Task 1 ii)

MySQL DDL

CREATE DATABASE IF NOT EXISTS FinalProject;

USE FinalProject;

CREATE TABLE IF NOT EXISTS Employee

(

EmployeeID INT NOT NULL PRIMARY KEY AUTO\_INCREMENT,

Name VarChar(50),

Job VarChar(30),

UserName VarChar(30)

);

CREATE TABLE IF NOT EXISTS Customer

(

CustomerID INT NOT NULL PRIMARY KEY AUTO\_INCREMENT,

Name VarChar(50)

);

CREATE TABLE IF NOT EXISTS Address

(

AddressID int PRIMARY KEY AUTO\_INCREMENT,

Address VarChar(100),

AddressType VarChar(50)

);

CREATE TABLE IF NOT EXISTS Contract

(

ContractID int PRIMARY KEY AUTO\_INCREMENT,

ContractNumber VarChar(30) NOT NULL,

Initial\_Meter\_Reading decimal(10,2),

BillingRate decimal(10,2),

MeterID int NOT NULL

);

CREATE TABLE IF NOT EXISTS Meter

(

MeterID INT PRIMARY KEY AUTO\_INCREMENT,

MeterNumber int

);

CREATE TABLE IF NOT EXISTS Bill

(

BillId INT NOT NULL PRIMARY KEY AUTO\_INCREMENT,

BillNumber varchar(20),

BillDate Date not null,

Balance decimal(10, 2),

Consumption decimal(10, 2),

Cost decimal(10, 2),

MeterReadingID int NOT NULL,

CustomerContractAddrAssocID int NOT NULL

);

CREATE TABLE IF NOT EXISTS MeterReading

(

MeterReadingID INT NOT NULL PRIMARY KEY AUTO\_INCREMENT,

CurrReadingDate Date,

CurrMeterReading decimal(19, 2),

CustomerContractAddrAssocID int NOT NULL,

MeterID int not null,

CurrReederID int null,

PrevMeterReadingDate date,

PrevMeterReading decimal(19, 2),

PrevReederID int null,

Notes varchar(100)

);

CREATE TABLE IF NOT EXISTS Payments

(

PaymentID INT NOT NULL PRIMARY KEY AUTO\_INCREMENT,

Amount decimal(10, 2) not null,

PaymentDate date not null,

Method varchar(20) ,

BillID int not null,

CustomerContractAddrAssocID int not null

);

CREATE TABLE IF NOT EXISTS CustomerContractAddrAssoc

(

CustomerContractAddrAssocID int PRIMARY KEY AUTO\_INCREMENT,

ActivationDt date not null,

DeactivationDt date,

ContractID int not null,

AddressID int not null,

CustomerID int not null

);

-- now adding in foreign keys once tables have been created

ALTER TABLE CustomerContractAddrAssoc

ADD CONSTRAINT FK\_CustomerContractAddrAssoc\_AddressID

FOREIGN KEY (AddressID) REFERENCES Address(AddressID);

ALTER TABLE CustomerContractAddrAssoc

ADD CONSTRAINT FK\_CustomerContractAddrAssoc\_ContractID

FOREIGN KEY (ContractID) REFERENCES Contract(ContractID);

ALTER TABLE CustomerContractAddrAssoc

ADD CONSTRAINT FK\_CustomerContractAddrAssoc\_CustomerID

FOREIGN KEY (CustomerID) REFERENCES Customer(CustomerID);

ALTER TABLE Contract

ADD CONSTRAINT FK\_Contract\_MeterID

FOREIGN KEY (MeterID) REFERENCES Meter(MeterID);

ALTER TABLE MeterReading

ADD CONSTRAINT FK\_MeterReading\_MeterID

FOREIGN KEY (MeterID) REFERENCES Meter(MeterID);

ALTER TABLE MeterReading

ADD CONSTRAINT FK\_MeterReading\_CustomerContractAddrAssocID

FOREIGN KEY (CustomerContractAddrAssocID) REFERENCES CustomerContractAddrAssoc(CustomerContractAddrAssocID);

ALTER TABLE MeterReading

ADD CONSTRAINT FK\_MeterReading\_CurrReederID

FOREIGN KEY (CurrReederID) REFERENCES Employee(EmployeeID);

ALTER TABLE MeterReading

ADD CONSTRAINT FK\_MeterReading\_PrevReederID

FOREIGN KEY (PrevReederID) REFERENCES Employee(EmployeeID);

ALTER TABLE Bill

ADD CONSTRAINT FK\_Bill\_MeterReadingID

FOREIGN KEY (MeterReadingID) REFERENCES MeterReading(MeterReadingID);

ALTER TABLE Bill

ADD CONSTRAINT FK\_Bill\_CustomerContractAddrAssocID

FOREIGN KEY (CustomerContractAddrAssocID) REFERENCES CustomerContractAddrAssoc(CustomerContractAddrAssocID);

ALTER TABLE Payments

ADD CONSTRAINT FK\_Payments\_CustomerContractAddrAssocID

FOREIGN KEY (CustomerContractAddrAssocID) REFERENCES CustomerContractAddrAssoc(CustomerContractAddrAssocID);

ALTER TABLE Payments

ADD CONSTRAINT FK\_Payments\_BillIDemployee

FOREIGN KEY (BillID) REFERENCES Bill(BillID);

SHOW TABLES;