1) **Create the following Tables:**

Location (LocationId, RegionalGroup)

Department (DeptId,Name,LocationId)

Job (JobId,Function)

Employee(EmpId,LastName,FirstName,MiddleName,JobId,ManagerId,HireDate,Salary,Commission,DeptId)

SalGrade (Grade, lowsal, Hisal)

**Queries based on the above tables:**

1. List out first name,last name,salary, commission for all employees
2. List out employee\_id,last name and department for all  employees
3. List out the employees anuual salary with their names only.
4. List the details about “SMITH”
5. List out the employees who are working in department 20
6. List out the employees who are earning salary between 3000 and 4500
7. Display the employee who got the maximum salary.
8. Display the no of employees who are working in Sales department

2) **Create the following Tables:**

Location(LocationId, RegionalGroup)

Department(DeptId,Name,LocationId)

Job(JobId,Function)

Employee(EmpId,LastName,FirstName,MiddleName,JobId,ManagerId,HireDate,Salary,Commission,DeptId)

SalGrade (Grade, lowsal, Hisal)

**Queries based on the above tables:**

1. List all job details
2. Display number of locations according to regional group
3. List out first name, last name, salary, commission for all employees
4. List out the employees who are working in department 10 or 20
5. Find out the employees who are working at ‘Middle East’
6. List out the employees whose name starts with “S”
7. Display the employees with their department name and regional groups.
8. Display number of employees working in each department.

3) **Relations:**

Classes(class, type, country, numGuns, bore, displacement)

Ships(name, class, launched)

Battles(name, date)

Outcomes(shipname, battlename, result)

**Queries:**

1) Find the countries whose ships had the largest number of guns.

2) Find the classes of ships at least one of which was sunk in a battle.

3) Find the names of the ships with a 16-inch bore.

4) Find the battles in which ships of the *Kongo* class participated.

5) Write a view on the relation.

6) Find the number of battleship classes.

7) Find the average of guns of battleships

8) Update the bore of the ship which was launched in the month of December.

**4) Relations:**

Movie (title, year, length, inColor, studioName, producer#)

StarsIn (movieTitle, movieYear, starName)

MovieStar (name, address, gender, birthdate)

MovieExec (producer#, name, address, cert#, netWorth)

Studio (name, address, presC#)

**Queries:**

1) Find the address of MGM studios.

2) Find Sandra Bullock’s birthdate.

3) Find all the stars that appear either in a movie made in 1980 or a movie with “Love” in the title.

4) Display the number of starts in each movie.

5) Find all the stars who either are male or live in Miami ( have Miami as a part of their address).

6) Who were the male stars in *Terms of Endearment*.

7) Which stars appeared in movies produced by MGM in 1995?

8) Delete the movie produced by ‘Karan Johar’

**5)Relations:**

Employee(employee\_neme, street, city)

Works(employee\_name, company\_name, salary)

Company(company\_name, city)

Manages(employee\_name, manager\_name)

**Qureies:**

1. Find the names of all employee who work for First bank corporation..
2. Find all employees in the database who live in the same cities as the companies for which they work.
3. Find all employees in the database who live in the same cities and on the same streets as do their managers.
4. Find the company that has the smallest payroll.
5. Give all mangers of First Bank Corporation a 10% raise
6. Delete all tuples in the works relation for employees of Small Bank Corporation.
7. Display the number of managers a company has.
8. Write a query to show right outer join.

**6) Relations:**

Book (BookId, title, publisher\_name)

Book\_Authors (BookId, AuthorName)

Publisher(Name, address, phone)

Book\_copies(bookid, BranchId, noofcopies)

Book\_loans (Bookid,BranchId, cardno, dateout,duedate)

Library\_Branch (BranchId,BranchName,Address)

Borrower (cardNo, Name, Address, Phone)

**Queries:**

1. How many copies of the book titled ‘The Lost Tribe’ are owned by the library branch whose name is”sharpstown”?
2. How many copies of book titled ‘The Lost Tribe’ are owned by each library branch?
3. Retrieve the names of all borrowers who do not have any books checked out.
4. For each book that is loaned out from the “Sharptown” branch and whose Due date is today, retrieve the book title, the borrowers name and the borrowers address.
5. Retrieve the names, addresses and number of books checked out for all borrowers who have more than five books checked out.
6. Display the number of books in library.
7. How many authors are there for the book “The Lost Tribe”
8. Write a view on book.

**7)Relations:**  
Employee(Fname,Minit,Lname,SSN, Bdate,Address, Sex, salary, Superssn,Dno)

Deparment(Dname, Dno,Mgrssn,Mgrstartdate)

Dept\_Locations (Dno,Dlocation)

Project (Pname,Pno,Plocation,Dnum)

Works\_On (Essn,Pno,Hours)

Dependent (Essn,DependantName,Sex,Bdate,Relationship)

**Queries:**

1. Retrieve the names of employees in department 5 who work more than 10 hr/week on the ‘Product X’ project.
2. List the names of employees who have dependent with the same first names as themselves.
3. Find the names of employees that are directly supervised by ‘Franklin Wong’.
4. For each project, list the project name and the total hours per week (by all employees) spent on that project.
5. Delete the employees who work on project ‘A’.
6. For each department, retrieve department name and the average salary of employees working in that department.
7. Retrieve the average salary of all female employees.
8. Find the names and addresses of employees who work on at least one project located in Houston but whose department has no location in Houston.

**8)Relations:**

Student (Name, studentNo, class, major)

Course (CourseName, CourseNo, CreditHours, Dept)

Selection(SectionIdentifier, CourseNo,semester, year, instructor)

Grade\_Report (studentno,SectionIdentifier, grade)

Preqrequisite(CourseNo,PrerquisitesNo)

**Queries:**

1. Retrieve the names of all senior students majoring in’CoSC.
2. Retrieve the names of all courses taught by professor King in 85 and 86.
3. For each section taught by professor King, retrieve the course number, semester, year, and number of students who took the section.
4. Retrieve the name and transcript of each senior students majoring in COSC. Transcript includes course name, course number, credits hours, semester, year and grade for each course completed by the student.
5. Retrieve the name and major departments of all straight A students( students who have a grade of A in all courses).
6. Retrieve the names and major departments of all students who do not have any grade of A in any of their courses.
7. Change the class of student ‘Smith’ to 2.
8. Delete the record for the student whose name is ‘Smith’ and student number is 17.

**9) Relations:**

Create a table EMPLOYEE with the following data. Declare EMPNO as primary key.

|  |  |  |  |
| --- | --- | --- | --- |
| EMP NO | EMP NAME | JOIN DATE | JOIN BASIC |
| *1001* | *Subhas bose* | *01-JUN-96* | *3000* |
| *1002* | *Nadeem shah* | *01-JUN-96* | *2500* |
| *1003* | *Charles babbage* | *01-JUN-96* | *3000* |
| *1004* | *Shreyas kumar* | *01-JUL-96* | *2500* |
| *1005* | *George boole* | *01-JUL-96* | *2800* |

Create a table SALARY with the following data. Here EMPNO will be act as a foreign key referring table EMPLOYEE

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| EMP NO | BASIC | COMMISSION | DEDUCTION | SALARY DATE |
| *1001* | *3000* | *200* | *250* | *30-JUN-96* |
| *1002* | *2500* | *120* | *200* | *30-JUN-96* |
| *1003* | *3000* | *500* | *290* | *30-JUN-96* |
| *1004* | *2500* | *200* | *300* | *30-JUN-96* |
| *1005* | *2800* | *100* | *250* | *30-JUN-96* |
| *1001* | *3000* | *200* | *250* | *31-JUL-96* |
| *1002* | *2500* | *120* | *200* | *31-JUL-96* |
| *1003* | *3000* | *500* | *290* | *31-JUL-96* |
| *1004* | *2500* | *200* | *300* | *31-JUL-96* |
| *1005* | *2800* | *100* | *150* | *31-JUL-96* |

1. Select avg sal of employee 1001.
2. What is the total salary earned by empno ‘1003’ till now.
3. What is the highest basic earned salary till date.
4. What is the highest commission among all employees.
5. How many employees are there together.
6. How many months salary data is given in the table.
7. What is the minimum amount of commission earned.
8. Count no of employees whose basic salary is 2500

10) **Relation:**

PATIENT (PID, FirstName, LastName, FatherName, BloodGroup, Disease, DOB, Address, Doctor ID)

DOCTOR (DID, Name, ContactNo, Qualification, Experience)

WARD (Ward\_Id, WName, Type, Bed No PID,StaffId)

STAFF (StaffID, Name, Contact, Type, Shift, Ward Name)

DOCT WARD (Doct ID, WardId)

**Queries:**

1) Display the patient details of patients whose blood group is “A+”

2) Display the doctors who treat the patient for “Cancer”

3) Display the number of patients treated by doctor “Parth”

4) Update doctors database to add a new doctor.

5) Update patient table updating the address of patient with name “Arati”

6) Display how many patients are admitted in ward “General”

7) Display number of staff in first shift.

8) Illustrate natural join.

11) **Relation**

Departments (DeptID, Street, City, State, Registry)

PoliceStaff (StaffID, FN, Surname, DOB, DutyHours, DeptID)

CriminalRecords (CriminalID, Crime, FN, Surname, ***StaffID***, Email ID)

CriminalPhn (CriminalID,PhnNo)

**Queries:**

1) Find name of all police staff “On Duty” from Registry

2) Find the average duty hours for all police.

3) Find police staff with duty hours more than 10.

4) Display the phone number of Criminal “Shahid”

5) Display the number of Plice staff for each department.

6) Display the department with highest police staff.

7) Write a view indicating the Department, police staff and criminals handled by police staff.

8) Illustrate any one outer join operation.

**12)Relation**

Items (item\_id,amount,type,customer\_id)

Order (OId,order\_date,amount,customer\_id, staffId)

Staff(name,staff\_id,dob,phno)

Customer(CID, name, address, email\_id, phno)

Staff\_Phone (staff\_id, phno)

Customer\_phone (customer\_id, phno)

Queries:

1) Display total number of items

2) Display the orders for the customer ‘Kavya’

3) Update order Amount of Customer ‘Divya’ to 5000

4) Retrieve the customer who has ordered highest number of items

5) Add the phone number of an existing customer “Mohan”

6) Display the number of orders placed by customer “Jagat”

7) Write a view on above relation.

8) Illustrate natural join on above relation.

13)**Relation**

Customer ( CustomerID, Name, Password,Addr, Email)

Product ( ProductID, Name, Image, Price, Description, CustomerID, Quantity)

Bill ( BillID, Date, Amount, Payment Method, No. of items)

ShippingDetails ( ShippingID, Status, Cost, Time, BillID)

CustPhone ( CustomerID, Phone no.)

Prod\_Bill (ProductID, BillID)

**Queries:**

1) Display the list of customers who have taken product “Phone”

2) Display the number of products purchased by customer “Mohan”

3) Display the number of bills where payment methods is “Cash”

4) Display the product whose status is “Shipped”

5) Display the total number of items billed.

6) Write a view on relation.

7) Write a left outer join query on above relation.

8) Update the status of the product 3 to “Shipped”

14) Match (MatchId, team1, team2, Ground, Date, Winner)

Player (PID, Name, Country, Yborn,Bplace)

Batting (MatchId,PID, nruns,nballs,fours,sixes)

Bowling (MatchId,PID, Novers, nruns,nwickets,maidens)

1. Find all the information of the players from India who were born after 1980.
2. Find the player who has hit more than 6 sixes.
3. Find the bowler of India who has taken more than 10 wickets
4. Find the player who has hit maximum sixes.
5. Display the number of players of each countery.
6. Update the runs of the bowler whose name is ‘Kapil Dev’ to 200
7. Delete the match which is been played between ‘India’ and ‘SA’ teams
8. Display the batting and bowling record of player ‘Kapil Dev’

15) branch (branch\_name, branch\_city, assets)

customer (customer\_name, customer\_street, customer\_city)

loan (loan\_number, branch\_name, amount)

borrower (customer\_name, loan\_number)

account (account\_number, branch\_name, balance)

depositor (customer\_name, account\_number)

1. Display the customers from the city ‘Mumbai’
2. Display the customers who have balance more than 5000 Rs.
3. Display the customers who have taken loan of more than 10000 Rs.
4. Display the customer who have account in branch ‘Dadar’
5. Update the total assets of the branches to 50000 located in city ‘Pune’
6. Display the customers who have an account and who have taken loan both.
7. Find the number of accounts in each branch
8. Find the customer who has maximum amount as balance in account.