**DBMS LAB Assignment –4**

**Q.1**. A database is being constructed for storing **sales information system**. A product can be described with a unique product number, product name, selling price, manufacturer name. The product can sale to a particular client and each client have it own unique client number, client name, client addresses, city, pin code, state and total balance to be required to paid. Each client order is to buy product from the salesman. In the order, it has unique sales order number, sales order date, client number, salesman number (unique), billed whole payment by the party or not and its delivery date. The salesman have the name, addresses, city, pin code, state, salary of the sales man, delivery date, total quantity ordered, product rate.

The schema for the above is as below:-

**Product**(product\_id,product\_name,manufacturer\_name,product\_rate,sell\_price, product\_description)

**Client**(client\_id, client\_name, address, city, pin, state, balance\_due)

**Salesman**(salesman\_id, salesman\_name, address, city, pin, state, salary)

**Sales\_order\_details**(sales\_order\_no, sales\_order\_date, client\_id, salesman\_id, bill\_payby\_party, delivery\_date, product\_rate, total\_quantity\_order, cancel\_date)

- The ".sql" file for creatting above database and inserting records could be accessed from <ftp://172.31.128.67/assignment4.zip>

Write the SQL queries for the following with respect to database created : –

(a) Retrieve the list of names and the cities of all the clients.

(b) List the various products available.

(c) Find the names of all clients having ‘a’ as the second letter in their names.

(d) List all the clients who are located in Allahabad.

(e) Find the products whose selling price is greater than 2000 and less than or equal to 5000

(f) Add a new column NEW\_PRICE into the produc table.

(g) Rename the column P\_rate of Sales\_Order\_Details to new\_P\_rate.

(h) List the products in sorted order of their description.

(i) Display the order number and date on which the clients placed their order.

(j) Delete all the records having delivery date before 25th August, 2018.

(k) Change the delivery date of order number ON01008 to 16-08-18

(l) Change the bal\_due of client\_no C01003 to 1200

(m)Find the product with description as ‘HDD1034’ and ‘DVDRW’

(n) List the names, city and state of the clients not in the state of ‘ASSAM’

(o) List of all orders that were cancelled in the month of March.

**Q.2**. A student is described by a unique Roll Number, Name Address, and Semester. Each student enrols himself in an Academic programme offered by a Department. Academic programmes have programme name(unique), duration, a programme code(unique) and a list of courses (both core and elective course) while the departments have department code (unique), department name (unique), HOD who is a Teacher and list of courses offered by it. Each teacher is described by employee code (unique), name, department and designation. A student registers some courses in a semester. A course is described by a unique course number, title of the course, credit allotted for the course and offering department. Database stores the grades obtained by different student in different courses registered by him/her in different semesters. Database also stores information about the courses offered by a department in a semester, the corresponding teacher(s) for each course.

The schema for the above is as below:-

**Student**(rollno, name, address, semester)\

**Academic**\_**program**(p\_name, duration, p\_code, dept\_code, type\_of\_course)

**Department**(dept\_code, dept\_name, hod\_name)

**Teacher**(Employee\_code, name, dept\_code, designation)

**Course**(course\_no, title\_of\_course, credit, dept\_code)

**Course\_offer\_by\_dept**(course\_no, dept\_code, semester, employee\_code, duration)

**Grade**(course\_no, roll\_no, grade, semester)

The ".sql" file for creatting above database and inserting records could be accessed from <ftp://172.31.128.67/assignment4.zip>

Write the SQL queries for the following with respect to database created : –

(a) Find all the students’ name, city, course allotted from the CSE department.

(b) List the total number of Faculty in the CSE department.

(c) List the available courses from the CSE department.

(d) List the all students in a particular semester.

(e) List the students who earned CGPA greater than or equal to 8.5

(f) How much subjects are registered by a student in each semester.

(g) List the students who are allotted the same courses of both the programme MCA & M.Tech.

(h) List the total number of student enrolled in the subject DBMS.

(i) Retrieve the semester of the student under DBMS subject.

(j) Retrieve all student names and arrange into ascending order.

(k) Modify a student address SNGH to INGH.

(l) Find the total credit point of student required to complete for a course like M.Tech.

(m) List the all courses which are related to computer science.

(o) Find the total number of department in our database.

**Q.3. Library information system:** Database should store information about books, journals, magazines etc. Searching for books can be done by author, title and subject. Similarly journals can be searched by subject area, publisher etc. It should also be possible to see which book is issued to which student and belonging department.

The schema for the above is as below:-

**Book**(id,subject,title,author,publisher)

**Issue**(id, i\_date, s\_roll, s\_name, s\_department)

- The ".sql" file for creatting above database and inserting records could be accessed from <ftp://172.31.128.67/assignment4.zip>

Write the SQL queries for the following with respect to database created : –

a) List the names of the books issued between 21-aug-18 and 29-Aug-18.

b) Retrieve the name and number of books by a particular author.

c) Retrieve the name of the publisher which has maximum number of books.

d) Count the total number of books in the library.

e) Count the number of books issued to a student with Roll no ‘CS20164034’

f) Change the author of the book to ‘ABC’ with book id=BK003.

g) Retrieve the name of the student to whom the book named ‘Database System’ by ‘E.Navathe’ is issued.

h) Display the total number of books issued to different departments.

i) List the name of the books where subject is like ‘ora’.