Jagannath International Management School

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(Affiliated to Guru Gobind Singh Indraprastha University, New Delhi)
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Bachelor of Computer Applications (BCA)

Course : BCA **Semester : II**
Subject Code: 20176 **Subject : DBMS Lab**

S. No.	Question
1.	Draw an E-R diagram from given entities and their attributes
2.	Convert the E-R diagram into a Relational model with proper constraints.
3.	Write queries to execute following DDL commands : CREATE :Create the structure of a table with at least five columns ALTER: Change the size of a particular column. Add a new column to the existing table. Remove a column from the table. DROP: Destroy the table along with its data.
4.	Write queries to execute following DML commands : INSERT: Insert five records in each table. UPDATE: Modify data in single and multiple columns in a table DELETE: Delete selective and all records from a table
5.	Write queries to execute following DML command : SELECT: Retrieve the entire contents of the table. Retrieve the selective contents (based on provided conditions) from a table. Retrieve contents from a table based on various operators i.e. string operators, logical operators and conditional operators,Boolean operators. Sort the data in ascending and descending order in a table on the basis of one column or more than one column.
6.	Create table using following integrity constraints: Primary Key Unique Key Not Null Check Default Foreign Key
7.	Write queries to execute following Aggregate functions Sum,Avg,Count,Minimum and Maximum value of a numeric column of a table using aggregate function
8.	Retrieve data from a table using alias names.
9.	Retrieve data of a table using nested queries.
10.	Retrieve data from more than one table using inner join, left outer, right outer and full outer joins
11.	Create view from one table and more than one table.

S. No.	Question
12.	Create index on a column of a table.
13.	Consider the Insurance company's Database given below. The primary keys are underlined and the data typesare specified. PERSON(driver_id# : string, name : string, address : string) CAR(regno : string, model : string, year : int) ACCIDENT(report_number : int, acc_date : date, location : string) OWNS(driver_id# : string, regno : string) PARTICIPATED(driver_id# : string, regno : string, report_number : int, damage_amount :number(10,2)) (i) Create the above tables by properly specified the primary key and the foreign key (ii) Enter at least five tuples for each relation (iii) Demonstrate how you can a. Update the damage amount for the car with a specific regno, the accident with report number 12 to 25000. b. Add a new accident to the database. (iv) Find the total number of people who owned cars that were involved in accident in2002. (iv) Find the number of accident in which cars belonging to a specific models were involved
14.	Consider the following schema of a library management system.Write the SQL queries for the questions given below; **Student(Stud_no : integer, Stud_name: string)** **Membership(Mem_no: integer, Stud_no: integer)** **Book_(book_no: integer, book_name:string, author: string)** **lss_rec_(iss_no:integer, iss_date: date, Mem_no: integer, book_no: integer)** (i) Create the tables with the appropriate integrity constraints (ii) Insert around 10 records in each of the tables (iii) Display all records for all tables (iv) List all the student names with their membership numbers (v) List all the issues for the current date with student and Book names (vi) List the details of students who borrowed book whose author is Elmarsi Navathe (vii) Give a count of how many books have been bought by each student (viii) Give a list of books taken by student with stud_no as 1005 (ix) delete the List of books details which are issued as of today (x) Create a view which lists out the iss_no, iss _date, stud_name, book name
15.	Use the relations below to write SQL queries to solve the business problems specified. CLIENT (clientno#,name, client_referred_by#) ORDER (orderno#, clientno#, order_date, empid#) ORDER_LINE (orderno#, order line number#, item_number#, no_of_items, item_ cost,shipping_date) ITEM (item_number#, item_type, cost) EMPLOYEE (empid#, emp_type#, deptno, salary, firstname, lastname) Notes: a. Column followed by # is the primary key of the table. b. Each client may be referred by another client. If so, the client number of the referring client is stored in referred_by. c. The total cost for a particular order line = no_of_items * item_cost.c. Write queries for the following (i) Create all the above tables.

	(ii) Insert at least five records. (iii) Display all the rows and columns in the CLIENT table. Sort by client name in reverse alphabetical order. (iv) Display the item number and total cost for each order line (total cost = no of items X item cost). Name the calculated column TOTAL COST. (v) Display all the client numbers in the ORDER table. Remove duplicates. (vi) Display the order number and client number from the ORDER table. Output the result in the format. Client <clientno> ordered <orderno> (vii) Display full details from the ORDER_LINE table where the item number is (first condition) between 1 and 200 (no > or < operators) OR the item number is greater than1000 AND (second condition) the item cost is not in the list 1000, 2000, 3000 OR the order number is not equal to 1000. (viii) Display the client name and order date for all orders. (ix) Repeat query (6) but also display all clients who have never ordered anything. (x) Display the client name and order date for all orders using the join keywords. (xi) Display the client name and order date for all orders using the JOIN method. (xii) Display the client number, order date and shipping date for all orders where the shipping date is between three and six months after the order date. (xiii) Display the client number and name and the client number and name of the person who referred that client. (xiv) Display the client name in upper case only and in lower case only. (xv) Display the second to fifth characters in each client name.