

9917125

TASK 4.1

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, purchase/billing and login credentials for administrative purpose.

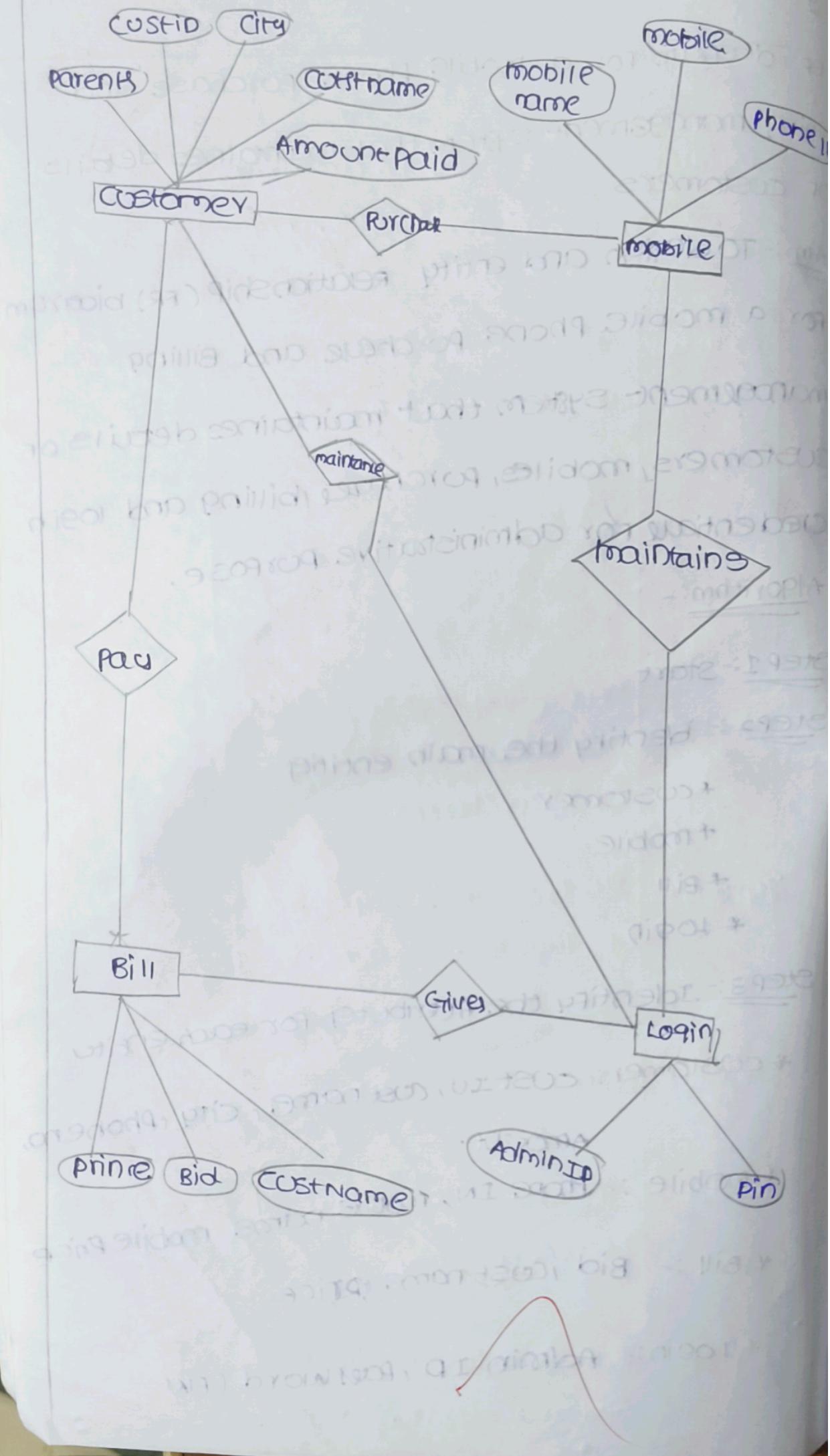
Algorithm:-

Step 1:- Start

Step 2 :- Identify the main entities  
\* customer  
\* mobile  
\* Bill  
\* Login

Step 3:- Identify the attributes for each entity

- \* customer :- CUST ID, cust name, city, phone no, amount.
- \* mobile :- phone IN, mobile name, mobile price
- \* Bill :- Bid, cost name, price
- \* Login :- Admin ID, Password (PIK)



Step 4 :- Identify Relationship between Entities

- \* Customer - Purchase: mobile :- A customer can purchase one or more mobiles
  - \* Customer - Pay Bill : A customer pays and receives a bill
  - \* Bill - Give Login : A bill is given by a login admin account
  - \* Login Maintains Customer : Admin maintains customer and mobile data
- Steps :- Determine cardinality
- \* Customer to mobile : many to many
  - \* Customer to Bill : one-to-one or one-to-many
  - \* Customer to Bill : one-to-many
  - \* Login to mobile : one-to-many

Step 5 :-

Draw the ER Diagram

Rectangles = Entities

Ellipses = Attributes

Diamonds = Relationship

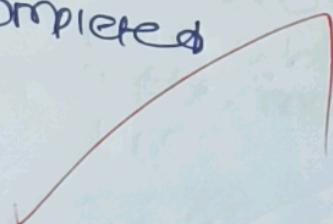
Lines

= Connections

~~Symbol~~ = Coordinating

| VEL TECH                |        |
|-------------------------|--------|
| EX NO.                  | 14     |
| PERFORMANCE (5)         | 5      |
| RESULT AND ANALYSIS (5) | 5      |
| VIVA VOCE (5)           | 0      |
| RECORD (5)              | -      |
| TOTAL (20)              | 10     |
| SIGN WITH DATE          | (19)18 |

Result:- Thus the design an entity relation  
-ship diagram for a mobile phone purchase  
and billing management is successfully  
completed



Task 2 :- convert ER diagram into Relationship  
model

Aim:- To convert an ER diagram into a relationship model for a mobile purchase database management system

Steps for converting the ER diagram to 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
- Derived their rules, you can convert the ER diagram to tables and columns and align the mapping

|                    |  |
|--------------------|--|
| Customer           |  |
| cost - name        |  |
| cost - ID          |  |
| cost - phone no    |  |
| cost - city        |  |
| cost - amount paid |  |

|             |           |
|-------------|-----------|
| Primary key | Bill      |
|             | Price     |
|             | Bid       |
|             | cost name |

|             |           |
|-------------|-----------|
| Primary key | logic     |
|             | Adim ID   |
|             | Pass word |
|             |           |

|                |                   |
|----------------|-------------------|
| mobile - name  | Primary key (pri) |
| mobile - price | Foreign key (Fk)  |
| phone no       | ID                |

| VEL TECH                |    |
|-------------------------|----|
| EX NO.                  | 16 |
| PERFORMANCE (5)         | 5  |
| RESULT AND ANALYSIS (5) | 5  |
| VIVA VOCE (5)           | 0  |
| RECORD (5)              | -  |
| TOTAL (20)              | 10 |
| SIGN WITH DATE          | 10 |

RESULT:- Thus the conversion of an ~~ER diagram~~ <sup>ER diagram</sup> into In relationship model for a mobile phone purchase database management system was done successfully.