Assignment 1

BANA 273 Business Intelligence for Analytical Decisions

This assignment must be completed individually. Submit Word file to online drop box. Write your name in the Word file.

1. Given the following four tables:

Customer (CustID, CustName, AnnualRevenue, CustType)

Shipment (ShipmentNumber, CustID, Weight, TruckID, DestinationCity, ShipDate)

Truck (TruckID, DriverName)

City(CityName, Population)

The primary key has a solid underline and foreign key is highlighted.

Answer the following queries with SQL script. Use the tables provided above. Please use correct syntax. You do not need MS Access to answer this question. **DO NOT submit SQL copied from MS Access.**

1) List the names of drivers who have delivered shipments for customers with annual revenue over $25 million to cities with populations over 5 million.   1 point

2) How many packages weighing more than 4 pounds were sent to Los Angeles by customers having annual revenue greater than $500 million?   1 point

3) For customers who sent a shipment first to Irvine and another shipment later to New York, what is their name and annual revenue?   1 points

4) List the names of customers who shipped at least 5 packages, each weighing more than 5 pounds to Irvine.   1 point

----

To solve part 3 above, you need to review practice problem set 3 (solutions posted on Canvas).

I have copied and pasted the relevant parts below:

Frequent_flier(Name, ffID, City, Street, zip, miles)

Reservation(ResID, ffID, flightID, date1, class, price, seatID)

Flight(FlightID, Origin, Dest, DepTime, ArrTime, equipID)

Equipment(EquipID, Desc, numFClass, numEClass)

14.   The equipment that flies in to Irvine as flight 120, departs between 1600 and 1630 hours for which city?

SELECT f2.dest

FROM Flight AS f1, Flight AS f2

WHERE f1.equipID=f2.equipID AND f1.dest='Irvine' AND f1.flightID=120 AND f2.deptime>1600 AND f2.deptime<1630 AND f2.Origin='Irvine';

The keyword "AS", allows you to rename a table, in this case table "Flight" as "f1". It also allows you to make 2 copies of this table, one called f1 and another called f2. Once you have 2 copies, you can join the two tables as seen in query above.

----

 2. Consider the following table LoanApp.   2 points

Based on these contigency tables find the following parameters:

i. N[Income=low]

ii. N[Income=low, Approve=no]

iii. N[Liability=high]

iv. N[Liability=high, Approve=no]

v. P[Income=low]

vi. P[Income=low, Approve=no]

vii. P[Approve=no| Income=low]

viii. P[Approve=yes| Income=low]

ix. P[Liability=high]

x. P[Liability=high, Approve=no]

xi. P[Approve=no| Liability=high]

xii. P[Approve=yes| Liability=high]

Income	CreditRating	Liability	Default	Approve	
high	excellent	normal	true	yes	
high	excellent	normal	false	yes	
low	excellent	normal	true	no	
medium	good	normal	true	no	
medium	poor	high	true	no	
medium	poor	high	false	yes	
low	poor	high	false	no	
high	good	normal	true	yes	
high	poor	high	true	no	
medium	good	high	true	no	
high	good	high	false	no	
low	good	normal	false	no	
low	excellent	high	true	no	
medium	good	nomal	false	yes	

		Approve		
		no	yes	Total
Income	high	2	3	5
	low	4	0	4
	medium	3	2	5
	Total	9	5	14

3. (a) Find the information gain provided by the features Income and Liability on the goal Approve (compute I(Approve; Income) and I(Approve; Liability)).

2 points

(b) Find the gain ratio provided by the features Income and Liability on the goal Approve.

2 points