1(A)	28/7/25	Conceptual design using ER Model	12	
1(B)	28/7/25	Convert ER diagram into Relational model	12	

28/7/25 Task - 1: Conceptual Design Using ER Model

~~Tools Required:~~

~~https://draw.io (or creatly / ERD plus)~~

~~steps involved in creating ER diagram~~

Aim:- To design a conceptual design using ER Model of college management system.

step-1: Understanding

→ Analyze the real world applications: College Management system

→ Understand domain: student, addmission, lecture, subjects.

step-2: Identify . Major Entities

Entities are core components responding objects (or) concepts:

. students
. Admission
. Timetable
. Lecture
. Subjects

step-3: Identify Attributes for entity.

Entity Attributes

student: Name, Student ID, Address, DOB, Depaltmenet

Addmission: Addmission-num, course name, date of enrollment, student ID.

Timetable: Time, data, classes.

Lecturer: Name, Lecturer-ID, Gender, Department, ph-num.

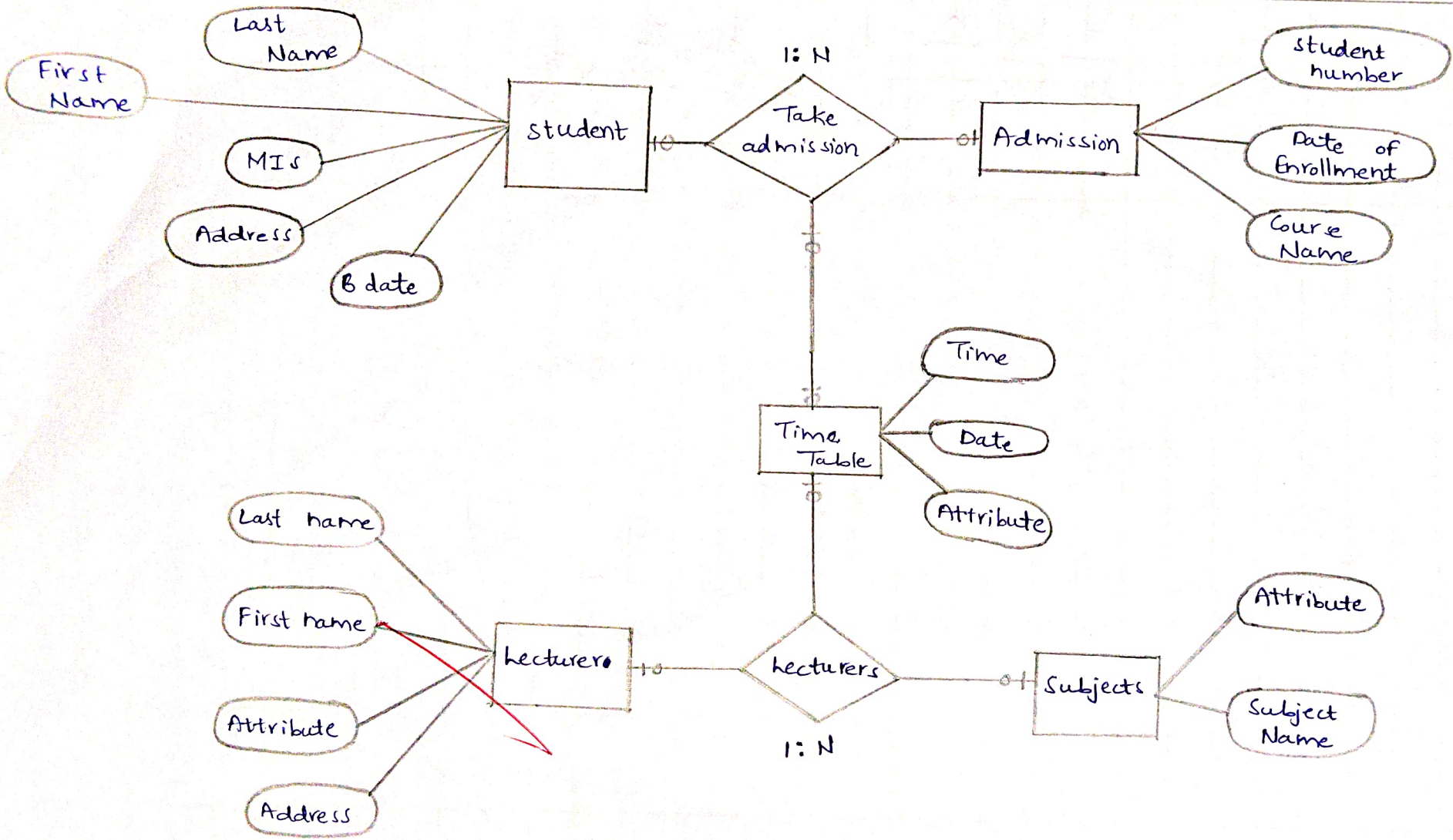
Subjects: Subject-name, subject code,

step-4: Relationship between entitie's.

→ students take one (or) more admissions.
→ Addmission student gets timetable.
→ Timetables gives one (or) more lecturers.
→ Lecturers teaches one (or) more subjects.

step-5: Draw ER diagram using draw.io

→ Open https://draw.io
→ Choose blank diagram → click create
→ From light panel, draw the folbwing.
→ Use ellipses for attributes.
→ Connect using lines.


Last Name
First Name
MIs
Address
B date
Student
1: N
Take admission
Admission
student number
Date of Enrollment
Course Name
Time
Time Table
Date
Attribute
Last name
First name
Attribute
Address
Lecturers
lecturers
1: N
Subjects
Attribute
Subject Name

Output :-

Entity Relationship diagram (ERD) that shows

→ All identified entities with attributes.

→ All relationship with appropriate cardinalities.

→ Solid lines for relationship connectors.

Input for ER design:

Real time college management system scenario Use requirements, data base design rules, Entities, Attribute, Relationships.

Result :-

Thus, the task of conceptual design using ER Model for college management system using draw.io has bee implemeinted successfully and task is done.

VELTECH	
EX No.	1(A)
PERFORMANCE (5)	5
RESULT AND ANALYSIS (5)	5
VIVA VOCE (5)	2
RECORD (5)	12
TOTAL (20)	

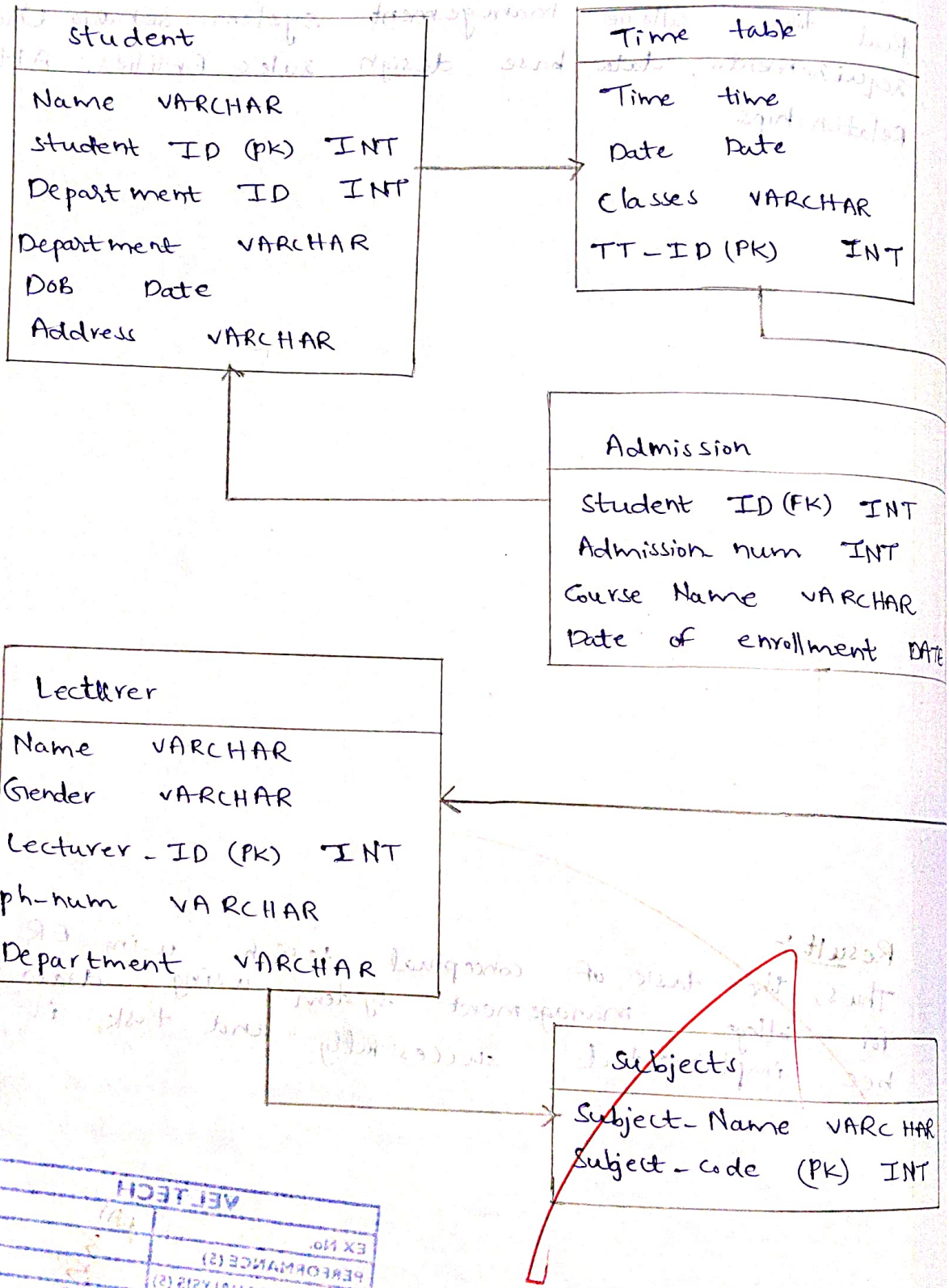
28/7/25

~~Result:-~~

E.R Modal

Thus, task 1 helped to understand the importance of concepted design in data base management using draw.io, ~~the~~ ~~the~~ and able to visually model to a real-time college management system into an ER diagram.

Relational Model:-



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Task-1B: Convert ER diagram into Relational Model

Aim:-

To convert the ER model diagram into relational model.

Steps for converting ER diagram to the relational model.

* Entity type become a table.
* All single-valued attributes become a column for the table.
* A key attribute of the entity type represented by primary key.
* The multi-valued attribute is represented by a seperate table.
* Composite attributes represent by components.
* Derived attributes are not considered in the table.

Using these rules, ER diagrams can be converted to tables and columns and assign the mapping between the tables.

VELTECH	
EX No.	1(B)
PERFORMANCE (5)	5
RESULT AND ANALYSIS (5)	5
VIVA VOCE (5)	2
RECORD (5)	
TOTAL (20)	12
SIGN WITH DATE	

Result:-

Thus, the relational model for the given ER diagram was successfully executed.

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