User (<u>Username</u>, Password)

Administrator (Username)

GTCR Employee(Username)

GTCR Student/Member(Username, FirstName, LastName, MiddleInitial, Address,PhoneNumber, EmailAddress, Card No, DrivingPlanType)

Driving Plan (Type, Discount, Monthly Payment, Annual Fees) 🦛

Credit Card (CardNo, Name on Card, CVV, Expiry Date, Billing Address)

Car (Vehicle Sno, Auxiliary Cable, Transmission Type, Seating Capacity, BluetoothConnectivity, Daily Rate, Hourly Rate, Color, Type, CarModel, UnderMaintenance Flag, CarLocation)

Location (Location Name, Capacity)

Reservation (ResID, Username, PickupDateTime, ReturnDateTime, Late By, Return Status, Estimated Cost, LateFees, ReservationLocation, VehicleSno)

*Reservation Table can also have an attribute called Reservation Id which can be used in the table below.

Reservation Extended Time (ResID, ExtendedTime)

Maintenance Request (Vehicle Sno, DateTime, Username)

Maintenance Request Problems (Vehicle Sno, DateTime, Problem)

Alternate Solutions:

User(Username, Password, GTCREmployeeFlag, AdminstratorFlag)

GTCR Student/ Member (Remains as it is).

CREATE TABLE STATEMENTS

```
CREATE TABLE `car` (
 'VehicleSno' int(10) unsigned NOT NULL AUTO INCREMENT,
 `Auxiliary Cable` bit(1) DEFAULT NULL,
 'Transmission Type' bit(1) NOT NULL,
 'Seating Capacity' int(10) unsigned DEFAULT NULL,
 `BluetoothConnectivity` bit(1) NOT NULL,
 'DailyRate' int(10) unsigned NOT NULL,
 'HourlyRate' int(10) unsigned NOT NULL,
 'Color' varchar(10) NOT NULL,
 `Type` varchar(45) NOT NULL,
 `CarModel` varchar(45) NOT NULL,
 `UnderMaintenanceFlag` bit(1) NOT NULL,
 `CarLocation` varchar(45) NOT NULL,
 PRIMARY KEY ('VehicleSno'),
 KEY 'FK_car_Location' ('CarLocation'),
 CONSTRAINT 'FK car Location' FOREIGN KEY ('CarLocation') REFERENCES
'location' ('LocationName'),
) ENGINE=InnoDB DEFAULT CHARSET=latin1;
CREATE TABLE 'credit card' (
 `CardNo` int(11) NOT NULL,
 'Name' varchar(45) DEFAULT NULL,
 `CVV` int(11) DEFAULT NULL,
 `ExpiryDate` date DEFAULT NULL,
 'BillingAdd' varchar(45) DEFAULT NULL,
 PRIMARY KEY ('CardNo')
) ENGINE=InnoDB DEFAULT CHARSET=utf8;
CREATE TABLE 'drivingplan' (
 `Type` varchar(45) NOT NULL,
 'Discount' int(11) DEFAULT NULL,
 `MonthlyPayment` int(11) DEFAULT NULL,
 `AnnualFees` int(11) DEFAULT NULL,
 PRIMARY KEY ('Type')
) ENGINE=InnoDB DEFAULT CHARSET=utf8;
CREATE TABLE 'location' (
 `LocationName` varchar(45) NOT NULL,
 'Capacity' int(10) unsigned DEFAULT NULL,
 PRIMARY KEY ('LocationName')
) ENGINE=InnoDB DEFAULT CHARSET=latin1;
```

```
CREATE TABLE 'maintenance request' (
 `VehicleSno` int(10) unsigned NOT NULL AUTO_INCREMENT,
 `RequestDateTime` datetime NOT NULL,
 'Username' varchar(45) NOT NULL,
 PRIMARY KEY ('VehicleSno', 'RequestDateTime') USING BTREE,
 CONSTRAINT `FK_VehicleSno` FOREIGN KEY (`VehicleSno`) REFERENCES `car`
('VehicleSno')
) ENGINE=InnoDB DEFAULT CHARSET=latin1;
CREATE TABLE `maintenance_request_problems` (
 'VehicleSno' int(10) unsigned NOT NULL AUTO INCREMENT,
 `RequestDateTime` datetime NOT NULL,
 'Problem' varchar(45) NOT NULL,
 PRIMARY KEY ('VehicleSno', 'RequestDateTime', 'Problem') USING BTREE,
 CONSTRAINT `FK_maintenance_request_problems_2` FOREIGN KEY (`VehicleSno`,
'RequestDateTime') REFERENCES 'maintenance request' ('VehicleSno',
`RequestDateTime`),
) ENGINE=InnoDB DEFAULT CHARSET=latin1;
CREATE TABLE 'member' (
 'Username' varchar(45) NOT NULL,
`FirstName` varchar(45) NOT NULL,
`LastName` varchar(45) NOT NULL,
 `MiddleInit` varchar(1) DEFAULT NULL,
 `Address` varchar(45) DEFAULT NULL,
 'PhoneNo' varchar(45) DEFAULT NULL,
 `EmailAddress` varchar(45) DEFAULT NULL,
 `CardNo` int(10) unsigned NOT NULL,
 `DrivingPlan` varchar(45) NOT NULL,
 PRIMARY KEY ('Username'),
 CONSTRAINT `FK_Username` FOREIGN KEY (`Username') REFERENCES `User`
('Username'),
CONSTRAINT `FK CardNo' FOREIGN KEY (`CardNo') REFERENCES `credit card`
('CardNo').
 CONSTRAINT `FK_DrivingPlanType` FOREIGN KEY (`DrivingPlan') REFERENCES
'drivingplan' ('Type'),
) ENGINE=InnoDB DEFAULT CHARSET=latin1;
```

```
CREATE TABLE 'reservation' (
 `ResID` int(10) unsigned NOT NULL AUTO_INCREMENT,
 'Username' varchar(45) NOT NULL,
 `PickUpDateTime` datetime NOT NULL,
 `ReturnDateTime` datetime NOT NULL,
 `LateBy` varchar(10) DEFAULT NULL,
 `ReturnStatus` varchar(10) NOT NULL,
 `EstimatedCost` int(10) unsigned NOT NULL,
`LateFees` int(10) unsigned DEFAULT NULL,
 `ReservationLocation` varchar(45) NOT NULL,
 'VehicleSno' int(10) unsigned NOT NULL,
 PRIMARY KEY ('ResID'),
 CONSTRAINT `FK_reservation_2` FOREIGN KEY (`VehicleSno`) REFERENCES `car`
('VehicleSno')
 CONSTRAINT `FK_reservation_1` FOREIGN KEY (`ReservationLocation`)
REFERENCES 'location' ('LocationName')
) ENGINE=InnoDB DEFAULT CHARSET=latin1;
CREATE TABLE 'reservation extended time' (
 'ResID' int(10) unsigned NOT NULL AUTO INCREMENT,
 `Extended_Time` datetime NOT NULL,
 PRIMARY KEY ('ResID'),
 CONSTRAINT `FK_reservation_extended_time_1` FOREIGN KEY (`ResID`)
REFERENCES 'reservation' ('ResID'),
) ENGINE=InnoDB DEFAULT CHARSET=latin1;
CREATE TABLE 'user' (
 'Username' varchar(45) NOT NULL,
'Password' varchar(45) NOT NULL,
 'GTCR Employee Flag' bit(1) DEFAULT NULL,
 `GTCR_Admin_Flag` bit(1) DEFAULT NULL,
 `GTCR_Member` bit(1) DEFAULT NULL,
 PRIMARY KEY ('Username')
) ENGINE=InnoDB DEFAULT CHARSET=utf8;
```