Practical 03 – Example 03

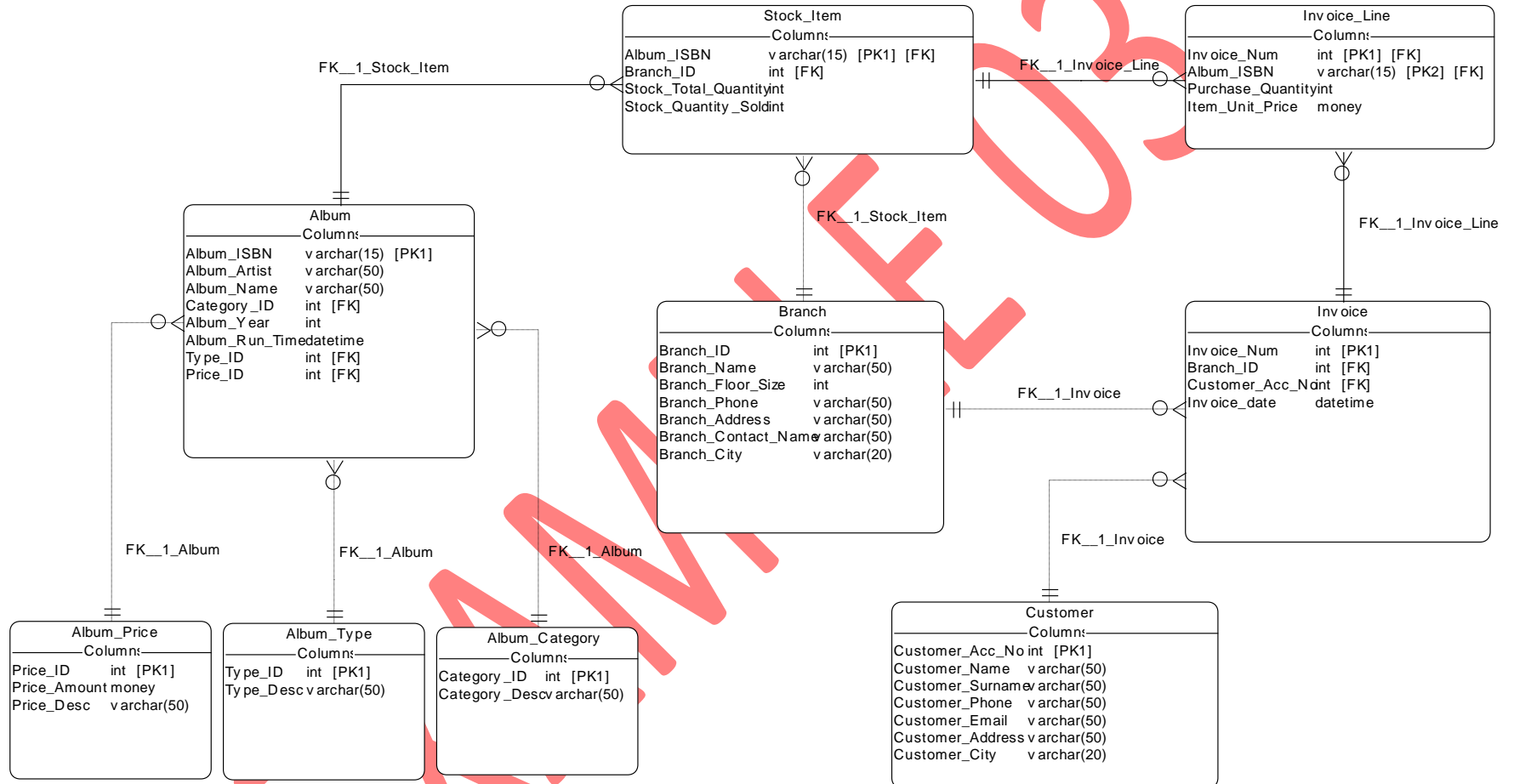## Data Manipulation (10 marks)

Important Notes:

1. Bring the following to the practical session:
   a. The Practical Textbook and/or the lecture notes for the exercise class in which the exercise was explained

2. SQL scripts are what is marked
   a. Scripts which run and perform what they are supposed to do get full marks
   b. Scripts which do not run will be marked on their own merit

3. Please refer to Hotek Chapter 10, as well as the class notes (04SQLCh08.pdf) on ClickUP for examples on generic structures as well as specific code.

CONTEXT:

The practical exercise is based on the MusicologyWarehouse database. Run the **03Prac – MusicologyWarehouse.sql** script to create and populate the database.

Physical Database Scheme – Musicology Warehouse

Stock_Item

Columns

Album_ISBN	varchar(15) [PK1] [FK]
Branch_ID	int [FK]
Stock_Total_Quantity	int
Stock_Quantity_Sold	int

Invoice_Line

Columns

Invoice_Num	int [PK1] [FK]
Album_ISBN	varchar(15) [PK2] [FK]
Purchase_Quantity	int
Item_Unit_Price	money

FK__1_Stock_Item

FK__1_Invoice_Line

FK__1_Stock_Item

FK__1_Invoice_Line

Album

Columns

Album_ISBN	varchar(15) [PK1]
Album_Artist	varchar(50)
Album_Name	varchar(50)
Category_ID	int [FK]
Album_Year	int
Album_Run_Time	datetime
Type_ID	int [FK]
Price_ID	int [FK]

Branch

Columns

Branch_ID	int [PK1]
Branch_Name	varchar(50)
Branch_Floor_Size	int
Branch_Phone	varchar(50)
Branch_Address	varchar(50)
Branch_Contact_Name	varchar(50)
Branch_City	varchar(20)

Invoice

Columns

Invoice_Num	int [PK1]
Branch_ID	int [FK]
Customer_Acc_No	int [FK]
Invoice_date	datetime

FK__1_Invoice

FK__1_Album

FK__1_Album

FK__1_Album

FK__1_Invoice

Album_Price

Columns

Price_ID	int [PK1]
Price_Amount	money
Price_Desc	varchar(50)

Album_Type

Columns

Type_ID	int [PK1]
Type_Desc	varchar(50)

Album_Category

Columns

Category_ID	int [PK1]
Category_Desc	varchar(50)

Customer

Columns

Customer_Acc_No	int [PK1]
Customer_Name	varchar(50)
Customer_Surname	varchar(50)
Customer_Phone	varchar(50)
Customer_Email	varchar(50)
Customer_Address	varchar(50)
Customer_City	varchar(20)

Queries – Musicology Warehouse

1. In response to a customer's enquiry, the sales assistant needs a list of albums which were produced before the year 2000. Write an SQL query that will show the album name, artist and album year for all albums produced before 2000. Test the query and save it as 03Prac - Query1.sql. **[1]**

2. The marketing division wants a list of customers who live in Pretoria or Polokwane. Write an SQL query that will show the customer name, surname, phone number, address, e-mail address and city for the required customers. Test the query and save it as 03Prac – Query2.sql. **[1]**

3. The accountant wants a list of all invoices that have been issued this year (2007). Write an SQL query that will show the invoice number, branch id, customer account number and invoice date for all 2007 invoices. You must use the BETWEEN operator for the query. Test the query and save it as 03Prac – Query3.sql. **[1]**

4. The mail server administrator wants a list of all customers whose email address is in the tuks.com domain. Write an SQL query that will show the customer name, surname, phone number, address, e-mail address for the required .Test the query and save it as 03Prac – Query4.sql. **[1]**

5. In response to a customer's enquiry, the sales assistant needs a list of albums by Bob Marley in the 1970s. Write an SQL query that will show the album name, artist and album year for all albums by Bob Marley that were produced in the 1970s. Test the query and save it as 03Prac – Query5.sql **[2]**

6. In response to a customer's enquiry, the sales assistant needs a list of albums that play for less than one hour and are by either Justine Timberlake or Andrea Bocelli. Write an SQL query that will show the album name, artist and playing time for all albums by Justine Timberlake or Andrea Bocelli, that play for under one hour. Test the query and save it as 03Prac – Query6.sql **[2]**

7. The marketing division wants a list of all the branches that are not in Pretoria or Johannesburg, and have a shop floor size of more than 50 sqm. Write an SQL query that will show the branch name, floor size, phone number, contact person and city for the required branches. Test the query and save it as 03Prac – Query7.sql. **[2]**

TOTAL [10]