**Linux -Assignment**

**Task 01: Analyze a given business scenario and create an ER diagram that includes entities, relationships, attributes, and cardinality. Ensure that the diagram reflects proper normalization up to the third normal form.**

Certainly! Here's an ER diagram for an online flight booking system:

**Entities:**

**1.** **Customer:** Stores information about customers who book flights.

- Attributes: CustomerID (PK), FirstName, LastName, Email, Phone

**2. Flight:** Represents the flights available for booking.

- Attributes: FlightID (PK), DepartureCity, ArrivalCity, DepartureDateTime, ArrivalDateTime, Airline, Price

**3. Booking:** Tracks individual bookings made by customers.

- Attributes: BookingID (PK), CustomerID (FK), FlightID (FK), BookingDateTime

**4. Payment:** Stores payment information for each booking.

- Attributes: PaymentID (PK), BookingID (FK), PaymentDateTime, Amount, payment Method

**Relationships:**

**1. Customer-Booking:** One customer can make many bookings, but one makes each booking. (One-to-Many)

**2. Flight-Booking:** One flight can have many bookings, but each booking is for one flight. (One-to-Many)

**3. Booking-Payment:** One booking can have one payment, but each payment is for one booking. (One-to-One)

**Cardinality:**

- Customer-Booking: (1, N) - (1, N)

- Flight-Booking: (1, N) - (1, N)

- Booking-Payment: (1, 1) - (1, 1)

**ER Diagram representation of Online Flight Booking System**

airline

Modified

Is belong to

scheduled

adminstrator

Booked flight

flight

Payment

Customer

ticket\_status

**Task 02: Ensure the script checks if a specific file (e.g., myfile.txt) exists in the current directory. If it exists, print "File exists", otherwise print "File not found".**

**Code:**

#!/bin/bash

filename="myfile.txt"

if [ -e "$ myfile.txt " ]; then

echo "File exists"

else

echo "File not found"

fi

1. Save this code into a file, for example, check\_file.sh. and run the code.
2. Run the code using the following command

chmod +x check\_file.sh

1. Run the script by executing

./check\_file.sh

1. This script will check if myfile.txt exists in the current directory and prints either the file exists if found or the file does not exist if the file is not found.

**Task 03: Write a script that reads numbers from the user until they enter '0'. The script should also print whether each number is odd or even.**

**Code:**

#!/bin/bash

while true; do

read -p "Enter a number (0 to exit): " number

if [ "$number" -eq 0 ]; then

echo "Exiting the script."

break

fi

if [ $((number % 2)) -eq 0 ]; then

echo "$number is even."

else

echo "$number is odd."

Fi

Done

Run the following command:

chmod +x odd\_even.sh

Run the script:

./odd\_even.sh

**Task 04: Create a function that takes a filename as an argument and prints the number of lines in the file. Call this function from your script with different filenames.**

**Code:**

#!/bin/bash

print\_num\_lines() {

filename="$1"

if [ -f "$filename" ]; then

num\_lines=$(wc -l < "$filename")

echo "Number of lines in $filename: $num\_lines"

else

echo "File '$filename' not found."

fi

}

print\_num\_lines "myfile1.txt"

print\_num\_lines "nextfile2.txt"

print\_num\_lines "lastfile3.txt"