29/07/25

Task-1.1

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 Purchases, billing and login credentials for administrative purpose

Algorithm:-

step-1:- start

step-2:- Identify the main entities

- customers
- 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, Mobile price

Bill: Bill, cust Name, Price

login: Admin ID, Password (PW)

step-4:- Identify Relationship between Entitites

Customer: Purchase mobile:- A customer can Purchases one or moblies

customer - Pay Bill:- 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

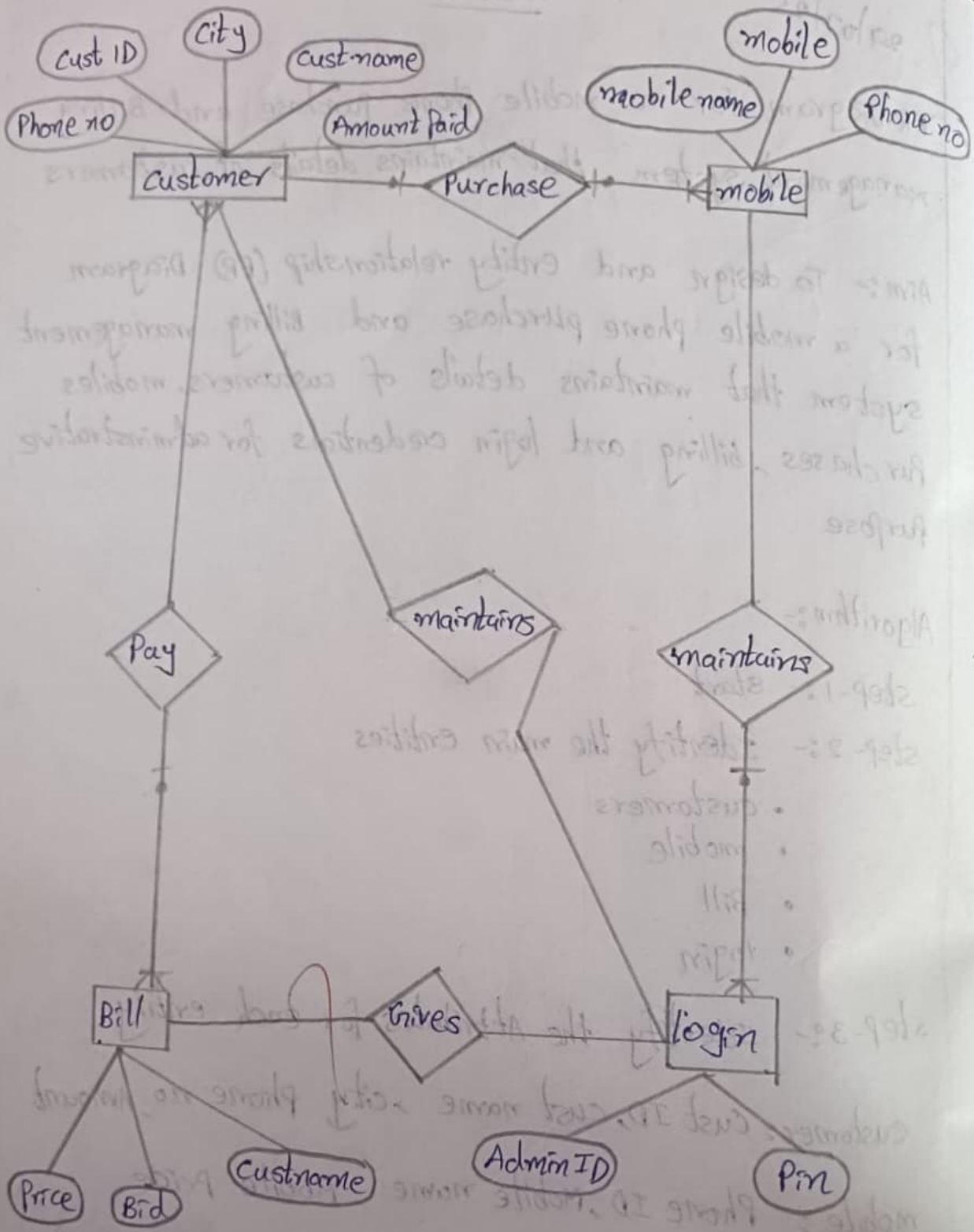
step-5 :- Determine cordinaty

- customer to mobile : many-to-many
- customer to bill : one-to-one or one-to-many
- login to bill : one-to-many
- login to mobile/customer : one-to-many

step-6 : Draw the ER Diagram

Rectangles = Entitites
Ellipses = Attributes
Diamonds = Relationship
lines = connections
symbol = coordinaties

Result:- Thus the design an entity. Relationship diagram for a mobile phone Purchase and billing management is successfully completed

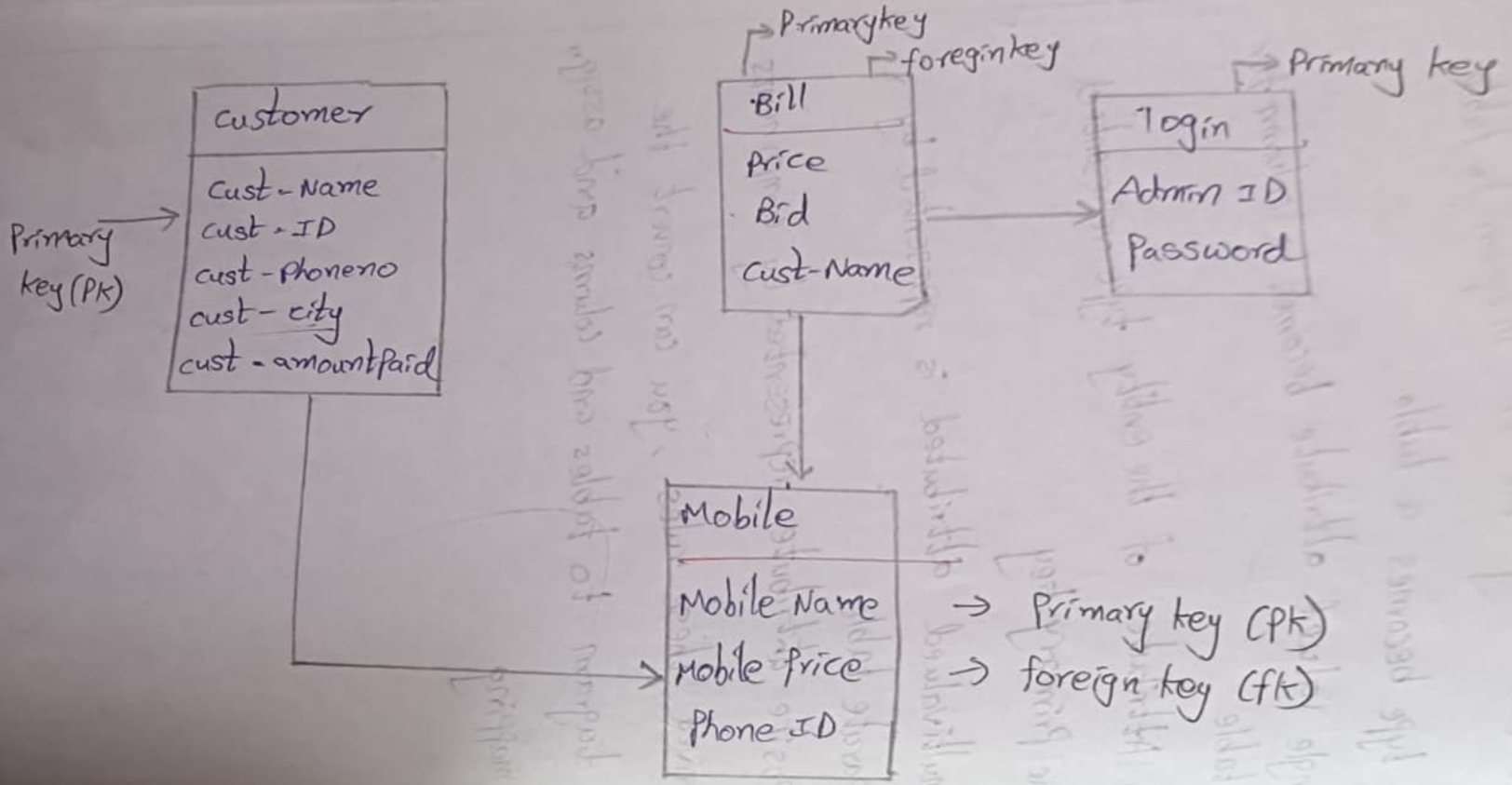

Cust ID
City
Cust-name
Phone no
Amount Paid
customer
Purchase
mobile
mobile name
Phone no
mobile
Pay
maintains
maintains
Bill
Gives
login
Price
Bid
Custname
AdminID
Pin

Task 1.2: Convert ER Diagram into Relationship model

Aim:- To convert an 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 attribute becomes a column for the table
→ A key Attribute of the entity type represented by the primary key
→ The multivalued attributed is represented by a separate table
→ composite attribute represented by components
→ Derived these rules, you can convert the ER diagram to tables and columns and assign the mapping.


Primarykey
foreginkey
Primary key
customer
Cust-Name
cust-ID
cust-phoneno
cust-city
cust-amountpaid
Primary key (PK)
Bill
Price
Bid
Cust-Name
login
Admin ID
Password
Mobile
Mobile Name
Mobile price
Phone ID
→ Primary key (PK)
→ foreign key (fk)

VEL TECH	
EX NO.	11
PERFORMANCE (5)	5
RESULT AND ANALYSIS (5)	5
VIVA VOCE (5)	0
RECORD (5)	—
TOTAL (20)	10
SIGN WITH DATE	

Result:- Thus the conversion of an ER Diagram into in Relationship model for a mobile phone purchase database management system was drawn successfully