DBMS Problem Statement

No.	**Title**
2.a	Create following tables using given schema and insert appropriate data into these tables. Student(StudID, Name, Address, Marks) Employee(EmplyeeID, Name, Address, Salary, DateOfJoining ,Department) Weather(CityID, CityName, MinTemp, MaxTemp) 2. • Alter Student and Employee table to add Not Null constraint on all columns. • Alter the Student table to add Primary key constraint on StudID column. • Create a view JoiningInfo on Employee table displaying Employee ID, Name and DateOfJoining of employees. • Crete index on primary key columns of all the tables. • Crate view MarksInfo on Student table displaying StuID and Marks. • Change the name of Weather table to WeatherData. • Drop column CityName from WeatherData table. • Add column Grade to Student table. • Crate a view “DistinctionStudents” on student table displaying data of students having Distinction as Grade. • Create a sequence on StudID in student table. • Create a synonym ‘Emp_Info’ for Employee table.
2.b	Create the Employee table using following schema Employee (Employee_id, First_name, Last_name, Salary, Joining_date, Department,) 1. Insert 10 to 15 appropriate records in the Employee table. 2. Get First_Name,Last_Name from employee table 3. Get unique DEPARTMENT from employee table 4. Get FIRST_NAME ,Joining year,Joining Month and Joining Date from employee table Select FIRST_NAME, year(joining_date),month(joining_date), DAY(joining_date) from EMPLOYEE 5. Get all employee details from the employee table order by Salary Ascending 6. Get all employee details from the employee table whose First_Name starts with A. 7. Update the Salary column by incrementing salary of all employees having salary less than 20000 by 5000. 8. Delete the department of employee no 004. 9. Find department wise minimum salary. 10. Find department wise Average salary in ascending order.
3.a	Consider Following Schema Employee (Employee_id, First_name, last_name , hire_date, salary, Job_title, manager_id, department_id) Departments(Department_id, Department_name, Manager_id, Location_id) Locations(location_id ,street_address ,postal_code, city, state, country_id) 1. Write a query to find the names (first_name, last_name) and the salaries of the employees who have a higher salary than the employee whose last_name=''Singh”. 2. Write a query to find the names (first_name, last_name) of the employees who have a manager and work for a department based in the United States. 3. Find the names of all employees who works in the IT department. 4. Write a query to find the names (first_name, last_name), the salary of the employees whose salary is greater than the average salary. 5. Write a query to find the names (first_name, last_name), the salary of

	the employees who earn more than the average salary and who works in any of the IT departments.
3.b	Consider Following Schema Employee (Employee_id, First_name, last_name , hire_date, salary, Job_title, manager_id, department_id) Departments(Department_id, Department_name, Manager_id, Location_id) Locations(location_id ,street_address ,postal_code, city, state, country_id) 1. Write a query to find the names (first_name, last_name), the salary of the employees who earn the same salary as the minimum salary for all departments. 2. Write a query to display the employee ID, first name, last names, salary of all employees whose salary is above average for their departments. 3. Write a query to find the employee id, name (last_name) along with their manager_id, manager name (last_name). 4. Find the names and hire date of the employees who were hired after 'Jones'. 5. Write a query to get the department name and number of employees in the department.
4	Write a stored procedure for following scenario Consider Tables: 1.Borrower(Roll_no, Name, DateofIssue, NameofBook, Status) 2.Fine(Roll_no,Date,Amt) •Accept Roll_no and NameofBook from user. •Check the number of days (from date of issue). •If days are between 15 to 30 then fine amount will be Rs 5per day. •If no. of days>30, per day fine will be Rs 50 per day. •After submitting the book, status will change from I to R. •If condition of fine is true, then details will be stored into fine table. •Also handles the exception by named exception handler or user define exception handler.
5	Write a Stored Procedure namely proc_Grade for the categorization of student. If marks scored by students in examination is <=1500 and marks>=990 then student will be placed in distinction category if marks scored are between 989 and900 category is first class, if marks 899 and 825 category is Higher Second Class**. Consider below tables** 1.Stud_Marks (name, total_marks) 2. Result (Roll,Name, Class)
6	Write a PL/SQL block of code using Cursor that will give 5000 bonus to the employee whose salary is greater than 4000 and bonus of 1000 to the employee whose salary is less than 4000. Use Table : Emp (eno,name,city,salary)
7	Write a database trigger on WorkCenters table. The System should keep track of the records that are being inserted. The capacity of work inserted in WorkCenters table should be reflected in WorkCenterStats table as a total capacity.
8	Write a program to implement MySQL/Oracle database connectivity with any front end language to implement Database navigation operations (add, delete, edit etc.)
9	Create a Library database with the schema Books(AccNo,Title,Author,Publisher,Count). • Create a table Library_Audit with same fields as of Books. • Create a before trigger to insert records into Librry_Audit table if there is deletion in Books table.

	• Create a after trigger to insert records into Librry_Audit table if there is updation in Books table.
10	Consider the given database schema: Student(Student_Id,Student_Name,Instructor_Id,Student_City) Instructor(Instructor_Id,Instructor_Name,Instructor_City,Specialization) 1. Find the instructor of each student. 2. Find the student who is not having any instructor. 3. Find the student who is not having any instructor as well as instructor who is not having student. 4. Find the students whose instructor's specialization is computer. 5. Create a view containing total number of students whose instructor belongs to "Pune".
11	Consider the given relational table: Employee(Emp_No,Emp_Name,Designation,City,Salary,Zipcode,County) 1. Creates a sequence used to generate employee numbers for the empno column of the emp table. 2. Create an Index on county. 3. Find the zip code whose county = 071 and check whether the query uses the Index and write your observation. 4. Create a view for employees having salary <50000 and stays in 'Mumbai'
12	Consider the given Database Schema: employee (employee-name, street, city) works (employee-name, company-name, salary) company (company-name, city) manages (employee-name, manager-name) • Find the names of all employees who work for First Bank Corporation. • Find the names, street addresses, and cities of residence of all employees • who work for First Bank Corporation and earn more than $10,000. • Find all employees in the database who live in the same cities and on the • same streets as do their managers. • Find all employees in the database who earn more than each employee of Small Bank Corporation. • Find all employees who earn more than the average salary of all employees of their company. • Find the company that has the smallest payroll.
13	Consider the given Database Schema: employee (employee-name, street, city) works (employee-name, company-name, salary) company (company-name, city) manages (employee-name, manager-name) • Find the names and cities of residence of all employees who work for First Bank Corporation. • Find all employees in the database who live in the same cities as the companies for which they work. • Find all employees in the database who do not work for First Bank Corporation. • Assume that the companies may be located in several cities. Find all companies located in every city in which Small Bank Corporation is located. • Find the company that has the most employees. • Find those companies whose employees earn a higher salary, on average, than the average salary at First Bank Corporation.
14	Consider Following Schema

	Employee(employee_id, employee_name, City, Company_Name, Salary) 11. Find details of all employees who work for company “IBM” and live in city “Pune”. 12. Find names, and cities of all employees who work for “Infosys” or earn more than 30000. 13. Find all employees who are employees of “IBM” and not living in city “Mumbai”. 14. Find company wise maximum salary. 15. Find those companies whose employees earn higher salary, than average salary at “IBM”.
15	Implement the following MongoDb Query 1. Create a collection named books. 2. Insert 5 records with field TITLE,DESCRIPTION,BY,URL,TAGS AND LIKES 3. Insert 1 more document in collection with additional field of user name and comments. 4. Display all the documents written by 'john' or whose title is 'mongodb'. 5. Display all the documents whose like is greater than 150.. 6. Update the title of 'mongodb' document to 'mongodb overview' 7. Display exactly two documents written by 'john'. 8. Display all the books in the sorted fashion.
16	Implement the following MongoDb Query 1. Create a collection named books. 2. Insert 5 records with field TITLE,DESCRIPTION,BY,URL,TAGS AND LIKES 3. Insert 1 more document in collection with additional field of user name and comments. 4. Display all the documents whose title is 'mongodb'. 5. Display all the documents whose title is 'mongodb' and written by 'john'. 6. Display all the documents whose like is greater than 100 and whose title is either 'mongodb' or written by 'john'. 7. Delete the document titled 'nosql overview'. 8. Display the second document published by 'john'. 9. Update the Author of TOC book to Vivek Kulkarni, if record does not exist new document should create
17	Create the collection books having the following fields TITLE, DESCRIPTION, AUTHOR, URL, TAGS AND LIKES. Implement the following Aggregation and Indexing Queries 1. Find the number of books published author john. 2. Find books which have minimum likes and maximum likes published author john. 3. Find the average number of likes of the books published author john. 4. Find the first and last book published author john.. 5. Create an index on author name. Display the books published author john and check if it uses the index which we have created
18	Create the following schema Order(id,amount ,status) Cus id Amount Status A1 400 P B1 300 D A1 200 F C1 200 F B1 700 P B1 800 P

	Status: P=”Pending”, D= “Delivered”, F= “Failed” Implement the following using Map Reduce function 1. Find the sum of amount of each customer whose status is P 2. Find the average amount of each customer 3. Find the min amount of each customer 4. Find the max amount of each customer whose status is F