Sri Lanka Institute of Information Technology

Assignment 2

MLB_16.01_07

Boat Safari Trip Management System

Information Systems and Data Modeling -IT1090

B.Sc. (Hons) in Information Technology

Group Details

Group Number: MLB_16.01_07

Project Title: Boat Safari Trip Management System

	Student ID	Student Name	E-mail	Contact number
1	IT22560926	PRABASHWARA R P	IT22560926@my.sliit.lk	0713529325
2	IT22601674	DILSHAN K. B	IT22601674@my.sliit.lk	0774021236
3	IT22603104	DIAS M.P. U	IT22603104@my.sliit.lk	0717031982
4	IT22602800	MUTHUKUDA ARACHCHIGE N.D	IT22602800@my.sliit.lk	0703141890
5	IT22560094	RANASINGHE T.M. R	IT22560094@my.sliit.lk	0781904889

Content

<u>Introduction</u>

The emphasis of this project is managing the Boat safari management systems database. Before the creation of this database, we considered various types of conditions. Some of them are functional requirements, Nonfunctional requirements, Security Requirements and Performance requirements. This project is contributed to facilitate customer and businessman like B-C connection.

This boat safari management database is designed to collect and serve data in an efficient manner. It collects data from the users and serves them with the relevant data, according to their accessibility level. This database system enables us to manage data and retrieve information for the growth of this boat safari business.

The boat safari database storing boat information, such as boat specifications, Maintains records and availabilities. Also, the database holds information related to reservation and booking data. It helps company to manage their customers' bookings, track availability and ensure a good service. Collecting and maintain customer profiles is another important part of the database. It helps them to provide effective customer relationship management (CRM). Storing information about staff and crew members helps to operate and manage the team efficiently and always provides better service to the customers.

Having these kinds of data base is very useful for securing the data, backing up the data and recovering the data if any kind of data loss situation occurs. It provides benefits for both customers and the company. Store large amounts of data, easily updating the data and data driven decision making are the other benefits of this database providing.

Hypothetical Scenario

GREENHORIZON is a boat safari company that prioritizes secure safari experiences. The company has implemented a robust system to enhance its service quality. This system is easily accessible to anyone through an online platform to engage with the company's services.

The company uses two types of boats, those are engine-powered boats and electric boats. For engine boats, the company keeps records of details of engine no, fuel type. For electric boats the company keeps records of Motor No, Battery capacity and charging time.

Each boat is equipped with a set of equipment. This set of equipment is dependent on the boat. All equipment has a unique number. Additionally, the company keeps records of the condition, name a short description of each equipment. The choice of boat type is included as part of the package provided to customers. Each boat is operated by a skilled driver. In compliance with government regulations to ensure customer safety, the service of a registered lifeguard is provided. Every lifeguard at GREENHORIZON is verified and registered by the World association of lifeguard council. Their registered number is also registered to the system.

The boat driver and the lifeguard collaborate and work together to ensure the security of our customers. The company maintains five boat yards and only boat drivers have been given permission to enter them. They also do yard maintenance. For each yard company has unique identifier.

The company offers several types of packages. Customers can book boat safari packages according to their preferences. Before booking a package, they should register to the system by entering their details. Then they can book safari packages, view discounts, and make payments.

A registered customer can select a package based on their preferences. After selecting the package, the customer can make payments to the relevant package either in cash or by the online portal. Customers can mention how many passengers are participating in a boat ride. The amount of the package will be automatically displayed according to the number of people traveling under the relevant package.

Usually, the company offers a discount on each package to promote their business. Also, they provide some special seasonal packages. The discount percentage changes from time to time. Discount amount derived from discount percentage. The company allows customers to view discounts without booking them. It helps customers to select a good package that is suitable for their budget.

After a customer has made payment, the system displays the status of the payment either "Pass" or "Fail". The system will generate a payment id for each successful payment.

In conclusion, boat safari trip management of GREENHORIZON offers a High-quality service and create user-friendly, efficient platform that caters   to the needs and preferences of their customers.

Main Requirements of the System

Functional requirement

Customer

- For every customer, the system must generate a unique identifier.
- Customers should be able to book and reserve a boat safari trip through the system.
- Customers should be able to view trip details of boat safari package.
- Customers should be able to select a package based on their preferences.
- Customers should be able to make payments to the relevant package based on their preference.
- Customers should be able to view discounts available for a relevant package.
- Customers should be able to access the trip management system through any devices.
- Customers should have access to cancel and get refunds for a particular safari trip.

Boatyard

- The system should support getting every boat's detail in the yard (boat number, engine number, brand name).
- The system should track the entry and exit times of every boat from the yard and their availability.
- The system should be allowed to enter a new boat detail into the database (boat number, engine number, brand name).
- The system should be allowed to input and output the boat driver's and lifeguard's details who have permission to enter the boat yard.

Boat

- The system should be able to display details of each boat separately.
- After a customer selects a specific boat for a ride, the same boat should not be available for another ride at the same time.
- Customers can select a particular boat for a boat safari both online and by visiting.
- Every boat must be registered to the system with the dentification number of boats.
- Customers should be able to view the details of the boats online.

Payment

- For every payment made by a customer, it must have a unique payment identifier.
- Customer can make payments using several methods including cash, online payment platforms, Online bank transfers.
- The system should maintain a record of all customer payments including paymentID, amount, and payment method.
- The input payment data should be recorded into the database in real-time when payment is made by the customer online or physically.
- The system should generate a receipt after the customer makes the payment.

Driver

- The system should have a login mechanism for the boat driver using their driver id, and grant access to the relevant functionalities related to their job role.
- The system should provide functionalities to view passenger list and ensure headcount of passengers is less than or equal to the number of seats.
- The boat driver should be able to view the stating yard details and the end location yard details.
- The system should provide communication between the driver and lifeguard. It helps to report emergencies or request assistance.
- The Driver should be able to view the boat details and conditions using the system. It helps them to manage their assigned trips and navigate safely during the safari.

Lifeguard

- The system should have a login ID and password to access the system. Lifeguard ID is used as a login ID.
- The lifeguard should be able to view the passengers list and their details.
- The system should allow them to view their assigned boat and check that the boat has lifesaving equipment such as a life jacket, first aid kits and Communication devices.
- The system would need to display the boat driver's details of who is travelling with them, and also provide boat drivers with phone numbers for communication purposes.
- The system alters emergency situations using their given phone numbers and lifeguards can use their given phone number to communicate with drivers, other lifeguards and relevant authorities.

Package

- The package should include transportation arrangements such as variations of boats and it should consist of safari trip destination and within the safari area.
- The package should provide knowledgeable and experienced guides which is share information about wildlife and changes of different eco systems.
- The package should make certain that the boat has the required safety equipment such as fire extinguishers, visual devices and communication devices.
- The package should offer opportunities for wildlife viewing along the waterways and to observe animals such as birds, lizards, alligators etc.

Equipment

- The system should maintain a record of all equipment details such as equipment no, name, description and condition.
- The system should provide functionality for allocating equipment for specific safaris.
- The system should generate reports and analytics on equipment utilization, availability, maintenance history, and condition.

Discount

- The system should allow customers to view discounts.
- The system should automatically apply the appropriate discount to the overall cost of a boat safari package.
- The system should generate reports on discount amount, discount percentage, end date, and start date.
- The system should display the discounts and discount types applicable to the packages selected by the customers.

Non-functional requirements

- Scalability - The database should be able to scale to handle the increasing amount of data when growing the system
- Reliability - The system should be designed to handle errors gracefully and recover from failures
- Security - The system should be protected by the system with sensitive data and prevent unauthorized access
- User-friendliness - User interface should be simple to use and intuitive.
- Availability - The system should be available and accessible to all users at all times.
- Compatibility - The system should be compatible with accepted web browsers likewise Google Chrome, Mozilla Firefox, Safari, and Microsoft Edge and versions.
- Maintainability - The system should contain clean, readable, and self-explanatory code. Use meaningful variable and function names, proper indentation, and consistent coding conventions.

Performance requirements

- Short response time - The system should provide quick responses to actions, such as searching packages, booking trips, or making inquiries.
- User handling - The system should be able to handle many simultaneous users.
- Processing and storage - The system should efficiently process, and store data related to boat safaris, including trip details, customer information, bookings, and payments.
- Reliable payment process - The system should integrate with reliable and secure payment gateways to ensure secure payment processing.

Security requirements

- Confidentiality - Sensitive information is protected from unauthorized access.
- Personal data protection - Safeguard the privacy and integrity of individuals' personal information.
- Access Control - Regulates and limits access to resources, systems, or information based on users.
- Data backup and recovery - Creating copies of important data and establishing mechanisms to restore it in case of data loss or system failures.
- Physical security - Protect physical assets, facilities, and equipment from theft, damage, or interference.
- Virus and malware security - Protect the system from malicious software by using antivirus software, and firewall systems.
- Login bans due to incorrect passwords - Limits the number of logins attempts and temporarily blocks or suspends user accounts after multiple failed login attempts.

Data Requirements

Yard

YARD_ID **char**

YARD_NAME **varchar**

SIZE   **char**

LOCATION **varchar**

Driver

DRIVER_ID **char**

NIC **char**

DOB **date**

First_Name **varchar**

Last_Name **varchar**

Boat_No **char**

Lifeguard

Lifeguard_id **varchar**

NIC **varchar**

ILS_RegNo **char**

DOB **date**

First_Name **varchar**

Last_Name **varchar**

Driver_ID **char**

Boat_No **char**

Lifegurd_Numbers

Lifeguard_id **varchar**

PhoneNo **varchar**

Driver_Number

Driver_ID **char**

Driver_phone_number **varchar**

YARD_DRIVER

YARD_ID **char**

DRIVER_ID **char**

Boat

Boat_No **char**

noOfSeates **int**

Brand **varchar**

YARD_ID **char**

DRIVER_ID **char**

LifeGuard_Id **varchar**

Engine_Powered

Boat_No **char**

Fuel_Type **varchar**

Engine_No **int**

Electric_Powered

Boat_No **char**

Mortor_NO **int**

Battery_capasity **char**

Charging_Time **int**

Equipment

Equ_No **int**

Boat_No **char**

Name **varchar**

condition **char**

Descripton **varchar**

Customer

CustomerID **varchar**

First_Name **varchar**

Last_Name **varchar**

DOB **date**

Address **varchar**

Nationality **varchar**

Age **int**

Boat_No **char**

DRIVER_ID **char**

Lifeguard_Id **varchar**

Customer_PhoneNO

CustomerID **varchar**

PhoneNO **varchar**

Customer_email

CustomerID **varchar**

email **varchar**

Payment

PaymentID **char**

PaymentDate **date**

No_of_Person **int**

Payment_status **char**

Payment_amount **real**

CustomerID **varchar**

Payment_Method

PaymentID **char**

Method **varchar**

Package

PackageID **char**

PackageName **varchar**

Descripition **varchar**

Price **int**

Boat_No **char**

StartDate **date**

EndDate **date**

PaymentID **char**

Discount

DiscountID **char**

Description_discount **varchar**

Discount_percentage **int**

Discount_amount **int**

Discount_start_date **date**

Discount_end_date **date**

PackageID **char**

Customer_Discount

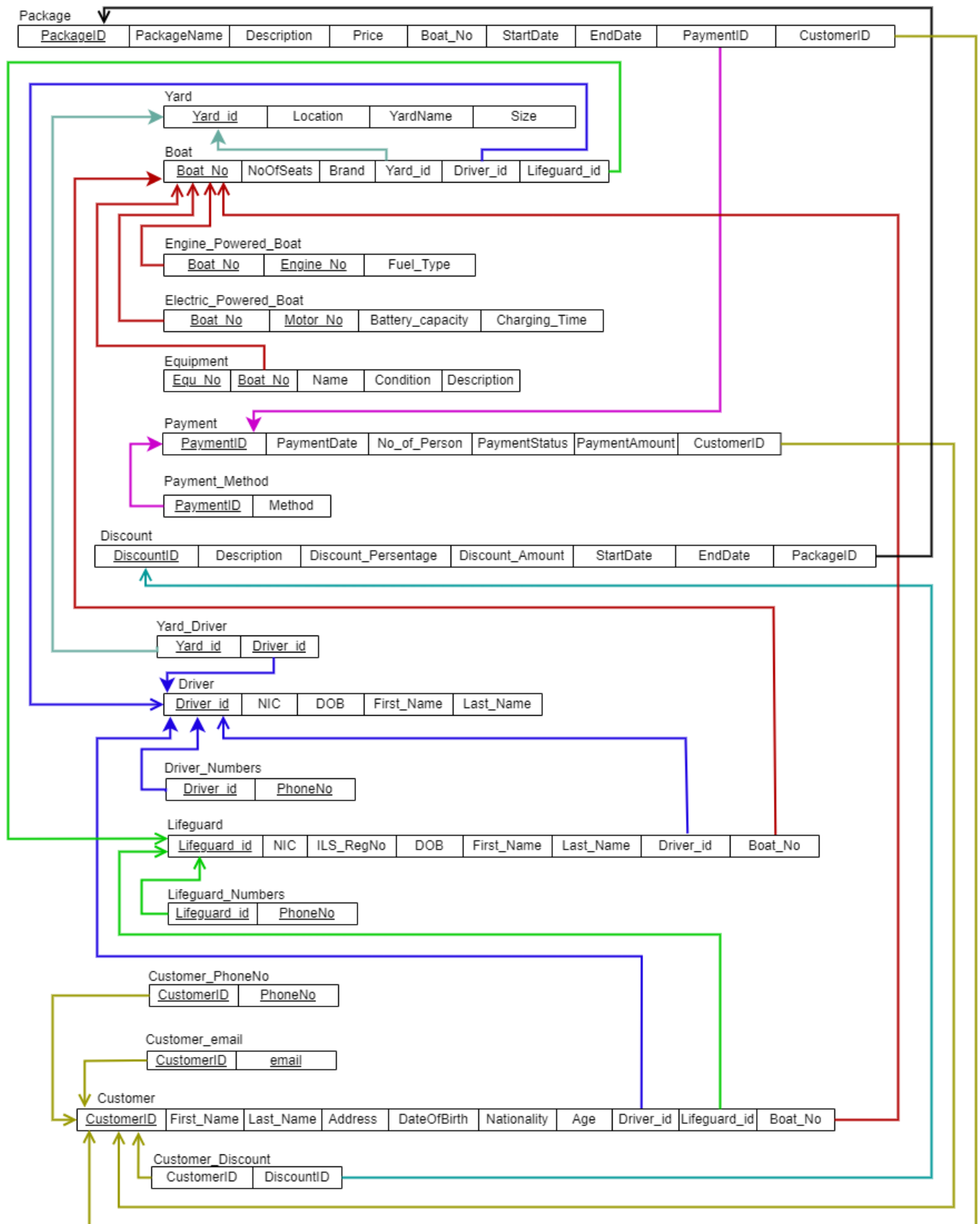CustomerID **varchar**

DiscountID **char**

Entity Relationship (ER) Diagram

Relational Schema

Package

PackageID	PackageName	Description	Price	Boat_No	StartDate	EndDate	PaymentID	CustomerID

Yard

Yard_id	Location	YardName	Size

Boat

Boat_No	NoOfSeats	Brand	Yard_id	Driver_id	Lifeguard_id

Engine_Powered_Boat

Boat_No	Engine_No	Fuel_Type

Electric_Powered_Boat

Boat_No	Motor_No	Battery_capacity	Charging_Time

Equipment

Equ_No	Boat_No	Name	Condition	Description

Payment

PaymentID	PaymentDate	No_of_Person	PaymentStatus	PaymentAmount	CustomerID

Payment_Method

PaymentID	Method

Discount

DiscountID	Description	Discount_Persentage	Discount_Amount	StartDate	EndDate	PackageID

Yard_Driver

Yard_id	Driver_id

Driver

Driver_id	NIC	DOB	First_Name	Last_Name

Driver_Numbers

Driver_id	PhoneNo

Lifeguard

Lifeguard_id	NIC	ILS_RegNo	DOB	First_Name	Last_Name	Driver_id	Boat_No

Lifeguard_Numbers

Lifeguard_id	PhoneNo

Customer_PhoneNo

CustomerID	PhoneNo

Customer_email

CustomerID	email

Customer

CustomerID	First_Name	Last_Name	Address	DateOfBirth	Nationality	Age	Driver_id	Lifeguard_id	Boat_No

Customer_Discount

CustomerID	DiscountID

Database Tables with sample Data

```sql
CREATE TABLE YARD (
YARD_ID char(5) NOT NULL,
YARD_NAME varchar(20) NOT NULL,
SIZE char(5),
LOCATION varchar(500),
constraint YARD_PK PRIMARY KEY(YARD_ID)
);




CREATE TABLE DRIVER (
DRIVER_ID char(6) NOT NULL,
NIC char(12) NOT NULL,
DOB date,
First_Name varchar(15) NOT NULL,
Last_Name varchar(15) NOT NULL,
Boat_No char(6),
constraint DRIVER_pk PRIMARY KEY(DRIVER_ID),
constraint DRIVER_check check(NIC LIKE'[0-9][0-9][0-9][0-9][0-9][0-9][0-9][0-9][0-9]'),
);




CREATE TABLE Lifeguard(
Lifeguard_id varchar(5) NOT NULL,
NIC varchar(12) NOT NULL,
ILS_RegNo char(12) NOT NULL,
DOB date,
First_Name varchar(15) NOT NULL,
Last_Name varchar(15) NOT NULL,
Driver_ID char(6) NOT NULL,
Boat_No char(5),
CONSTRAINT Lifeguard_pk PRIMARY KEY (Lifeguard_id),
CONSTRAINT Lifeguard_check CHECK(NIC LIKE'[0-9][0-9][0-9][0-9][0-9][0-9][0-9][0-9][0-9][0-9][0-9][0-9]'),
CONSTRAINT DRIVER_ID_in_Life_guard_fk FOREIGN KEY (DRIVER_ID) REFERENCES DRIVER (DRIVER_ID)
);




CREATE TABLE Lifegurd_Numbers(
Lifeguard_id varchar(5),
PhoneNo varchar(12)
CONSTRAINT Lifegurd_Numbers_pk PRIMARY KEY (Lifeguard_id,PhoneNo),
CONSTRAINT Lifegurd_Numbers_check CHECK(PhoneNo LIKE'+[0-9][0-9][0-9][0-9][0-9][0-9][0-9][0-9][0-9][0-9][0-9]'),
CONSTRAINT Lifeguard_id_in_Lifeguard_numbers FOREIGN KEY (Lifeguard_id) REFERENCES Lifeguard (Lifeguard_id)
);




CREATE TABLE Driver_Number (
Driver_ID char(6) NOT NULL,
Driver_phone_number varchar(15) NOT NULL,
constraint DRIVER_Number_pk PRIMARY KEY(DRIVER_ID,Driver_phone_number),
CONSTRAINT Driver_ID_in_Driver_Number FOREIGN KEY(Driver_ID) REFERENCES Driver(Driver_ID)
);
```

```sql
CREATE TABLE YARD_DRIVER (
YARD_ID char(5) NOT NULL,
DRIVER_ID char(6) NOT NULL,
constraint YARD_DRIVER_pk PRIMARY KEY(YARD_ID,DRIVER_ID),
CONSTRAINT YARD_ID_in_YARD_DRIVER_fk FOREIGN KEY (YARD_ID) REFERENCES YARD (YARD_ID),
CONSTRAINT DRIVER_ID_in_YARD_DRIVER_fk FOREIGN KEY (DRIVER_ID) REFERENCES DRIVER (DRIVER_ID),
);




CREATE TABLE Boat (
Boat_No char(5) NOT NULL,
noOfSeates int,
Brand varchar(50),
YARD_ID char(5) NOT NULL,
DRIVER_ID char(6) NOT NULL,
LifeGuard_Id varchar(5) NOT NULL,
CONSTRAINT Boat_pk PRIMARY KEY (Boat_NO),
CONSTRAINT DRIVER_ID_in_Boat_fk FOREIGN KEY (DRIVER_ID) REFERENCES DRIVER (DRIVER_ID),
CONSTRAINT LifeGuard_Id_in_Boat_fk FOREIGN KEY (Lifeguard_id) REFERENCES Lifeguard (Lifeguard_id),
CONSTRAINT YARD_ID_in_Boat_fk FOREIGN KEY (YARD_ID) REFERENCES YARD (YARD_ID)
);




-- Engine_Powered is a ISA Relation with Boat Entity –


CREATE TABLE Engine_Powered (
Boat_No char(5) NOT NULL,
Fuel_Type varchar (30),
Engine_No int NOT NULL,
CONSTRAINT Engine_Powered_ISA_pk PRIMARY KEY (Boat_NO , Engine_No),
CONSTRAINT Boat_No_in_Engine_Powered_fk FOREIGN KEY (Boat_NO) REFERENCES Boat (Boat_NO)
);




-- Electric_Powered is a ISA Relation with Boat Entity –


CREATE TABLE Electric_Powered(
Boat_No char(5) NOT NULL,
Mortor_NO int NOT NULL,
Battery_capasity char(15),
Charging_Time int,
CONSTRAINT Electric_Powered_ISA_pk PRIMARY KEY (Boat_NO,Mortor_NO),
CONSTRAINT Boat_No_in_Electric_Powered_fk FOREIGN KEY (Boat_NO) REFERENCES Boat (Boat_NO)
);




-- Equipment is a Weak Entitiy with Boat Entity –


CREATE TABLE Equipment (
Equ_No int NOT NULL,
Boat_No char(5) NOT NULL,
Name varchar(30),
condition char (6),
Descripton varchar(250)
CONSTRAINT Equipment_pk PRIMARY KEY (Equ_No),
CONSTRAINT Boat_No_in_Equipment_fk FOREIGN KEY (Boat_NO) REFERENCES Boat (Boat_NO)
);
```

```sql
CREATE TABLE Customer(
CustomerID varchar(6) NOT NULL,
First_Name varchar(15) NOT NULL,
Last_Name varchar(15) NOT NULL,
DOB date,
Address varchar (50),
Nationality varchar(20),
Age int,
Boat_No char(5) NOT NULL,
DRIVER_ID char(6) NOT NULL,
Lifeguard_Id varchar(5) NOT NULL,
CONSTRAINT Customer_pk PRIMARY KEY (CustomerID),
CONSTRAINT DRIVER_ID_in_Customer_fk FOREIGN KEY (DRIVER_ID) REFERENCES DRIVER (DRIVER_ID),
CONSTRAINT LifeGuard_Id_in_Customer_fk FOREIGN KEY (Lifeguard_id) REFERENCES Lifeguard (Lifeguard_id)
);


CREATE TABLE Customer_PhoneNO(
CustomerID varchar(6) NOT NULL,
PhoneNO varchar(12) NOT NULL,
CONSTRAINT Customer_PhoneNO_pk PRIMARY KEY (CustomerID , PhoneNO),
CONSTRAINT LifeGuard_Id_in_Customer_PhoneNO_fk FOREIGN KEY (CustomerID) REFERENCES Customer (CustomerID)
);


CREATE TABLE Customer_email(
CustomerID varchar(6) NOT NULL,
email varchar(50),
CONSTRAINT Customer_email_pk PRIMARY KEY (CustomerID , email),
CONSTRAINT LifeGuard_Id_in_Customer_email_fk FOREIGN KEY (CustomerID) REFERENCES Customer (CustomerID),
CONSTRAINT Customer_email_check CHECK(email LIKE '%_@__%.__%')
);


CREATE TABLE Payment(
PaymentID char(6) NOT NULL,
PaymentDate date,
No_of_Person int,
Payment_status char(10),
Payment_amount real,
CustomerID varchar(6) NOT NULL,
CONSTRAINT Payment_pk PRIMARY KEY(PaymentID),
CONSTRAINT Customer_ID_in_Payment_fk FOREIGN KEY(CustomerID) REFERENCES Customer (CustomerID)
);


CREATE TABLE Payment_Method(
PaymentID char(6) NOT NULL,
Method varchar(10) NOT NULL,
CONSTRAINT Payment_Method_pk PRIMARY KEY(PaymentID),
CONSTRAINT Customer_ID_in_Payment_Method_fk FOREIGN KEY(PaymentID) REFERENCES Payment(PaymentID)
);
```

```sql
CREATE TABLE Package(
PackageID char(5) NOT NULL,
PackageName varchar(50) NOT NULL,
Descripition varchar(100),
Price int,
Boat_No char(5),
StartDate date,
EndDate date,
PaymentID char(6) NOT NULL,
CustomerID varchar(6) NOT NULL,
CONSTRAINT Package_pk PRIMARY KEY (PackageID),
CONSTRAINT PaymentID_in_Package_fk FOREIGN KEY(PaymentID) REFERENCES Payment (PaymentID),
CONSTRAINT CustomerID_in_Package_fk FOREIGN KEY(CustomerID) REFERENCES Customer (CustomerID)
);


CREATE TABLE Discount (
DiscountID char(6) NOT NULL,
Description_discount varchar(100),
Discount_percentage int,
Discount_amount int,
Discount_start_date date,
Discount_end_date date,
PackageID char(5) NOT NULL,
CONSTRAINT Discount_pk PRIMARY KEY(DiscountID),
CONSTRAINT Package_ID_in_Discount_fk FOREIGN KEY (PackageID) REFERENCES Package (PackageID)
);


CREATE TABLE Customer_Discount(
CustomerID varchar(6) NOT NULL,
DiscountID char(6) NOT NULL,
CONSTRAINT Customer_Discount_pk PRIMARY KEY(CustomerID, DiscountID),
CONSTRAINT Customer_ID_in_Customer_Discount FOREIGN KEY(CustomerID) REFERENCES Customer (CustomerID),
CONSTRAINT DiscountID_in_Customer_Discount FOREIGN KEY (DiscountID) REFERENCES Discount(DiscountID)
);



-------------------------------------------------------------------------------------------------

insert into YARD values ('YD001' , 'Aquatic' , '300 m' , 'Madu River Galle District' );
insert into YARD values ('YD002' , 'Blue Ocean' , '500 m' , 'Kalpitiya, Puttalam District' );
insert into YARD values ('YD003' , 'Sun Valley' , '450 m' , 'Mirissa, Matara District' );
insert into YARD values ('YD004' , 'Sea Birds' , '500 m' , 'Hikkaduwa , Galle District' );
insert into YARD values ('YD005' , 'Queens' , '350 m' , 'West coast Beach, Colombo District' );


insert into DRIVER values ('DID001' , '199612342' , '1995-11-17' , 'Gamlath' , 'Hettige', 'E0001' );
insert into DRIVER values ('DID002', '199968769' , '1996-08-09' , 'Pannala' , 'Gnanananda', 'E0002 ' );
insert into DRIVER values ('DID003' , '199898348' , '1998-02-15' , 'Praneeth' , 'Banda' , 'D0001 ' );
insert into DRIVER values ('DID004' , '199794876' , '1994-03-05' , 'Mahinda' , 'Weerakoon' , 'D0002 ' );
insert into DRIVER values ('DID005', '199594671' , '2000-06-09' , 'Jayakody' , 'Wickremasinghe' , 'D0003 ' );


INSERT INTO Lifeguard VALUES('LG001','199023446578','ISL2023LG321','1990-02-21','Nimali','Jayalath','DID001','E0001');
INSERT INTO Lifeguard VALUES('LG002','199387639703','ISL2023LG443','1993-06-01','Sumith','Athukorala','DID002','E0002');
INSERT INTO Lifeguard VALUES('LG003','199567359834','ISL2023LG032','1995-11-25','Santhush','Akalanka','DID003','D0001')
INSERT INTO Lifeguard VALUES('LG004','198896833957','ISL2023LG432','1988-09-13','Buddika','Jayaweera','DID004','D0002');
INSERT INTO Lifeguard VALUES('LG005','200094433145','ISL2023LG913','2000-08-26','Eshanga','Bashitha','DID005','D0003');
```

```
INSERT INTO Lifegurd_Numbers VALUES('LG001','+94772356487');
INSERT INTO Lifegurd_Numbers VALUES('LG002','+94752098483');
INSERT INTO Lifegurd_Numbers VALUES('LG002','+94764593052');
INSERT INTO Lifegurd_Numbers VALUES('LG003','+94724958394');
INSERT INTO Lifegurd_Numbers VALUES('LG004','+94789432450');
INSERT INTO Lifegurd_Numbers VALUES('LG004','+94714957763');
INSERT INTO Lifegurd_Numbers VALUES('LG005','+94779499302');
INSERT INTO Lifegurd_Numbers VALUES('LG005','+94755648653');


INSERT INTO Driver_Number VALUES ('DID001','+94715689263');
INSERT INTO Driver_Number VALUES ('DID005','+94775813589');
INSERT INTO Driver_Number VALUES ('DID002','+94761535759');
INSERT INTO Driver_Number VALUES ('DID003','+94714587358');
INSERT INTO Driver_Number VALUES ('DID004','+94717031987');
INSERT INTO Driver_Number VALUES ('DID004','+94717031593');
INSERT INTO Driver_Number VALUES ('DID002','+94761538956');


insert into YARD_DRIVER values ('YD001' , 'DID001' );
insert into YARD_DRIVER values ('YD002' , 'DID002' );
insert into YARD_DRIVER values ('YD003' , 'DID003' );
insert into YARD_DRIVER values ('YD001' , 'DID004' );
insert into YARD_DRIVER values ('YD004' , 'DID004' );
insert into YARD_DRIVER values ('YD005' , 'DID005' );
insert into YARD_DRIVER values ('YD002' , 'DID001' );


--Insert data into Boat Table—

INSERT INTO Boat VALUES ('E0001' , 8 , 'Boston Whaler' , 'YD001' , 'DID001' , 'LG001');
INSERT INTO Boat VALUES ('E0002' , 4 , 'Bayliner' , 'YD002' , 'DID002' , 'LG002');
INSERT INTO Boat VALUES ('D0001' , 8 , 'Bayliner' , 'YD003' , 'DID003' , 'LG003');
INSERT INTO Boat VALUES ('E0003' , 2 , 'Sea Ray' , 'YD004' , 'DID004' , 'LG004');
INSERT INTO Boat VALUES ('D0002' , 4 , 'Grady White' , 'YD005' , 'DID005' , 'LG005');


--Insert data into Engine_Powered Table—

INSERT INTO Engine_Powered VALUES ('D0001' , 'gasoline and ethanol' , 501 );
INSERT INTO Engine_Powered VALUES ('D0002' , 'gasoline and ethanol' , 502 );
INSERT INTO Engine_Powered VALUES ('D0002' , 'diesel' , 503 );
INSERT INTO Engine_Powered VALUES ('D0002' , 'diesel' , 504 );
INSERT INTO Engine_Powered VALUES ('D0001' , 'gasoline and ethanol' , 505 );


--Insert data into Electric_Powered Table—
INSERT INTO Electric_Powered VALUES ('E0001' , 6620 , '86h' , 05 );
INSERT INTO Electric_Powered VALUES ('E0002' , 8015 , '250h' , 11 );
INSERT INTO Electric_Powered VALUES ('E0003' , 0515 , '115h' , 08 );

INSERT INTO Equipment VALUES (20001 , 'E0001' , 'Fire extinguishers' , 'Good' , 'A fire extinguisher is a handheld active fire protection device
usually filled with a dry or wet chemical used to extinguish or control small fires');
INSERT INTO Equipment VALUES (20002 , 'E0002' , 'Sound signaling devices' , 'Good' , 'sound-making devices that are not fitted on the pleasure
craft and include whistles, pealess whistles, air horns');
INSERT INTO Equipment VALUES (20003 , 'D0001' , 'Fire extinguishers' , 'Poor' , 'A fire extinguisher is a handheld active fire protection device
usually filled with a dry or wet chemical used to extinguish or control small fires');
INSERT INTO Equipment VALUES (20004 , 'E0003' , 'Visual signaling devices' , 'Good' , 'feature glass fiber reinforced polyester (GRP) or marine
grade and corrosion proof aluminum enclosures');
INSERT INTO Equipment VALUES (20005 , 'D0002' , 'Visual signaling devices' , 'Good' , 'sound-making devices that are not fitted on the pleasure
craft and include whistles, pealess whistles, air horns');
```

```sql
INSERT INTO Customer VALUES('C00001','Akila','Sampath','1988-05-19','12/A New Kandy Road, Malabe',
'Srilankan','35','E0001','DID001','LG001');
INSERT INTO Customer VALUES('C00002','Janith','Thiwanka','1990-02-12','118, Hokandara North, Hokandara',
'Sri lankan','33','E0002','DID002','LG002');
INSERT INTO Customer VALUES('C00003','David','Pietersen','1976-03-29','1 Chapel Hill,Bournemouth',
'British','44','D0001','DID003','LG003');
INSERT INTO Customer VALUES('C00004','William','Smith','1985-05-19','813 Howard Street Oswego',
'American','35','D0002','DID004','LG004');
INSERT INTO Customer VALUES('C00005','Samantha','Prabhu','1986-02-04','16 West model town,Uttar Pradesh',
'Indian','36','D0003','DID005','LG005');


INSERT INTO Customer_PhoneNO VALUES('C00001','+94774023267');
INSERT INTO Customer_PhoneNO VALUES('C00002','+94983405324');
INSERT INTO Customer_PhoneNO VALUES('C00003','+44379113246');
INSERT INTO Customer_PhoneNO VALUES('C00004','+13452345605');
INSERT INTO Customer_PhoneNO VALUES('C00005','+91056375299');
INSERT INTO Customer_PhoneNO VALUES('C00005','+91056375366');
INSERT INTO Customer_PhoneNO VALUES('C00001','+94774021598');


INSERT INTO Customer_email VALUES('C00001','akila88@gmail.com');
INSERT INTO Customer_email VALUES('C00001','akilasilva@gmail.com');
INSERT INTO Customer_email VALUES('C00002','thiwanka21@gmail.com');
INSERT INTO Customer_email VALUES('C00003','pietersen76@gmail.com');
INSERT INTO Customer_email VALUES('C00003','dPietersen@gmail.com');
INSERT INTO Customer_email VALUES('C00004','william85@gmail.com');
INSERT INTO Customer_email VALUES('C00004','william124@gmail.com');
INSERT INTO Customer_email VALUES('C00005','samanthap@gmail.com');


INSERT INTO Payment VALUES('P0001','2023-05-23',5,'Pass',5000.00,'C00001');
INSERT INTO Payment VALUES('P0002','2023-05-14',5,'Fail',5000.00,'C00002');
INSERT INTO Payment VALUES('P0003','2023-05-12',5,'Pass',5000.00,'C00003');
INSERT INTO Payment VALUES('P0004','2023-05-13',5,'Fail',5000.00,'C00004');
INSERT INTO Payment VALUES('P0005','2023-05-18',5,'Fail',5000.00,'C00005');


INSERT INTO Payment_Method VALUES ('P0001','cash');
INSERT INTO Payment_Method VALUES ('P0002','card');
INSERT INTO Payment_Method VALUES ('P0003','online');
INSERT INTO Payment_Method VALUES ('P0004','cash');
INSERT INTO Payment_Method VALUES ('P0005','online');


INSERT INTO Package VALUES ('PK001' ,'Family' , 'Fimily package can have 8 members' , 8600 , 'E0001',
'2023-05-05' , '2023-07-20' , 'P0001' ,'C00001' );
INSERT INTO Package VALUES ('PK002' ,'Couple' , 'Couple package can have 2 members' , 4300 , 'E0002',
'2023-05-05' , '2023-07-20' , 'P0002' ,'C00002' );
INSERT INTO Package VALUES ('PK003' ,'indiviudal' , 'Individual package can have 1 members' , 2200 , 'D0001',
'2023-05-05' , '2023-07-20' , 'P0003' ,'C00003' );
INSERT INTO Package VALUES ('PK004' ,'indiviudal' , 'Individual package can have 1 members' , 2200 , 'E0003',
'2023-05-05' , '2023-07-20' , 'P0004' ,'C00004' );
INSERT INTO Package VALUES ('PK005' ,'Family' , 'Family package can have 8 members' , 8600 , 'D0002',
'2023-05-05' , '2023-07-20' , 'P0005' ,'C00005' );


INSERT INTO Discount VALUES ('DS001','Discount for package1',5,500,'2023-05-12','2023-05-12','PK001');
INSERT INTO Discount VALUES ('DS002','Discount for package2',4,700,'2023-05-13','2023-05-13','PK002');
INSERT INTO Discount VALUES ('DS003','Discount for package3',3,800,'2023-05-14','2023-05-14','PK003');
INSERT INTO Discount VALUES ('DS004','Discount for package4',2,900,'2023-05-15','2023-05-15','PK004');
INSERT INTO Discount VALUES ('DS005','Discount for package5',8,300,'2023-05-16','2023-05-16','PK005');
```

```
INSERT INTO Customer_Discount VALUES('C00001','DS001');
INSERT INTO Customer_Discount VALUES('C00002','DS002');
INSERT INTO Customer_Discount VALUES('C00003','DS003');
INSERT INTO Customer_Discount VALUES('C00004','DS004');
INSERT INTO Customer_Discount VALUES('C00005','DS005');
```

Contribution of the Project

IT22560926 - PRABASHWARA R. P

I was gathering everyone as the group leader and going over our boat safari management system. I instructed them to review all of the lectures related to our project before we got started. and create a schedule for project durations, break them up into sections, and assign individuals to them based on their skills. I constantly kept everyone else updated on the progress of each member.

I created SQL tables for package, Boat, Engine Powered, Electric Powered. I also wrote the functional requirements for a lifeguard.

and I went through all the SQL programs, making relations with foreign keys in tables, and fixing some syntax errors.

IT22603104 - DIAS M.P.U

As an active group member, I have contributed to developing the Hypothetical scenario and creating tables for Payment, Discount, Customer_discount and Driver_Number in relation schema.

Furthermore, I have contributed to developing the relational schema and ER diagram and include functional requirements for Boat and customer entities.

IT22601674 – DILSHAN K.B

As a member of the group, my primary responsibility was to create the relational schema. Before proceeding, I engaged in discussions with my group members to gather their knowledge and ideas. Furthermore, I wrote the functional requirements for the Yard and Payment entities.

In addition to this, I implemented three tables in the database (Customer, Customer_PhoneNo, Customer-email) and inserted relevant data into them.

IT22602800 – MUTHUKUDA ARACHCHIGE N.D

As a group member, I wrote functional requirements for Equipment and Discount. Furthermore, I added some details to hypothetical scenario.

Also, I created database tables to represent Lifeguard, Lifeguard_Number , Equipment and Payment_methods tables insert relevant values into it.

IT22560094 - RANASINGHE T.M.R

In our group project my contributions were diverse. I wrote the project report introduction. Also, I have to identify functional requirements for boat drivers and lifeguards and provide ideas for developing an ER diagram.

Additionally, I created database tables for Driver, Yard and Yard_Driver , Driver_Number table and inserted relevant data into those tables.