**CS3320.001 - INTERNET SOFTWARE DEVELOPMENT**

**Fall 2018 – Assignment 4**

**Due Date: November 4, 2018**

**Description:**

A partner of your company has requested to build a software application that will predict the rate of the fuel based on the following criteria:

* Location
* Competitors rate
* Client rate history
* Client rate negotiation history
* Gallons requested
* Company profit margin (%)
* Seasonal rate fluctuation (%)

**Architecture:**

Persistence

Backend

Web

User Interface

Insert / update

Controller

Database

request

retreive

response

Pricing Module

Service

**Deliverables:**

* In this assignment we will store and retrieve data from database.
* Use this MySQL schema to create database. This should work with other databases too.

create database CS3320;

-- client table

CREATE TABLE IF NOT EXISTS clientInformation (

clientId INT AUTO\_INCREMENT PRIMARY KEY,

fullName VARCHAR(255) NOT NULL,

address VARCHAR(255) NOT NULL,

city VARCHAR (100) NOT NULL,

state VARCHAR (2) NOT NULL,

zipCode VARCHAR (10) NOT NULL,

phone VARCHAR (10) NOT NULL,

email VARCHAR (255) NOT NULL

);

-- Quote Table

CREATE TABLE IF NOT EXISTS fuelQuote (

quoteId INT AUTO\_INCREMENT PRIMARY KEY,

clientId INT NOT NULL,

gallonsRequested double,

requestDate datetime,

deliveryDate datetime,

deliveryAddress VARCHAR (255) NOT NULL,

deliveryCity VARCHAR (100) NOT NULL,

deliveryState VARCHAR (2) NOT NULL,

deliveryZipCode VARCHAR (10) NOT NULL,

deliveryContactName VARCHAR (255) NOT NULL,

deliveryContactPhone VARCHAR (10) NOT NULL,

deliveryContactEmail VARCHAR (255) NOT NULL,

suggestedPrice double,

totalAmountDue double,

CONSTRAINT FK\_clientId FOREIGN KEY (clientId) REFERENCES clientInformation(clientId)

);

-- test data

INSERT INTO clientInformation (fullName, address, city, state, zipCode, phone, email)

VALUES ('Raj Singh', '123 Main Street', 'Austin', 'TX', '78701', '2101234567', 'testemail@test.com');

INSERT INTO fuelQuote (clientId, gallonsRequested, requestDate, deliveryDate, deliveryAddress, deliveryCity, deliveryState, deliveryZipCode, deliveryContactName, deliveryContactPhone, deliveryContactEmail, suggestedPrice, totalAmountDue)

VALUES (1, 1000.0, '2018-10-20', '2018-10-30', '123 Main Street', 'Austin', 'TX', '78701', 'Raj Singh', '2101234567', 'testemail@test.com', 2.59, 2590.0);

* Insert some test data to these tables using insert statements, see example.
* Complete the code to make database connection from your application.
* Retrieve data from database and display client information and quote history.
* You should be able to update client information if data exists. If data doesn’t exist then create new record in database when user clicks save.
* Create few quotes using Quotes page. Then display quote history. We should be able to see all quotes under history.
* NOTE: Suggested Price will be coming from a different module that you will develop during project. For this assignment, make it user entry.

IMPORTANT: Submit just the code. Create a word/pdf doc that shows your code and sample output. These could be screenshots.

**Tools & Technologies:**

* You are free to use any tools and technologies.

**Submission:**

Submit your files to TRACS. If there are any instructions on how to use your application, then please provide a readme file.

**Notes:**

You and your partner should equally work on the assignment.