

ER Diagram for a mobile phone purchases management system that maintains details of customers and Billing.

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 are details for administration purpose

Algorithm :-

Step 1 : Start

Step 2 : Identify the main entities

- Step 3 :
 - customer
 - mobile
 - bill
 - login

Step 3 :- Identify the attributes for each entity

- Customer : cust ID, cust name, city, phone no, amount
- mobile : phone ID, mobile name, city, phone no, name mobile, price
- Bill : Bid, Cust Name, price
- Login : Admin ID, Password (Pw)
- Step 4 :- Identify relationship between, entities
 - customer-purchase : A customer can purchase one mobile
 - Customer-pay-Bill : A customer pays and receives a bill.

Date :- 29/7/25

Task :- 1.1

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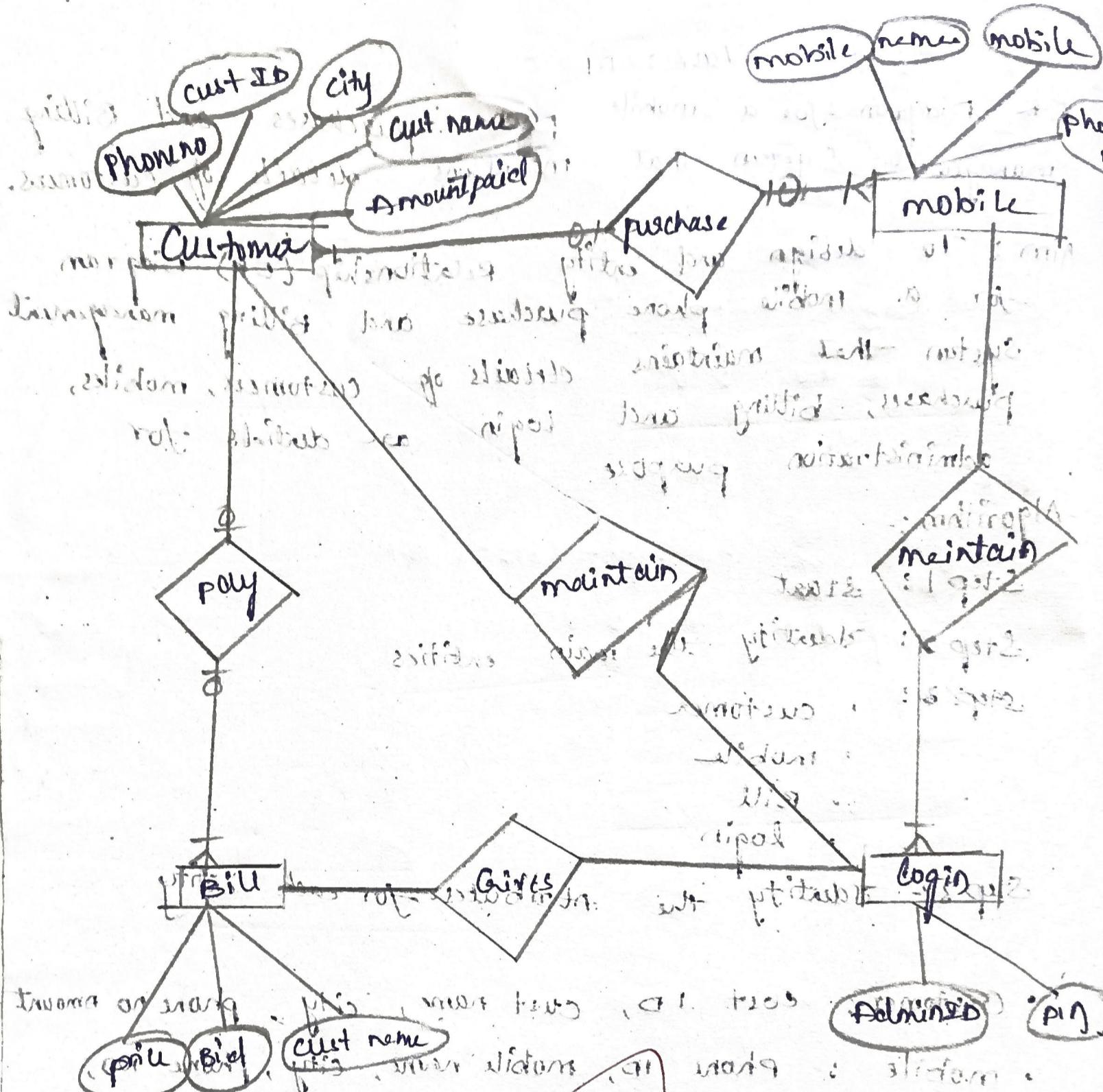
- Customer : cust ID, cust name, city, phone no amount
- mobile : phone ID, mobile name, city, phone no, Name mobile, price

- Bill : Bid, Cust Name, price.
- Login : Admin ID, Password (Pw)

Step 4 :- Identify relationship between entities

- customer-purchase mobile : A customer can purchase one or more mobile

- 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
- Login to bill - one to many.
- Log in to mobile / customer:

Step 6 :-

draw the ER Diagram

Rectangles = Entities

Ellipses = Attributes

Diamonds = Relationships

Lines = Connections

Symbol = coordinates.

Result; Thus the design an entity relationship diagram for a mobile phone purchase and billing management is successfully completed.

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RECORD (5)	-
TOTAL (20)	12
SIGN WITH DATE	19/18

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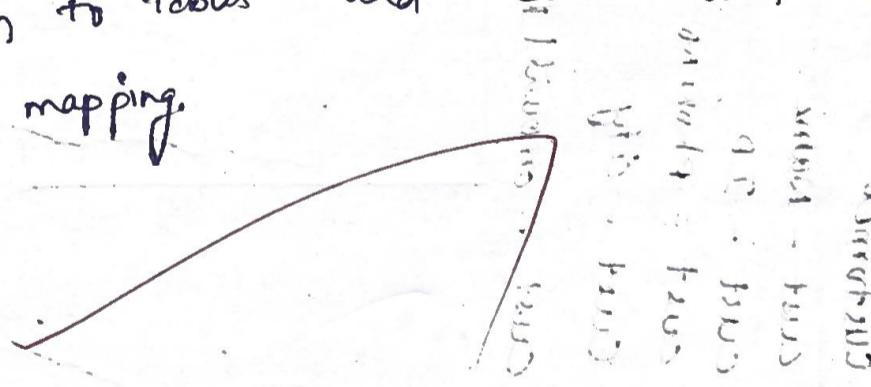
Date: 29/7/25

Task 1.2: Convert ER Diagram into Relationship models.

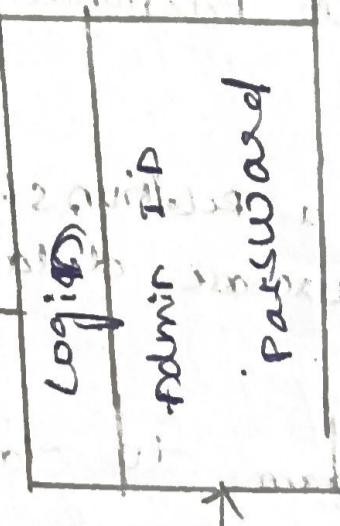
Aim: To convert ER Diagram into a relationship model for a mobile phone purchase database management system.

Steps for Converting the ER diagram to table

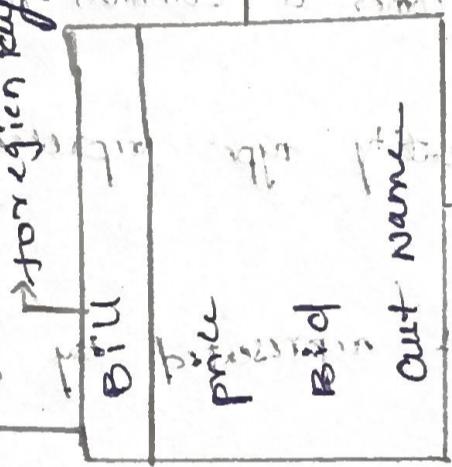
- Entity type becomes a table
- All single valued attributes becomes a common for the table
- - Key attributes of the entity type represented by the primary key.
- The multivalued attributes is represented by a separate table.
- composite attribute represented by components.
- Once these rules, you can convert the ER diagram to tables and columns and assign the mapping.



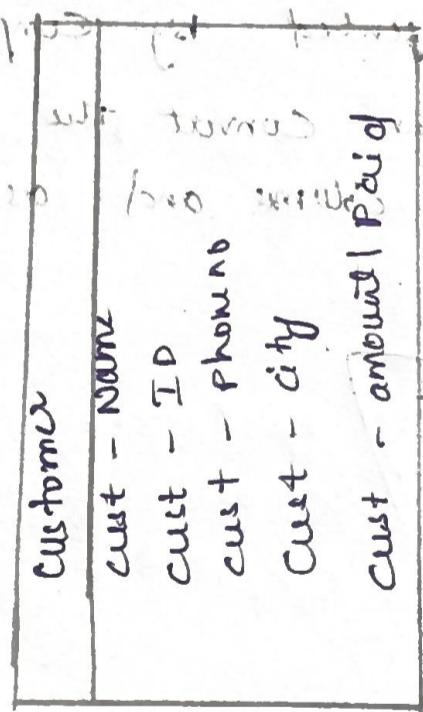
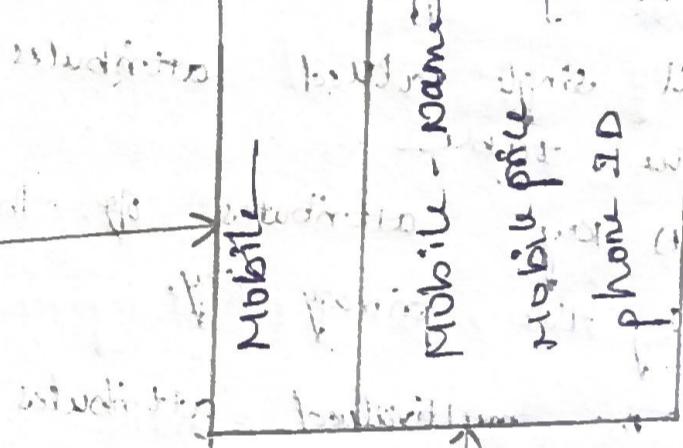
Primary key



Primary key
foreign key



Mobile



Primary key

BIFU

VEL TECH	
EX NO.	13
PERFORMANCE (5)	9
RESULT AND ANALYSIS (5)	5
VIVA VOCE (5)	0
RECORD (5)	0
TOTAL (20)	10
SIGN WITH DATE	✓

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Result:

thus the conversion of our ER Diagram into a relationship model for a mobile phone purchase database management system was successfully drawn

