

Sri Lanka Institute of Information Technology.



Assignment 1
MLB_09.02_6
Online Land Sales System.

Information Systems and Data Modelling-IT1090
B.Sc. (Hons) in Information Technology

Group Details

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Assignment Group ID: MLB_09.02_6

Project Title: Online Land Sales System.

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Introduction

The assignment topic of our group received is **Online Land Sales System**. We proposed a name for the online land sales system. The name we suggested to online land sales system is **Dream Lands**.

Dream Lands is an online land sales company, which sells properties through their own website. The three types of properties are **Lands, Apartments, and Homes**. Customers can reserve properties through the website. (**Reservation of property is done through the website only. Financial and Legal Procedures related to sale of property are manually done.**)

To reserve a property customer should have a valid **Customer Account**. Dream Lands company consists of 6 departments. They are **Department of Financial Management, Department of Property Management, Department of IT, Departments of Human Resource management, Department of Law and Department of Customer Relationship Management**. All the departments consist of employees. To work in a particular department, employee should have a valid **Employee Account**. After successfully completing every sale of property, Department of Financial Management issues an invoice to customer.

Requirements Analysis Document

1. **Dream Lands** is an **Online Land Sales Company**, which sells properties through their own website.
2. **Dream Lands company does not maintain sub branches apart from main branch.**

Requirements related to customers

1. Customers can reserve properties through the website. To reserve properties customer should have a valid **Customer Account**.
2. When creates a customer account, system asks for customer's **First Name, Second Name, Surname, NIC Number, Date of Birth, Age, Permanent Address, two Phone Numbers, Email Address, Gender** (Male/Female/Other) and **Unique Password for Customer Account**.
3. **Password should contain maximum 20 characters.**
4. **Customer should provide all the correct details to the system. If not, customer cannot create an account.**
5. **Customer should be older than 18 years.**
6. After submitting those details accurately, the system creates a **Unique ID** automatically **for the Customer Account**.
7. The format of Customer Account ID is "**DLC[0-9][0-9][0-9][0-9][0-9][0-9]**".
8. **One customer can make only one customer account.**
9. **One customer can reserve more than one property at a time.**
10. **Using customer account credentials (customer account password and customer account ID) customer can reserve properties.**
11. **There should be one customer responsible for one customer account.**

Requirements related to properties,

1. There are three types of properties. They are **Lands, Apartments and Homes**.
2. The system shows **Features of Property, Property ID, Property type** (Home/Land/Apartment), **Province, District and Town** property situated to customer.
3. **Property ID is unique for each property.**
4. The format of Property ID is “**DLP[0-9][0-9][0-9][0-9]**”.
5. **After reserving the property by one customer. It cannot be reserved by another customer.**
6. **Properties depend on Department.** (Details about properties are uploaded and deleted by Department of IT. We assumed properties depends on Department of IT)

Requirements related to departments

1. The company consists of **6 departments** They are **Department of IT, Department of Financial Management, Department of Legal Works, Department of Human Resource Management, Department of customer relationship management and Department of Property Management.**
2. Department of IT **manages the company website, manages the database, upload and remove Properties from website and other technical stuffs.** Department of Financial Management **manages customer transactions (issuing invoices), Salaries of employees and bank accounts,** Department of Human Resource Management **manages employees in company,** Department of Legal Works **manages legal side of property transactions,** Department of Customer Relationship Management **manages advertisements about company, consider customer suggestions and solve customer problems and other customer related activities** and Department of Property Management

buys new properties to sell, and manages features related to properties

- 3. All the departments have a unique ID.** Department of IT's ID is **D01**, Department of Financial Management's ID is **D02**, Department of Legal Works' ID is **D03**, Department of Human Resource Management's ID is **D04**, Department of customer relationship management's ID is **D05** and Department of Property Management's ID is **D06**.

- 4. All the departments should be consisted of employees.**

Requirements related to employees

- 1. All the employees should work in a department.**
- 2. One employee can work in only one department.**
- 3. To work in particular department Employee should have a valid Employee account.**
- 4. When creates an Employee account, system asks for employee's First Name, Second Name, Surname, NIC Number, Date of Birth, Age, Permanent Address, two Phone Numbers, Email Address, Gender (Male/Female/Other), Qualifications and a Unique Password for Employee Account.**
- 5. Password should contain maximum 20 characters.**
- 6. Employee should provide all the details to the system. If not, employee cannot create an account.**
- 7. Employee should be older than 18 years.**
- 8. After submitting details accurately the system generates a Unique ID automatically for Employee Account.**
- 9. The format of employee account ID is "DLE[0-9][0-9][0-9][0-9][0-9][0-9]"**.
- 10. One employee can make only one employee account.**
- 11. There should be one employee responsible for one employee account.**

Requirements related to invoices

- 12.** After every transaction Department of Financial Management issues invoice to customer.
- 13.** Each Invoice Number is unique to each invoice.
- 14.** Invoice contains **Invoice Number, Issued Date, Description, Price, Discount, Tax and Balance.**
- 15.** The format of Invoice Number is “I[0-9][0-9][0-9][0-9]”.
- 16.** Invoices are issued by **Department of Financial Management Only.**
- 17.** There should be one customer responsible for one invoice.

Data Requirements

- **Entities related to the system,**

- 01. Customer
- 02. Customer Account
- 03. Employee
- 04. Employee Account
- 05. Property
- 06. Department
- 07. Invoice

- **Entity Definition**

01.Customer

Attribute	Simple	Multivalued	Derived	Composite	Unique	Not Null
NIC	Yes				Yes	Yes
Name				Yes		Yes
Email Address	Yes				Yes	Yes
Phone Number		Yes				Yes
Permanent Address	Yes					Yes
DOB	Yes					Yes
Age	Yes		Yes			Yes
Gender	Yes					Yes

Primary Key: NIC

02.Customer Account

Attribute	Simple	Multivalued	Derived	Composite	Unique	Not Null
Customer Account ID	Yes				Yes	Yes
Password	Yes				Yes	Yes

Primary Key: Customer Account ID

03.Department

Attribute	Simple	Multivalued	Derived	Composite	Unique	Not Null
Name	Yes					Yes
Department ID	Yes				Yes	Yes
Description	Yes					Yes

Primary Key: Department ID

04.Property (Weak Entity)

Attribute	Simple	Multivalued	Derived	Composite	Unique	Not Null
Property ID	Yes				Yes	Yes
Property Type	Yes					Yes
Location				Yes		Yes
Features		Yes				Yes

Partial Key: Property ID

05.Employee

Attribute	Simple	Multivalued	Derived	Composite	Unique	Not Null
NIC	Yes				Yes	Yes
Name				Yes		Yes
Email Address	Yes				Yes	Yes
Phone Number		Yes				Yes
Permanent Address	Yes					Yes
DOB	Yes					Yes
Age	Yes		Yes			Yes
Gender	Yes					Yes
Qualification		Yes				Yes

Primary Key: NIC

06.Employee Account

Attribute	Simple	Multivalued	Derived	Composite	Unique	Not Null
Employee Account ID	Yes				Yes	Yes
Password	Yes				Yes	Yes

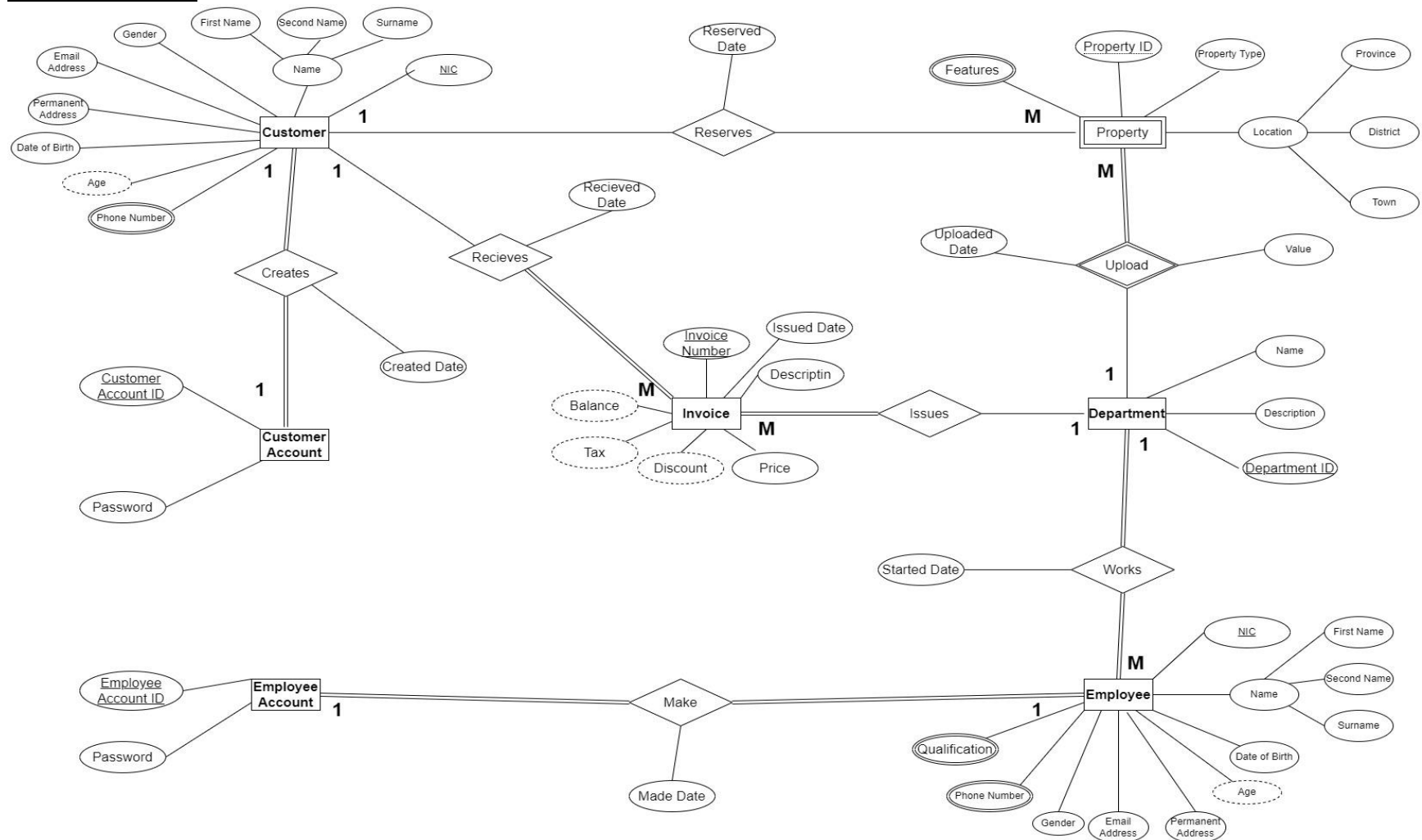
Primary Key: Employee Account ID

07.Invoice

Attribute	Simple	Multivalued	Derived	Composite	Unique	Not Null
Invoice Number	Yes				Yes	Yes
Issued Date	Yes					Yes
Description	Yes					Yes
Price	Yes					Yes
Tax	Yes		Yes			Can be null
Discount	Yes		Yes			Can be null
Balance	Yes		Yes			Yes

Primary Key: Invoice Number

ER Diagram



Important: 01. We included More clear and understandable ER Diagram with uploading file.

02. We used **draw.io** software to design ER Diagram

Relational Schema

RegisteredCustomer (CustomerAccountID: string, Password: string, NIC: string, FirstName: string, SecondName: string, Surname: string, EmailAddress: string, DOB: date, Age: integer, PermanentAddress: string, Gender: string)

//multivalued attribute

CustomerPhoneNumbers (CustomerAccountID: string, PhoneNumber: string)

Department (DepartmentID: string, Name: string, Description: string)

RegisteredEmployee (EmployeeAccountID: string, Password: string, DepartmentID: string, NIC: string, FirstName: string, SecondName: string, Surname: string, EmailAddress: string, DOB: date, Age: integer, PermanentAddress: string, Gender: string)

//multivalued attribute

EmployeePhoneNumbers (EmployeeAccountID: string, PhoneNumber: string)

//multivalued attribute

EmployeeQualifications (EmployeeAccountID: string, Qualification: string)

Property (PropertyID: string, DepartmentID: string, CustomerAccountID: string, PropertyType: string, Province: string, District: string, Town: string)

//multivalued attribute

PropertyFeatures (PropertyID: string, DepartmentID: string, Feature: string)

Invoice (InvoiceNumber: string, CustomerAccountID: string, DepartmentID: string, IssuedDate: date, Description: string, Price: real, Discount: real, Tax: real, Balance: real)

Logical Database Design

Relation Names in Database

01. RegisteredCustomer
02. Department
03. CustomerPhoneNumbers
04. RegisteredEmployee
05. EmployeePhoneNumbers
06. EmployeeQualifications
07. Property
08. PropertyFeatures
09. Invoice

SQL Commands for Create Relations

--RegisteredCustomer Table

```
CREATE TABLE RegisteredCustomer(  
  CustomerAccountID CHAR(9),  
  Password VARCHAR(20) UNIQUE NOT NULL,  
  NIC CHAR(12) UNIQUE NOT NULL,  
  FirstName VARCHAR(100) NOT NULL,  
  SecondName VARCHAR(100) NOT NULL,  
  Surname VARCHAR(100) NOT NULL,  
  EmailAddress VARCHAR(100) UNIQUE NOT NULL,  
  DOB DATE NOT NULL,  
  Age INTEGER NOT NULL,  
  PermanentAddress VARCHAR(500) NOT NULL,  
  Gender VARCHAR(10) NOT NULL,  
  
  --Conditions  
  CONSTRAINT checkID CHECK(CustomerAccountID LIKE 'DLC[0-9][0-9][0-9][0-9][0-9][0-9]'),  
  CONSTRAINT checkNIC 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 checkGender CHECK(Gender IN('Male','Female','Other')),  
  
  --Primary Key  
  CONSTRAINT RCPrimaryKey PRIMARY KEY (CustomerAccountID),  
  
);
```

--Department Table

```
CREATE TABLE Department(  
  DepartmentID CHAR(3),  
  Name VARCHAR(100) UNIQUE NOT NULL,  
  Description VARCHAR(1000) NOT NULL,  
  
  --Conditions  
  CONSTRAINT checkDepartmentID CHECK(DepartmentID LIKE 'D[0][1-6]'),  
  
  --Primary Key  
  CONSTRAINT DepartmetPK PRIMARY KEY (DepartmentID)  
  
);
```

--CustomerPhoneNumbers Table

```
CREATE TABLE CustomerPhoneNumbers(  
  CustomerAccountID CHAR(9),  
  PhoneNumber CHAR(10),  
  
  --Conditions  
  CONSTRAINT CheckPN CHECK(PhoneNumber LIKE '[0-9][0-9][0-9][0-9][0-9][0-9][0-9][0-9][0-9][0-9]'),  
  
  --Primary Key  
  CONSTRAINT CPNPK PRIMARY KEY (CustomerAccountID,PhoneNumber),  
  
);
```

```

--Foreign Key
CONSTRAINT CPNFK FOREIGN KEY (CustomerAccountID) REFERENCES
RegisteredCustomer(CustomerAccountID)
);

--RegisteredEmployee Table

CREATE TABLE RegisteredEmployee(
EmployeeAccountID CHAR(9),
Password VARCHAR(20) UNIQUE NOT NULL,
DepartmentID CHAR(3) ,
NIC CHAR(12) UNIQUE NOT NULL,
FirstName VARCHAR(100) NOT NULL,
SecondName VARCHAR(100) NOT NULL,
Surname VARCHAR(100) NOT NULL,
EmailAddress VARCHAR(100) UNIQUE NOT NULL,
DOB DATE NOT NULL,
Age INTEGER NOT NULL,
PermanentAddress VARCHAR(500) NOT NULL,
Gender VARCHAR(10) NOT NULL,

--Conditions
CONSTRAINT checkEID CHECK(EmployeeAccountID LIKE 'DLE[0-9][0-9][0-9][0-9][0-9]'),
CONSTRAINT checkENIC CHECK(NIC LIKE '[0-9][0-9][0-9][0-9][0-9][0-9][0-9][0-9][0-9][0-9]'),
CONSTRAINT checkEGender CHECK(Gender IN('Male', 'Female', 'Other')),

--Primary Key
CONSTRAINT REPrimaryKey PRIMARY KEY (EmployeeAccountID),

--Foreign Key
CONSTRAINT REForeignKey FOREIGN KEY (DepartmentID) REFERENCES Department(DepartmentID)
);

--EmployeePhoneNumbers Table

CREATE TABLE EmployeePhoneNumbers(
EmployeeAccountID CHAR(9),
PhoneNumber CHAR(10),

--Conditions
CONSTRAINT CheckEPN CHECK(PhoneNumber LIKE '[0-9][0-9][0-9][0-9][0-9][0-9][0-9][0-9][0-9][0-9]'),

--Primary Key
CONSTRAINT EPNPK PRIMARY KEY (EmployeeAccountID, PhoneNumber),

--Foreign Key
CONSTRAINT EPNFK FOREIGN KEY (EmployeeAccountID) REFERENCES
RegisteredEmployee(EmployeeAccountID)
);

--EmployeeQualifications Table

CREATE TABLE EmployeeQualifications(

```



```

EmployeeAccountID CHAR(9),
Qualification VARCHAR(500),

--Primary Key
CONSTRAINT EQPK PRIMARY KEY (EmployeeAccountID,Qualification),

--Foreign Key
CONSTRAINT EQFK FOREIGN KEY (EmployeeAccountID) REFERENCES
RegisteredEmployee(EmployeeAccountID)
);

--Property Table

CREATE TABLE Property(
PropertyID CHAR(7) ,
DepartmentID CHAR(3) ,
CustomerAccountID CHAR(9) NOT NULL,
PropertyType VARCHAR(10)NOT NULL,
Province VARCHAR(30) NOT NULL,
District VARCHAR(30) NOT NULL,
Town VARCHAR(30)NOT NULL,

--Conditions
CONSTRAINT CheckPID CHECK(PropertyID LIKE 'DLP[0-9][0-9][0-9][0-9]'),
CONSTRAINT CheckPType CHECK(PropertyType IN('Land','Apartment','Home')),
CONSTRAINT CheckDepartmentID CHECK(DepartmentID LIKE 'D01'),

--Primary Key
CONSTRAINT PropertyPK PRIMARY KEY (PropertyID,DepartmentID),

--Foreign Key
CONSTRAINT PropertyFK1 FOREIGN KEY (DepartmentID) REFERENCES Department(DepartmentID),
CONSTRAINT PropertyFK2 FOREIGN KEY (CustomerAccountID) REFERENCES
RegisteredCustomer(CustomerAccountID)
);

--PropertyFeatures

CREATE TABLE PropertyFeatures(
PropertyID CHAR(7) ,
DepartmentID CHAR(3),
Feature VARCHAR(500),

--Primary Key
CONSTRAINT PFPK PRIMARY KEY (PropertyID,DepartmentID,Feature),

--Foreign Key
--CONSTRAINT PFFK FOREIGN KEY (PropertyID) REFERENCES Property(PropertyID),
CONSTRAINT PFFK1 FOREIGN KEY (DepartmentID) REFERENCES Department(DepartmentID)
);

--Invoice Table

CREATE TABLE Invoice(
InvoiceNumber CHAR(5),
CustomerAccountID CHAR(9) NOT NULL,
DepartmentID CHAR(3) NOT NULL,

```

```

IssuedDate DATE NOT NULL,
Description VARCHAR(500) NOT NULL,
Price MONEY NOT NULL,
Discount MONEY,
Tax MONEY,
Balance MONEY NOT NULL,

--Conditions
CONSTRAINT CheckKIN CHECK(InvoiceNumber LIKE 'I[0-9][0-9][0-9][0-9]'),
CONSTRAINT CheckDID CHECK(DepartmentID LIKE 'D02'),

--Primary Key
CONSTRAINT InvoicePK PRIMARY KEY (InvoiceNumber),

--Foreign key
CONSTRAINT IFK1 FOREIGN KEY(CustomerAccountID) REFERENCES
RegisteredCustomer(CustomerAccountID),
CONSTRAINT IFK2 FOREIGN KEY(DepartmentID) REFERENCES Department(DepartmentID),
);

```

SQL Commands for Insert Sample Data into Relations

--RegisteredCustomer Table

```
INSERT INTO RegisteredCustomer
VALUES
('DLC000001','Abc@12','200002801628','Tharin','Ransika','Ransinghe','tharinransinghe@gmail.com','2000-01-28',22,'42/5,Pansala para,Ganemulla','Male');
```

```
INSERT INTO RegisteredCustomer
VALUES
('DLC000002','123@#2','198710345671','Shehan','Apsara','Perera','shehanapsara@gmail.com','1987-08-09',25,'43/A,A lane,Kaduwela','Male');
```

```
INSERT INTO RegisteredCustomer
VALUES
('DLC000003','3221967TRD','199676321281','Thushara','Sampath','Jayasena','thushara@gmail.com','1996-06-24',26,'322/5,Kandy Road,Kadugannawa','Male');
```

```
INSERT INTO RegisteredCustomer
VALUES
('DLC000004','Tha123567','197236741232','Shehani','Apsara','Ranaweera','shehaniapsara@gmail.com','1972-03-06',50,'423/A,Jayaweera Road, Kegalla','Female');
```

```
INSERT INTO RegisteredCustomer
VALUES
('DLC000005','#123BDC','198900123456','Thushari','Menaka','Perera','thushari@gmail.com','1989-04-25',31,'Sujeewa Villa, Pansala para,Kalaniya','Female');
```

--Department

```
INSERT INTO Department
VALUES ('D01','Department of IT','Manages the company website, manages the database, upload and remove Properties from website and other technical stuffs');
```

```
INSERT INTO Department
VALUES ('D02','Department of Financial Management','Manages customer transactions (issuing invoices), Salaries of employees and bank accounts');
```

```
INSERT INTO Department
VALUES ('D03','Department of Legal Works','Manages legal side of property transactions');
```

```
INSERT INTO Department
VALUES ('D04','Department of Human Resource Management','Manages employees in company');
```

```
INSERT INTO Department
VALUES ('D05','Department of customer relationship management','Manages advertisements about company, consider customer suggestions and solve customer problems and other customer related activities');
```

```
INSERT INTO Department
VALUES ('D06','Department of Property Management','Buys new properties to sell, and manages features related to properties');
```

--CustomerPhoneNumbers

```

INSERT INTO CustomerPhoneNumbers
VALUES('DLC000001','0718267910');

INSERT INTO CustomerPhoneNumbers
VALUES('DLC000001','0713453211');

INSERT INTO CustomerPhoneNumbers
VALUES('DLC000002','0723451211');

INSERT INTO CustomerPhoneNumbers
VALUES('DLC000002','0332263784');

INSERT INTO CustomerPhoneNumbers
VALUES('DLC000003','0773221210');

INSERT INTO CustomerPhoneNumbers
VALUES('DLC000003','0714567841');

INSERT INTO CustomerPhoneNumbers
VALUES('DLC000004','0714561211');

INSERT INTO CustomerPhoneNumbers
VALUES('DLC000004','0723561245');

INSERT INTO CustomerPhoneNumbers
VALUES('DLC000005','0724231212');

INSERT INTO CustomerPhoneNumbers
VALUES('DLC000005','0334571257');

--RegisteredEmployee

INSERT INTO RegisteredEmployee
VALUES('DLE000001','522@123','D02','196751231115','Senaka','Imasha','Perera','senakaimash
a123@gmail.com','1967-07-22',55,'23/B,Mahara Handiya, Kalaniya','Male');

INSERT INTO RegisteredEmployee
VALUES('DLE000002','Acd#5','D01','198834214158','Thamasha','Ushani','Jayasinghe','thamsha
1988@gmail.com','1988-03-24',34,'Thamasha Niwasa, Galahitiyawa,Ganemulla','Female');

INSERT INTO RegisteredEmployee
VALUES('DLE000003','BAC128','D02','200003222515','Lakindu','Vidushan','Perera','lakindu32
1@gmail.com','2000-03-25',22,'345/21,Sooriyapaluwa,Ragama','Male');

INSERT INTO RegisteredEmployee
VALUES('DLE000004','Cham123@','D04','198042158321','Ishini','Sulali','Perera','ishinipere
ra@gmail.com','1980-04-21',42,'32-B,Main Road,Belummahara','Female');

INSERT INTO RegisteredEmployee
VALUES('DLE000005','Ishan415','D01','199931152487','Ishan','Chamika','Ranasinghe','ishanj
kl@gmail.com','1999-03-15',23,'321/56,Pansala Road, Matara','Male');

--EmployeePhoneNumbers

INSERT INTO EmployeePhoneNumbers
VALUES ('DLE000001','0332277851');

```

```

INSERT INTO EmployeePhoneNumbers
VALUES ('DLE000001', '0712224511');

INSERT INTO EmployeePhoneNumbers
VALUES ('DLE000002', '0715326712');

INSERT INTO EmployeePhoneNumbers
VALUES ('DLE000003', '0754223961');

INSERT INTO EmployeePhoneNumbers
VALUES ('DLE000004', '0714567841');

INSERT INTO EmployeePhoneNumbers
VALUES ('DLE000005', '0712169315');

--EmployeeQualifications

INSERT INTO EmployeeQualifications
VALUES ('DLE000001', 'Dip. in Business Management');

INSERT INTO EmployeeQualifications
VALUES ('DLE000001', 'Dip. in Finance Management ');

INSERT INTO EmployeeQualifications
VALUES ('DLE000002', 'B.Sc(Sp) in Information Technology');

INSERT INTO EmployeeQualifications
VALUES ('DLE000003', 'B.Sc(Sp) in Accounting');

INSERT INTO EmployeeQualifications
VALUES ('DLE000004', 'BA(Sp) in Economics');

INSERT INTO EmployeeQualifications
VALUES ('DLE000004', 'M.Sc in Business Administration');

INSERT INTO EmployeeQualifications
VALUES ('DLE000005', 'Certificate in Information Technology.');
```

--Property

```

INSERT INTO Property
VALUES('DLP0001', 'D01', 'DLC000001', 'Apartment', 'Western', 'Gampaha', 'Kadawatha');
```

```

INSERT INTO Property
VALUES('DLP0002', 'D01', 'DLC000002', 'Home', 'Southern', 'Gall', 'Kokmaduwa');
```

```

INSERT INTO Property
VALUES('DLP0004', 'D01', 'DLC000004', 'Land', 'Western', 'Colombo', 'Nugegoda');
```

```

INSERT INTO Property
VALUES('DLP0003', 'D01', 'DLC000003', 'Home', 'Central', 'Kandy', 'Peradeniya');
```

```

INSERT INTO Property
VALUES ('DLP0005', 'D01', 'DLC000001', 'Land', 'North', 'Jaffna', 'Jaffna');

--PropertyFeatures

INSERT INTO PropertyFeatures
VALUES ('DLP0001', 'D01', '4 Rooms');

INSERT INTO PropertyFeatures
VALUES ('DLP0001', 'D01', '3 Phase Electricity');

INSERT INTO PropertyFeatures
VALUES ('DLP0001', 'D01', 'Water Supply');

INSERT INTO PropertyFeatures
VALUES ('DLP0001', 'D01', 'Near to Kadawata Town');

INSERT INTO PropertyFeatures
VALUES ('DLP0002', 'D01', '3 Rooms');

INSERT INTO PropertyFeatures
VALUES ('DLP0002', 'D01', 'Water Supply');

INSERT INTO PropertyFeatures
VALUES ('DLP0002', 'D01', 'Near to Gall Expressway Interchange');

INSERT INTO PropertyFeatures
VALUES ('DLP0003', 'D01', '25 Perches');

INSERT INTO PropertyFeatures
VALUES ('DLP0003', 'D01', 'Near to Kandy Town');

INSERT INTO PropertyFeatures
VALUES ('DLP0004', 'D01', '5 Rooms');

INSERT INTO PropertyFeatures
VALUES ('DLP0004', 'D01', 'A/C');

INSERT INTO PropertyFeatures
VALUES ('DLP0004', 'D01', 'High Luxery Home');

INSERT INTO PropertyFeatures
VALUES ('DLP0005', 'D01', '100 Perch');

INSERT INTO PropertyFeatures
VALUES ('DLP0001', 'D01', 'Near to Jaffna Town');

--Invoice

INSERT INTO Invoice
VALUES ('I0001', 'DLC000001', 'D02', '2022-04-10', 'Apartment', 14500000, NULL, NULL, 14500000);

INSERT INTO Invoice
VALUES ('I0002', 'DLC000002', 'D02', '2022-04-11', 'Home', 1650000, NULL, NULL, 1650000);

INSERT INTO Invoice
VALUES ('I0003', 'DLC000003', 'D02', '2022-04-12', 'Land', 1890000, NULL, NULL, 1890000);

```

```
INSERT INTO Invoice
VALUES ('I0004', 'DLC000004', 'D02', '2022-05-10', 'Home', 1420000, NULL, NULL, 1420000);

INSERT INTO Invoice
VALUES ('I0005', 'DLC000005', 'D02', '2022-05-12', 'Land', 1420000, NULL, 500000, 1920000);
```

Relations with Relation Instances.

01.RegisteredCustomers

	CustomerAccountID	Password	NIC	FirstName	SecondName	Surname	EmailAddress	DOB	Age	PermanentAddress	Gender
1	DLC000001	Abc@12	200002801628	Tharin	Ransika	Ransinghe	tharinransinghe@gmail.com	2000-01-28	22	42/5,Pansala para,Ganemulla	Male
2	DLC000002	123@#2	198710345671	Shehan	Apsara	Perera	shehanapsara@gmail.com	1987-08-09	25	43/A,A lane,Kaduwela	Male
3	DLC000003	3221967TRD	199676321281	Thushara	Sampath	Jayasena	thushara@gmail.com	1996-06-24	26	322/5,Kandy Road,Kadugannawa	Male
4	DLC000004	Tha123567	197236741232	Shehani	Apsara	Ranaweera	shehaniapsara@gmail.com	1972-03-06	50	423/A,Jayaweera Road, Kegalla	Female
5	DLC000005	#123BDC	198900123456	Thushari	Menaka	Perera	thushari@gmail.com	1989-04-25	31	Sujeewa Villa, Pansala para,Kalaniya	Female

02.Department

	DepartmentID	Name	Description
1	D01	Department of IT	Manages the company website, manages the databas...
2	D02	Department of Financial Management	Manages customer transactions (issuing invoices), Sal...
3	D03	Department of Legal Works	Manages legal side of property transactions
4	D04	Department of Human Resource Management	Manages employees in company
5	D05	Department of customer relationship management	Manages advertisements about company, consider cu...
6	D06	Department of Property Management	Buys new properties to sell, and manages features rela...

03. CustomerPhoneNumbers

	CustomerAccountID	PhoneNumber
1	DLC000001	0713453211
2	DLC000001	0718267910
3	DLC000002	0332263784
4	DLC000002	0723451211
5	DLC000003	0714567841
6	DLC000003	0773221210
7	DLC000004	0714561211
8	DLC000004	0723561245
9	DLC000005	0334571257
10	DLC000005	0724231212

04. RegisteredEmployee

	EmployeeAccountID	Password	DepartmentID	NIC	FirstName	SecondName	Surname	EmailAddress	DOB	Age	PermanentAddress
1	DLE000001	522@123	D02	196751231115	Senaka	Imasha	Perera	senakaimasha123@gmail.com	1967-07-22	55	23/B, Mahara Handiya, Kalaniya
2	DLE000002	Acid#5	D01	198834214158	Thamasha	Ushani	Jayasinghe	thamsha1988@gmail.com	1988-03-24	34	Thamasha Niwasa, Galahitiyaw
3	DLE000003	BAC128	D02	200003222515	Lakindu	Vidushan	Perera	lakindu321@gmail.com	2000-03-25	22	345/21, Sooriyapaluwa, Ragama
4	DLE000004	Cham123@	D04	198042158321	Ishini	Sulali	Perera	ishiniperera@gmail.com	1980-04-21	42	32-B, Main Road, Belummahara
5	DLE000005	Ishan415	D01	199931152487	Ishan	Chamika	Ranasinghe	ishanjkl@gmail.com	1999-03-15	23	321/56, Pansala Road, Matara

05.EmployeePhoneNumbers

	EmployeeAccountID	PhoneNumber
1	DLE000001	0332277851
2	DLE000001	0712224511
3	DLE000002	0715326712
4	DLE000003	0754223961
5	DLE000004	0714567841
6	DLE000004	0722241960
7	DLE000005	0332277851
8	DLE000005	0412347654
9	DLE000005	0712169315

06.EmployeeQualifications

	EmployeeAccountID	Qualification
1	DLE000001	Dip. in Business Management
2	DLE000001	Dip. in Finance Management
3	DLE000002	B.Sc(Sp) in Information Technology
4	DLE000003	B.Sc(Sp) in Accounting
5	DLE000004	BA(Sp) in Economics
6	DLE000004	M.Sc in Business Administration
7	DLE000005	Certificate in Information Technology.

07.Property

	PropertyID	DepartmentID	CustomerAccountID	PropertyType	Province	District	Town
1	DLP0001	D01	DLC000001	Apartment	Western	Gampaha	Kadawatha
2	DLP0002	D01	DLC000002	Home	Southern	Galle	Kokmaduwa
3	DLP0003	D01	DLC000003	Home	Central	Kandy	Peradeniya
4	DLP0004	D01	DLC000004	Land	Western	Colombo	Nugegoda
5	DLP0005	D01	DLC000001	Land	North	Jaffna	Jaffna

08.PropertyFeatures

	PropertyID	DepartmentID	Feature
1	DLP0001	D01	3 Phase Electricity
2	DLP0001	D01	4 Rooms
3	DLP0001	D01	Near to Jaffna Town
4	DLP0001	D01	Near to Kadawata Town
5	DLP0001	D01	Water Supply
6	DLP0002	D01	3 Rooms
7	DLP0002	D01	Near to Gall Expressway Interchange
8	DLP0002	D01	Water Supply
9	DLP0003	D01	25 Perches
10	DLP0003	D01	Near to Kandy Town
11	DLP0004	D01	5 Rooms
12	DLP0004	D01	A/C
13	DLP0004	D01	High Luxery Home
14	DLP0005	D01	100 Perch

09.Invoice

	InvoiceNumber	CustomerAccountID	DepartmentID	IssuedDate	Description	Price	Discount	Tax	Balance
1	I0001	DLC000001	D02	2022-04-10	Apartment	14500000.00	NULL	NULL	14500000.00
2	I0002	DLC000002	D02	2022-04-11	Home	1650000.00	NULL	NULL	1650000.00
3	I0003	DLC000003	D02	2022-04-12	Land	1890000.00	NULL	NULL	1890000.00
4	I0004	DLC000004	D02	2022-05-10	Home	1420000.00	NULL	NULL	1420000.00
5	I0005	DLC000005	D02	2022-05-12	Land	1420000.00	NULL	500000.00	1920000.00

The End.