ITC 6000 - Database Management System
Signature Assignment #4
SQL Complex Query Practice

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Signature Assignment #4

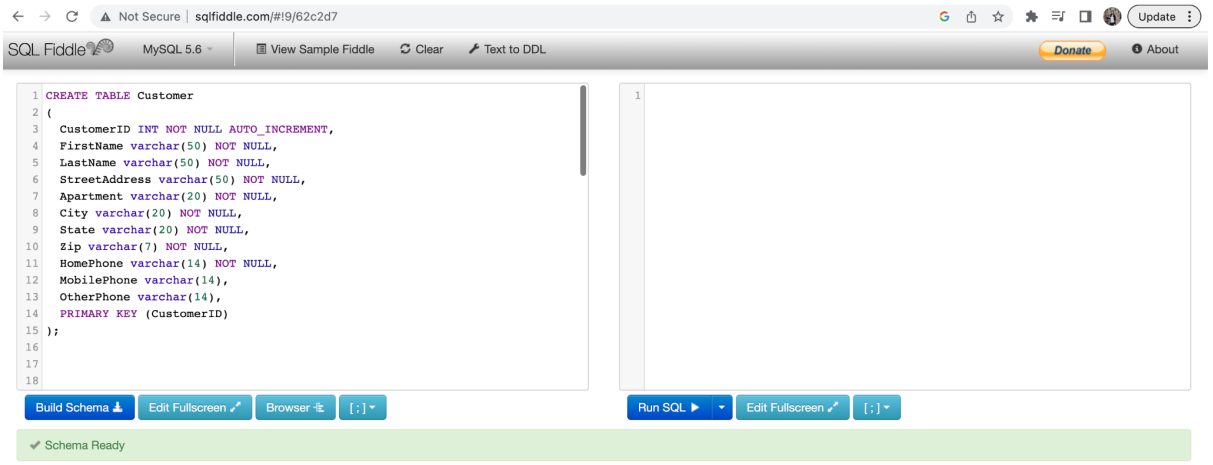
SQL Complex Query Practice

Based on the ER model created for Donut Shop, the following SQL Complex Query Practice has been written in SQL Fiddle platform.

A. Provide the SQL code that inserts data into all of the tables

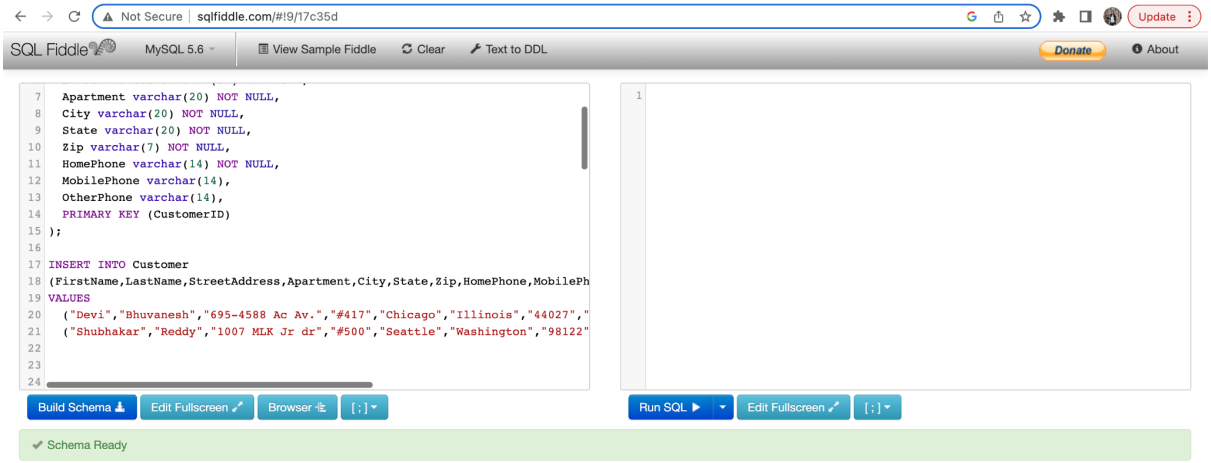
CUSTOMER TABLE

CREATE TABLE Customer (CustomerID INT NOT NULL AUTO_INCREMENT, FirstName varchar(50) NOT NULL, LastName varchar(50) NOT NULL, StreetAddress varchar(50) NOT NULL, Apartment varchar(20) NOT NULL, City varchar(20) NOT NULL, State varchar(20) NOT NULL, Zip varchar(7) NOT NULL, HomePhone varchar(14) NOT NULL, MobilePhone varchar(14), OtherPhone varchar(14), PRIMARY KEY (CustomerID));



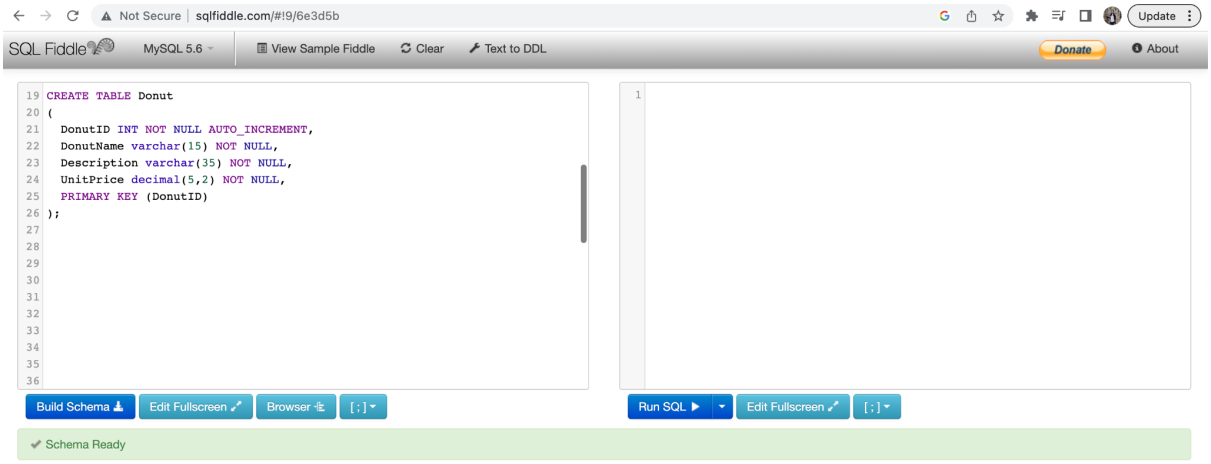
INSERT VALUES INTO CUSTOMER TABLE

INSERT INTO Customer (FirstName,LastName,StreetAddress,Apartment,City,State,Zip, HomePhone,MobilePhone,OtherPhone)
VALUES
("Devi","Bhuvanesh","695-4588 Ac Av.","#417","Chicago","Illinois","44027", "456-000-3982","91-8778588654","91-9840624903"),
("Shubhakar","Reddy","1007 MLK Jrdr","#500","Seattle","Washington","98122", "206-000-3982", "098-111325646","098-3234532145");



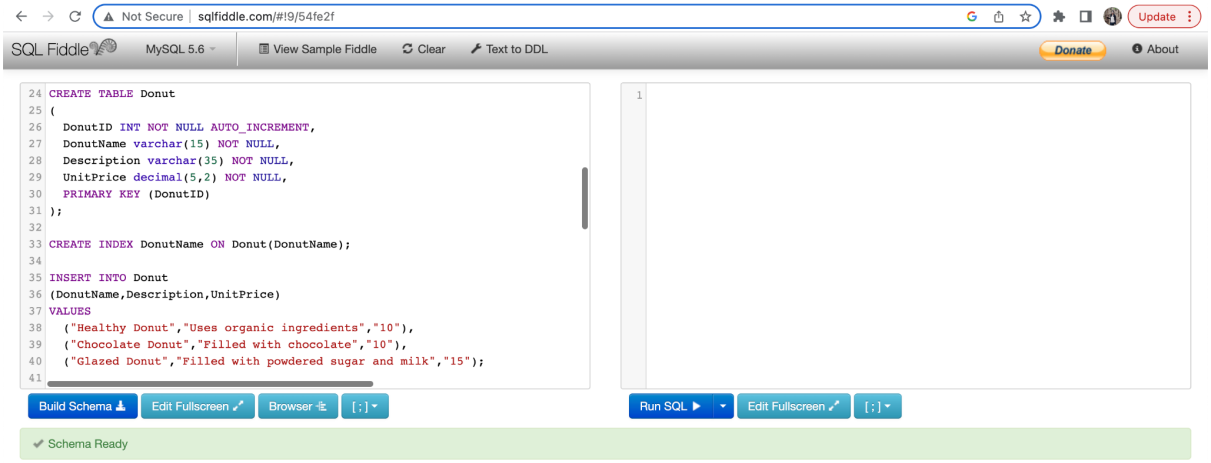
DONUT TABLE

CREATE TABLE Donut (DonutID INT NOT NULL AUTO_INCREMENT, DonutName varchar(15) NOT NULL, Description varchar(35) NOT NULL, UnitPrice decimal(5,2) NOT NULL, PRIMARY KEY (DonutID));



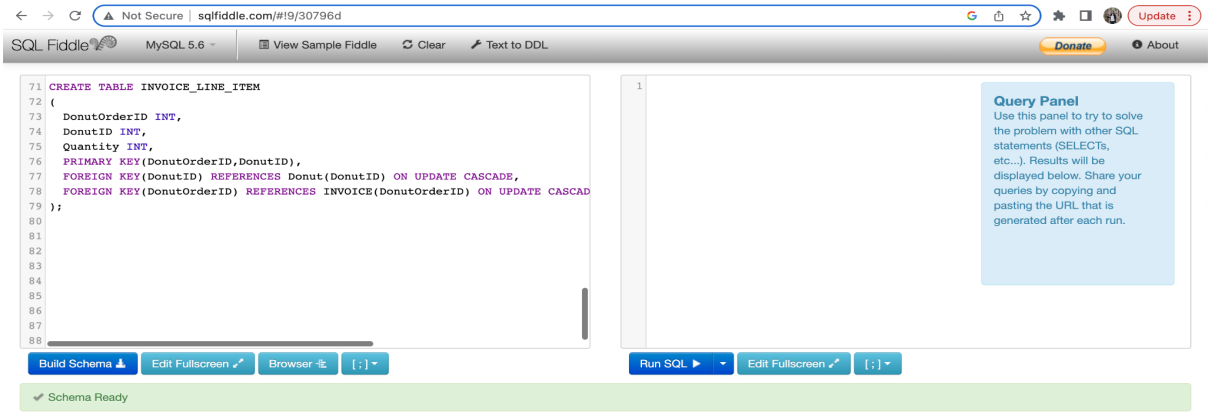
INSERT VALUES INTO DONUT TABLE

INSERT INTO Donut (DonutName,Description,UnitPrice)
VALUES
("Healthy Donut","Uses organic ingredients","10"),
("Chocolate Donut","Filled with chocolate","10"),
("Glazed Donut","Filled with powdered sugar and milk","15");



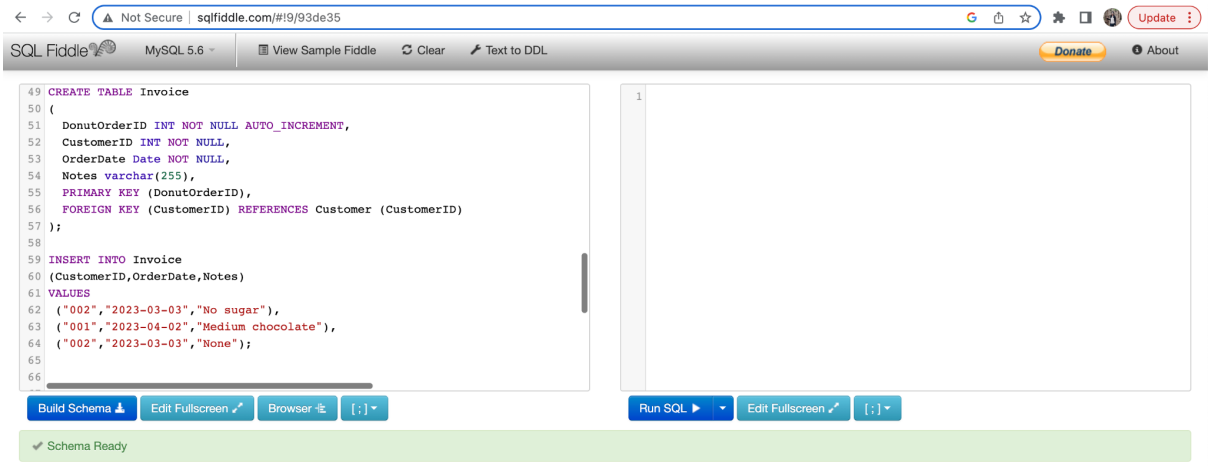
INVOICE TABLE

CREATE TABLE Invoice (DonutOrderID INT NOT NULL AUTO_INCREMENT, CustomerID INT NOT NULL, OrderDate Date NOT NULL, Notes varchar(255), PRIMARY KEY (DonutOrderID), FOREIGN KEY (CustomerID) REFERENCES Customer (CustomerID));



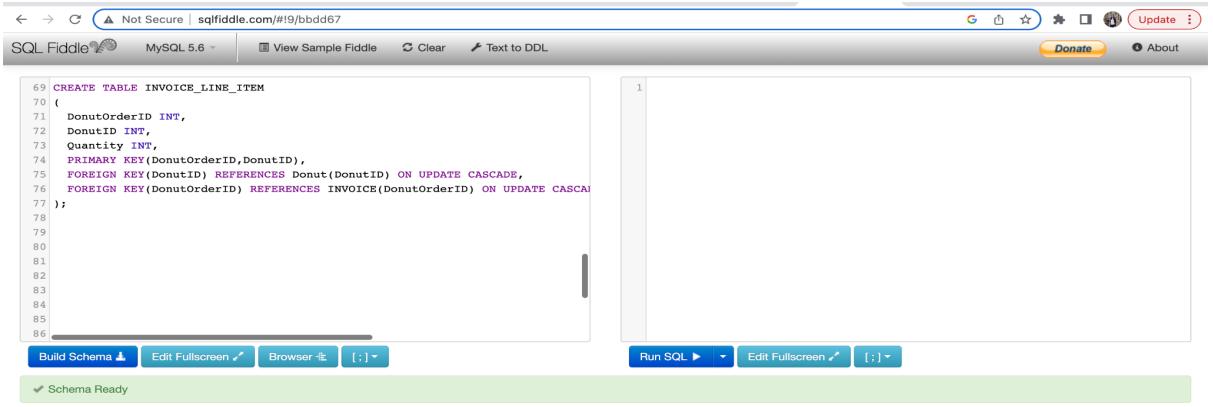
INSERT VALUES INTO INVOICE TABLE

INSERT INTO Invoice (CustomerID,OrderDate,Notes)
VALUES
("002","2023-03-03","No sugar"),
("001","2023-04-02","Medium chocolate"),
("002","2023-03-03","None");



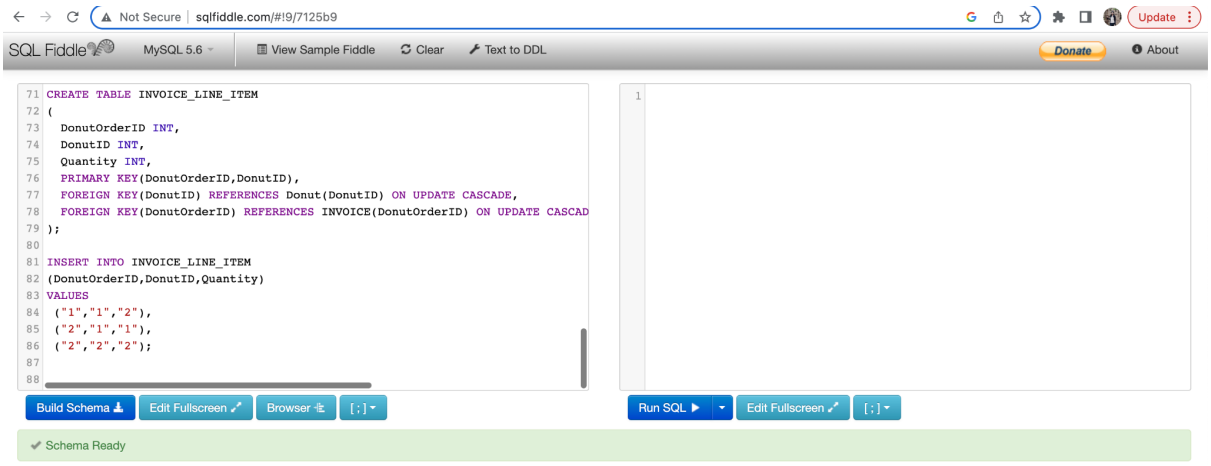
INVOICE_LINE_ITEM TABLE

CREATE TABLE INVOICE_LINE_ITEM (DonutOrderID INT, DonutID INT, Quantity INT, PRIMARY KEY(DonutOrderID,DonutID), FOREIGN KEY(DonutID) REFERENCES Donut(DonutID) ON UPDATE CASCADE, FOREIGN KEY(DonutOrderID) REFERENCES INVOICE(DonutOrderID) ON UPDATE CASCADE);



INSERT VALUES INTO INVOICE_LINE_ITEM

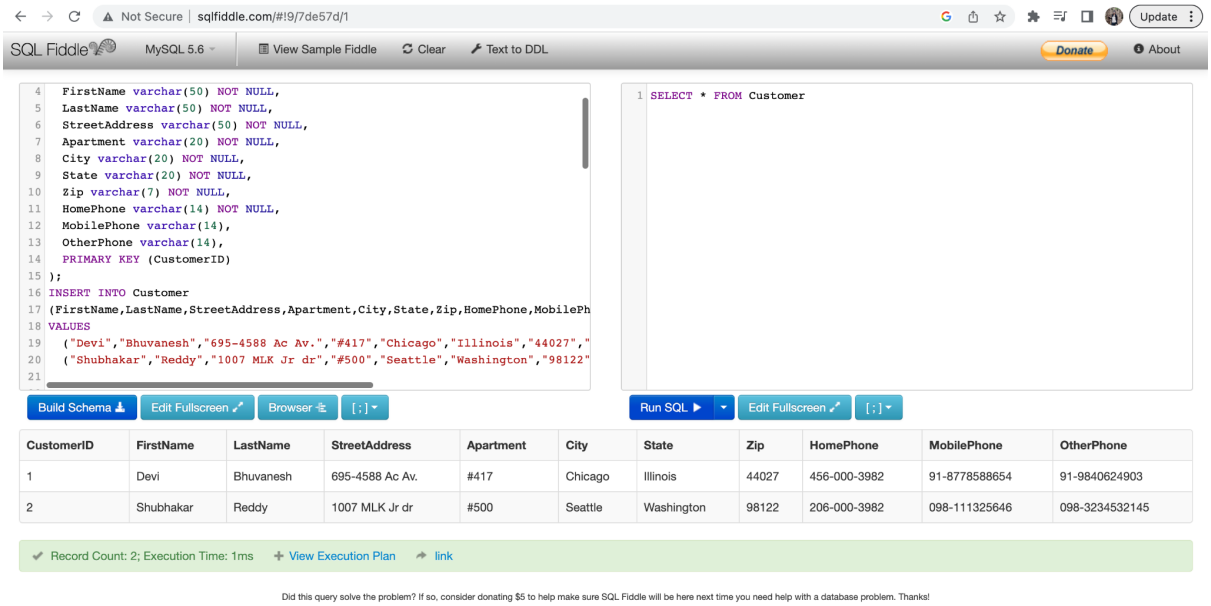
INSERT INTO INVOICE_LINE_ITEM (DonutOrderID,DonutID,Quantity)
VALUES
("1","1","2"),
("2","1","1"),
("2","2","2");



B. Provide SQL Code for simple queries to display all data in each table created

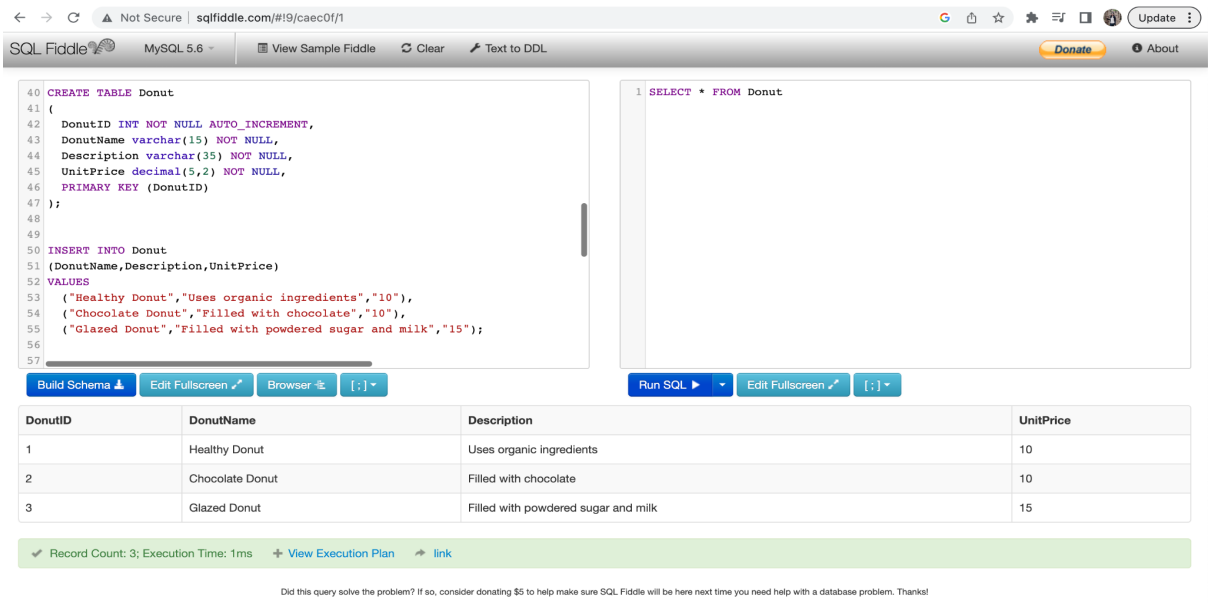
To view Customer Table

SELECT * FROM Customer



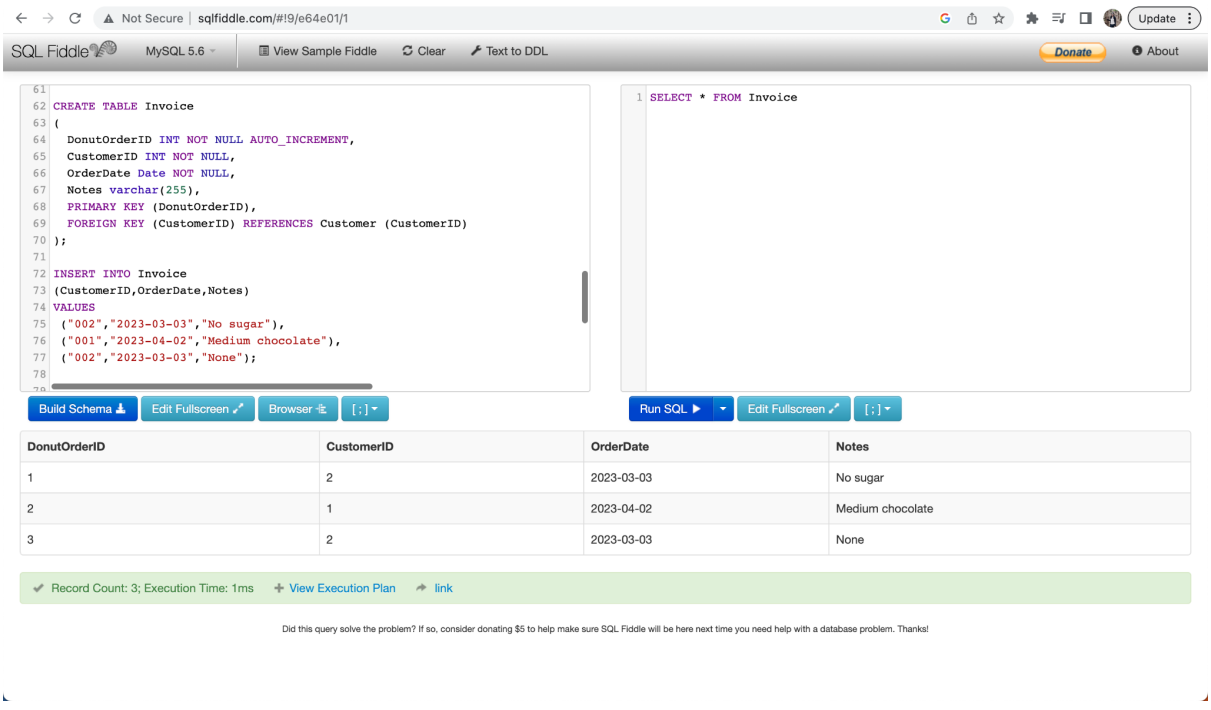
To view Donut Table

SELECT * FROM Donut

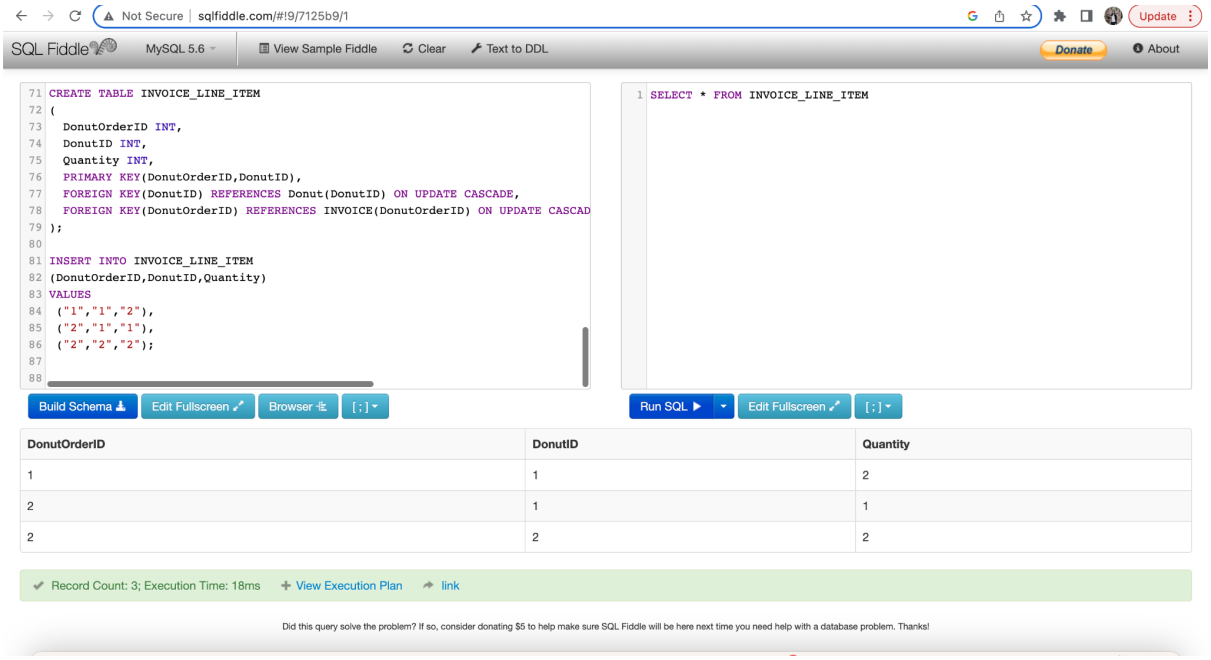


To view Invoice Table

SELECT * FROM Invoice

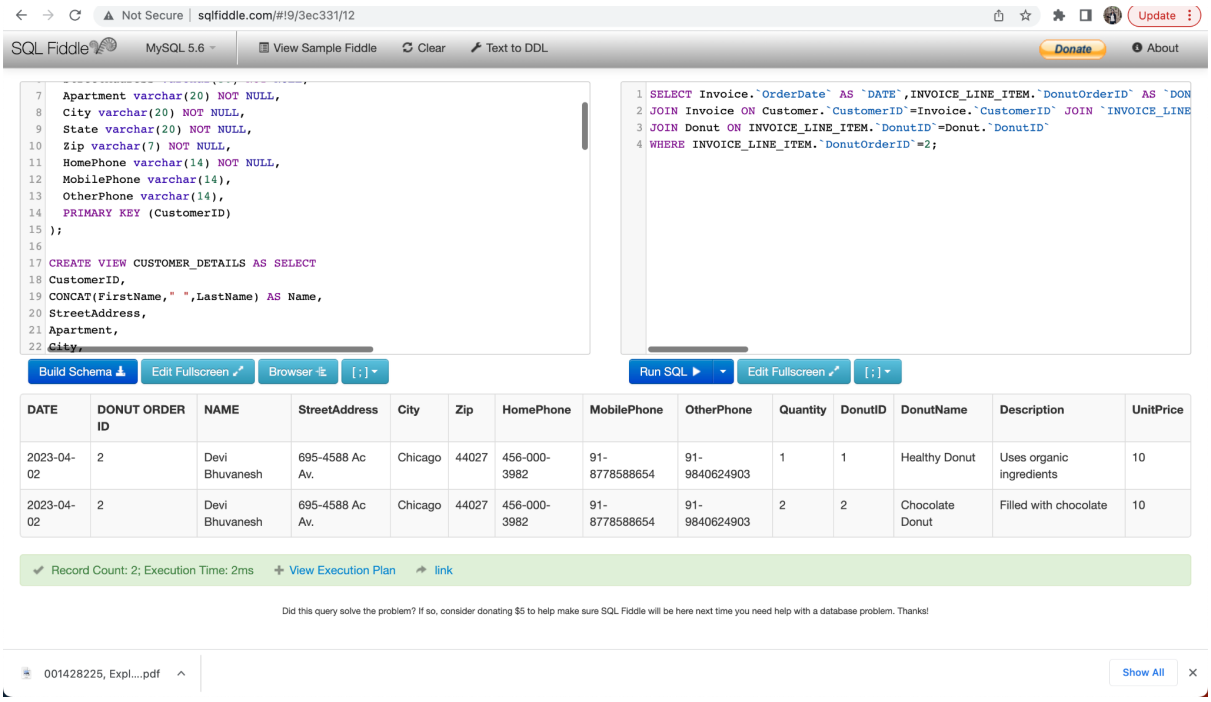


To view INVOICE_LINE_ITEM Table
SELECT * FROM INVOICE_LINE_ITEM



C. Provide the SQL code for a complex join query to display all of the information contained in the attached "Sales Order Form."

SELECT Invoice.`OrderDate` AS `DATE`,INVOICE_LINE_ITEM.`DonutOrderID` AS `DONUT ORDER ID`,CONCAT(Customer.`FirstName`,' ',CUSTOMER.`LastName`) AS NAME, Customer.`StreetAddress`, Customer.`City`, Customer.`Zip`, Customer.`HomePhone`, Customer.`MobilePhone`, Customer.`OtherPhone`,INVOICE_LINE_ITEM.`Quantity`, INVOICE_LINE_ITEM.`DonutID`,Donut.`DonutName`,Donut.`Description`,Donut.`UnitPrice` FROM Customer
JOIN Invoice ON Customer.`CustomerID`=Invoice.`CustomerID` JOIN `INVOICE_LINE_ITEM` ON Invoice.`DonutOrderID` = INVOICE_LINE_ITEM.`DonutOrderID`
JOIN Donut ON INVOICE_LINE_ITEM.`DonutID`=Donut.`DonutID`
WHERE INVOICE_LINE_ITEM.`DonutOrderID`=2;



DATE	DONUT ORDER ID	NAME	StreetAddress	City	Zip	HomePhone	MobilePhone	OtherPhone	Quantity	DonutID	DonutName	Description	UnitPrice
2023-04-02	2	Devi Bhuvanesh	695-4588 Ac Av.	Chicago	44027	456-000-3982	91-8778588654	91-9840624903	1	1	Healthy Donut	Uses organic ingredients	10
2023-04-02	2	Devi Bhuvanesh	695-4588 Ac Av.	Chicago	44027	456-000-3982	91-8778588654	91-9840624903	2	2	Chocolate Donut	Filled with chocolate	10

Record Count: 2; Execution Time: 2ms View Execution Plan link

Did this query solve the problem? If so, consider donating $5 to help make sure SQL Fiddle will be here next time you need help with a database problem. Thanks!