

Database Management Systems Assignment 3

1 (a) Consider the following tables:

WORKS (Pname, Cname, Salary)

LIVES (Pname, Street, City)

Located_IN (Cname, City)

MANAGER (Pname, Mgrname)

Where Pname=Person name, Cname= Company name and Mgrname= Manager Name

Write SQL queries for the following:

(i) list the names of the people who work for the company Wipro along with the cities they live in.

(ii) find the people who work for the company 'Infosys' with a salary more than Rs. 50,000. List the names of the people, along with the street and city addresses.

(iii) find the names of the persons who do not work for the company 'HCL'. 3x2=6

(b) what do you understand by normalization in database design? Explain third normal form (3NF) by taking suitable example(s). 4

2 (a) what is a relationship set? 2

(b) give short answers for the following:

(i) properties that describe an entity's characteristics.

(ii) language used to define data in a database

(iii) SQL clause used for sorting the tuples.

(iv) SQL clause used for pattern matching in a string. 4x1=4

(c) suggest appropriate data types for the following attributes:

(i) date of birth

(ii) marks of a student

(iii) employee id

(iv) name of a school

3 (a) what is a binary relationship? Illustrate the same with the help of an example. 4

(b) describe the three level architecture of a database approach for a DBMS with the help of a block diagram. What is the difference between logical and physical data independence

$4+2=6$

4. (a) Describe the three -tier architecture of the DBMS with the help of a diagram. 4

(b) Consider the following table PLAYER INFO

Player ID	Name	Sport Played
1	Joey	44
2	Virat	52
3	Manoj	69
4	Xavier	54

(i) Write SQL command to create the table. 2

(ii) Write SQL command to add one more column AGE to above table. 2

(iii) Write SQL command to remove the above table from the database. 2

5. (a) Differentiate between primary key, candidate key and super key. 3

(b) Consider the database of an online book store.

Every book has a title, ISBN, Year and price. The store also keeps the information about the author and publisher for all the books. For author the database keeps the name, address, and phone number. For

publishers, the database keeps the name, address, phone number. Many author may write many book and a book is published by one publisher only.

(a) Identify the entities of interest and their attributes. 2

(b) Identify the relationships among these entities. 2

(c) Design an E-R diagram for such a bookstore and state necessary assumptions. 3

6. (a) What are referential integrity constraints ? Give one example. 4

(b) Differentiate between : $2 \times 3 = 6$

(i) Logical and physical data independence

(ii) DDL and DML

(iii) Strong and weak entity