Computer Language

assignment 1

- create 'student_db' database
- create following tables in database with proper data types
  - student: id (PK), name, address, phone, email, age, schoolId (FK)
  - school: id (PK), name, address, principal, phone
- create relationship as shown in the table schema
- add some dummy data

assignment 2

- create 'product_db' databse
- create following tables
  - categories: id (PK), title, description
  - products: id (PK), title, price, description, category (FK), company
  - orders: id (PK), total, date
  - order_details: id (PK), orderId (FK), productId (FK), quantity, price, totalPrice, discount
- create relationship as shown in the table schema
- add some dummy data

assignment 3

solve following queries using sales database

- Write a query that produces all rows from the Customers table for which the salesperson's number is 1001
- Write a select command that produces the rating followed by the name of each customer in San Jose
- Write a query that will produce the snum values of all salespeople from the Orders table (with the duplicate values suppressed)
- Write a query that will give you all orders for more than Rs. 1,000
- Write a query that will give you the names and cities of all salespeople in London with a commission above 0.10
- Write a query on the Customers table whose output will exclude all customers with a rating <= 100, unless they are located in Rome

- What will be the output from the following query? Select * from Orders
  where (amt < 1000 OR
  NOT (odate = '1990-10-03'
  AND cnum > 2003));
- What will be the output of the following query?
  Select * from Orders
  where NOT ((odate = '1990-10-03' OR snum >1006) AND amt >= 1500)
- Write a query that selects all orders except those with zeroes or NULLs in the amt field.

assignment 4

To solve below queries use "hr" database

- Write a query to get unique department ID from employee table.
- Write a query to get all employee details from the employee table order by first name, descending.
- Write a query to get the employee ID, names (first_name, last_name), salary in ascending order of salary.
- Display first name and join date of the employees who is either IT Programmer or Sales Man.
- Display details of employee with ID 150 or 160.
- Display first name, salary, commission pct, and hire date for employees with salary less than 10000.
- Display employees where the first name or last name starts with S.
- Display details of jobs in the descending order of the title.
- Display details of the employees where commission percentage is null and salary in the range 5000 to 10000 and department is 30.
- Display employees first_name,email who are working in "Executive" department.
- Display unique contry_id from locations table.
- Display all employees whose have job_id IT_PROG and FI_ACCOUNT.
- Display all countries in ascending order.

assignment 5

To solve below queries use "hr" database

- Display first name and last name after converting the first letter of each name to upper case and the rest to lower case.
- Display the first word in job title.
- Display the length of first name for employees where last name contain character 'b' after 3rd position.
- Display first name in upper case and email address in lower case for employees where the first name and email address are same irrespective of the case.
- Display first name, salary, and round the salary to thousands.

- Display employee ID and the date on which he ended his previous job.
- Display first name and date of first salary of the employees.
- Display first name and experience of the employees.
- Display first name of employees who joined in 2001.
- Display employees who joined in the current year.
- Display the number of days between system date and 1st January 2011.
- Display number of employees joined after 15th of the month.
- Display third highest salary of employees.

assignment 6

To solve below queries use "sales" database

- Write a query that counts the number of salespeople registering orders for each day. (If a salesperson has more than one order on a given day, he or she should be counted only once.).
- Write a query on the Customers table that will find the highest rating in each city. Put the output in this form:
  For the city (city), the highest rating is : (rating).
- Write a query that totals the orders for each day and places the results in descending order.
- Write a query that selects the total amount in orders for each salesperson for whom this total is greater than the amount of the largest order in the table.
- Write a query that selects the highest rating in each city.
- Largest order taken by each salesperson with order value more than Rs.3000. 7. Select each customer smallest order.

assignment 7

To solve below queries use "sales" database

- Write a query that lists each order number followed by the name of the customer who made the order.
- Write a query that gives the names of both the salesperson and the customer for each order along with the order number.
- Write a query that produces all customers serviced by salespeople with a commission above 12%. Output the customer's name, the salesperson's name, and the salesperson's rate of commission.
- Write a query that calculates the amount of the salesperson's commission on each order by a customer with a rating above 100.
- Write a query that produces all pairs of salespeople who are living in the same city.Exclude combinations of salespeople with themselves as well as duplicate rows with the order reversed

assignment 8

To solve below queries use "sales" database

- Write a query that uses a subquery to obtain all orders for the customer named Cisneros. Assume you do not know his customer number (cnum).
- Write a query that produces the names and ratings of all customers who have above- average orders.
- Write a query that selects the total amount in orders for each salesperson for whom this total is greater than the amount of the largest order in the table.
- Write a query that selects all customers whose ratings are equal to or greater than ANY of Serres.
- Write a query using ANY or ALL that will find all salespeople who have no customers located in their city.
- Write a query that selects all orders for amounts greater than any for the customers in London.
- Extract all the orders of Motika.
- Find all the order attribute to salespeople servicing customers in London.
- Find names and numbers of all salesperson who have more than one customer. 10. Find salespeople number,name and city who have multiple customers.
- Select customers who have a greater rating than any other customer in Rome.
- Select all orders that had amounts that were greater that at least one of the orders from '1990-10-04' .
- Find all orders with amounts smaller than any amount for a customer in San Jose. 14. Select those customers whose rating are higher than every customer in Paris.

assignment 9

use "sales" database to solve below queries.

- Create an index that will enable a user to pull orders for '1990-10-03' out of the Orders table quickly.
- If the Orders table has already been created, how can you force the onum field to be unique (assume all current values are unique)?
- Create an index that would permit salesperson to retrieve his orders.
- Let us assume that each salesperson is to have only one customer of a given rating, and that this is currently the case. Create an index that enforces it.
- Create an index to speed up searching order on a given date by given customer.