupLayout.PREFERRED_SIZE, 88,
                        javax.swing.GroupLayout.PREFERRED_SIZE)
                        .addGap(0, 0, 0)
                        .addComponent(jButton2, javax.swing.GroupLayout.PREFERRED_SIZE, 89,
                        javax.swing.GroupLayout.PREFERRED_SIZE)
                        .addGap(0, 0, 0)
                        .addComponent(jLabel6))))))
    .addGroup(jPanel1Layout.createSequentialGroup()
        .addGap(0, 0, 0)
        .addGroup(jPanel1Layout.createSequentialGroup()
            .addComponent(jLabel4)
            .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)
            .addComponent(jLabel5)))))))
```

```
.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED, 42,
Short.MAX_VALUE)

.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING, false)
        .addComponent(txtfee, javax.swing.GroupLayout.DEFAULT_SIZE, 139,
Short.MAX_VALUE)
        .addComponent(txtdate, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
        .addComponent(txtdue, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)))
        .addComponent(jLabel1, javax.swing.GroupLayout.PREFERRED_SIZE, 51,
javax.swing.GroupLayout.PREFERRED_SIZE))
        .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED, 37,
Short.MAX_VALUE)
        .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addComponent(txtavl, javax.swing.GroupLayout.PREFERRED_SIZE, 102,
javax.swing.GroupLayout.PREFERRED_SIZE)
            .addComponent(jLabel7, javax.swing.GroupLayout.PREFERRED_SIZE, 102,
javax.swing.GroupLayout.PREFERRED_SIZE))
        .addGap(32, 32, 32))))
);

jPanel1Layout.setVerticalGroup(
    jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
    .addGroup(jPanel1Layout.createSequentialGroup()
        .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addGroup(jPanel1Layout.createSequentialGroup()
                .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
                    .addGroup(jPanel1Layout.createSequentialGroup()
                        .addComponent(jLabel1)
                        .addComponent(jComboBox1, javax.swing.GroupLayout.PREFERRED_SIZE, 28,
javax.swing.GroupLayout.PREFERRED_SIZE))
                    .addGroup(jPanel1Layout.createSequentialGroup()
                        .addGap(18, 18, 18)
                        .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
                            .addComponent(jLabel2)
                            .addComponent(txt_custid, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)))
                    .addGroup(jPanel1Layout.createSequentialGroup()
                        .addGap(25, 25, 25)
                        .addComponent(jLabel7)
                        .addGap(18, 18, 18)
                        .addComponent(txtavl, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)))
                    .addGroup(jPanel1Layout.createSequentialGroup()
                        .addGap(16, 16, 16)
                        .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
                            .addComponent(jLabel3)
                            .addComponent(txtname, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE)))
                .addContainerGap()
            ).addContainerGap()
        ).addContainerGap()
    ).addContainerGap()
).addContainerGap()
```

```
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))
        .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED, 21,
Short.MAX_VALUE)

.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
            .addComponent(jLabel6)
            .addComponent(txtfee, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))
        .addGroup(jPanel1Layout.createSequentialGroup()
            .addGap(26, 26, 26)
            .addComponent(jLabel4))
        .addGroup(jPanel1Layout.createSequentialGroup()
            .addGap(0, 0, Short.MAX_VALUE)
            .addComponent(txtdate, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)))
        .addGroup(jPanel1Layout.createSequentialGroup()
            .addGap(29, 29, 29)
            .addComponent(jLabel5))
        .addGroup(jPanel1Layout.createSequentialGroup()
            .addGap(0, 0, Short.MAX_VALUE)
            .addComponent(txtdue, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)))
        .addGroup(jPanel1Layout.createSequentialGroup()
            .addGap(26, 26, 26)
            .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
                .addComponent(jButton1, javax.swing.GroupLayout.PREFERRED_SIZE, 37,
javax.swing.GroupLayout.PREFERRED_SIZE)
                .addComponent(jButton2, javax.swing.GroupLayout.PREFERRED_SIZE, 37,
javax.swing.GroupLayout.PREFERRED_SIZE))
            .addGap(50, 50, 50)))
    );

javax.swing.GroupLayout layout = new javax.swing.GroupLayout(getContentPane());
getContentPane().setLayout(layout);
layout.setHorizontalGroup(
    layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
        .addGroup(layout.createSequentialGroup()
            .addGap(19, 19, 19)
            .addComponent(jPanel1, javax.swing.GroupLayout.PREFERRED_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))
);
layout.setVerticalGroup(
    layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
        .addGroup(layout.createSequentialGroup()
            .addGap(27, 27, 27)
            .addComponent(jPanel1, javax.swing.GroupLayout.PREFERRED_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))
);
.layout.setContainerGap(20, Short.MAX_VALUE))

);

pack();
 setLocationRelativeTo(null);
}// </editor-fold>
```

```
private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {
```

```
try {
```

```
String name = jComboBox1.getSelectedItem().toString();
String custid = txt_custid.getText();
String fee = txtfee.getText();
SimpleDateFormat Date_Format = new SimpleDateFormat("yyyy-MM-dd");
String date = Date_Format.format(txtdate.getDate());
SimpleDateFormat Date_Format1 = new SimpleDateFormat("yyyy-MM-dd");
String date2 = Date_Format1.format(txtdue.getDate());

Class.forName("com.mysql.jdbc.Driver");
con = DriverManager.getConnection("jdbc:mysql://localhost:3306/car?" +
"autoReconnect=true&useSSL=false", "root", "qwerty");
pst = con.prepareStatement("insert into rental (car_id,cust_id,fee,date,due)values(?,?,?,?,?)");

pst.setString(1, name);
pst.setString(2, custid);
pst.setString(3, fee);
pst.setString(4, date);
pst.setString(5, date2);
pst.executeUpdate();

pst1 = con.prepareStatement("update car_reg set available = 'No' where car_reg = ? ");
pst1.setString(1, name);
pst1.executeUpdate();

JOptionPane.showMessageDialog(this, "Successfully Saved");

} catch (ClassNotFoundException ex) {
    Logger.getLogger(rental.class.getName()).log(Level.SEVERE, null, ex);
} catch (SQLException ex) {
    Logger.getLogger(rental.class.getName()).log(Level.SEVERE, null, ex);
}
}

private void txt_custidActionPerformed(java.awt.event.ActionEvent evt) {
    // TODO add your handling code here:
}

private void txt_custidKeyPressed(java.awt.event.KeyEvent evt) {
    // TODO add your handling code here:
    if (evt.getKeyCode() == KeyEvent.VK_ENTER) {

        try {

            System.out.println("hi");
            String custid = txt_custid.getText();

            Class.forName("com.mysql.jdbc.Driver");
            con = DriverManager.getConnection("jdbc:mysql://localhost:3306/carrental?" +
"autoReconnect=true&useSSL=false", "root", "qwerty");

            pst = con.prepareStatement("select * from customer where cust_id = ? ");
            pst.setString(1, custid);
            rs = pst.executeQuery();
```

```
if (rs.next() == false) {  
  
    JOptionPane.showMessageDialog(null, "Customer No not Found");  
} else {  
    String productname = rs.getString("name");  
  
    txtname.setText(productname.trim());  
  
}  
  
}  
  
} catch (ClassNotFoundException ex) {  
    Logger.getLogger(customer.class.getName()).log(Level.SEVERE, null, ex);  
} catch (SQLException ex) {  
    Logger.getLogger(customer.class.getName()).log(Level.SEVERE, null, ex);  
}  
}  
}  
}  
  
private void jComboBox1ActionPerformed(java.awt.event.ActionEvent evt) {  
    // TODO add your handling code here:  
  
    try {  
  
        String car_id = jComboBox1.getSelectedItem().toString();  
  
        Class.forName("com.mysql.jdbc.Driver");  
        con = DriverManager.getConnection("jdbc:mysql://localhost:3306/carrental?" +  
"autoReconnect=true&useSSL=false", "root", "qwerty");  
        pst2 = con.prepareStatement("select * from car_reg where car_reg = ? ");  
        pst2.setString(1, car_id);  
        rs1 = pst2.executeQuery();  
  
        if (rs1.next() == false)  
        {  
            JOptionPane.showMessageDialog(null, "Car No not Found");  
        }  
        else {  
            String available = rs1.getString("available");  
            txtavl.setText(available.trim());  
            if (available.equals("Yes") )  
            {  
                txt_custid.setEnabled(true);  
                txtname.setEnabled(true);  
                txtfee.setEnabled(true);  
                txtdate.setEnabled(true);  
                txtdue.setEnabled(true);  
            }  
  
            else  
            {  
                txt_custid.setEnabled(false);  
            }  
        }  
    }  
}
```

```
        txtname.setEnabled(false);
        txtdate.setEnabled(false);
        txtdue.setEnabled(false);
        txtfee.setEnabled(false);
    }

}

} catch (ClassNotFoundException ex) {
    Logger.getLogger(customer.class.getName()).log(Level.SEVERE, null, ex);
} catch (SQLException ex) {
    Logger.getLogger(customer.class.getName()).log(Level.SEVERE, null, ex);
}
}

private void jButton2ActionPerformed(java.awt.event.ActionEvent evt) {
    // TODO add your handling code here:
    setVisible(false);
    dispose();
}

public static void main(String args[]) {
    //<editor-fold defaultstate="collapsed" desc=" Look and feel setting code (optional) ">
    /* If Nimbus (introduced in Java SE 6) is not available, stay with the default look and feel.
     * For details see http://download.oracle.com/javase/tutorial/uiswing/lookandfeel/plaf.html
     */
    try {
        for (javax.swing.UIManager.LookAndFeelInfo info :
javax.swing.UIManager.getInstalledLookAndFeels()) {
            if ("Nimbus".equals(info.getName())) {
                javax.swing.UIManager.setLookAndFeel(info.getClassName());
                break;
            }
        }
    } catch (ClassNotFoundException ex) {
        java.util.logging.Logger.getLogger(rental.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);
    } catch (InstantiationException ex) {
        java.util.logging.Logger.getLogger(rental.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);
    } catch (IllegalAccessException ex) {
        java.util.logging.Logger.getLogger(rental.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);
    } catch (javax.swing.UnsupportedLookAndFeelException ex) {
        java.util.logging.Logger.getLogger(rental.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);
    }
    //</editor-fold>

/* Create and display the form */
java.awt.EventQueue.invokeLater(new Runnable() {
    @Override
```

```
public void run() {
    new rental().setVisible(true);
}
});

}

// Variables declaration - do not modify
private datechooser.beans.DateChooserDialog dateChooserDialog1;
private datechooser.beans.DateChooserDialog dateChooserDialog2;
private datechooser.beans.DateChooserDialog dateChooserDialog3;
private datechooser.beans.DateChooserDialog dateChooserDialog4;
private javax.swing.JButton jButton1;
private javax.swing.JButton jButton2;
private javax.swing.JComboBox jComboBox1;
private javax.swing.JLabel jLabel1;
private javax.swing.JLabel jLabel2;
private javax.swing.JLabel jLabel3;
private javax.swing.JLabel jLabel4;
private javax.swing.JLabel jLabel5;
private javax.swing.JLabel jLabel6;
private javax.swing.JLabel jLabel7;
private javax.swing.JPanel jPanel1;
private javax.swing.JTextField txt_custid;
private javax.swing.JTextField txtavl;
private com.toedter.calendar.JDateChooser txtdate;
private com.toedter.calendar.JDateChooser txtdue;
private javax.swing.JTextField txtfee;
private javax.swing.JTextField txtname;
// End of variables declaration
}
```

Duepay.java

```
package car;
```

```
import java.awt.event.KeyEvent;
import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.PreparedStatement;
import java.sql.ResultSet;
import java.sql.ResultSetMetaData;
import java.sql.SQLException;
import java.text.SimpleDateFormat;
import java.util.Vector;
import java.util.logging.Level;
import java.util.logging.Logger;
import javax.swing.JOptionPane;
import javax.swing.table.DefaultTableModel;

public class Duepay extends javax.swing.JFrame {

    Connection con;
    PreparedStatement pst = null;
    PreparedStatement pst2 = null;
    PreparedStatement pst3 = null;
    ResultSet rs;

    public Duepay() {
        initComponents();
        table_update();
    }

    @SuppressWarnings("unchecked")
    // <editor-fold defaultstate="collapsed" desc="Generated Code">
    private void initComponents() {

        jPanel1 = new javax.swing.JPanel();
        jLabel1 = new javax.swing.JLabel();
        car_id = new javax.swing.JTextField();
        jLabel2 = new javax.swing.JLabel();
        txt_custid = new javax.swing.JTextField();
        txtdue = new javax.swing.JTextField();
        txtelp = new javax.swing.JTextField();
        txtfine = new javax.swing.JTextField();
        jLabel3 = new javax.swing.JLabel();
        jLabel4 = new javax.swing.JLabel();
        jLabel5 = new javax.swing.JLabel();
        jButton1 = new javax.swing.JButton();
        jButton2 = new javax.swing.JButton();
        jLabel6 = new javax.swing.JLabel();
        jScrollPane1 = new javax.swing.JScrollPane();
        jTable1 = new javax.swing.JTable();

        setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);
        setUndecorated(true);

        jLabel1.setText("Car ID");

        car_id.addMouseListener(new java.awt.event.MouseAdapter() {
            public void mouseClicked(java.awt.event.MouseEvent evt) {
                car_idMouseClicked(evt);
            }
        });

        javax.swing.GroupLayout jPanel1Layout = new javax.swing.GroupLayout(jPanel1);
        jPanel1.setLayout(jPanel1Layout);
        jPanel1Layout.setHorizontalGroup(
            jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addGroup(jPanel1Layout.createSequentialGroup()
                .addContainerGap()
                .addComponent(jLabel1)
                .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)
                .addComponent(car_id, javax.swing.GroupLayout.PREFERRED_SIZE, 150, javax.swing.GroupLayout.PREFERRED_SIZE)
                .addGap(18, 18, 18)
                .addComponent(jLabel2)
                .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)
                .addComponent(txt_custid, javax.swing.GroupLayout.PREFERRED_SIZE, 150, javax.swing.GroupLayout.PREFERRED_SIZE)
                .addGap(18, 18, 18)
                .addComponent(jLabel3)
                .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)
                .addComponent(txtdue, javax.swing.GroupLayout.PREFERRED_SIZE, 150, javax.swing.GroupLayout.PREFERRED_SIZE)
                .addGap(18, 18, 18)
                .addComponent(jLabel4)
                .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)
                .addComponent(txtelp, javax.swing.GroupLayout.PREFERRED_SIZE, 150, javax.swing.GroupLayout.PREFERRED_SIZE)
                .addGap(18, 18, 18)
                .addComponent(jLabel5)
                .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)
                .addComponent(txtfine, javax.swing.GroupLayout.PREFERRED_SIZE, 150, javax.swing.GroupLayout.PREFERRED_SIZE)
                .addGap(18, 18, 18)
                .addComponent(jButton1)
                .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)
                .addComponent(jButton2)
                .addGap(18, 18, 18)
                .addComponent(jLabel6)
                .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)
                .addComponent(jScrollPane1, javax.swing.GroupLayout.DEFAULT_SIZE, 150, javax.swing.GroupLayout.PREFERRED_SIZE)
                .addContainerGap())
        );
        jPanel1Layout.setVerticalGroup(
            jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addGroup(jPanel1Layout.createSequentialGroup()
                .addContainerGap()
                .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
                    .addComponent(jLabel1)
                    .addComponent(car_id, javax.swing.GroupLayout.PREFERRED_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
                    .addComponent(jLabel2)
                    .addComponent(txt_custid, javax.swing.GroupLayout.PREFERRED_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
                    .addComponent(jLabel3)
                    .addComponent(txtdue, javax.swing.GroupLayout.PREFERRED_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
                    .addComponent(jLabel4)
                    .addComponent(txtelp, javax.swing.GroupLayout.PREFERRED_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
                    .addComponent(jLabel5)
                    .addComponent(txtfine, javax.swing.GroupLayout.PREFERRED_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
                    .addComponent(jButton1)
                    .addComponent(jButton2)
                    .addComponent(jLabel6))
                .addGap(18, 18, 18)
                .addComponent(jScrollPane1, javax.swing.GroupLayout.DEFAULT_SIZE, 150, javax.swing.GroupLayout.PREFERRED_SIZE)
                .addContainerGap())
        );

        javax.swing.GroupLayout layout = new javax.swing.GroupLayout(getContentPane());
        getContentPane().setLayout(layout);
        layout.setHorizontalGroup(
            layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addComponent(jPanel1, javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
        );
        layout.setVerticalGroup(
            layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addComponent(jPanel1, javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
        );
    }
}
```



```
.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING, false)
        .addComponent(car_id, javax.swing.GroupLayout.PREFERRED_SIZE, 190,
        javax.swing.GroupLayout.PREFERRED_SIZE)
        .addComponent(txt_custid, javax.swing.GroupLayout.DEFAULT_SIZE, 193,
        Short.MAX_VALUE)
        .addComponent(txtdue))
        .addComponent(txtelp, javax.swing.GroupLayout.PREFERRED_SIZE, 193,
        javax.swing.GroupLayout.PREFERRED_SIZE)))
    .addGroup(jPanel1Layout.createSequentialGroup()
        .addComponent(jLabel5)
        .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED,
        javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
    .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING,
    false)
        .addGroup(jPanel1Layout.createSequentialGroup()
            .addComponent(jButton1, javax.swing.GroupLayout.PREFERRED_SIZE, 91,
            javax.swing.GroupLayout.PREFERRED_SIZE)
            .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)
            .addComponent(jButton2, javax.swing.GroupLayout.DEFAULT_SIZE,
            javax.swing.GroupLayout.PREFERRED_SIZE, Short.MAX_VALUE))
            .addComponent(txtfine, javax.swing.GroupLayout.PREFERRED_SIZE, 193,
            javax.swing.GroupLayout.PREFERRED_SIZE)))
        .addComponent(containerGap(33, Short.MAX_VALUE)))
);
jPanel1Layout.setVerticalGroup(
    jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
    .addGroup(jPanel1Layout.createSequentialGroup()
        .addGroup(jPanel1Layout.createSequentialGroup()
            .addGap(22, 22, 22)
            .addGroup(jPanel1Layout.createSequentialGroup()
                .addComponent(car_id, javax.swing.GroupLayout.PREFERRED_SIZE, 29,
                javax.swing.GroupLayout.PREFERRED_SIZE)
                .addComponent(jLabel1))
                .addGap(26, 26, 26)
                .addGroup(jPanel1Layout.createSequentialGroup()
                    .addComponent(txt_custid, javax.swing.GroupLayout.PREFERRED_SIZE,
                    javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
                    .addComponent(jLabel2, javax.swing.GroupLayout.PREFERRED_SIZE, 14,
                    javax.swing.GroupLayout.PREFERRED_SIZE))
                    .addGap(18, 18, 18)
                    .addGroup(jPanel1Layout.createSequentialGroup()
                        .addComponent(txtdue, javax.swing.GroupLayout.PREFERRED_SIZE,
                        javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
                        .addComponent(jLabel3))
                        .addGap(18, 18, 18)
                        .addGroup(jPanel1Layout.createSequentialGroup()
                            .addComponent(txtelp, javax.swing.GroupLayout.PREFERRED_SIZE,
                            javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
                            .addComponent(jLabel4))
                            .addGap(18, 18, 18)
                            .addGroup(jPanel1Layout.createSequentialGroup()
                                .addComponent(txtfine, javax.swing.GroupLayout.PREFERRED_SIZE,
                                javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
                                .addComponent(jLabel5))
                                .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED, 31,
                                Short.MAX_VALUE)

```

```
.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING,
false)
    .addComponent(jButton1, javax.swing.GroupLayout.DEFAULT_SIZE, 40, Short.MAX_VALUE)
    .addComponent(jButton2, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE))
    .addGap(26, 26, 26))
);

jLabel6.setFont(new java.awt.Font("Tahoma", 1, 24)); // NOI18N
jLabel6.setText("Return Car");

jTable1.setModel(new javax.swing.table.DefaultTableModel(
new Object [][] {
},  

new String [] {
    "CustID", "CarID", "ReturnDate", "Elapsed", "Fine"
}
) {
Class[] types = new Class [] {
    java.lang.Integer.class, java.lang.Integer.class, java.lang.String.class, java.lang.Integer.class,
java.lang.Integer.class
};
public Class getColumnClass(int columnIndex) {
    return types [columnIndex];
}
});
jScrollPane1.setViewportView(jTable1);

javax.swing.GroupLayout layout = new javax.swing.GroupLayout(getContentPane());
getContentPane().setLayout(layout);
layout.setHorizontalGroup(
layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
    .addGroup(layout.createSequentialGroup()
        .addGap(258, 258, 258)
        .addComponent(jLabel6)
        .addGapContainerGap(javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
    )
    .addGroup(layout.createSequentialGroup()
        .addGap(20, 20, 20)
        .addComponent(jPanel1, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
        .addGapPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
        .addComponent(jScrollPane1, javax.swing.GroupLayout.PREFERRED_SIZE, 421,
javax.swing.GroupLayout.PREFERRED_SIZE)
        .addGapGap(41, 41, 41))
);
layout.setVerticalGroup(
    layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
        .addGroup(layout.createSequentialGroup()
            .addComponent(jLabel6)
            .addGapGap(23, 23, 23)
            .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING, false)
                .addComponent(jPanel1, javax.swing.GroupLayout.PREFERRED_SIZE,
                javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
                .addComponent(jScrollPane1, javax.swing.GroupLayout.PREFERRED_SIZE, 421,
                javax.swing.GroupLayout.PREFERRED_SIZE)
            )
        );
    )
);
```

```
.addComponent(jPanel1, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
.addComponent(jScrollPane1, javax.swing.GroupLayout.PREFERRED_SIZE, 0,
Short.MAX_VALUE))
.addContainerGap(39, Short.MAX_VALUE))
);

pack();
setLocationRelativeTo(null);
}// </editor-fold>

private void car_idActionPerformed(java.awt.event.ActionEvent evt) {

}

private void car_idMouseClicked(java.awt.event.MouseEvent evt) {

}

private void table_update() {
    int CC;
    try {
        Class.forName("com.mysql.jdbc.Driver");
        con = DriverManager.getConnection("jdbc:mysql://localhost:3306/carrental?" +
"autoReconnect=true&useSSL=false","root","qwerty");
        pst = con.prepareStatement("SELECT * FROM returncar");
        ResultSet Rs = pst.executeQuery();

        ResultSetMetaData RSMD = Rs.getMetaData();
        CC = RSMD.getColumnCount();
        DefaultTableModel DFT = (DefaultTableModel) jTable1.getModel();
        DFT.setRowCount(0);

        while (Rs.next()) {
            Vector v2 = new Vector();

            for (int ii = 1; ii <= CC; ii++) {
                v2.add(Rs.getString("car_id"));
                v2.add(Rs.getString("cust_id"));
                v2.add(Rs.getString("return_date"));
                v2.add(Rs.getString("elp"));
                v2.add(Rs.getString("fine"));
            }

            DFT.addRow(v2);
        }
    } catch (Exception e) {
    }
}

private void car_idKeyPressed(java.awt.event.KeyEvent evt) {
    // TODO add your handling code here:
    if (evt.getKeyCode() == KeyEvent.VK_ENTER)
```

```
{  
  
    try {  
  
        System.out.println("hi");  
        String car_id1 = car_id.getText();  
  
        Class.forName("com.mysql.jdbc.Driver");  
        con = DriverManager.getConnection("jdbc:mysql://localhost:3306/carrental?" +  
"autoReconnect=true&useSSL=false","root","qwerty");  
        pst = con.prepareStatement("select car_id,cust_id,due,DATEDIFF(NOW(),due) as elap from rental  
where car_id = ? ");  
        pst.setString(1,car_id1);  
        rs = pst.executeQuery();  
  
        if(rs.next() == false)  
        {  
            JOptionPane.showMessageDialog(null, "Car No not Found");  
        }  
        else  
        {  
            String productname = rs.getString("cust_id");  
            txt_custid.setText(productname.trim());  
  
            String datedue = rs.getString("due");  
            txtdue.setText(datedue.trim());  
  
            String elp = rs.getString("elap");  
  
            int elapsed = Integer.parseInt(elp);  
  
            if(elapsed > 0)  
            {  
                txtelp.setText(elp);  
                int fine = elapsed * 100;  
                txtfine.setText(String.valueOf(fine));  
            }  
            else  
            {  
                txtelp.setText("0");  
                txtfine.setText("0");  
            }  
        }  
    } catch (ClassNotFoundException ex) {  
        Logger.getLogger(customer.class.getName()).log(Level.SEVERE, null, ex);  
    } catch (SQLException ex) {  
        Logger.getLogger(customer.class.getName()).log(Level.SEVERE, null, ex);  
    }  
}  
}
```

```
private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {
```

```
    try {
```

```
String car_id1 = car_id.getText();
String custid = txt_custid.getText();
String returndate = txtdue.getText();
String elped = txtelp.getText();
String fine = txtfine.getText();

Class.forName("com.mysql.jdbc.Driver");
con = DriverManager.getConnection("jdbc:mysql://localhost:3306/carrental?" +
"autoReconnect=true&useSSL=false", "root", "qwerty");

pst3 = con.prepareStatement("insert into returncar
(car_id,cust_id,return_date,elp,fine)values(?,?,?,?,?)");
pst3.setString(1,car_id1);
pst3.setString(2,custid);
pst3.setString(3,returndate);
pst3.setString(4,elped);
pst3.setString(5,fine);
pst3.executeUpdate();

pst = con.prepareStatement("update car_reg set available = 'Yes' where car_reg = ? ");
pst.setString(1, car_id1);
pst.executeUpdate();

pst2 = con.prepareStatement("Delete from rental where car_id = ? ");
pst2.setString(1, car_id1);
pst2.executeUpdate();

JOptionPane.showMessageDialog(this, "Updated Saved");
}

catch (ClassNotFoundException | SQLException ex)
{
    Logger.getLogger(rental.class.getName()).log(Level.SEVERE, null, ex);
}

private void jButton2ActionPerformed(java.awt.event.ActionEvent evt) {
    // TODO add your handling code here:
    setVisible(false);
    dispose();
}

public static void main(String args[])
try {
    for (javax.swing.UIManager.LookAndFeelInfo info :
javax.swing.UIManager.getInstalledLookAndFeels()) {
        if ("Nimbus".equals(info.getName())) {
            javax.swing.UIManager.setLookAndFeel(info.getClassName());
            break;
        }
    }
}

catch (ClassNotFoundException ex) {
    java.util.logging.Logger.getLogger(Duepay.class.getName()).log(java.util.logging.Level.SEVERE, null,
ex);
```

```
        } catch (InstantiationException ex) {
            java.util.logging.Logger.getLogger(Duepay.class.getName()).log(java.util.logging.Level.SEVERE, null,
ex);
        } catch (IllegalAccessException ex) {
            java.util.logging.Logger.getLogger(Duepay.class.getName()).log(java.util.logging.Level.SEVERE, null,
ex);
        } catch (javax.swing.UnsupportedLookAndFeelException ex) {
            java.util.logging.Logger.getLogger(Duepay.class.getName()).log(java.util.logging.Level.SEVERE, null,
ex);
        }
    } //</editor-fold>

    java.awt.EventQueue.invokeLater(new Runnable() {
        public void run() {
            new Duepay().setVisible(true);
        }
    });
}

// Variables declaration - do not modify
private javax.swing.JTextField car_id;
private javax.swing.JButton jButton1;
private javax.swing.JButton jButton2;
private javax.swing.JLabel jLabel1;
private javax.swing.JLabel jLabel2;
private javax.swing.JLabel jLabel3;
private javax.swing.JLabel jLabel4;
private javax.swing.JLabel jLabel5;
private javax.swing.JLabel jLabel6;
private javax.swing.JPanel jPanel1;
private javax.swing.JScrollPane jScrollPane1;
private javax.swing.JTable jTable1;
private javax.swing.JTextField txt_custid;
private javax.swing.JTextField txtdue;
private javax.swing.JTextField txtelp;
private javax.swing.JTextField txtfine;
// End of variables declaration
}
```

Front end Snapshots

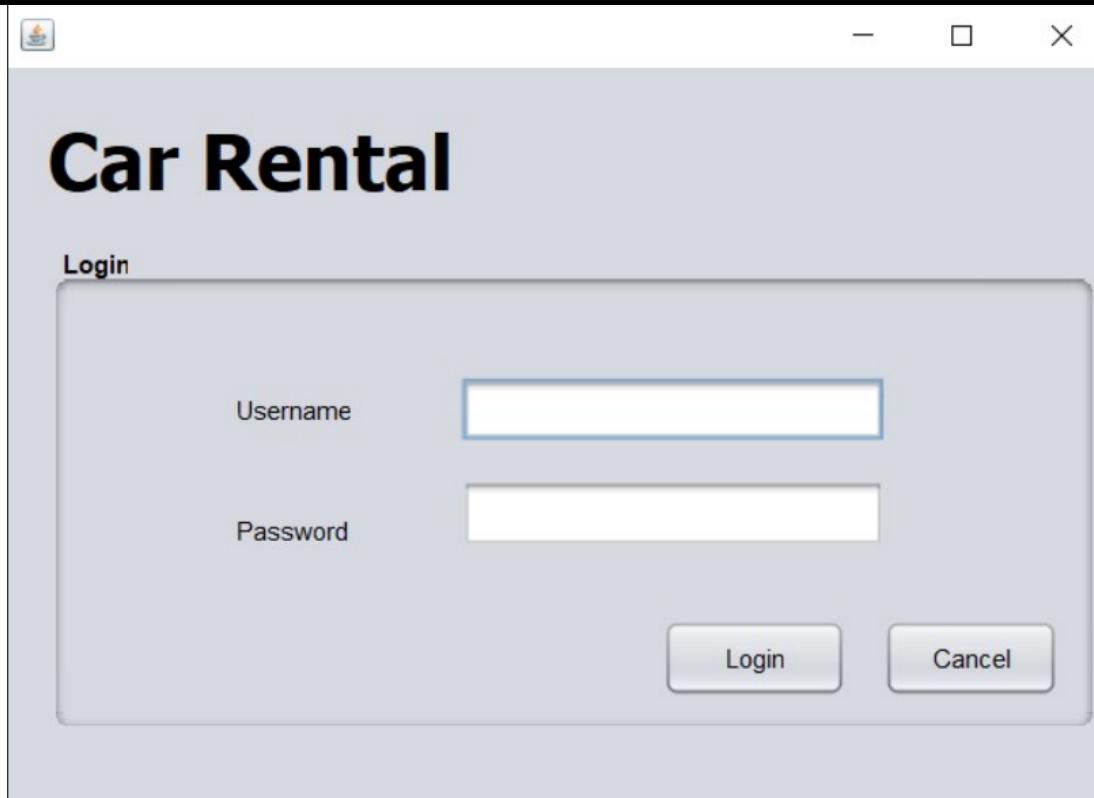


Fig. 5.3.1 Login Page

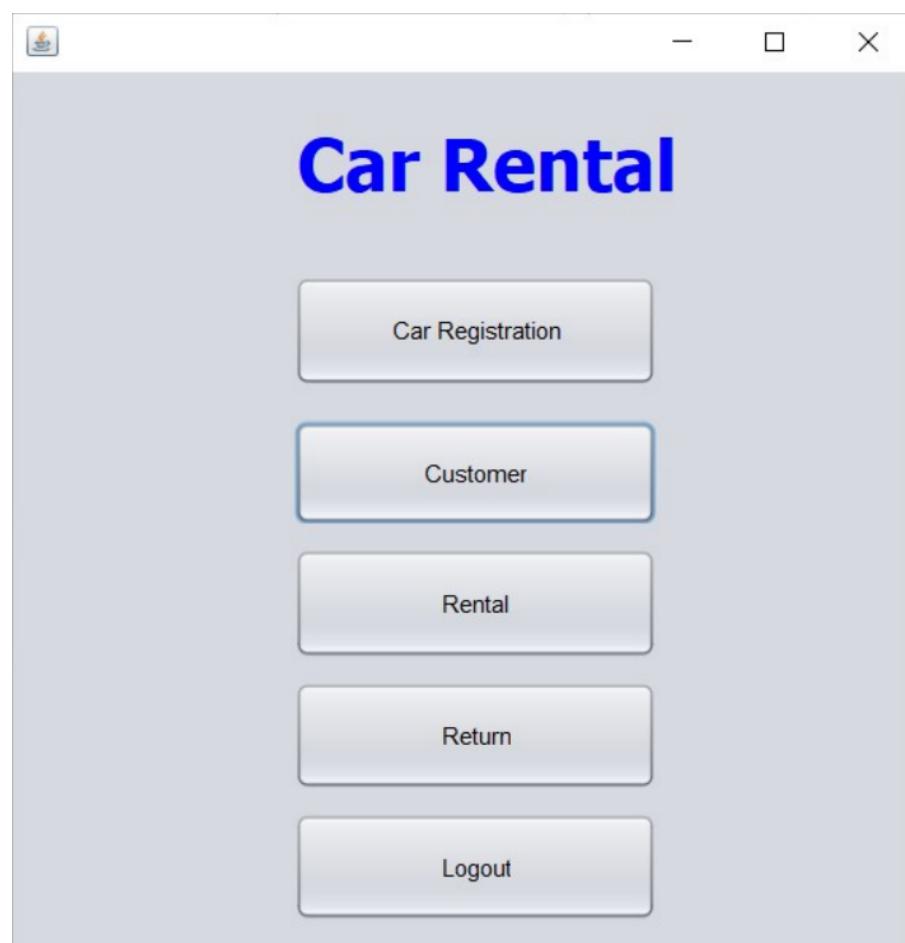


Fig. 5.3.2 Main Page

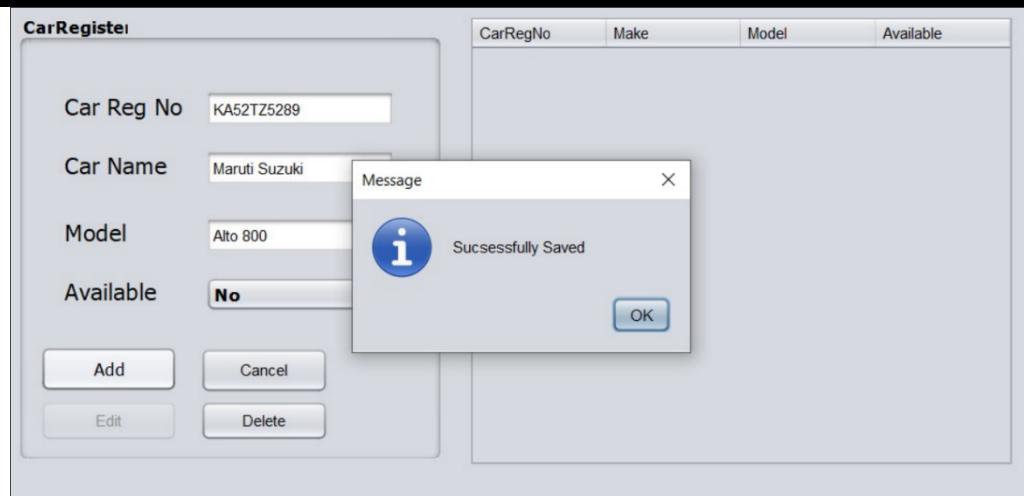


Fig. 5.3.3.1 Car Registration - Adding Information

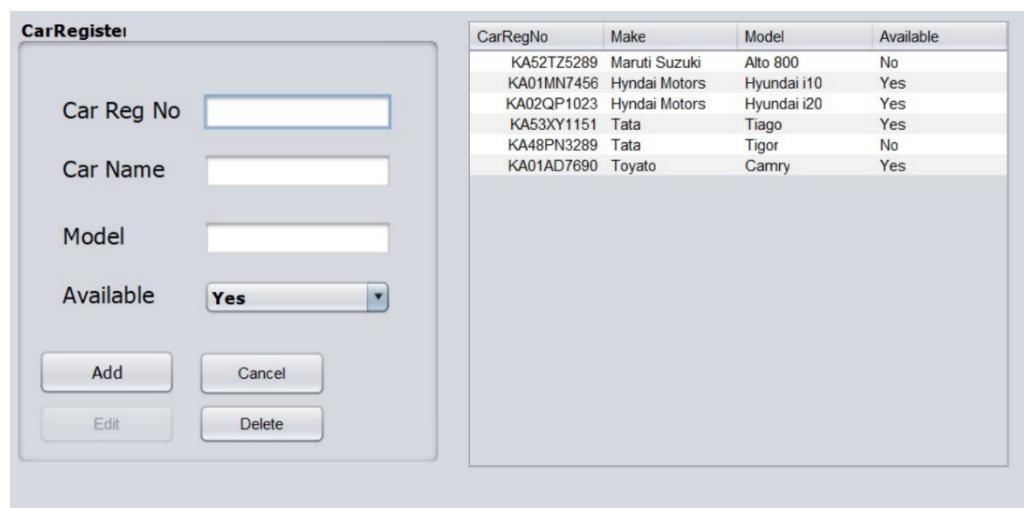


Fig. 5.3.3.2 Car registration - Information added Successfully

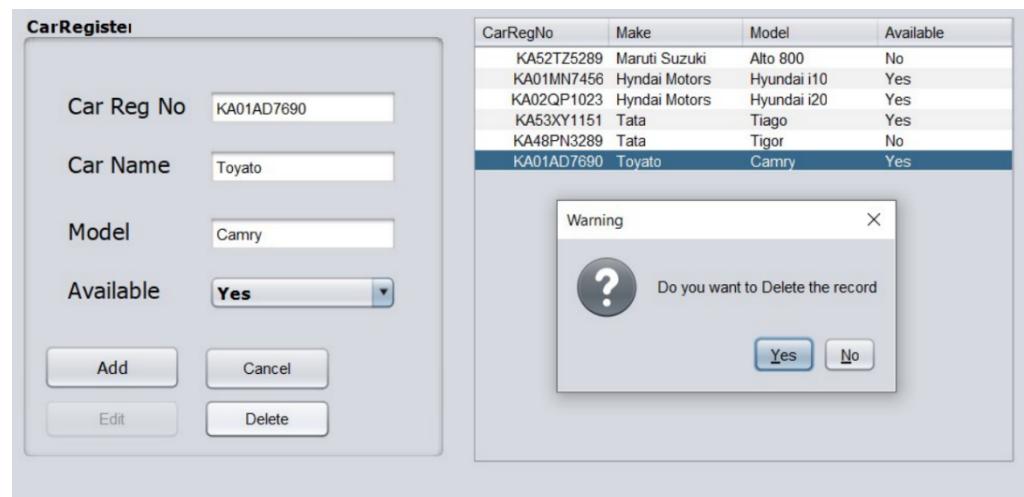


Fig. 5.3.3.3 Car registration - Information deletion of registered car

Customer

Customer ID	C0011
Customer Name	
Address	
Mobile	
<input type="button" value="OK"/> <input type="button" value="Cancel"/>	

Customer

CustomerID	CustomerName	Address	Mobile
C0001	Anurag	Bellary Karnataka	94523436
C0002	Tejaswi	Raichur Karnataka	86636811
C0003	Thoyaj	Mysore Karnataka	78792728
C0004	Vallabh	Manglore Karantaka	65457601
C0005	Likhith	Banglore Rural Kar...	65973898
C0006	Varun	Banglore Karnataka	64251931
C0007	Shreyas	RV Clg Banglore	99999999
C0008	Kruthik	8th Mile Banglore	21212121
C0009	Rakshitha	Baglugunte 8th mile	22446688
C0010	Yasaswini	Mumbai India	998877

Fig. 5.3.4 Customer – Customer Registration

Renta

Car ID	KA02QP1023	Available
Customer ID	C0001	<input type="checkbox"/> Yes
Customer Name	Anurag	
Rental fee	1000	
Date	2022/02/04	<input type="button"/>
Due Date	2022/02/08	<input type="button"/>
<input type="button" value="ok"/> <input type="button" value="Cancel"/>		

Renta

Car ID	KA52TZ5289	Available
Customer ID		<input type="checkbox"/> No
Customer Name		
Rental fee		
Date		<input type="button"/>
Due Date		<input type="button"/>
<input type="button" value="ok"/> <input type="button" value="Cancel"/>		

Fig. 5.3.5.1 Rental – Car Available**Fig. 5.3.5.2 Rental – Car not Available**

Return Car

Car ...	KA53XY1151
Customer ID	C0001
Date	2022-02-03
Days Elapsed	3
Fine	300

CustID	CarID	ReturnDate	Elapsed	Fine
KA01MN7456	C0001	2019-02-04	12	1200
KA02QP1023	C0002	2019-02-21	9	900
KA53XY1151	C0005	2019-02-19	0	0
KA01AD7690	C0001	2019-02-06	11	1100
KA01MN7456	C0006	2019-10-15	5	500
KA01AD7690	C007	2019-11-16	2	200
KA01AD7690	C007	2019-11-16	2	200

Fig. 5.3.6.1 Return car – Car returning procedure

Return Car

Car ...	
Customer ID	
Date	
Days Elapsed	
Fine	

CustID	CarID	ReturnDate	Elapsed	Fine
KA01MN7456	C0001	2019-02-04	12	1200
KA02QP1023	C0002	2019-02-21	9	900
KA53XY1151	C0005	2019-02-19	0	0
KA01AD7690	C0001	2019-02-06	11	1100
KA01MN7456	C0006	2019-10-15	5	500
KA01AD7690	C007	2019-11-16	2	200
KA01AD7690	C007	2019-11-16	2	200
KA53XY1151	C0001	2022-02-03	3	300

Fig. 5.3.6.2 Return car – Returning car table updated

CONCLUSION

The project Car Rental Management System (CRMS) is for computerizing the working in a car rental company. The software takes care of all the requirements of an average car rental company and is capable to provide easy and effective storage of information related to cars and customers of the car rental company.

It generates bills, provides car details including car insurance and service details. It also provides customer details such as driving license number, membership id, name etc. The system also provides the facility of backup as per requirement.

BIBLIOGRAPHY

Few of the book(s) and websites that were instrumental in helping us to complete this project are as mentioned below.

BOOK

1. Fundamental of Database System by Elmasri and Navathe ,5th Edition, Addison-Wesley,2007.
2. Database System Concepts by Avi Silberschatz, Henry F Korth, and S. Sudharshan,1996.
3. Concepts of Database Management by Philip J. Pratt,2008
4. Modern Database Management by Jeffery A Hoffer,2010

URL

1. <https://www.w3schools.com>
2. <https://www.youtube.com>
3. <https://www.google.co.in>
4. <https://www.wikipedia.org>

**CONCLUSI
ON**

BIBLIOGRAPHY