1) Create the collection SALE as follows using MongoDB

id	items	price	Quantity	1) Compute the total of each item number.
1	Shirt	100	2	2) Find all details of items from the sale collection.
2	Pant	200	1	3) Compute the average quantity for each item.
3	Sari	500	5	4) Compute the maximum quantity for each item.
4	Shirt	100	10	5) Compute the minimum quantity for each item.
5	Sari	500	10	6) Compute the total of each item number.

2) Create the collection SALE as follows using MongoDB

Id	items	price	Quantit	Create a index on item field of SALE collection
1	Shirt	100	2	Create a index in ascending on item and descending on price field of
2	Pant	200	1	Compute sum of the all the prices of items name Shirt.
3	Sari	500	5	Update the price of item Shirt whose id is 5 with the price 600.
4	Shirt	100	10	Find all items whose price is equal to 500.
5	Sari	500	10	Create a index on item field of SALE collection

3) Create the collection ORDERS as follows using MongoDB

Custid	OrderDate	Price
Abc123	Oct 04,2019	25
Xyz123	Oct 05,2019	50
Xyz456	Oct 06.2019	60
Xyz789	Oct 07,2019	70
Xyz789	Oct 06,2019	90
Xyz789	Oct 06,2019	90
Abc123	Oct 06,2019	90

Write a Map Reduce functions to gives the Total Price Per Customer

4) Create a collection Teacher_info using MongoDB as follows

T_id	T_Name	Dept_Name	Salary	Status	List all teachers whose salary is 25000.
01	Ravi	IT	30000	A	List all teachers whose status is “A” and salary 20000.
02	Mangesh	IT	20000	A	List all teachers whose status is “N” or salary 25000.
03	Akshay	Comp	25500	N	List all teachers whose salary is greater than 20000.
04	Rakesh	Mech	35000	N	List all teachers whose salary is less than 30000.
05	Ramesh	Civil	25000	A	List all teachers whose salary is 25000.

5) Create a collection Teacher_info using MongoDB as follows

Teacher_id	Teacher_Name	Dept_Name	Salary	Status
Pic001	Ravi	IT	30000	A
Pic002	Mangesh	IT	20000	A
Pic003	Akshay	Comp	25500	N
Pic004	Rakesh	Mech	35000	N
Pic005	Ramesh	Civil	25000	A

- List all teachers whose status is “A” in descending order.
- Delete the teacher info whose Teacher_id is “Pic001”.
- Change the name of Teacher” Ravi” with “Ravi Kumar”.
- Increase salary of all teachers which status is “A” with 10000.
- Count the number of IT department.

6) Create collection Employee(Employee_Id,Lastname,Firstname,Middlename,Job_Id,Manager_id,Hiredate, Salary,Department_id) using MongoDB as follows.

Employee_Id	Lastname	Firstname	Middlename	Job_Id	Manager_id	Hiredate	Salary	Department_id
7369	Smith	Jon	Q	667	7902	17-DEC-84	800	10

7499	Allen	Kevin	J	670	7698	20-FEB-85	1600	20
7505	Doyle	Jean	K	671	7839	04-APR-85	2850	20
7506	Dennis	Lynn	S	671	7839	15-MAY-85	2750	30
7507	Baker	Leslie	D	671	7839	10-JUN-85	2200	40
7521	wark	cynthia	D	670	7698	22-FEB-85	1250	10

- Give the details of employee whose salary in between 1000 and 2000.
- List employee details whose department id 20 with ascending order.
- List employee details whose department id 30 with descending order.
- Give the total number of employee.
- Give the details of employee whose department id is distinct.

7) Create collection Employee(Employee_Id,Lastname,Firstname,Middlename,Job_Id,Manager_id,Hiredate, Salary,Department_id) using MongoDB as follows.

Employee_Id	Lastname	Firstname	Middlename	Job_Id	Manager_id	Hiredate	Salary	Department_id
7369	Smith	Jon	Q	667	7902	17-DEC-84	800	10
7499	Allen	Kevin	J	670	7698	20-FEB-85	1600	20
7505	Doyle	Jean	K	671	7839	04-APR-85	2850	20
7506	Dennis	Lynn	S	671	7839	15-MAY-85	2750	30
7507	Baker	Leslie	D	671	7839	10-JUN-85	2200	40
7521	wark	cynthia	D	670	7698	22-FEB-85	1250	10

- Change the name of smith with Sumit.
- Increase the salary of employee with 10% whose dept id is 20.
- Delete all employee whose dept id is 30.
- List out the employees who are working in department 10 and draw the salaries more than 1000.
- List out the employees who are working in department 10 or 20.

8) Create library database (using mongodb)
   - List the books of computer subjects.
   - List the books whose publication is “Pearson”
   - List the number of journals.

- List the number of books which price is less than rs.500.

SQL PROBLEM STATEMENTS

9) For college database execute following queries:

Department (dept_Id ,dept_name, budget)
Teacher(Teacher_id, name, salary, dept_id)
Course (course_id title, credits, dept_id)
Teaches (course_id, Teacher_id)

- Find the names of all teachers in Computer dept who have salary greater than 7 0000.
- Find the names of teachers who are working in IT dept.
- Create a view to find out name and salary of teacher.

Find the names of all teachers whose salary is greater than at least one teacher in Mechanical dept

10) For Employee database execute following queries:

Department (dept_name, building, budget)
Employee(Emp_id, name, salary, dept_name)
Project(proj_id, title, dept_name)
Workson (emp_id, proj_id)

- Create a view to find employee name and project title for employee in IT depa rtment.
- Find the names of all departments whose name includes substring " p".
- List the entire employee records in descending order.
- Find the names of all employees whose salary is greater than at least one empl oyee in production dept.

11) For University database execute following queries:

Department (dept_name, building, budget)
Instructor (inst_id, name, salary, dept_name)
Course (course_id, title, credits, dept_name)
Teaches (course_id, inst_id)

- Find the average salary of the instructors who are in music dept.
- Find the average salary in each dept.
- Find out department name with average salary in each department where avera ge salary is greater than 40000.
- Find the names of all instructors whose salary is greater than at least one instru ctor in biology dept.

12) For banking database execute following queries:

Branch(branch_name, building, asset)
Customer(cust_id, name,address)
Account(acc_number,balance,branch_name)
Depositor(acc_number, inst_id)
Loan(Loan_no,amount)
Borrower(Loan_no , cust_id)

- Find the number of all accounts who have branch_name as pune.
- Find the names of all customer who have saving account in bank.
- Create a view to find all customers who have account and loan in the bank
- Show the branch name and number of account in that branch

13) Create the following table STUDENT with Regd No as Primary Key. Write down the SQL command which will show the Regd. No of Pradeep.

- Write down the SQL command which will display the Name and Branch of Regd No 0002.
- Write a SQL command which will count the number of rows existing in STUDENT table.
- Add another column address in STUDENT table.
- Change the branch of Ram from CSE to ETC.

REGD.NO	NAME	BRANCH
0001	Ram	CSE

0002	Hari	MECH
0003	Pradeep	EEE
0004	Deepak	ETC

14) Create the following table STUDENT with Regd No as Primary Key.

REGD.No	Name	Branch
0001	Ram	CSE
0002	Hari	MECH
0003	Predeep	EEE
0004	Deepak	ETC

- Write down the SQL command which will delete record of Ram.
- write down the SQL command which will show all record whose name start with "R".
- Write a SQL command which Update Name of "Pradeep" to "Pradeep Kumar".
- Add another column address in STUDENT table and update all address.
- Find the total registration count of each branch.

15) Create a table Salesperson as follows with SID as a Primary Key and Table Product with SID as foreign Key and PID as a primary key.

Salesperson

SID	Name	Age	Salary
1	Abe	61	140000
2	Bob	34	44000
5	Chris	34	40000
7	Dan	41	52000
8	Ken	57	115000

Product

PID	SID	Name	City
1	1	Samsonic	pleasant
2	5	Panasonic	oaktown
3	7	Samony	jackson
4	8	Orange	Jackson

- Find the name of all salespeople that have an order with Samsonic.
- The names of all salespeople that do not have any order with Samsonic.

- The names of salespeople that have 2 or more orders.
- Display all salesperson with age less than 40.
- Find the ID and name of sales person who is selling product Panasonic.

16) Consider the following schema:

Suppliers (sid: integer, sname: varchar(50), address: varchar(60)),sid as a primary key.

Parts (pid: integer, pname: varchar(50), color: varchar(20)),pid as primary key.

Catalog (sid: integer, pid: integer, cost: real),sid and pid as a foreign key which refers Supplier and Parts table respectively.

Insert values in each table.

Write SQL command for each of the following queries.

- Find the distinct pnames of all parts.
- Alter the data types of sname as varchar(30).
- Find out the supplier who is supplying part "Keyboard" whose cost is 5000.
- Remove all parts whose name is "Mouse".
- List all supplier whose name start with "S" in descending order.

17) Create table as follows

- dept (deptno, dname, mgreno).deptno as a primary key
- emp (eno, ename, bdate, title, salary, deptno),eno as a primary key and deptno is foreign key.
- proj (pno, pname, budget, deptno),pno as a primary key, deptno as a foreign refer dept
- workson (eno, pno, responsibility, hours),eno and pno as a foreign key which references table emp and proj
- Insert values in each table
  - Write an SQL query that returns the project number and name for projects with a budget greater than $100,000.
  - Write an SQL query that returns all works on records where hours worked is less than 10 and the responsibility is 'Manager'.
  - Write an SQL query that returns the employees (number and name only) who have a title of 'EE' or 'SA' and make more than $35,000.

- Write an SQL query that returns the employees (name only) in department 'D1' ordered by decreasing salary.
- List manager Number whose department name is “Production”

18) Create table as follows

dept (dno, dname, mgreno).dno as a primary key

emp (eno, ename, bdate, title, salary, dno),eno as a primary key

proj (pno, pname, budget, dno),pno as a primary key, dno as a foreign refer dept

workson (eno, pno, responsibility, hours),eno and pno as a foreign key which references table emp and proj

Insert values in each table

1) Write an SQL query that returns the departments (all fields) ordered by ascending department name.
2) Write an SQL query that returns the employee name, department name, and employee title.
3) Write an SQL query that returns the project name, hours worked, and project number for all works on records where hours > 10.
4) Write an SQL query that returns the project name, department name, and budget for all projects with a budget < $50,000.
5) Find the responsibility of the employee “Ramesh” who is working on project “Banking”.

19) Create table as follows

emp (eno, ename, bdate, title, salary, dno),eno as a primary key

proj (pno, pname, budget, dno),pno as a primary key,dno as a foreign refer dept

dept (dno, dname, mgreno).dno as a primary key

workson (eno, pno, resp, hours),eno and pno as a foreign key which references table emp and proj

Insert values in each table

- Write an SQL query that returns the employee numbers and salaries of all employees in the 'Consulting' department ordered by descending salary.
- Write an SQL query that returns the employee name, project name, employee title, and hours for all works on records.
- Find the entire employee whose salary in between 1000 and 8000.
- List the entire projects name.
- Find the employee who working on project “Banking” of ‘Production” department with duration 120 hours.

20) Create table as follows

Employee (employee-name, street, city) employee name as primary key.

Company (company-name, city) company-name as primary key.

Works (employee-name, company-name, salary)

Manages (employee-name, manager-name)

- Count employees company wise where salary greater than 25000.
- Delete column salary from Works.
- Display the structure of manager table.
- Update data type of employee-name in Manager from varchar(30) to varchar(50)
- Find the employees whose salary ranges 25000 to 50000.

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21) Create table as follows

1) *Employee (employee-name, street, city) employee name as primary key.*
2) *Company (company-name, city) company-name as primary key.*
3) *Works (employee-name, company-name, salary)*
4) *Manages (employee-name, manager-name)*

- Find the names, street address, and cities of residence for all employees
- Find the names of all employees in the database who live in the city "Pune"
- Find the names of all employees in the database who do not work for 'First Bank Corporation'.
- Find the names of all employees in the database who earn more than every employee of 'Small Bank Corporation'.
- Find all the managers.

22) Create table Employee(Employee_Id,Lastname,Firstname,Middlename,Job_Id,Manager_id,Hiredate, Salary,Department_id)

- Insert following records.

Employee_Id	Lastname	Firstname	Middlename	Job_Id	Manager_id	Hiredate	Salary	Department_id
7369	Smith	Jon	Q	667	7902	17-DEC-84	800	10
7499	Allen	Kevin	J	670	7698	20-FEB-85	1600	20
7505	Doyle	Jean	K	671	7839	04-APR-85	2850	20

7506	Dennis	Lynn	S	671	7839	15-MAY-85	2750	30
7507	Baker	Leslie	D	671	7839	10-JUN-85	2200	40
7521	wark	cynthia	D	670	7698	22-FEB-85	1250	10

- Create a view for all column of Employee table.
- Create a view of last name, firstname, middlename of Employee table.
- Create a view of all employees whose last name start from "S" and middle name is "Q".
- Create a view of all employees with salary incremented by 10 %.
- Delete view for all column of Employee.

23) Do the following

Create a table Animal (id, name) with auto increment id field and insert value in animal table

Create table Location as follows Location (Location_Id, Reginal_Group)

- You will have to create an auto-increment field start with 100.
- Rename Location table with "Location_of_india", and display Location_of_india table content.
- Create a view of all location whose location_id =101;
- Alter table Location to add column "Location Name"

24) Create the 'product ' table and 'product_price_history' table

- *CREATE TABLE product (product_id,,product_name,supplier_name, unit_price);*
- *CREATE TABLE product_price_history (product_id,,product_name,supplier_name, unit_price);*

29) create a trigger to update the 'product_price_history' table when the price of the product is updated in the 'product' table.

Create table account(accno int,amount int)

Create a trigger on account table before update in new inserted amount is less than "0" then set amount "0" else if amount is greater than 100 then set amount 100

25) Write a PL/SQL block to calculate the grade of minimum 10 students. Using MYSQL procedure and function.

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26) Do the following

Write a PL/SQL block to find the maximum number from given three numbers.

27) In database MB CREATE TABLE employee (I'd,name,post,age,exp_yrs,salary)

Insert some values.

Write a function to calculate average of salary

Write a function to calculate min,max,sum,count

28) Write a PL/SQL block to find the maximum number from given three numbers.

> CREATE TABLE student_data (mark1, mark2, mark3 mark4,name_of _student)

Insert some values.

Write a function to calculate average of marks.

List the average marks of each student.

28) Write a stored function for Inventory database

- Assigning inventory i.e code for each order according To the following conditions

If order_id<4 set inventory=11

Else

If order_id>3 set inventory=15

29) Write a stored procedure for Inventory database

- To get all orders
- Get count of order having order code same as order code given by user
- Get details of order having order code same as order code given by user .

29) Write a stored procedure

To add new employee into employee table

- Which will return number of employees working in the department. Pass the dept no.
- Display maximum salary.
- Display minimum salary.

- To display all employees.