Title:- Conceptual Design using ER Model - Health care management system.

Tools Required:-

https://draw.io (or Creately (ERDplus)

steps involved in creating ER Diagram.

step 1:- problem understanding & Requirments Analysis.

* Analyze the real application : Health care management system.
* understand the domain : Hospitals, patients, Doctors, Appointments, Prescriptions.

step 2:- Identify major Entities.

Entities are core components representing objects (or) concepts in the system;

Patient, Doctor, Appointment, prescription, medicine, depar

step 3:- Identify Attributes for each Entity.

Example attributes;

Entity Attributes.

Patient : patientid (PK), Name, Age, Gender, phone, Adress

Doctor : Doctor (PK), Name, specialization, contact No, Department ID (FK)

Appointment: Appointment (PK), Patient ID (FK), Doctor (FK), Date, Time

Prescription : prescription ID (PK), Appointment ID (FK), Diagrams, Notes

medicine: medicine ID (PK), Name, Dosage, manufactor

Department: Department id (PK), Name, location

step 4:- Define Relationships between Entities

* A patient books one or more Appointments.
* A Doctor conducts many Appointments.
* An Appointment generates one prescription.
* A Prescription includes many medicines.
* A Doctor belong to one department.

Steps:- Draw ER diagrams using draw.io.

Instructions:-

* open https://draw.io
* Choose Blank diagram → click create
* from left panel, drag the following:
* use rectangles for Entities (Patient, Doctor)
* use Ellipses for Attributes (Name, Age, Etc)
* use diamonds for Relationships (Books, Conducts)
* Connects using lines:
* solid lines for relation connectors.
* use double Ellipse for multivalued attributes (if any)
* use pk a underline to denote primary key.
* use labels such as (M:N) (1:N), Etc, to show cardinality

Examples relationships:-

* Patient (1) - books → (M) Appointment
* Doctor (1) - conducts → (M) appointment
* Appointment (1) - generates → (1) prescription
* Prescription (1) - includes → (M) medicine.
* save diagram as PNG/ PDF and include pk in your lab report

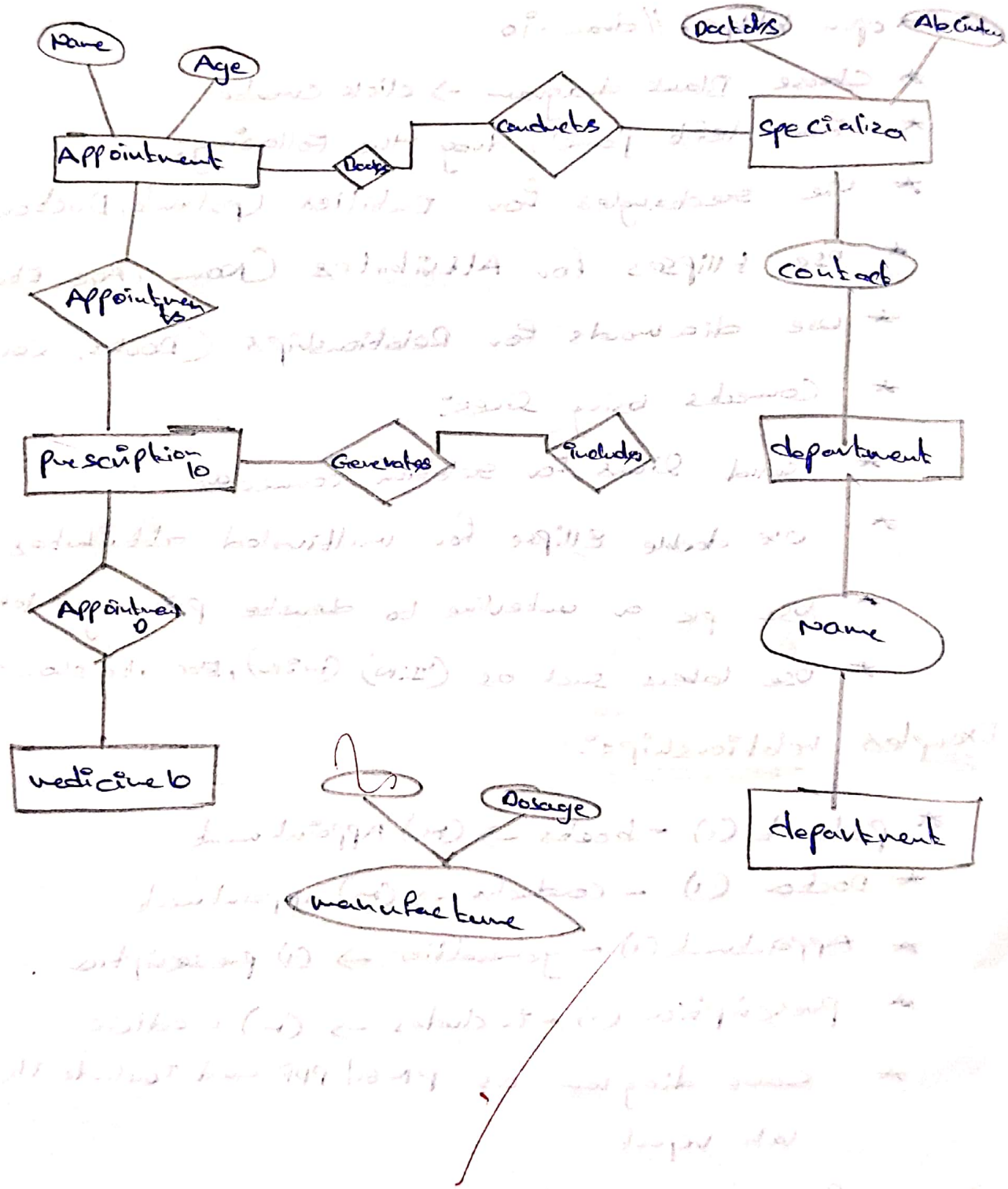
Input for the ER Design:-

Real-time Healthcare system scenario.

User Requirements (Patient mangement, Doctor scheduling, medi Records)

Data base Design Rules (Entity - Attribute - Relation shi identification.

Output diagram :-



Entity Relationship diagram (ERD) that clearly shows:

All identified Entities with attributes.

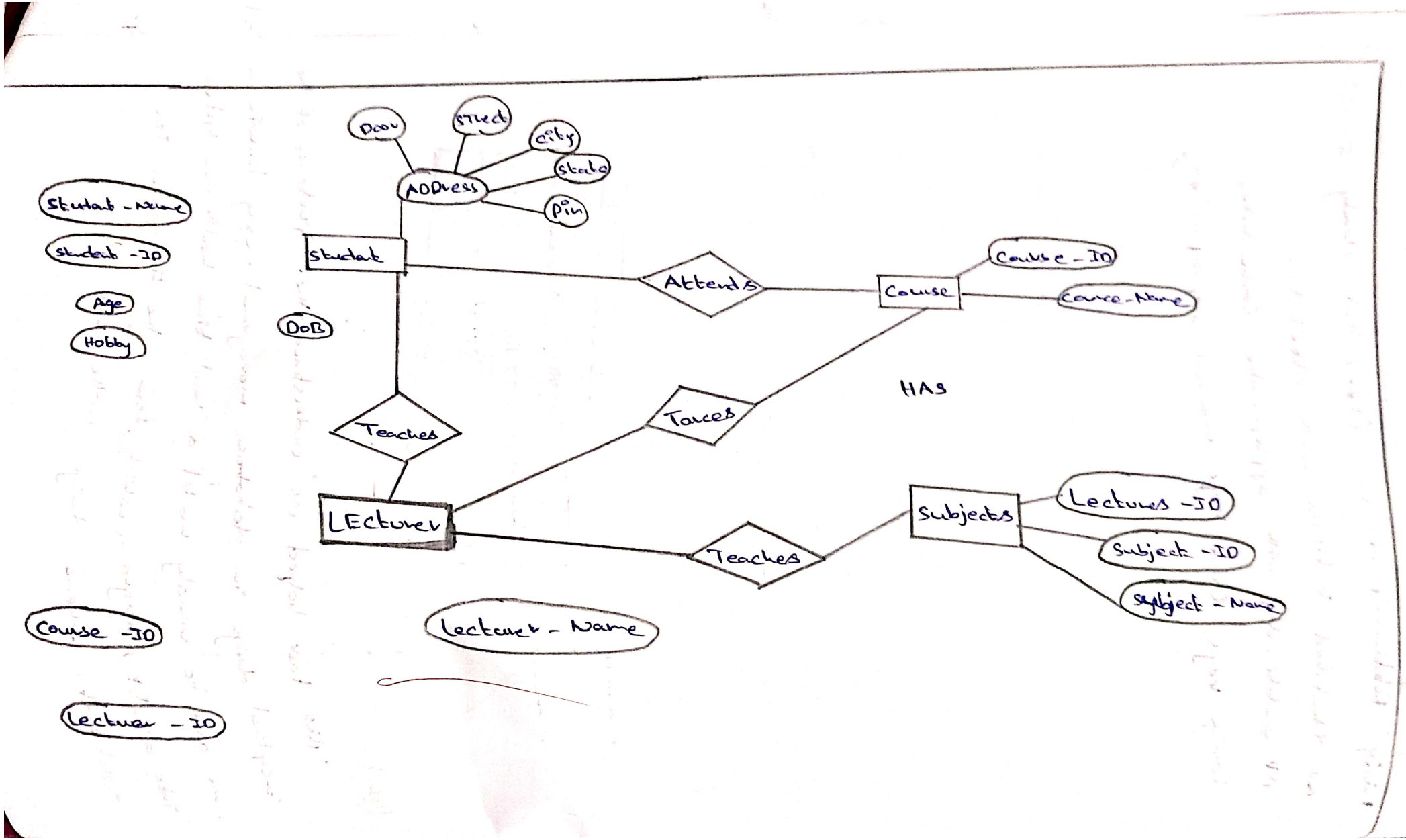
All relationship with appropriate cardinalities.

foreign keys and keys marked appropriately.

VEL TECH - CSE	
EX NO.	
ERFORMANCE (5)	
RESULT AND ANALYSIS (5)	
VIVA VOCE (5)	
RECORD (5)	
TOTAL (20)	
SIGN WITH DATE	

Result:-

This task helped us understand the importance of the conceptual design in database management. using drawio, we are able to visualy model a real time health care system into an ER diagram, which forms the foundation for relational schema design in the next phase.



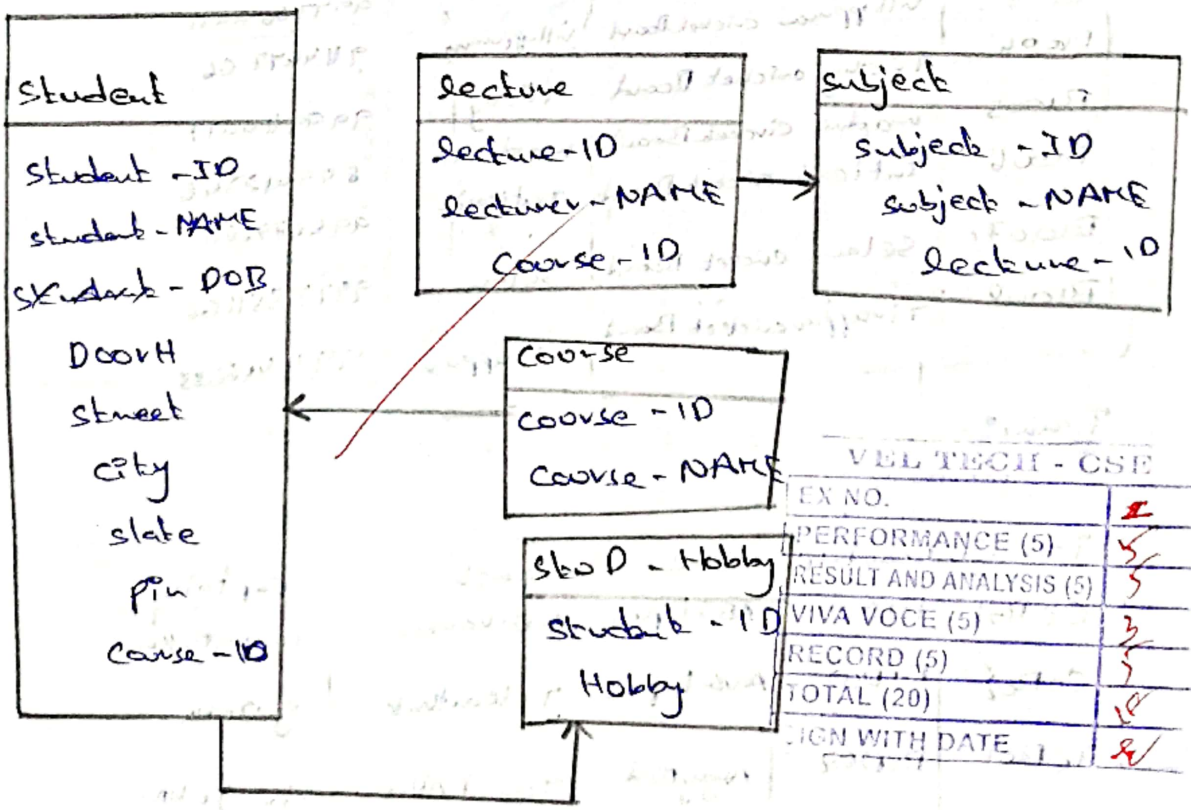
Task-12.

Convert ER Diagram into Relational model

Steps for converting the ER diagram to the table

* Entity type becomes a table
* All single-valued attribute becomes a column for the table
* A key attribute of the entity type represented by the primary key
* The multivalued attributes is represented by a separate table
* Composite attribute represent by Components.
* Derived attributes are not considered in the table.

using these rules. you can Convert the ER diagrams to tables and Columns and assign the mapping between the tables and Colums and assign the mapping between the tables. Tables structure for the given ER diagram is as below.



VEL TECH - CSE

EX NO.	12
PERFORMANCE (5)	5
RESULT AND ANALYSIS (5)	5
VIVA VOCE (5)	3
RECORD (5)	5
TOTAL (20)	18
IGN WITH DATE	8/