Kelli Kinnikin

Samantha Eidson

CIS330-01

HW #3

DUE DATE: 11-27-17

1.) Relational Algebra: A=P(Addresses), C=P(Customers), O=P(Orders), MO=P(made\_of)

πfname,lname,phoneNum(

SELECT C.fname,C.lname, C.phoneNum

FROM Customers as C

INNER JOIN Addresses A ON (C.AddressID = A.AddressID)

INNER JOIN Orders O ON (C.phoneNum = O.phoneNum)

INNER JOIN made\_of MO ON (O.itemName=MO.itemName)

WHERE A.state = 'Missouri' and MO.itemName='lettuce wrap';

2.) Relational Algebra: A=P(Addresses), C=P(Customers), O=P(Orders), MO=P(made\_of)

πfname,lname,phoneNum (

SELECT C.fname,Clname, C.phonenum

FROM Customers as C

INNER JOIN Addresses A ON (C.addressID = A.AddressID)

INNER JOIN Orders O ON (C.phoneNum = O.phoneNum)

INNER JOIN made\_of MO ON (O.itemName=MO.itemName)

WHERE A.state = 'Illinois' and MO.itemName='buffalo patty';

3.) πfname,lname,street,city,state,zip (

SELECT C.fname,C.lname, C.AddressID

FROM Customers as C

INNER JOIN Addresses A ON (C.AddressID = A.AddressID)

INNER JOIN Orders O ON (C.phoneNum = O.phoneNum)

INNER JOIN made\_of MO ON (O.itemName=MO.itemName)

WHERE MO.itemName NOT IN (

SELECT MO.itemName

FROM made\_of as MO

WHERE MO.itemName='Vegan Cheddar' OR MO.itemName='Gluten-free bun';

4.)

SELECT categoryName, MAX (C.itemName)

FROM Category as CA

GROUP BY categoryName;

5. )

SELECT AVG (O.itemName)

FROM Orders as O

INNER JOIN Customers as C ON (O.phoneNum=C.phoneNum)

WHERE O.itemName ='Buffalo patty' OR O.itemName='beef patty' OR O.itemName= 'turkey patty' OR O.itemName='veggie patty'

GROUP BY C.phoneNum;

6. )

SELECT C.fname,C.lname,COUNT(\*)

FROM Customers as C

INNER JOIN Orders O ON (C.phoneNum=O.phoneNum)

WHERE O.itemName ='buffalo patty' OR O.itemName='beef patty' OR O.itemName= ' turkey patty' OR O.itemName='veggie patty'

GROUP BY C.AddressID

HAVING COUNT(\*) >2;

7.)

SELECT Count (\*)

FROM Contains as CO, Category as CA

INNER JOIN Allergens as AL ON (Co.allergenName=Al.allergenName)

INNER JOIN Ingredients as I ON ( AL.categoryName= I.categoryName)

GROUP BY I.allergenName