

SRI BHARATHI ARTS AND SCIENCE COLLEGE FOR WOMEN

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DEPARTMENT: COMPUTER SCIENCE

SUBJECT: DATABASE SYSTEMS

SUBJECT CODE:16SCCCS4

TWO MARKS QUESTIONS:

UNIT-1:

1.DEFINE DBMS?

A Database management system (DBMS) is a collection of interrelated data at a set of programs to access those data. The collection of the data usually referred as the database, contains information relevant to an enterprise.

2.WRITE THE APPLICATION OF DATABASE SYSTEMS?

Databases are widely used. here are some representative applications.

- Enterprise information
- Banking and finance
- Universities
- Airlines
- Telecommunication

3.WHAT ARE THE DATABASE LANGUAGES?

A database system provides a data-definition language to specify the database schema and a data-manipulation language to express database queries and update.

4.WHAT IS MEAN BY RELATIONAL DATABASE?

- A relational database is based on the relational model and uses a collection of tables to represent both data and the relationships among these data.
- It also includes a DML and DDL.

5.DEFINE DATA MINING?

The term data mining refers loosely to the process of semi automatically analyzing large database to find useful patterns. Like knowledge discovery in artificial intelligence(also called machine learning)or statistical analytics, data mining attempts to discovery rules and patterns from data.

UNIT-2:

1.WHAT IS MEANT BY DATABASE SCHEMA?

- The logical design of the database , and the database instance , which is a snapshot of the data in the database at a given instant in time.
- In general a relation schema consists of a list of attributes and their corresponding domains.

2.WHAT IS THE PURPOSE OF THE USING KEYS IN DATABASE SYSTEMS?

- A super key is a set of one or more attributes that, taken collectively, allow as to identify uniquely a tuple in the relation.

- The attribute is called a foreign key from r1, referencing r2. The relation r1 is called the referencing relation.

### 3.WRITE ABOUT RELATIONAL QUERY LANGUAGES?

A query language is a language in which a user requests information from the database. In a procedural language, the user instructs the system to sequence of operations on the database to compute the desired result.

### 4.HOW TO WRITE SELECTION OPERATION IN RELATIONAL ALGEBRA?

The select operations tuples that satisfy a given predicate. We use the lowercase Greek letter sigma to denote selection . the predicate appears as a subscripts to sigma . the argument relation is in parentheses after the sigma.

### 5.DEFINE NULL VALUES?

- Null values present special problems in relational operation, including arithmetic operation, comparison operation, and set operation.
- The result of an arithmetic expression(involving, for example +,-,\*,or/) is null if any of the input values is null.

## UNIT-3

### 1.WHAT IS SQL QUERY LANGUAGES?

The SQL language is structured query language. The several parts

- Data -definition language(DDL)
- Data-manipulation language(DML)
- Integrity
- View definition
- Authorization

### 2.WHAT ARE THE AGGREGATE FUNCTION IN SQL?

Aggregate functions are function that take a collection (a set or multiset) of values as input and return a single value

- Average: avg
- Minimum: min
- Maximum: max
- Total: sum
- Count : count

### 3.WRITE ABOUT SET OPERATIONS?

Set operations(SQL) SET operations allow the results of multiple queries to be combined into a single result set. Set operation include UNION, INTERSECT, and EXCEPT.

### 4.LIST OUT THE WAYS OF MODIFYING THE DATABASE?

- Database field tap
- Database summary values tab
- Search tab
- Queries tab
- Templates tab

## 5.WHAT ARE THE SQL DATA TYPES?

The SQL standard supports a variety of built – in types , including

- Char(n);
- Varchar(n);
- Int;
- Small int;
- Numeric(p);
- Real, double precision;
- Float(n);

## UNIT-4

### 1.WHAT IS TUPLES?

- A relational- algebra expression, we provide a sequence of procedures that generates the answer to our query
- The tuple relation calculus by constant, is a nonprocedural query language.

### 2.DEFINE E-R MODEL?

The entity-relationship (E-R) data model was developed to facilitate database design by allowing specification of an enterprise schema that represents the overall logical structure of a database

### 3.WHAT IS COMPLEX ATTRIBUTES?

The complex attribute is a types of attribute in database . it is formed by nesting composite attributes and multi-valued attributes in arbitrary way. We can say this as the both are in the attribute.

### 4.WHAT IS MEAN BY WEAK ENTITY SET?

- Consider a section entity, which is uniquely identified by a course identifier, semester, year and section identifier.
- Clearly, section entities are related to course entities.

### 5.WHAT ARE THE NOTATION USED IN ER-MODEL?

A diagrammatic representation of the data model of an application is a very important part of designing a database schema

- Alternative E-R notations
- The unified modelling language

## UNIT-5

### 1.WHAT IS RELATIONAL DATABASE DESIGN?

Relational database design models information and data into a set of tables with row and columns. Each row of a relation/tables represents a record , and each column represent an attribute of data.

### 2.WHAT ARE THE FEATURES OF GOOD RELATION DESIGN?

- It is possible to generate is set of relation schema directly from the ER design.
- The goodness (or badness) of the resulting of schemas depend on how to good the ER design was in the first place

### 3.DEFINE BCNF?

Boyce-codd normal form(BCNF) is a normal form used in database normalization.

BCNF was developed in 1974 by Raymond 1974 by Raymond F. Boyce and edger F. codd to address certain types of anomalies not dealt with by 3NF as originally defined.

### 4.WHAT IS NORMALIZATION?

The normalization is the process of minimizing redundancy from a relation or set of relations. Redundancy in relation may cause insertion, deletion and updation anomalies..... normal forms are used to elimination or reduce redundancy in database tables.

### 5. WHAT IS MEAN BY FUNCTIONAL DEPENDENCIES?

The attributes of a table is said to be dependent on each other when an attribute of a table uniquely identifies another attributes of the same table

Ex: student table with attributes

Stu\_id, Stu\_name , Stu\_age