**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(vid\_length) as video\_average

from video\_video

where rate\_id >='8/10'

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\_description like '%database%' or course\_description 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 fid in

(Select fid from university\_classes

where c\_num ='OMIS651')) and zipcode ='60115'

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', '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 city, count(cus\_id) as num\_of\_customers, z.state

from car\_customer c , car\_zip z

where c. zipcode = z. zipcode

group by city, z.state

order by num\_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 cus\_first, cus\_last

from video\_customer c, video\_rents r, video\_copy1 co, video\_video v

where c.cus\_id=r.cus\_id and r.cid= co.cid and co.isbn = v.isbn and title like 'E%'

order by cus\_first, 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 emp\_first, emp\_last, sum(amt) as totalsales

from video\_employee e left join video\_purchases p

on e.emp\_id = p.emp\_id

group by e.emp\_id, emp\_last , emp\_first

order by totalsales desc

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, copy\_no, rent\_type, title

from video\_video v left join video\_copy1 co

on v.isbn = co.isbn

order by 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 p.Employee\_ID, Sum (p.BasicSalary + i.Incentive\_Amount) as amt\_recieved

from ARK\_Instafood\_Employee e, ARK\_Instafood\_Payroll p, ARK\_Instafood\_Incentive i

where e.Employee\_ID = p.Employee\_ID and p.IncentiveType = i.IncentiveType

group by p.Employee\_ID

order by amt\_recieved

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

select FirstName, LastName, Count(e.Employee\_ID) as order\_delivered, e.Employee\_ID

from ARK\_Instafood\_Delivery d, ARK\_Instafood\_DeliveryExecutive de, ARK\_Instafood\_Employee e

where d.Employee\_ID= de.Employee\_ID and de.Employee\_ID = e.Employee\_ID and d.Status='Completed'

group by e.Employee\_ID, FirstName, LastName

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 Name, Count (Order\_ID) as total\_orders

from ARK\_Instafood\_Restaurant r, ARK\_Instafood\_Menu\_Type t, ARK\_Instafood\_OrderItem i

where r.Restaurant\_ID = t.Restaurant\_ID and t.Type\_ID = i.Type\_ID

group by t.Restaurant\_ID, 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 o.Customer\_ID, c.FirstName, c.LastName, c.PhoneNumber, c.EmailAddress

from ARK\_Instafood\_Customer c left join ARK\_Instafood\_OrderHeader o

on c.Customer\_ID = o.Customer\_ID

group by o.Customer\_ID,FirstName, LastName, PhoneNumber, EmailAddress

order by count(o.Customer\_ID) desc