Information Systems and Data Modeling – IT1090

Assignment

Title: Bus Scheduling and Booking System	
Batch Number: Y1S2_2023_MTR	Group Number: Y1S2_2023_MTR_G10

Declaration:

We hold a copy of this assignment that we can produce if the original is lost or damaged.

We hereby certify that no part of this assignment has been copied from any other group's work or from any other source. No part of this assignment has been written / produced for our group by another person except where such collaboration has been authorized by the subject lecturer/tutor concerned.

Group Members:

IT22909428	NISFA N.M.F.	…… signature
IT22352026	HANSARA K.D.K.U.	…… signature
IT22349460	WARUNIKA R.S.	…… signature
IT22315496	ANURADHA D.P.G.C.	…… signature
IT22002174	DINETH T.H.V.	…… signature

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1. Hypothetical Scenario

The Bus Scheduling and Booking System is an online platform that helps passengers easily search, book and pay for bus tickets from the comfort of their homes. This system allows passengers to search for available buses based on their departure and arrival cities, travel dates, and times. It provides a range of options, such as types of buses, fares, seats available, and travel durations. Once the passenger selects a suitable option, they can book their tickets.

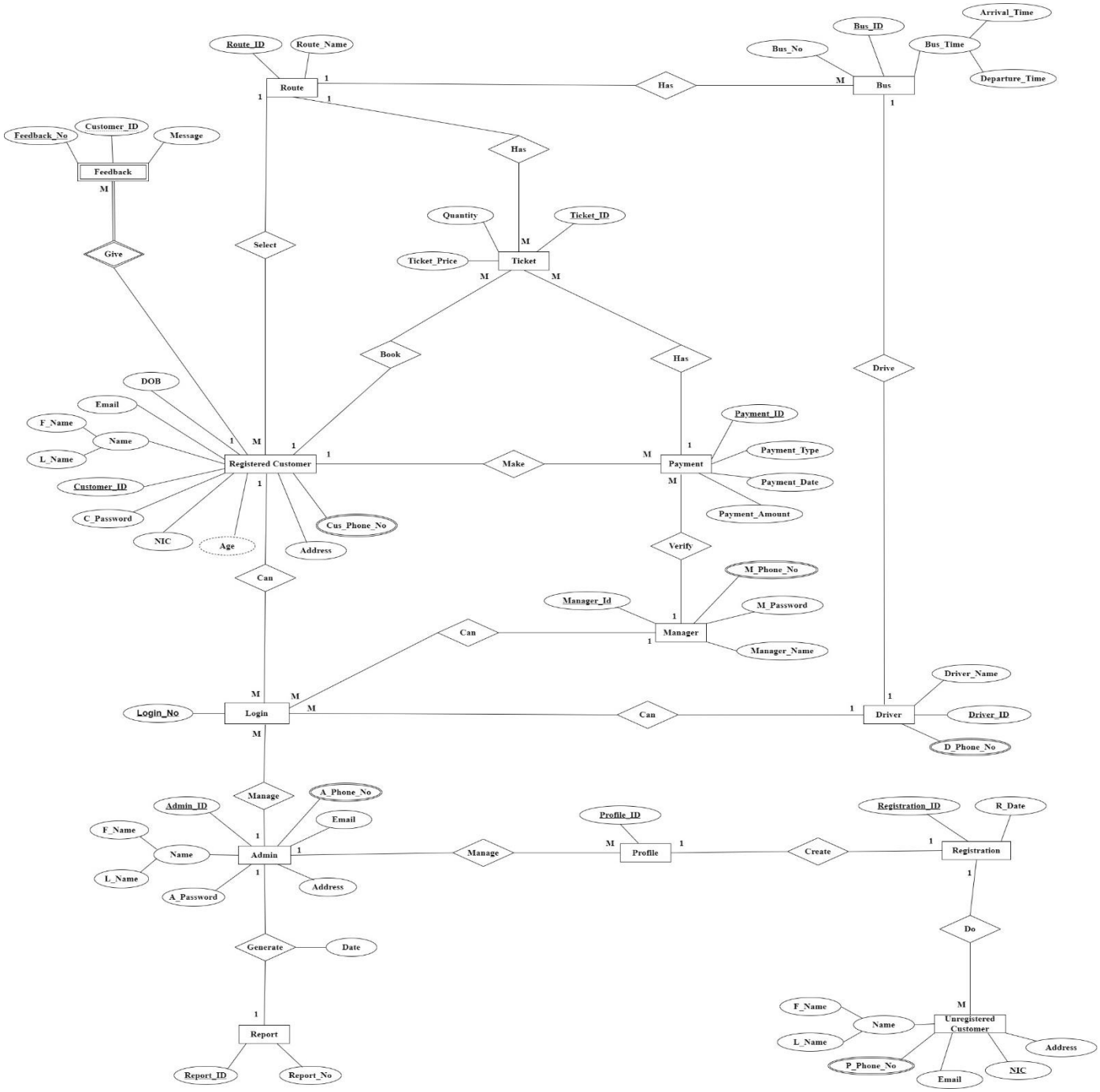
Unregistered customer is required to produce their NIC, first name, last name, address, email, and contact number during the registration process, and NIC is unique for the unregistered customer. An unregistered customer can only register once, but registration can hold many unregistered customers simultaneously. They get a unique registration ID according to the registered date and are able to create a profile with a profile ID. Registration creates each and every one of these unregistered customer's profile. All the profiles are managed by an Admin. An Admin has a first name, last name, ID, password, address, email, and contact number. Admin can be specified by his ID. Admin has more than one contact number.

Registered customers have a first name, last name, ID, password, NIC, contact number, date of birth, email, address, and age. The age depends on the date of birth. Each registered customer will own a unique ID. They can have more than one contact number. Registered customers can check and select the route. Each registered customer can select one route, and the route to locations can be selected by many registered customers. Customers can buy tickets for the selected route. A customer can book many tickets at a time. A route can be booked with many tickets. Route has a unique ID and a route name. The customer makes the payment. Payment has an ID, payment amount, date, and type. Payment ID is unique for the payment. Every ticket has a payment. The payment is verified by the manager. The manager has a unique ID, password, name, and contact number. Manager can have more than one contact number. The ticket has a unique ID and price. A customer can buy more than one ticket.
Registered customers can give one or more feedbacks about their experiences. Feedback has a unique ID, and it depends on the customer.

After booking the ticket successfully, the customer need to get the bus according to the route. Every bus has a route. Bus has an ID, arrival time, departure time, and bus number. Every bus has a unique ID. A driver with driver ID, driver name, and contact number drives the bus. Each driver can be specified with their ID.

Manager, registered customer, driver, and admin can log in to the system. Login has a unique login number. Each of these users can log in to the system more than one time. At the end of the day, the admin generates the report with a unique report ID and number.

2. ER-Diagram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Bus
Departure_Time
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Login_No
Login
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Driver
Driver_ID
D_Phone_No
Manage
A_Phone_No
Admin_ID
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