

# **Department of Computer Science & Engineering**

**Database Systems Laboratory(CSL58) – SQL questions**

|  |  |
| --- | --- |
| Sl. No. | Question |
| 1. a) | Consider the Sailor database given below. The primary keys are underlined.  Assume relevant data types for attributes.  SAILORS(Sid, Sname, Rating, Age)  BOATS(Bid, Bname, Colour)  RESERVES(Sid, Bid, day)  Create the above tables in SQL. Specify primary and foreign keys properly. Enter at least 5 tuples in each table with relevant data. Solve the following queries.   1. Find the names of sailors who have reserved at least one boat. 2. Find the Sid’s of sailors who have reserved a red or a green boat. 3. Find the Sid’s of sailors who have not reserved a boat. |
|  |  |
| 2. a) | Consider the Employee database given below. The primary keys are underlined. Assume relevant data types for attributes.  EMPLOYEE (Fname, Lname, SSN, Addrs, Sex, Salary, SuperSSN, Dno)  DEPARTMENT (Dname, Dnumber, MgrSSN, MgrStartDate)  PROJECT(Pno, Pname, Dnum)  WORKS\_ON (ESSN, Pno, Hours)  Create the above tables in SQL. Specify primary and foreign keys properly. Enter at least 5 tuples in each table with relevant data. Solve the following queries.   1. Retrieve the name of all employees whose salary is greater than the salary of all employees in dept 5. 2. Retrieve the ssn of all employees who work on project numbers 1,2 or 3 3. Display the total Number of hours put in by all employees on every project. |
|  |  |
| 3.a) | Consider the Aircraft database given below. The primary keys are underlined. Assume relevant data types for attributes.  Aircraft (Aircraft ID, Aircraft\_name, Cruising\_range)  Certified (Emp ID, Aircraft ID)  Employee (Emp ID, Ename, Salary)  Create the above tables in SQL. Specify primary and foreign keys properly. Enter at least 5 tuples in each table with relevant data. Solve the following queries.   1. Find the employee ID’s of employee who make the highest salary. 2. Find the name of aircrafts such that all pilots certified to operate them earn more than 50000 3. Find the employees who are not certified for operating any aircraft. |
|  |  |
| 4.a) | Consider the Supply-Parts database given below. The primary keys are underlined. Assume relevant data types for attributes.  Supplier (Sid, Sname, Address)  Part (PID, Pname, Color)  Shipment (Sid, PID, Cost)  Create the above tables in SQL. Specify primary and foreign keys properly. Enter at least 5 tuples in each table with relevant data. Solve the following queries.   1. Find the Sid’s of suppliers who supply a green part 2. For every supplier print the name of the supplier and the total number of parts that he/she supplies 3. Update the part color supplied by supplier s3 to yellow |
|  |  |
| 5.a) | Consider the Aircraft database given below. The primary keys are underlined. Assume relevant data types for attributes.  Aircraft (Aircraft ID, Aircraft\_name, Cruising\_range)  Certified (Emp ID, Aircraft ID)  Employee (Emp ID, Ename, Salary)  Create the above tables in SQL. Specify primary and foreign keys properly. Enter at least 5 tuples in each table with relevant data. Solve the following queries.   1. Find the names of pilots certified for Boeing aircraft 2. Arrange the Aircrafts with respect to the ascending order of distance. 3. Find the name of pilots who can operate flights with a range greater than 3000 miles but are not certified on any Boeing aircraft. |
|  |  |
| 6.a) | Consider the Employee database given below. The primary keys are underlined. Assume relevant data types for attributes.  EMPLOYEE (Fname, Lname, SSN, Addrs, Sex, Salary, SuperSSN, Dno)  DEPARTMENT (Dname, Dnumber, MgrSSN, MgrStartDate)  DEPENDENT(Dname, ESSN)  Create the above tables in SQL. Specify primary and foreign keys properly. Enter at least 5 tuples in each table with relevant data. Solve the following queries.   1. For each department, retrieve the department name and the average salary of all employees working in that department 2. List the names of managers who have at least one dependent 3. Display the details of all departments having ‘tech’ as their substring |
|  |  |
| 7.a) | Consider the following Accident Tracker Schema. The primary keys are underlined.  PERSON (driver – id #, name, address)  CAR (Regno, model, year)  ACCIDENT (report-number, acc\_date, location)  OWNS (driver-id #, Regno)  PARTICIPATED (driver-id, Regno, report-number, damageamount)  Create the above tables in SQL. Specify primary and foreign keys properly. Enter at least 5 tuples in each table with relevant data. Solve the following queries.   1. Display the unique Regno’s of the cars involved in accidents. 2. Display the car Regno and model of the car which has the maximum damage amount. 3. Display the number of cars owned by each driver. |
|  |  |
| 8.a) | Consider the Cricket database given below. The primary keys are underlined. Assume relevant data types for attributes.  PLAYER (PId, Lname, Fname, Country, Yborn, Bplace)  MATCH (MatchId, Team1,Team2, Ground, Date, Winner)  BATTING (MatchId, Pid, Nruns, Fours, Sixes)  BOWLING (MatchId, Pid, Novers, Maidens, Nruns, Nwickets)  Create the above tables in SQL. Specify primary and foreign keys properly. Enter at least 5 tuples in each table with relevant data. Solve the following queries.   1. Display the sorted list of ground names where Australia has played as team1 2. Find the match information of all matches in which Dhoni did batting. 3. Find the names of players who did batting in match 2689 |
|  |  |
| 9.a) | Consider the following shipment schema. The primary keys are underlined. Assume relevant data types for attributes.  CUSTOMER (cust # , cname, city)  ORDER (order#, odate, cust #, ord-Amt)  ORDER – ITEM (order #, Item #, qty)  ITEM (item #, unit price)  SHIPMENT (order #, ship-date)  Create the above tables in SQL. Specify primary and foreign keys properly. Enter at least 5 tuples in each table with relevant data. Solve the following queries.   1. List the customer names who have placed more than 2 orders. 2. Find the total order amount for each day 3. List the customer details who has the largest order amount. |
|  |  |
| 10.a) | Consider the following shipment schema. The primary keys are underlined. Assume relevant data types for attributes.  CUSTOMER (cust # , cname, city)  ORDER (order#, odate, cust #, ord-Amt)  ORDER – ITEM (order #, Item #, qty)  ITEM (item #, unit price)  SHIPMENT (order #, ship-date)  Create the above tables in SQL. Specify primary and foreign keys properly. Enter at least 5 tuples in each table with relevant data. Solve the following queries.   * 1. List name of the customer, no. of orders placed by each customer residing in Bangalore city.   2. List the names of the customers who have ordered at least 3 items   3. List the customer names who have not ordered for item no. 10. |
|  |  |