

Group 20 Project
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Lab 3 (Date: 03-09-2021)
Bus Management System

PART B: Produce ERD version 1 with following details

- Identify Weak Entity if any
- Identify Keys for each entity type.
- Identify cardinality constraint (1 to 1, 1 to many, many to 1 and many to many).
- Identify Participation (total or partial) constraints.
- Identify 'IS A' hierarchy if any. Indicate if 'IS A' hierarchy has overlapping or disjoint constraints.
- Identify if you have any Unions between entity types.

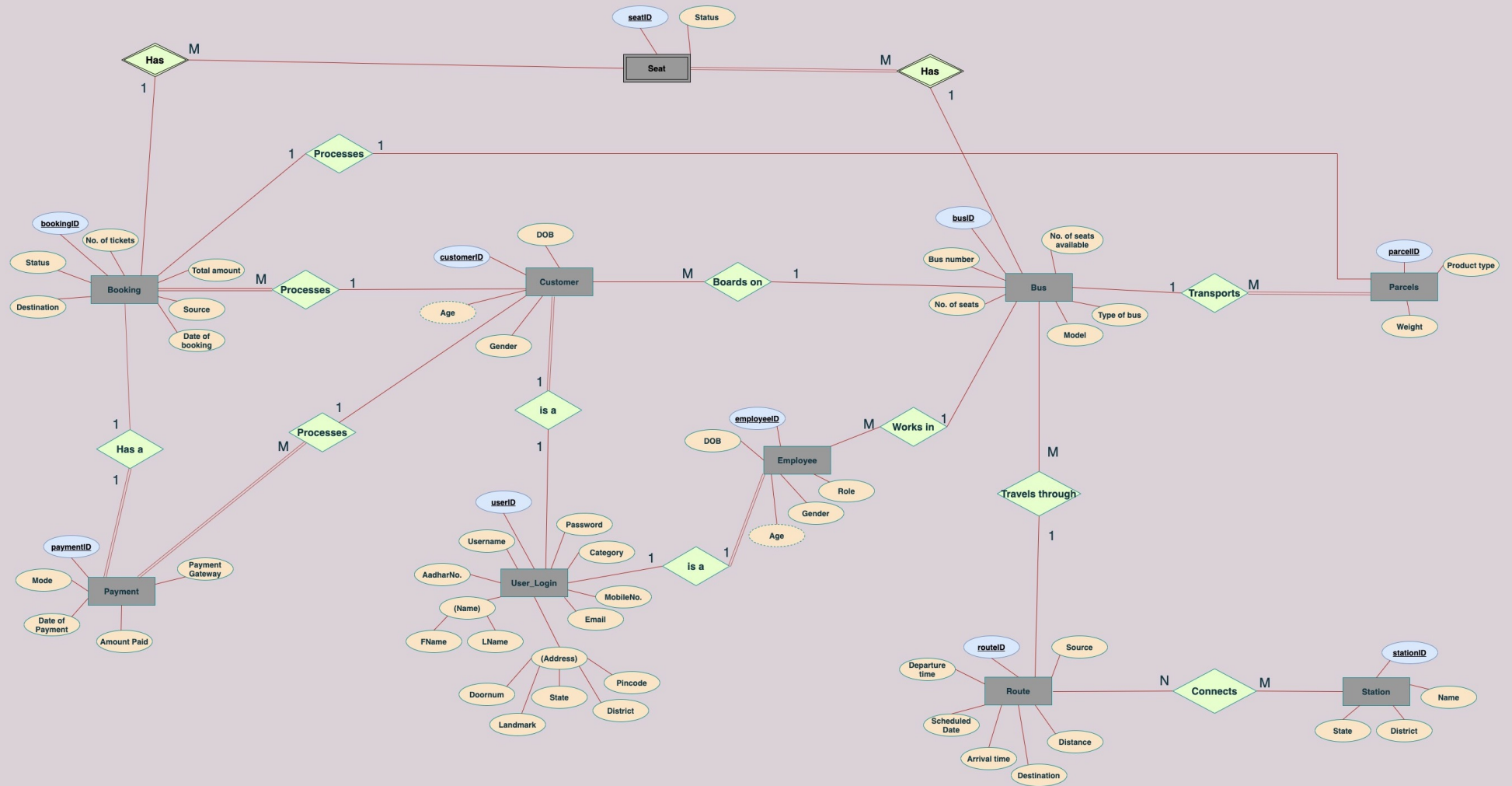
Ans:

- Keys for each entity are underlined and they are differentiated from other attributes

Entity	Key Attribute
Bus	busID
Customer	customerID
Employee	employeeID
User	userID
Booking	bookingID
Payment	paymentID
Route	routeID
Station	stationID
Seat	seatID and busID
Parcel	productID

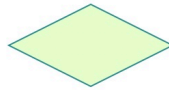
- Cardinality constraint of each relationship is mention the below ER diagram.
- 'IS A' hierarchy is present between Passenger, User entity and Employee, User entity.

Following is the ER diagram of Bus management system





- Entity



- Relationship



- Attribute



- Key attribute