**Programming Scenario**

You are setting up an Access Database for a team that processes work request, each work request is assigned a ticket number and they are referred to as an "OPC", each OPC is identified with a subsequent number. Our users obtain work by pressing a "Get Next Button" on our application at which time the next available OPC will be assigned to them. An OPC ticket will refer to a Customer (this is inclusive of personal customer AND business customer if applicable). The customer can have several different types of accounts (chequing, savings, loans, etc), finally each one of those accounts will have transaction data (cash deposit, withdraw, transfer, etc). Our operations Dept. works out of Toronto and the Database server is located in London England, whenever a developer uses the "Now()" function they get the GMT date/time. Due to circumstances cases can only be marked completed the following day after 2pm as a 'cool off period' thus they press a "Defer" button which puts the item back into the Get Next queue until 2pm the next day.

Example:

OPC 20190505

Ticket opened on: Jan 1 2020

Opened by: phone channel

Account representative: Mickey Mouse

Personal Customer:

Name: Mr. Donald Duck

Age: 51

Gender: M

Occupation: Engineer

Bank Account(s):

Chequing: 111-99 (account number – branch)

Savings: 222 – 99 (account number – branch)

Business account:

Name: Duck Industries

Type of Business: Architecture firm

Registered in: Ontario

Opened Date: Jan 1, 1980.

Chequing: 333-99 (account number – branch)

Loan: 444 – 99 (account number – branch)

Transaction details on any account are as follows:

Description

Amount

Date/Time

**Question 1:** Database structuring – Illustrate how you would organize the above example into a database, illustrate how you would connect the data (if someone was looking at the OPC ticket how they would be able to identify any part of the related data.

(you may use whatever method you want such as: create a DB with the fields with or without the data, illustrate in Visio, Draw it in excel)

**Question 2:** Mock up a **Sequel** Query to select any transactions for greater than $10,000 for all of Mr. Ducks' accounts

**Question 3:** In the example how would you program the "Defer" button so that the OPC is kept in the queue until 2pm the next day? (using **SQL or VBA** functions)