

Date: 29/7/25

Task: 1.1 mobile phone purchase

ER Diagram for a mobile phone purchase and billing management system that maintains details of customers.

AIM:

To design and Entity Relationship (ER) diagram for a mobile phone purchase and Billing management System that maintains details of customers, mobiles, purchases, billing and login credentials for administrative purposes.

ALGORITHM:

Step 1: Start

Step 2: Identify the main entities

- Customer
- mobile
- Bill
- login

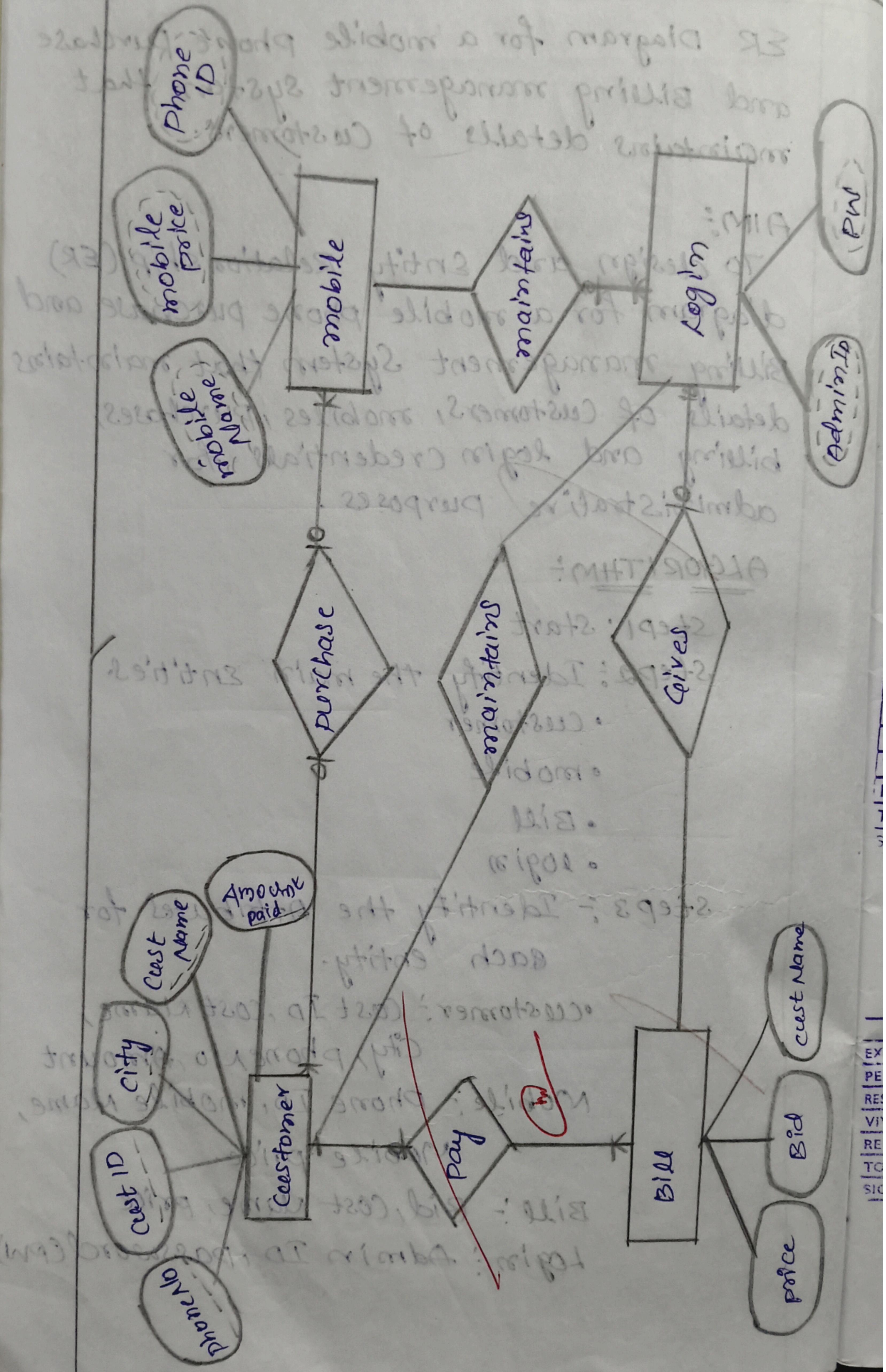
Step 3: Identify the attributes for each entity.

Customer: Cost ID, Cost Name, City, Phone No, Amount

Mobile: Phone ID, mobile Name, Mobile price.

Bill: Bid, cost Name, price

Login: Admin ID, password(PW)



## Step 4: Identify Relationship between Entities

- Customer - purchase - mobile: A customer can purchases one or mobiles.
- Customer - pay - Bill: A customer pays and receives a bill.
- Bill - gives - login: A bill is given by a login/admin account.
- Login - maintains - customer/mobile: Admin maintains customer and mobile data.

## Step 5: Determine Cardinality

- Customer to mobile: many to many
- Customer to bill: one-to-one or one-to-many

VEL TECH	
EX NO.	1
PERFORMANCE (5)	5
RESULT AND ANALYSIS (5)	5
VIVA VOCE (5)	3
RECORD (5)	3
TOTAL (20)	13

SIGN WITH DATE

Step 6: Draw the ER Diagram

• Rectangles = Entities

• Ellipses = Attributes

• Diamonds = Relationships

• Lines = Connections

• Symbols = cardinalities.

VEL TECH	
EX No.	
PERFORMANCE (5)	5
RESULT AND ANALYSIS (3)	
VIVA VOCE (3)	
RECORD (4)	
TOTAL (15)	

SIGN WITH DATE

Result: thus the design an entity

Relationship diagram a mobile phone purchase and billing management is successfully completed.

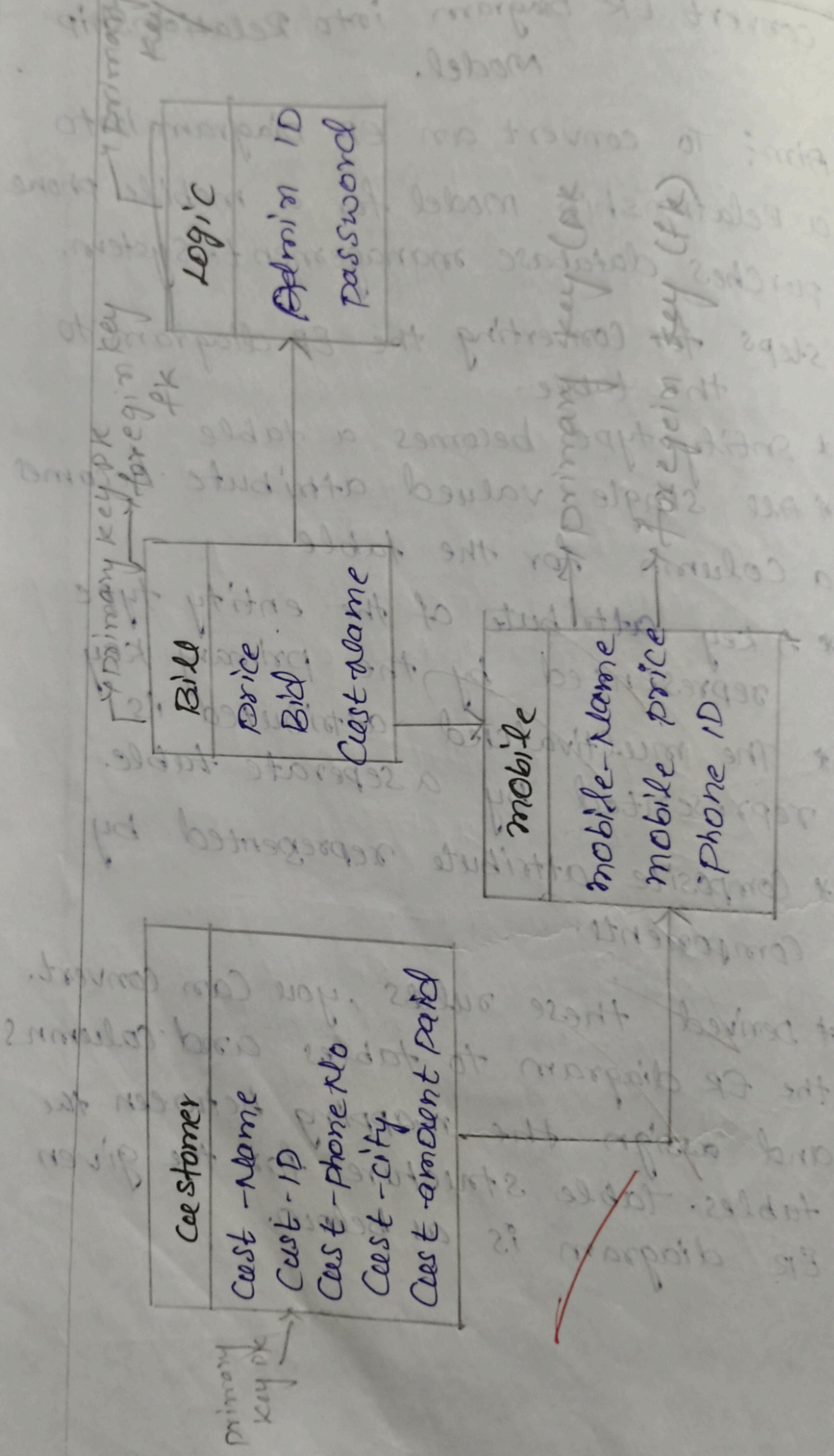
Date: 29/7/25 Task 1.2

Convert ER-Diagram into Relationship Model.

Aim: To convert an ER Diagram into a Relationship model for a mobile phone purchases database management system.

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 attribute is represented by a separate table.
- \* Composite attribute represented by components.
- \* ~~Derive these rules, you can convert the ER diagram to tables and columns and assign the mapping between the tables. Table structures for the given ER diagram is as below.~~



VEL TECH	
EX NO.	1
PERFORMANCE (5)	5
RESULT AND ANALYSIS (5)	5
VIVA VOCE (5)	3
RECORD (5)	10
TOTAL (20)	13
SIGN WITH DATE	m

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VEL TECH	
EX No.	
PERFORMANCE (5)	
RESULT AND ANALYSIS (3)	
VIVA VOCE (3)	
RECORD (4)	
TOTAL (15)	
SIGN WITH DATE	

Result: Thus, the conversion of an ER Diagram into in relationship Model for a mobile phone purchase data base management system was drawn successfully.