**Homework 1**

Single table queries:

1. Write a query to display make, model, year1 and vin of all cars whose vin contains 'LP' anywhere in it. Sort the results in the descending order of year.

**Select make, model, year1, vin**

**From car\_cars**

**Where vin like %lp%**

**Order by year1 desc**

1. Write a query to find average video length of those videos whose rating is greater than or equal to 8. Name the column as video\_average.

**Select avg(video length) as video\_average**

**From video\_video**

**Where rate\_id >= 8**

1. Write a Query to find *c\_num* and *course\_name* for the courses having ‘database’ or ‘system’ in their course description from university\_courses table.

**select c\_num, course\_name**

**from university\_courses**

**where course\_name like ('%database%') or course\_name like ('%system%')**

1. Write a query to find *pur\_id, cus\_id* and *price\_paid* for the cars that are priced in the range of 10000 and 15000 from car\_purchases table.S ort the results by maximum price paid to minimum.

**select pur\_id,cus\_id,price\_paid**

**from car\_purchases**

**where price\_paid between 10000 and 15000**

**order by price\_paid desc**

Sub queries:

1. Write a query to display fname, lname, email\_address of the faculty who taught

Course number OMIS651 and stayed in 60115 zipcode area using subquery

**select fname, lname, email\_address**

**from university\_faculty**

**where zipcode = 60115 and fid in**

**(select fid**

**from university\_classes**

**where c\_num = 'omis651')**

1. Write a query to display all customer first and last names of those who lived in Aurora or Naperville

**select cus\_first, cus\_last**

**from car\_customer**

**where zipcode in**

**(select zipcode**

**from car\_zip**

**where city in( 'aurora') or city in ('Naperville'))**

Joins:

1. Write a query to display the city, state, number of customers in the city as num\_of\_customers from each city. Order by highest to lowest number of customers.

**select z.city, z.state , count (c.cus\_id) as no\_of\_customers**

**from car\_customer c, car\_zip z**

**where c.zipcode = z.zipcode**

**group by z.city , z.state**

**order by no\_of\_customers desc**

1. Display the customer first and last names of all customers who rented a video beginning with the letter E, sorted by first name and last name

**select a.cus\_first,a.cus\_last**

**from video\_customer a , video\_rents b, video\_copy1 c , video\_video d**

**where a.cus\_id = b.cus\_id and b.cid = c.cid and c.isbn=d.isbn**

**and d.title like 'e%'**

**order by a.cus\_first,a.cus\_last**

1. Write a query to display emp\_first, emp\_last and sum of sales made by employee as totalsales regardless of whether employee made a sale or not and arrange the result by totalsales highest to lowest

**select a.cus\_first,a.cus\_last**

**from video\_customer a , video\_rents b, video\_copy1 c , video\_video id**

**where a.cus\_id = b.cus\_id and b.cid = c.cid and c.isbn=d.isbn**

**and d.title like 'e%'**

**order by a.cus\_first,a.cus\_last**

1. Write a query to display isbn, copy\_no, rent\_type, title of all titles regardless of whether they are rented or not and order the list by copy\_no

**select v.isbn,c.copy\_no,c.rent\_type,v.title**

**from video\_copy1 c right outer join video\_video v**

**v.isbn=c.isbn**

**order by c.copy\_no**

**Use the ARK\_Instafood database to answer the following questions**

1. Write a query to display Employee\_ID and calculate the total amount received by each employee (salary + incentives) as amt\_recieved and sort the list lowest amt\_recieved to highest

**Select employee, sum(baic salary+incentive amount) as amount received**

**From ARK instafood payroll p join ARK\_instafood\_incentive a**

**On p.incentivetype = i.incentive type**

**Group by employee\_ID**

**Order by amount received**

1. Write a query to display first name, last name, number of orders completed as order\_delivered by each employee

**select E.FirstName, E.LastName , Count(D.status) as numberoforders**

**from ARK\_Instafood\_Employee E, ARK\_Instafood\_Delivery D**

**where E.Employee\_ID = D.Employee\_ID**

**and status = 'completed'**

**group by e.FirstName, e.LastName**

**order by numberoforders**

1. Write a query to display name of restaurant and total orders it received as total\_orders and sort the list by total orders, highest first.

**Select R.Name, Count(O.Order\_ID) AS Total\_Orders**

**from ARK\_Instafood\_Restaurant R left outer join ARK\_Instafood\_Menu\_Type M on R.Restaurant\_ID = M.Restaurant\_ID left outer join ARK\_Instafood\_MENU E on M.Type\_ID = E.Type\_ID left outer join ARK\_Instafood\_OrderItem O ON E.Type\_ID = O.Type\_ID and E.Item\_ID = O.Item\_ID**

**Group by R.Name**

**Order by Total\_Orders desc**

1. Write a query to display the Customer\_ID, Firstname, EmailAddress, PhoneNumber who placed the most number of orders.

**select top 1 c.customer\_id, c.firstname, c.emailaddress, c.phonenumber,**

**count(o.Order\_ID) as Most\_number\_of\_Orders**

**from ARK\_instafood\_customer c, ARK\_Instafood\_OrderHeader o**

**where o.customer\_id = c.customer\_id**

**group by c.customer\_id, c.firstname, c.emailaddress, c.phonenumber**