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Semester	r	8th
Section	r	B (SE)

Q1 (a) Which attribute in the following table is a Candidate Key? Assume that no more data will ever be added to this table.

Ans The "Names" attribute in the following table is a Candidate Key and the "Department" attribute assume that no more data will ever be added to this table.

(b) What is Data Redundancy and Data Integrity?

Ans DATA REDUNDANCY:-

Data redundancy is a condition created with in a database or data storage technology in which the same piece of data is held in two separate places. Whenever data is repeated, this basically constitutes data redundancy. This can occur by accident, but is also done deliberately for backup and recovery purposes.

* DATA INTEGRITY:

Data Integrity is the overall completeness, accuracy and consistency of data. This can be indicated by the absence of alternation between two instances or between two updates of a data record, meaning data is intact and unchanged.

(c) Show a ~~two~~ multivalued composite attribute is represented in conceptual model. Show with example

Ans The composite attribute is represented by an ellipse, and those ellipses are connected with an ellipse. An attribute can have more than one value. These attributes are known as a multivalued attribute.

The double oval is used to represent multivalued attributes.

EXAMPLE: A typical example of a composite attribute is a person's address, which is composed of atomic attributes such as a City, Zip, and Street.

(d) How is the "reduced maintenance" in database approach?

Ans Reduced maintenance in Database Approach Relational database - A

database that represents data as a collection of tables in which all data relationships are represented by common values in related tables. Improved Data Consistency By eliminating or controlling data redundancy, we greatly reduced the opportunities for inconsistency.

(Q) How are the following represented using ER diagram: Mandatory One, Mandatory Many, Optional One, Optional Many?

Ans In a mandatory relationship, every instance of one entity must participate in a relationship with another entity.

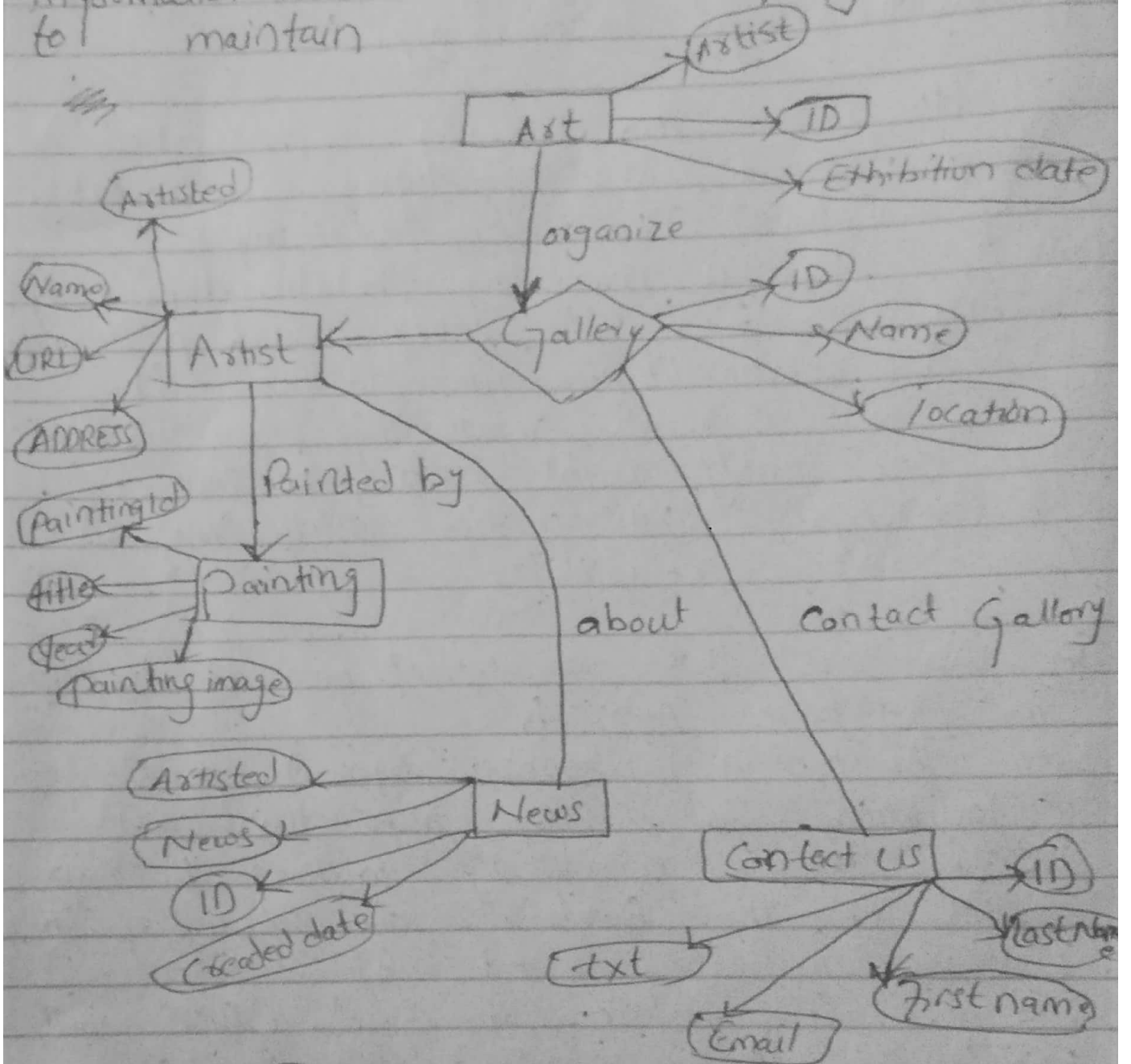
In an optional relationship, any instances of one entity might participate in a relationship with another entity, but this is not compulsory.

(Q) Why is there an explicit need of backup in database approach?

Ans The backup in database approach provide facilities for logging transactions and DBMS changes, periodically making backup copies of the database, and recovering the database in the event of some type of failure. A good DBMS will provide comprehensive and flexible mechanisms for backing up and restoring copies of data.

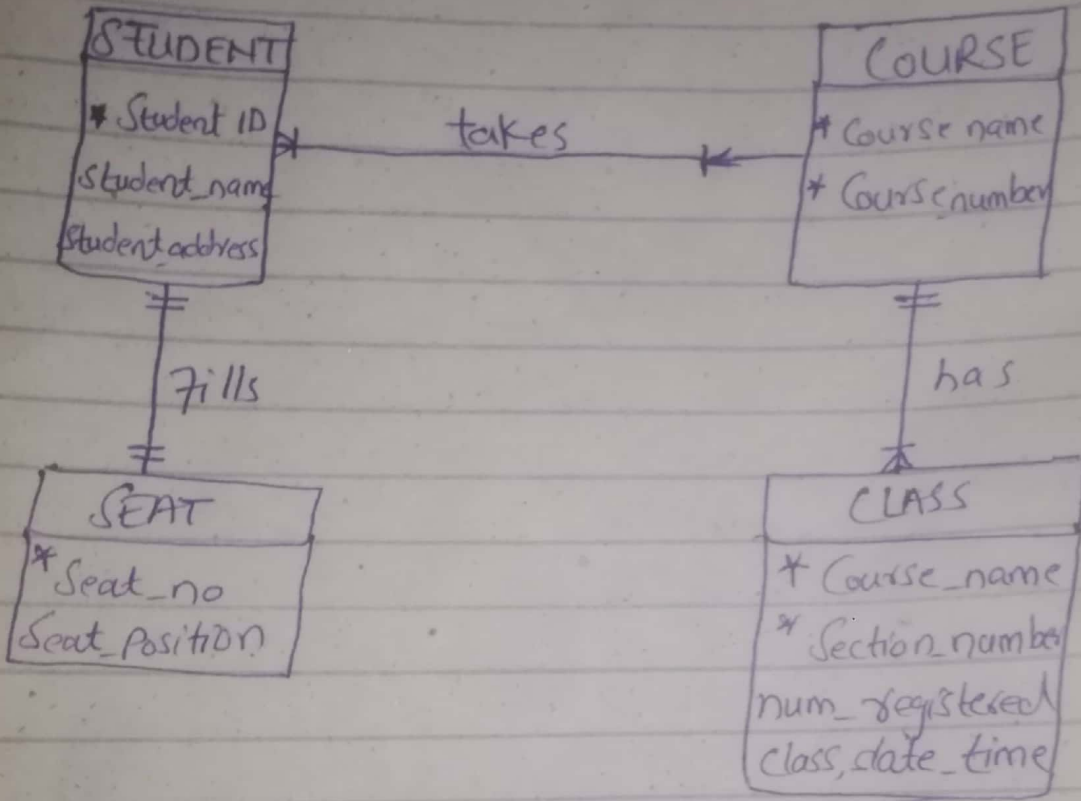
Q2 Draw an ERD from the following business rules use proper notations for the type of attributes.

ANS A Schema need to capture all information that an Art Gallery need to maintain



ERD DIAGRAM

Q3 Convert the following Conceptual to Relational Model.



Ans FROM CONCEPTUAL MODEL TO RELATIONAL MODEL

4 RELATIONAL MODEL

- The relational Model is a logical data Model, which represents data as a set of relations (term table is often substituted for relation in formal presentations).
- Relational Model defines data from the end user point of view. It does not define physical organization of data.
- Relational model can be implemented in a relational database.

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Seat No	Seat position
(1)	(a)
(2)	(a)

Fills

STUDENT

ID	Name	Address
1	Sameed	Mardan
2	Farhan	Mardan
3	midrar	Mardan

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CLASS

Section	Subject	Pho No	Time
B	Physics	09137	8:00
B	Maths	583	11:00
B	English	501	2:00
B	Chemistry	009	5:0

COURSE

Name	Number
DBMS	6
English	3
Urdu	1
Islamiyat	2

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