Create the following tables with appropriate data type for attributes and integrity constraints on the tables. Enter at least 5 records in each table and answer the queries given below.

Suppliers (SNo, Sname, Status, SCity)

Parts (PNo, Pname, Colour, Weight, City)

Project (JNo, Jname, Jcity)

Shipment (Sno, Pno, Jno, Quantity)

1. Find supplier numbers for suppliers in Mandi with status less than 20.

2. Find supplier details for suppliers who supply part P2. Display the supplier list in decreasing order of supplier numbers.

3. Find suppliers names for suppliers who do not supply part P2.

4. For each shipment get full shipment details, including total shipment weights computed as Weight*Quantity of corresponding parts.

5. Get all the shipments where the quantity is in the range 300 to 750 inclusive.

6. Get part numbers for parts that either weigh more than 1Kg or are supplied by suppliers S2 or both.

7. Get the names of cities that store more than two red parts. Change the column name in the output to “City-Parts”.

8. Update the city of supplier S1 to “Delhi”.

9. Get part numbers for parts supplied by a supplier in Allahabad to a project in Chennai.

10. Find the names of all parts whose color starts with the letter b.

11. Change the datatype of the weight attribute in the Parts table from int to float.

12. Find the number of parts of each color.

13. Find the names of all the projects which are located in the city Jaipur and in which the part is supplied by supplier S3.

14. Delete all the projects which are located in Madras.

15. Find all part-details of parts that are shipped to any project carried out in Mumbai.

16. Find number of unique projects supplied by supplier S1.

17. Add column SDate in shipment table.

18. For each supplier which supplies parts to a project, find the total no. of parts supplied by the supplier.

19. Find all supplier name, part name and project name triples such that the indicated supplier, part, and project are all located in the same city. List the name of the city along with the names of suppliers, project and parts.

20. Get the names of cities from where more than three yellow parts are supplied.

21. Find all distinct cities where either supplier is living or parts are shipped from or projects are carried out. Change the column name in the output to “All-Cities”.

22. Find names of cities such that atleast one supplier is living there and atleast one part is shipped and one project is carried out. Change the column name in the output to “Common-Cities”.

23. Modify data type of any attribute of table shipment.

Employee Database

DDL Commands

•Create table, alter table, drop table

DML Commands

•Select, update, delete, insert statements

•Condition specification using Boolean and comparison operators (and, or, not, =, <>,>, <,>=, <=)

•Arithmetic operators and aggregate functions (Count, sum, avg, Min, Max)

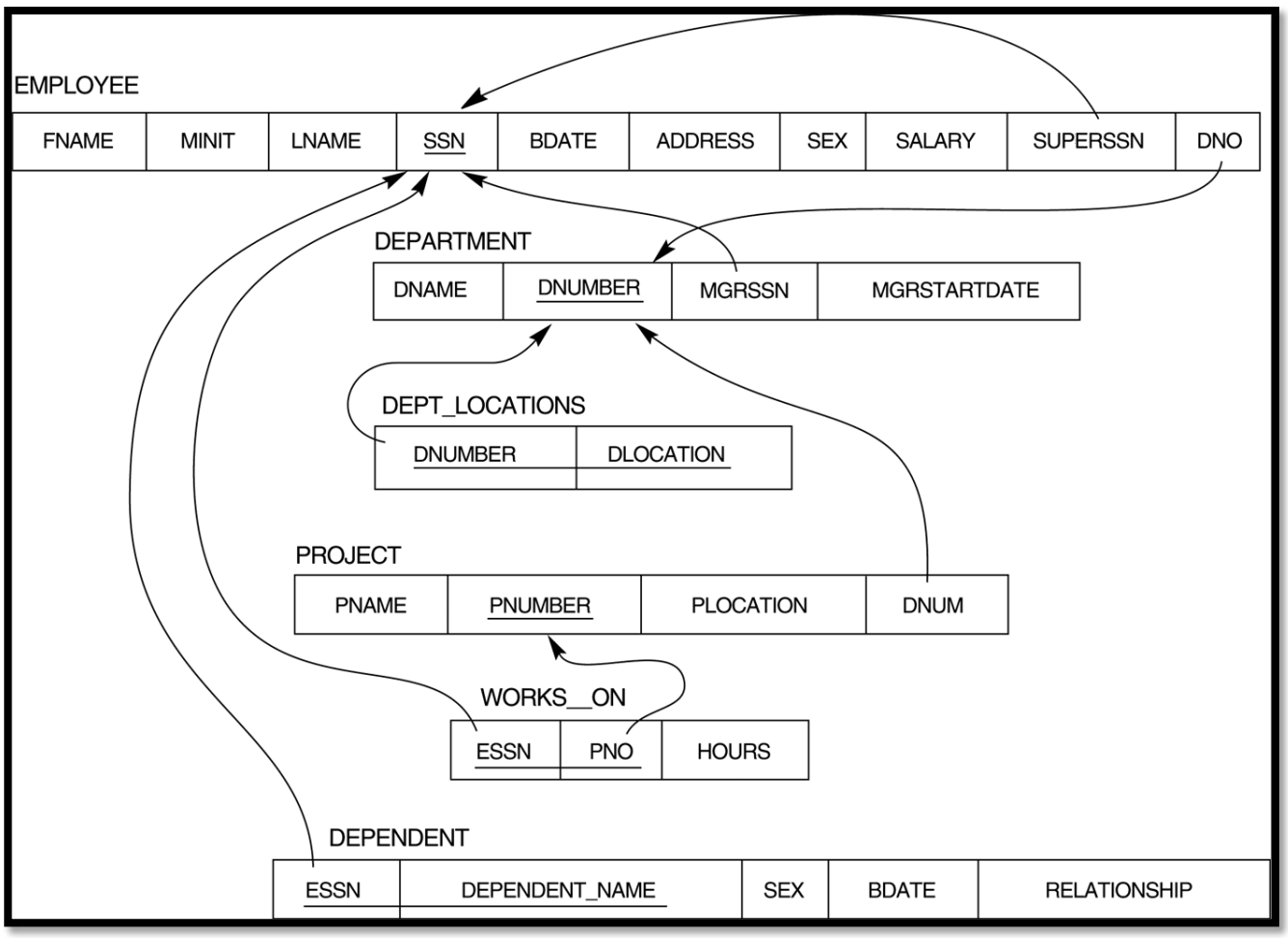
•Multiple table queries (join on different and same tables)

•Nested select statements

•Set manipulation using (any, in, contains, all, not in, not contains, exists, not exists, union, intersect, minus, etc.)

•Categorization using group by.....having

•Arranging using order by



Refer figure 5.7 of Reference [1]

List of sample queries to be done using above schema

1.Create tables with relevant foreign key constraints

2.Populate the tables with data

3.Perform the following queries on the database:

1. Display all the details of all employees working in the company.

2. Display ssn, lname, fname, address of employees who work in department no 7.

3. Retrieve the birthdate and address of the employee whose name is 'Franklin T. Wong'

4. Retrieve the name and salary of every employee

5. Retrieve all distinct salary values

6. Retrieve all employee names whose address is in ‘Bellaire’

7. Retrieve all employees who were born during the 1950s

8. Retrieve all employees in department 5 whose salary is between 50,000 and 60,000(inclusive)

9. Retrieve the names of all employees who do not have supervisors

10. Retrieve SSN and department name for all employees

11. Retrieve the name and address of all employees who work for the 'Research' department

12. For every project located in 'Stafford', list the project number, the controlling department number, and the department manager's last name, address, and birthdate.

13. For each employee, retrieve the employee's name, and the name of his or her immediate supervisor.

14. Retrieve all combinations of Employee Name and Department Name

15. Make a list of all project numbers for projects that involve an employee whose last name is 'Narayan’ either as a worker or as a manager of the department that controls the project.

16. Increase the salary of all employees working on the 'ProductX' project by 15%. Retrieve employee name and increased salary of these employees.

17. Retrieve a list of employees and the project name each works in, ordered by the employee's department, and within each department ordered alphabetically by employee first name.

18. Select the names of employees whose salary does not match with salary of any employee in department 10.

19. Retrieve the name of each employee who has a dependent with the same first name and same sex as the employee.

20. Retrieve the employee numbers of all employees who work on project located in Bellaire, Houston, or Stafford.

21. Find the sum of the salaries of all employees, the maximum salary, the minimum salary, and the average salary. Display with proper headings.

22. Find the sum of the salaries and number of employees of all employees of the ‘Marketing’ department, as well as the maximum salary, the minimum salary, and the average salary in this department.

23. Select the names of employees whose salary is greater than the average salary of all employees in department 10.

24. For each department, retrieve the department number, the number of employees in the department, and their average salary

25. For each project, retrieve the project number, the project name, and the number of employees who work on that project.

26. Change the location and controlling department number for all projects having more than 5 employees to ‘Bellaire’ and 6 respectively.

27. For each department having more than 10 employees, retrieve the department no, no of employees drawing more than 40,000 as salary.

28. Display employee names having no dependent in descending order.

29. For each department find number of female and number of male employees.

30. Find the name and age of youngest employee in each department.