DATE : 28-07-25

TASK 1 : CONCEPTUAL DESIGN USING ER MODAL
-HOTEL MANAGEMENT SYSTEM

STEPS INVOLVED IN CREATING ER DIAGRAM

TOOL : https://draw.io

AIM : To design using ER Model - Hotel Management system.

STEP 1 : Problem understanding and Requirements Analysis

Goal : Manage hotel reservations, customers data, room availability, billing and Payment efficiency.

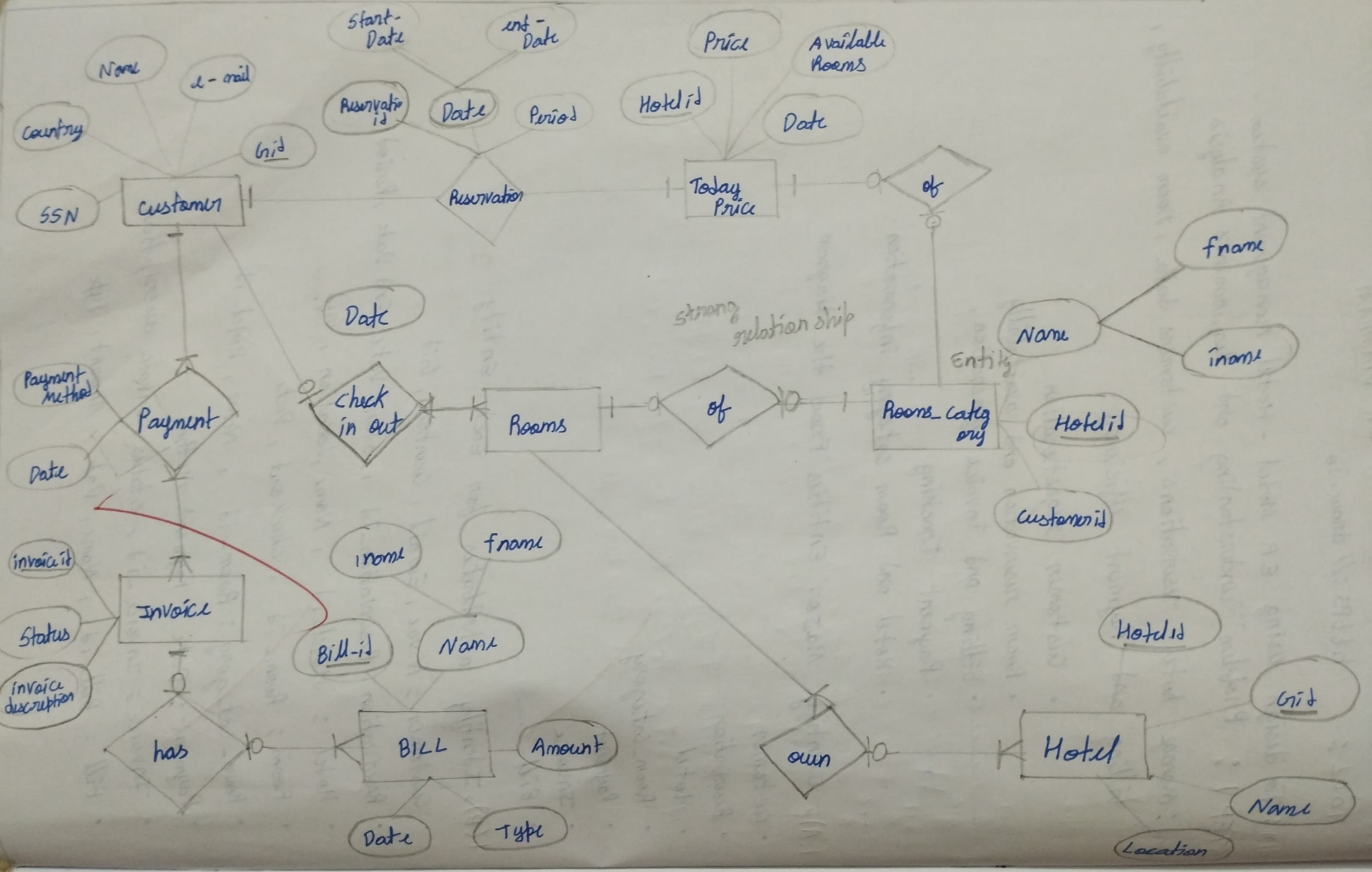
- Customer registeration
- Room reservation and availability
- Billing and Invoice generation
- Payment Tracking
- Hotel and Room category information.

1(A). Identify Major Entities From the diagram

- customer
- Reservation
- Hotel
- Room_Category
- Payment
- Invoice
- Bill

1(B). Identify attributes for Each Entity

- Customer : Name, Email, Country, Gid
- Reservation : Reservation_id, start Date, End Date, Period
- Hotel : Hotel_id, Name, Location, Gid
- Room : Room_id, chuck out, Date
- Room_Category : Room_id, Name, Hotel_id
- Payment : Date, Payment Method
- Invoice : Invoice_id, status, Invoice description
- Bill : Bill_id, Name, Date, Amount, Type


Start-Date
end-Date
Price
Available Rooms
Name
e-mail
Reservation id
Date
Period
Hotel id
Date
Country
Gid
SSN
Customer
Reservation
Today Price
of
fname
Date
strong relation ship
Name
Entity
lname
Payment Method
Payment
Check in out
Rooms
of
Rooms_Category
Hotel id
Date
customer id
invoice id
lname
fname
Invoice
Status
Bill-id
Name
invoice description
has
BILL
Amount
own
Hotel
Hotel id
Gid
Name
Date
Type
Location

1(c) Define Relationships between Entities

- Customer - Reservation : one-to-Many
- Reservation - Today Price :

Draw ER Diagram using draw.io

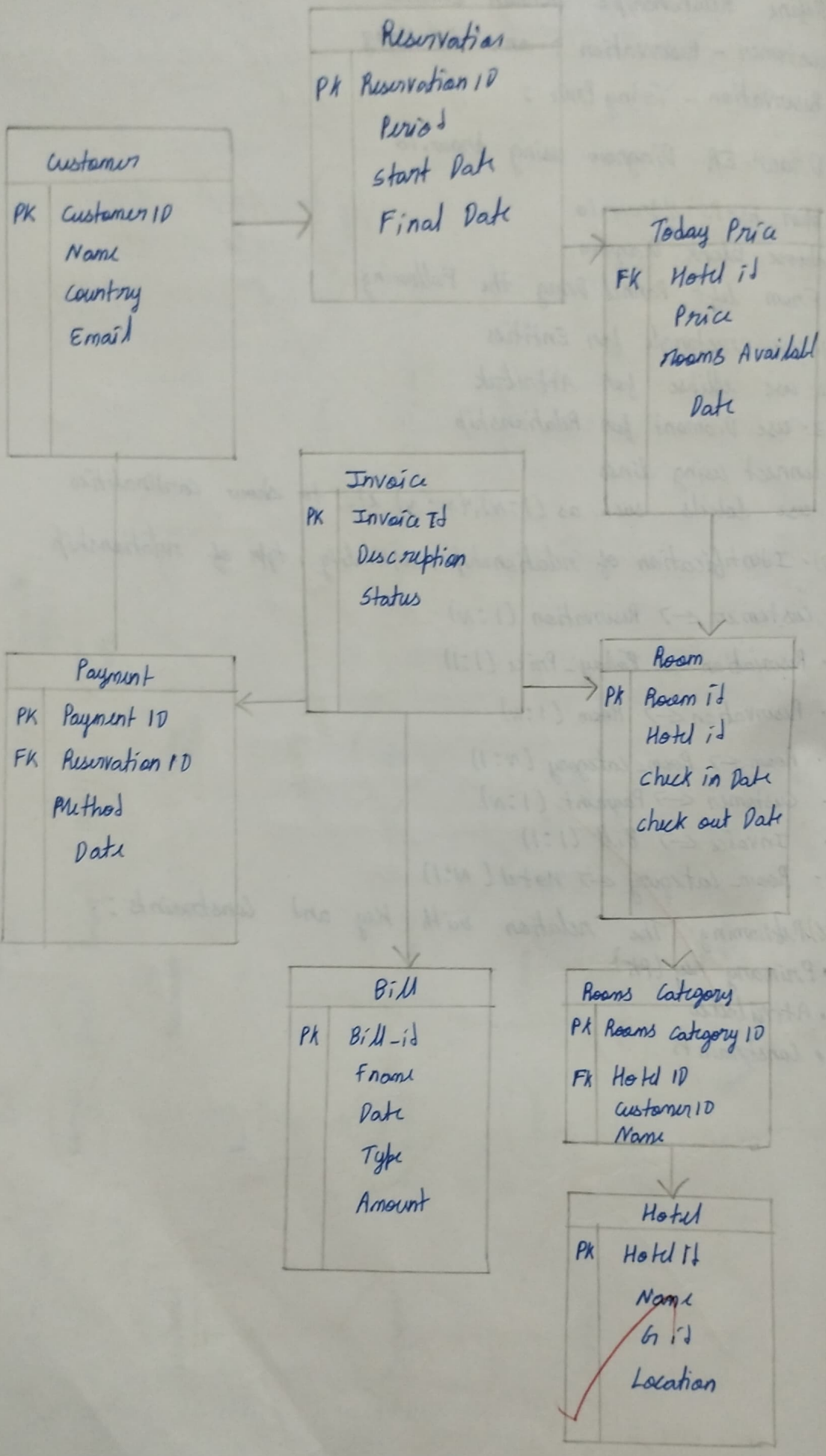
- open https://draw.io
- choose Blank Diagram
- From left Pannel Drag the Following
  1. use rectangle for Entities
  2. use ellipse for Attribute
  3. use Diamond for Relationship
- Connect using lines
- use labels such as (1:N), (M:N) etc to show cardinalities

1(D). Identification of relationship, Cardinality, type of relationship

1. Customer <-> Reservation (1:N)
2. Reservation <-> Today_Price (1:1)
3. Reservation <-> Room (1:N)
4. Room <-> Room_Category (N:1)
5. Customer <-> Payment (1:N)
6. Invoice <-> Bill (1:1)
7. Room_Category <-> Hotel (N:1)

1(E). Reframing The relation with Key and Constraints :-

- Primary Key (PK)
- Attributes
- Constraints


Reservation
PK Reservation ID
Period
start Date
Final Date
Customer
PK Customer ID
Name
country
Email
Today Price
FK Hotel id
Price
Rooms Availabl
Date
Invoice
PK Invoice Id
Discription
Status
Payment
PK Payment ID
FK Reservation ID
Method
Date
Room
PK Room id
Hotel id
check in Date
check out Date
Bill
PK Bill_id
Fname
Date
Type
Amount
Rooms Category
PK Rooms category ID
FK Hotel ID
customer ID
Name
Hotel
PK Hotel Id
Name
G id
Location

28.07.25

1.2 CONVERT ER DIAGRAM INTO RELATIONAL DATABASE

AIM : To Design Relational Database For Hotel Managment System

.) Steps for converting the ER Diagram to table

- Entity type becomes a table
- All single-valued attributes become a column for table
- A key attribute of the entity type represents primary key
- composite attribute of entity type by components
- Derived attributes are not considered in table.

using these rules, you can convert the ER Diagram to table and columns and assign the Tables.

VELTECH	
EX No.	1
PERFORMANCE (5)	5
RESULT AND ANALYSIS (5)	5
VIVA VOCE (5)	5
RECORD (5)	—
TOTAL (20)	15
N WITH DATE	28/7

Result : Thus, the ER diagram and conversion of ER diagram to Database model of Hotel Managment system successfully completed.