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Department :> Computer Science

Program :> Software Engineering

Semester :> 4TH

Section :>   A

Subject : DATABASE(Theroy)

Question Number 1

ANSWER 1

: "ID" is the Candidate Key.

For explanation check this:

STUDENT

STUD_NO	STUD_NAME	STUD_PHONE	STUD_STATE	STUD_COUNTRY	STUD_AGE
1	RAM	9716271721	Haryana	India	20
2	RAM	9898291281	Punjab	India	19
3	SUJIT	7898291981	Rajsthan	India	18
4	SURESH		Punjab	India	21

Table 1

STUDENT_COURSE

STUD_NO	COURSE_NO	COURSE_NAME
1	C1	DBMS
2	C2	Computer Networks
1	C2	Computer Networks

Table 2

Candidate Key: The minimal set of attribute which can uniquely identify a tuple is known as candidate key. For Example, STUD_NO in STUDENT relation.
- The value of Candidate Key is unique and non-null for every tuple.
- There can be more than one candidate key in a relation. For Example, STUD_NO is candidate key for relation STUDENT.
- The candidate key can be simple (having only one attribute) or composite as well. For Example, {STUD_NO, COURSE_NO} is a composite candidate key for relation STUDENT_COURSE.
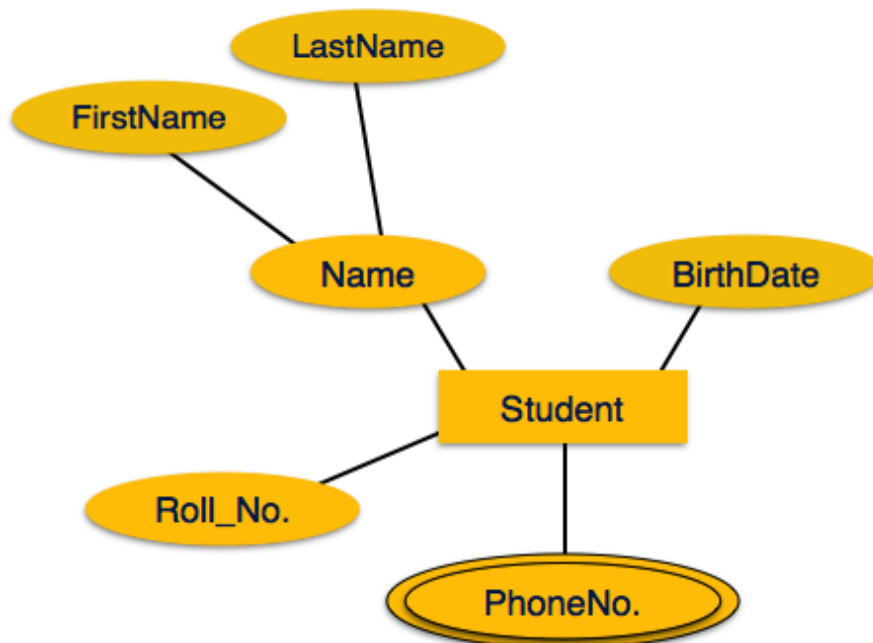
(2)

DATA REDUNDANCY

Data redundancy is a condition created within a database or data storage technology in which the same piece of data is held in two separate places.

DATA INTEGRITY

Data integrity is the overall completeness, accuracy and consistency of data. The concept of data integrity ensures that all data in a database can be traced and connected to other data. This ensures that everything is recoverable and searchable.

(3)

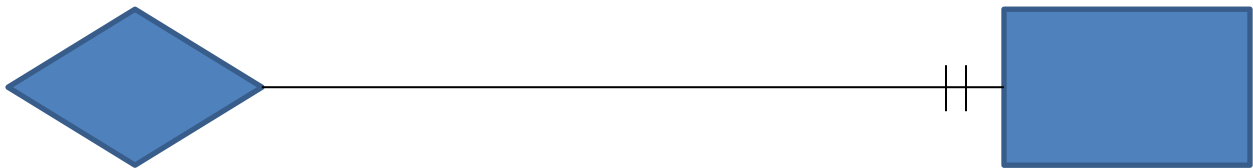**. Multivalued** attributes are depicted by double ellipse.

(4)

The maintenance reduced in database by minimum redundancy and flexibly.

Emphasizes the integration and sharing of data throughout the organization.

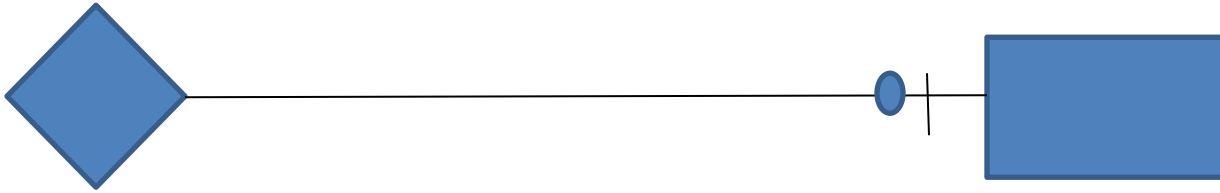Requires fundamental reorientation or shift through process, storing w/top management.
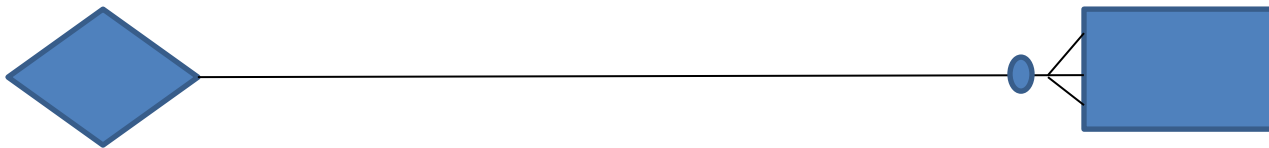
(5)

Mandatory one

Mandatory Many

Optional One

Optional Many

(6)

It is the responsibility of end-user to protect data from accidental or intestinal lose of data from that there is need of backup in database. Explicit need of backup in database is necessary because it is "easy to configure and easy to manage, our recovery solution can restore to lost file from as much as 30 days back, so you don't have to worry about failing to retrieve that lost file, even if you accidently delete it and empty the recycling bin."

Question Number 2

ARTISTS

Attributes: Name, birthplace, age, style, art.

PIECE OF ART WORK

Attributes :>

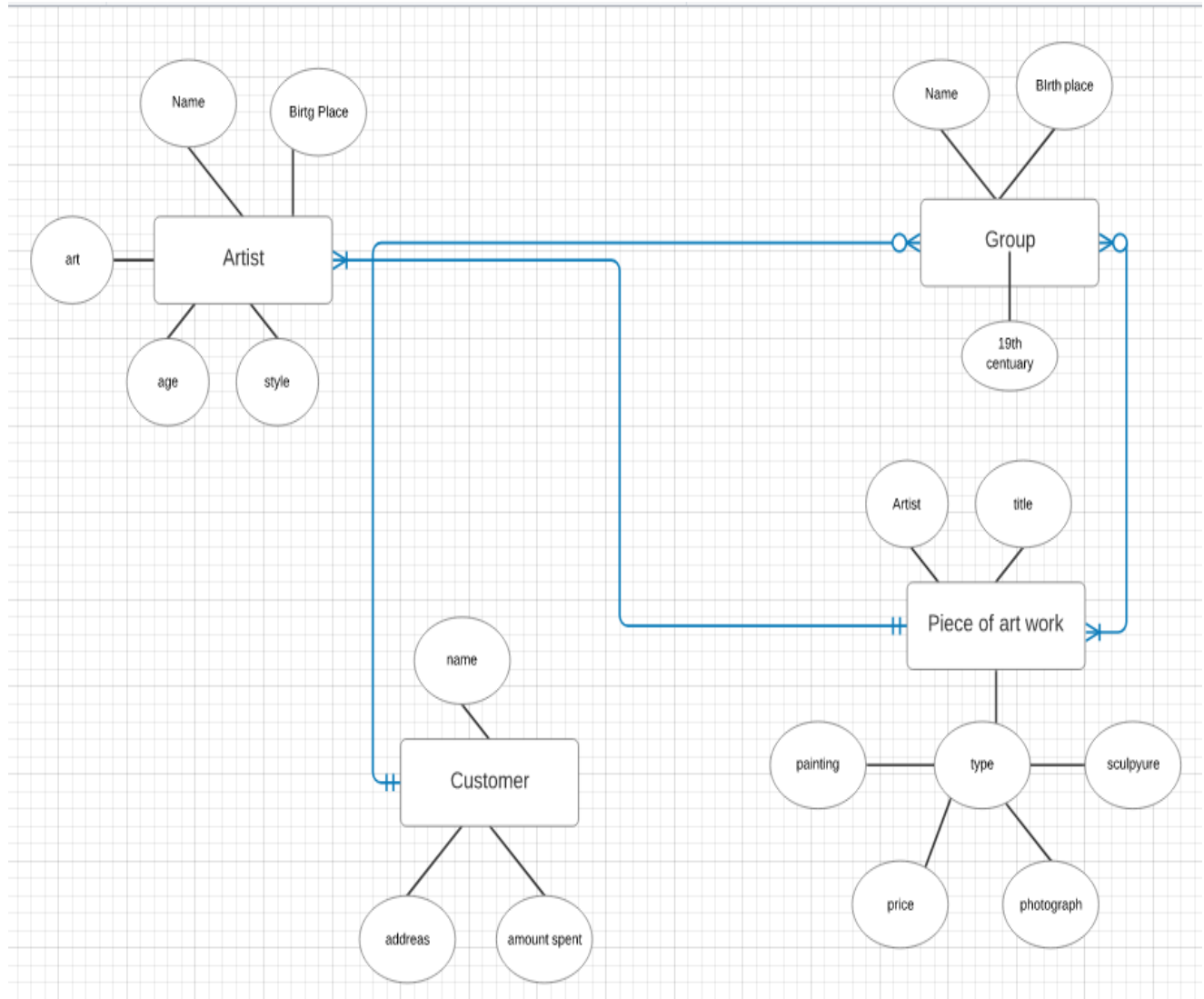Artist, year, title, type, (painting , sculpture, photograph, price)

Group

Attributes :>

Portraits, Picasso, 19th centaury , name ,

CUSTOMER

Attributes:> Name, address, amount, spent in dollars

ERD Diagram

Question Number 3

Conceptual Model to Relational Model