**NYU – TANDON SCHOOL OF ENGINEERING**
CS-GY 6083 - B, FALL 2019
Principles of Database Systems

Assignment: 3 [100 points]

Please submit your assignment on NYU class with PDF document attachment. Please mention Student ID, Name, Course, Section Number, and date of submission on first page of your submission. **Insert picture of result screenshots in same PDF document.**

NO LATE SUBMISSION or RESUBMISSION WILL BE ALLOWED. DO NOT WAIT UNTIL LAST DAY OF SUBMISSION DEADLINE, CHECK DUE DATE CAREFULLY, AND CHECK YOUR SUBMISSION TH0ROUGHLY BEFORE SUBMITTING.
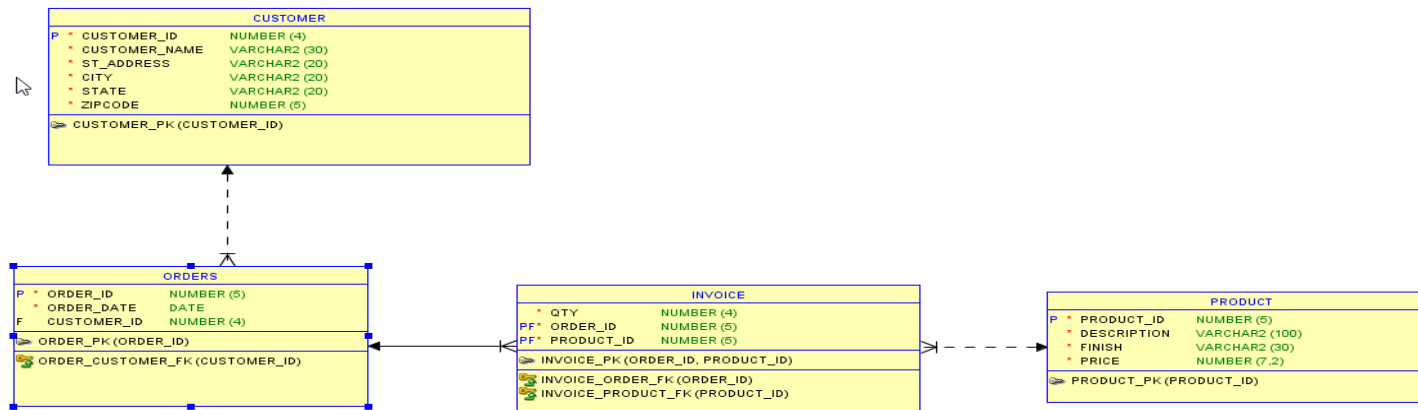
Problem 1: 50 Points
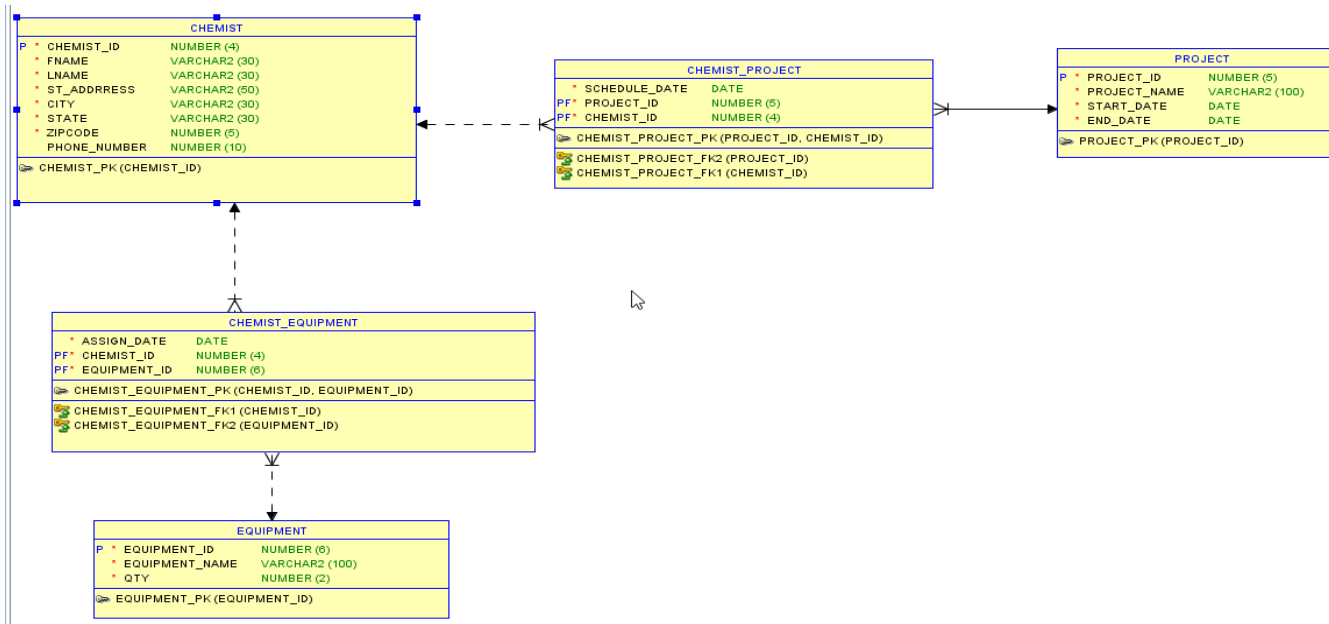
Relational Model Figure 1.

For relational schema model in Figure 1,
Write SQL for following quires. For each of the query submit query and screen of its result.

a) Retrieve Chemist name (first name and last name), projects name they are scheduled to, and number of days (round value with no decimal) they are on project. List result set in descending order of days chemists are on project.

b) Retrieve Chemist ID, Chemist name (first name and last name) and name of projects they are scheduled to with project name containing word 'DATA' (for example, Migrating Database from Oracle to MySQL)

c) List chemist ID, total number of equipment they are using, and total number of projects they are working on. List the result set in order of number of project in descending order.

d) Create a view with name CHMIEST_EQUIP_ON_PROJECT_V that list all details of chemists along with equipment name they are assigned to. Exclude those chemists who are not working on any projects. Retrieve all data from the view created in order of chemist_id.

e) List chemist_id and their full name (a single string of first name and last name) of those chemist who are scheduled on project but not assigned any equipment.

Problem 2: 50 points

CUSTOMER

P	*	CUSTOMER_ID	NUMBER (4)
	*	CUSTOMER_NAME	VARCHAR2 (30)
	*	ST_ADDRESS	VARCHAR2 (20)
	*	CITY	VARCHAR2 (20)
	*	STATE	VARCHAR2 (20)
	*	ZIPCODE	NUMBER (5)

CUSTOMER_PK (CUSTOMER_ID)

ORDERS

P	*	ORDER_ID	NUMBER (5)
	*	ORDER_DATE	DATE
F		CUSTOMER_ID	NUMBER (4)

ORDER_PK (ORDER_ID)
ORDER_CUSTOMER_FK (CUSTOMER_ID)

INVOICE

	*	QTY	NUMBER (4)
PF	*	ORDER_ID	NUMBER (5)
PF	*	PRODUCT_ID	NUMBER (5)

INVOICE_PK (ORDER_ID, PRODUCT_ID)
INVOICE_ORDER_FK (ORDER_ID)
INVOICE_PRODUCT_FK (PRODUCT_ID)

PRODUCT

P	*	PRODUCT_ID	NUMBER (5)
	*	DESCRIPTION	VARCHAR2 (100)
	*	FINISH	VARCHAR2 (30)
	*	PRICE	NUMBER (7,2)

PRODUCT_PK (PRODUCT_ID)

Relational Model Figure 2.

For relational schema model in figure 2,
Write SQL for following quires. For each of the query submit query and screen of its result.
   a) List Customer name and number of orders in last 30 days

   b) List Order number, Order Date, and Order amount for each of the order

   c) List Customer ID, Customer Name for those customers who have maximum number of orders

   d) List product id, description and their price, only for those products that never sold.

   e) Create a view with name MYFULLVIEW_V that details Customer Id, Customer name, Order id, Order date, product
      description of each product in order, quantity of each product, and their price. Query this view to list Customer id,
      Customer name, Order number, Order Date, total number of quantity, and total amount for each order. List result in
      descending order of total Order amount.