Database Management System (DBMS)

Lab Assignment- 4

Date of assignment: 12th Feb 2020 **Instructor: Dr. Ranjana Vyas**

Note: 1) All Assignments should be done independently.

2) **Perform the following queries on the previous tables. Uses join operation if needed.**

*****USE INSERT INTO Table (Column1, Column2) VALUES (Value1, Value2), (Value1, Value2) for multiple insertions at a time.**

Q1. Perform following operations.

CustomerID	CustomerName	ContactName	Address	City	PostalCode	Country
1	Alfreds Futterkiste	Maria Anders	Obere Str. 57	Berlin	12209	Germany
2	Ana Trujillo Emparedados y helados	Ana Trujillo	Avda. de la Constitución 2222	México D.F.	05021	Mexico
3	Antonio Moreno Taquería	Antonio Moreno	Mataderos 2312	México D.F.	05023	Mexico
4	Around the Horn	Thomas Hardy	120 Hanover Sq.	London	WA1 1DP	UK
5	Berglunds snabbköp	Christina Berglund	Berguvsvägen 8	Luleå	S-958 22	Sweden

a. selects all customers with a City starting with the letter "M"?

b. selects all customers with a City containing the pattern "ex"?

c. selects all customers with a City of "Berlin" or "London" ?

Table 1 :-

CustomerID	CustomerName	ContactName	Address	City	PostalCode	Country
1	Alfreds Futterkiste	Maria Anders	Obere Str. 57	Berlin	12209	Germany
2	Ana Trujillo Emparedados y helados	Ana Trujillo	Avda. de la Constitución 2222	México D.F.	05021	Mexico
3	Antonio Moreno Taquería	Antonio Moreno	Mataderos 2312	México D.F.	05023	Mexico

Table 2:-

OrderID	CustomerID	EmployeeID	OrderDate	ShipperID
10308	2	7	1996-09-18	3
10309	37	3	1996-09-19	1
10310	77	8	1996-09-20	2

Perform operations on Table 1 and Table 2 :-

a. Left join
b. inner join
c. Right join
d. full join

Q3. **In this assignment you will build a sample database similar to the preferred solution for**

Assignment 2. You will create the tables in Oracle, add sample data and create several queries and a report.

Step 1:

DATABASE TABLES:

Campus (CampusID, CampusName, Street, City, State, Zip, Phone, CampusDiscount)

Position (PositionID, Position, YearlyMembershipFee)

Members (MemberID, LastName, FirstName, CampusAddress, CampusPhone, CampusID, PositionID,

ContractDuration)
FK CampusID --> Campus(CampusID)
PositionID --> Position(PositionID)

Prices (FoodItemTypeID, MealType, MealPrice)

FoodItems (FoodItemID, FoodItemName, FoodItemTypeID)

FK FoodItemTypeID --> Prices(FoodItemTypeID)

Orders (OrderID, MemberID, OrderDate)

FK MemberID --> Members(MemberID)

OrderLine (OrderID, FoodItemsID, Quantity)

FK OrderID --> Orders(OrderID)
FoodItemsID --> FoodItems(FoodItemID)

STRUCTURE NOTES:

Use the proper naming convention for your constraints:

Example: Constraint TableName_FieldName_ConstraintID (Campus_CampusID_PK) Set up the Primary Keys for each table with Constraints listed.

Note: The OrderLine Table has a composite Primary Key

Add Your Foreign Keys for each table with your Constraints listed.

Set up your Sequence for the Prices table ONLY. Remember to follow the proper naming convention.

The Sequence will be used in the insert commands to add your auto numbering into the Primary Key (FoodItemTypeID) fields. Name the Sequence "Prices_FoodItemID_Seq"

Make the Data Types for all the Primary Keys and their corresponding Foreign Keys Varchar2(5). Make the Data Type for OrderDate Varchar2(25).

Make the Data Types for the MealPrice and YearlyMembershipFee Decimal, 7 digits maximum with 2 digits to the right of the decimal place, so that we can perform calculations on them.
Make the Data Types for ContractDuration, and Quantity Integer with 3 digits maximum for calculation purposes.
Make the Data Type for CampusDiscount Decimal, 2 digits maximum with 2 digits to the right of the decimal place.

Step 2.

Use the Insert Into Command to add your data to each table. Add data to your primary tables first and then to your secondary tables. Also, remember to use the sequence code with your insert statement to add the auto number value to each primary key field.

DATA TO BE INSERTED:

Campus:

'1','IUPUI','425 University Blvd.','Indianapolis', 'IN','46202', '317-274-4591',.08
'2','Indiana University','107 S. Indiana Ave.','Bloomington', 'IN','47405', '812-855-4848',.07
'3','Purdue University','475 Stadium Mall Drive','West Lafayette', 'IN','47907', '765-494-1776',.06

Position:

'1','Lecturer', 1050.50
'2','Associate Professor', 900.50
'3','Assistant Professor', 875.50
'4','Professor', 700.75

'5','Full Professor', 500.50

Members:

'1','Ellen','Monk','009 Purnell', '812-123-1234', '2', '5', 12
'2','Joe','Brady','008 Statford Hall', '765-234-2345', '3', '2', 10
'3','Dave','Davidson','007 Purnell', '812-345-3456', '2', '3', 10
'4','Sebastian','Cole','210 Rutherford Hall', '765-234-2345', '3', '5',
10 '5','Michael','Doo','66C Peobody', '812-548-8956', '2', '1', 10
'6','Jerome','Clark','SL 220', '317-274-9766', '1', '1', 12
'7','Bob','House','ET 329', '317-278-9098', '1', '4', 10
'8','Bridget','Stanley','SI 234', '317-274-5678', '1', '1', 12
'9','Bradley','Wilson','334 Statford Hall', '765-258-2567', '3', '2', 10

Prices: Note - Remember that these Primary Key Values should be entered using the Sequence (autonumber)

'1','Beer/Wine', 5.50
'2','Dessert', 2.75
'3','Dinner', 15.50
'4','Soft Drink', 2.50
'5','Lunch', 7.25

FoodItems:

'10001','Lager', '1'
'10002','Red Wine', '1'
'10003','White Wine',
'1' '10004','Coke', '4'
'10005','Coffee', '4'

'10006','Chicken a la King',
'3' '10007','Rib Steak', '3'
'10008','Fish and Chips', '3'
'10009','Veggie Delight', '3'
'10010','Chocolate Mousse',
'2' '10011','Carrot Cake', '2'
'10012','Fruit Cup', '2'
'10013','Fish and Chips', '5'
'10014','Angus Beef Burger',
'5' '10015','Cobb Salad', '5'

Orders:

'1', '9', 'March 5, 2005'
'2', '8', 'March 5, 2005'
'3', '7', 'March 5, 2005'
'4', '6', 'March 7, 2005'
'5', '5', 'March 7, 2005'
'6', '4', 'March 10, 2005'
'7', '3', 'March 11, 2005'
'8', '2', 'March 12, 2005'
'9', '1', 'March 13, 2005'

OrderLine:

'1','10001',1
'1','10006',1
'1','10012',1
'2','10004',2
'2','10013',1
'2','10014',1
'3','10005',1
'3','10011',1
'4','10005',2
'4','10004',2
'4','10006',1
'4','10007',1
'4','10010',2
'5','10003',1
'6','10002',2
'7','10005',2
'8','10005',1
'8','10011',1
'9','10001',1

Step 3.

Create the queries listed below:

This will allow you to see most, if not all, of your data without it wrapping.

1. Select all records from each table

2. List all of your constraints in the database
3. List all of your table names in the database
4. List your sequence name in the database

```
select sequence_name
from user_sequences;
```

5. List the Columns and Datatypes of each table
6. Create a listing of all Faculty Members (First and Last), their Faculty Position and the University that they are affiliated with (Name), along with their Monthly_Dues (Calculated Field with a column alias). Sort the records in descending order by University and then by Faculty's last name in ascending order.

7. Create a listing that shows the various food items that the faculty club serves (Name of the food item, type of food item and the price of the food item). Note: List no alcoholic beverages. Sort the records in ascending order by price.

8. List the OrderID, Order Date, Faculty Member's Name, Campus Name, each FoodItem that makes up a given order, the type of meal, cost of the meal, quantity ordered and the total line total (calculated field and column alias). Sort by Order IDs in descending order.