Dhirubhai Ambani
Institute of Information and Communication Technology

IT 214

DATA BASE MANAGEMENT SYSTEM

Event Hub

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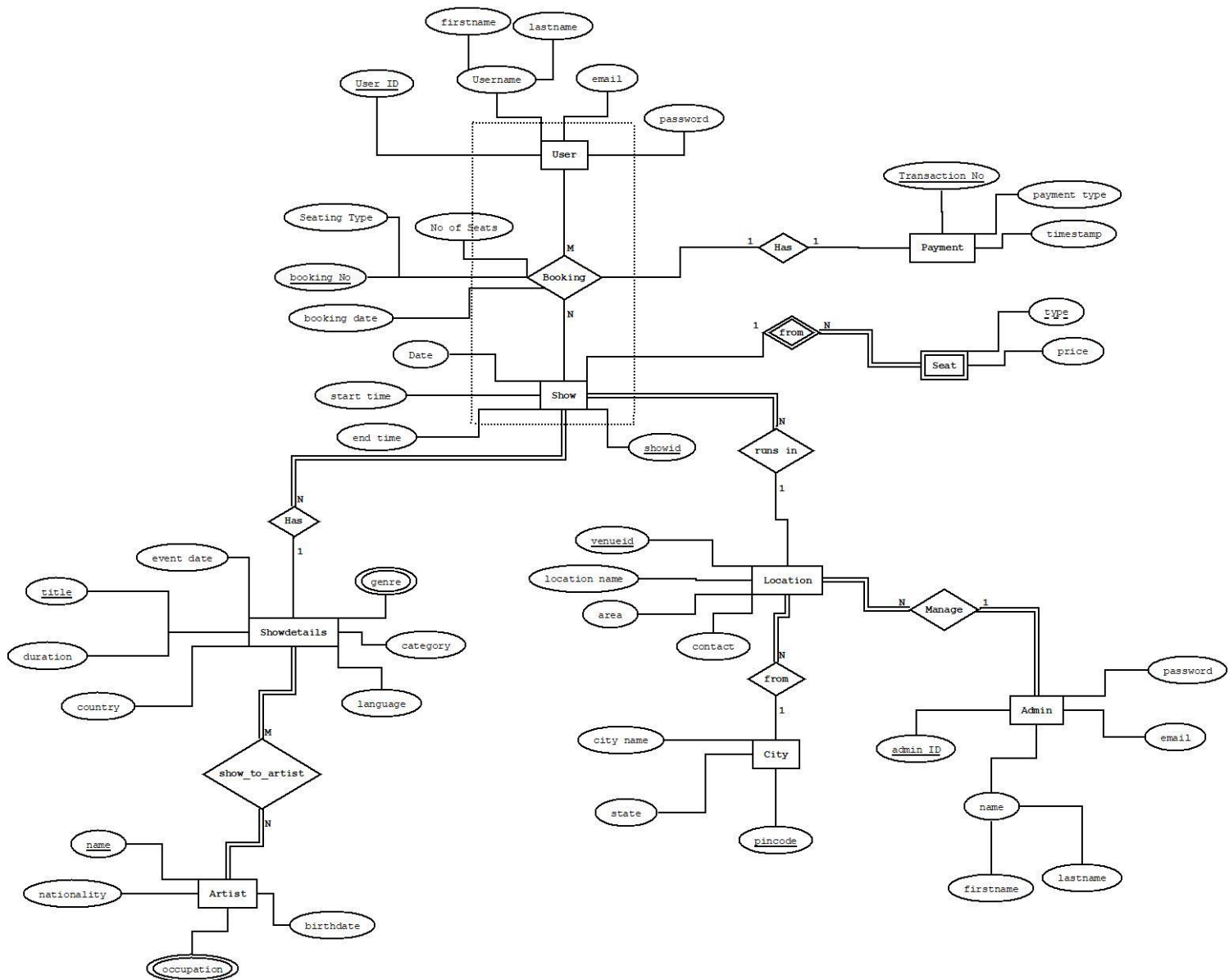AVINASH BARAIYA : 202201211

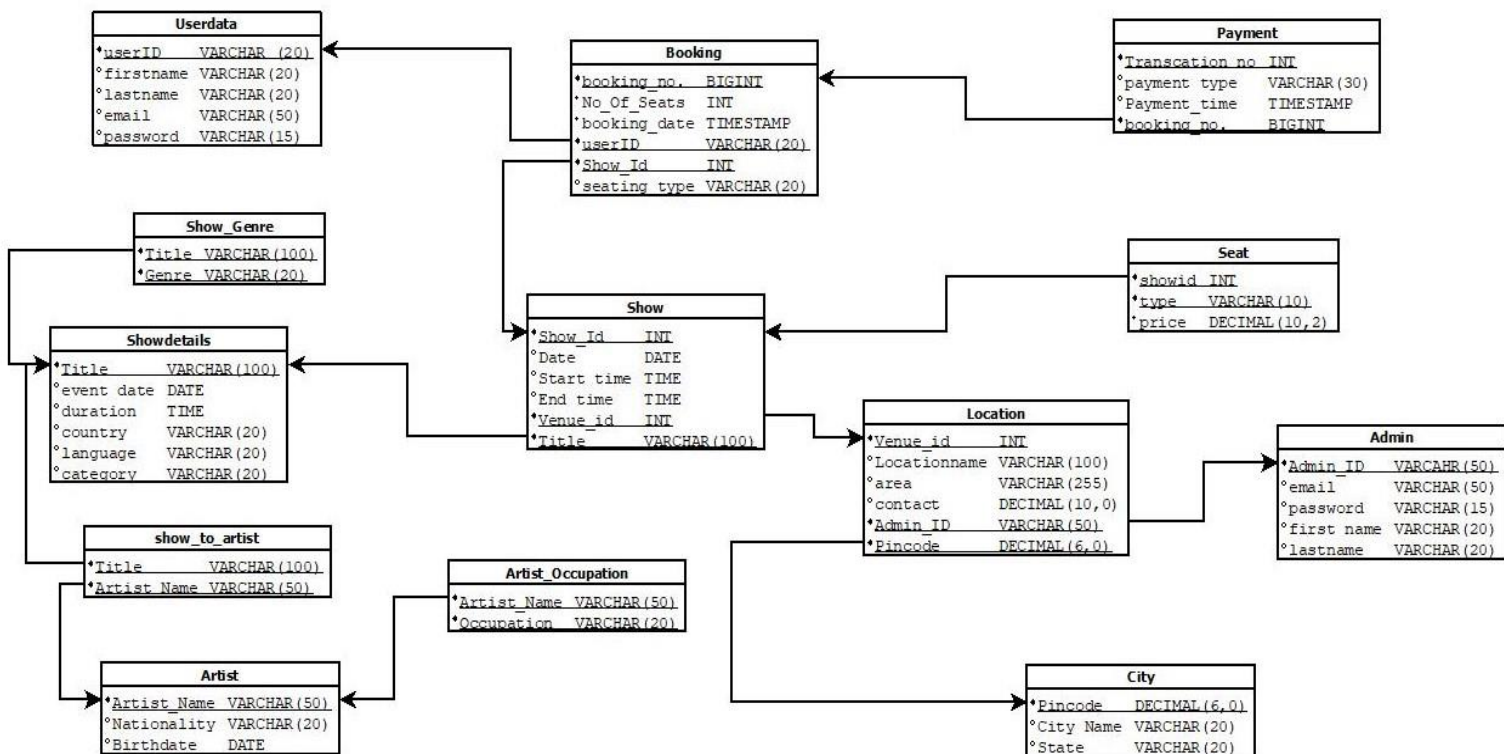KAVAN KANSODARIYA : 202201223

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Submissions :
1) Entity Relationship Diagram
2) Relational Schema Diagram
3) FD set and Minimal FD set with BCNF result

ENTITY REALTIONSHIP DIAGRAM

EventHub Application Entity Relationship Model

RELATIONAL SCHEMA DIAGRAM

Userdata
- *userID   VARCHAR (20)
- firstname VARCHAR(20)
- lastname VARCHAR(20)
- email   VARCHAR(50)
- password VARCHAR(15)

Booking
- *booking_no. BIGINT
- No_Of_Seats INT
- booking_date TIMESTAMP
- *userID   VARCHAR(20)
- *Show_Id   INT
- seating type VARCHAR(20)

Payment
- *Transcation_no INT
- payment type VARCHAR(30)
- Payment_time TIMESTAMP
- *booking_no.   BIGINT

Show_Genre
- *Title VARCHAR(100)
- *Genre VARCHAR(20)

Seat
- *showid INT
- *type   VARCHAR(10)
- price DECIMAL(10,2)

Show
- *Show_Id   INT
- Date   DATE
- Start time TIME
- End time   TIME
- *Venue_id   INT
- *Title   VARCHAR(100)

Showdetails
- *Title   VARCHAR(100)
- event date DATE
- duration   TIME
- country   VARCHAR(20)
- language   VARCHAR(20)
- category   VARCHAR(20)

Location
- *Venue_id   INT
- Locationname VARCHAR(100)
- area   VARCHAR(255)
- contact   DECIMAL(10,0)
- *Admin_ID   VARCHAR(50)
- *Pincode   DECIMAL(6,0)

Admin
- *Admin_ID   VARCAHR(50)
- email   VARCHAR(50)
- password   VARCHAR(15)
- first name VARCHAR(20)
- lastname   VARCHAR(20)

show_to_artist
- *Title   VARCHAR(100)
- *Artist_Name VARCHAR(50)

Artist_Occupation
- *Artist_Name VARCHAR(50)
- *Occupation VARCHAR(20)

Artist
- *Artist_Name VARCHAR(50)
- Nationality VARCHAR(20)
- Birthdate   DATE

City
- *Pincode   DECIMAL(6,0)
- City Name VARCHAR(20)
- State   VARCHAR(20)

FD set and Minimal FD set with BCNF result

- ## USERDATA {userID, Firstname, Lastname , Email, Password}

FD SET:

userID → Firstname

userID → Lastname

userID → Email

userID → Password

Email → Password

Email → Firstname

Email → Lastname

Email → userID

Justification for minimal FD set:

Here We have userID and Email both have Considered as Candidate Key. But priority is given to userID

Minimal FD set for USERDATA:

userID → Firstname

userID → Lastname

userID → Email

userID → Password

Here userID is candidate-key and this relation is in **BCNF** form.

- ## Admin {AdminID, Email, Password, Firstname, Lastname}

FD Set:

AdminID → Email

AdminID → Password

AdminID → Firstname

AdminID → Lastname

Email   → Password

Email   → Firstname

Email   → Lastname

Justification for minimal FD set:

Here We have AdminID and Email both have Considered as Candidate Key. But priority is given to AdminID.

Minimal FD set for Admin:

AdminID   → Email

AdminID   → Password

AdminID   → Firstname

AdminID   → Lastname

So, here AdminID is candidate-key and this relation is in **BCNF** form.

- **Artist { Artistname, Nationality, Birthdate}**

FD Set:

Artistname   → Natinality

Artistname   → Birthdate

Here Artistname is candidate-key so it is in **BCNF** form.

- **Artist_occupation {Artistname, Occupation}**

FD Set:

{Artistname,Occupation}   → Occupation

Here {Artistname, Occupation} is candidate-key so it is in **BCNF** form.

- **Showdetails {Title, Eventdate, Duration, Category, Language, Country}**

FD Set:

Title   → Eventdate

Title　　→ Duration

Title　　→ Category

Title　　→ Language

Title　　→ Country

Here Title is candidate-key so it is in **BCNF** form.

- ## Show_genre {Title, Genre}

FD Set:

{Title,Genre}　　→ Genre

Here {Title, Genre} is candidate-key so it is in **BCNF** form.

- ## Show_to_artist {Title, Artistname}

FD Set:

{Title,Artistname}　　　→ Artistname

Here {Title, Artistname} is candidate-key so it is in **BCNF** form.

- ## Booking {BookingNo ,No_of_seats, Booking date, UserID, ShowID, seating type}

FD Set:

BookingNo　　→ No_of_seats

BookingNo　　→ Booking date

BookingNo　　→UserID

BookingNo　　→ShowID

BookingNo　　→seating type

{UserID, ShowID}　　　→No_of_seats

{UserID, ShowID}　　　→Booking date

{UserID, ShowID}　　　→UserID

{UserID, ShowID}　　　→ShowID

{UserID, ShowID}　　　→seating type

Justification for Minimal FD set :

Here BookingNo→{BookingNO,No_of_seats, Booking date, UserID, ShowID, seating type} and

{UserID, ShowID}→{BookingNO,No_of_seats, Booking date, UserID, ShowID, seating type} means both BookingNO and {UserID,ShowID} both are candidate key but we declare our candidate key as BookingNo.

Minimal FD Set for Booking:

BookingNo   → No_of_seats

BookingNo   → Booking date

BookingNo   →UserID

BookingNo   →ShowID

BookingNo   →seating type

So, here BookingNo is candidate-key and this relation is in **BCNF** form.

- **Show {ShowID, Date, Start time,End time, Venue ID,Title}**

FD Set:

ShowID   → Date

 ShowID   →Start time

ShowID   → End time

ShowID   → Venue ID

ShowID   → Title

So, here ShowID is candidate-key and this relation is in **BCNF** form

- **Location {VenueID, Area, Hall name, contact, AdminID, Pincode}**

FD Set:

VenueID   → Area

VenueID   →Hall name

VenueID   →Contact

VenueID   →AdminID

VenueID   →Pincode

Justification for Minimal FD Set:

Here VenueID is candidate-key so it is in **BCNF** form.

- ### Seat { ShowID, Type, Price}

FD Set:

{ShowID ,Type} $\rightarrow$ Price

Justification for Minimal FD Set:

Here Seat is Weak Entity is Related to Show table so that {ShowID ,Type} is candidate-key so it is in **BCNF** form.

- ### Payment {Transaction no, Payment type, Payment time, Amount, Booking_no}

FD Set:

Transaction no	$\rightarrow$ Payment type
Transaction no	$\rightarrow$ Payment time
Transaction no	$\rightarrow$ Booking no
Booking_no	$\rightarrow$ Payment type
Booking_no	$\rightarrow$ Transaction no
Booking_no	$\rightarrow$ Payment time

Justification for Minimal FD set:

Here Transaction_no and Booking_no Both are candidate key But Priority is given to Transaction No.

Similarly, as Userdata Table.

Minimal FD set for Payment:

Transaction no	$\rightarrow$ Payment type
Transaction no	$\rightarrow$ Payment time
Transaction no	$\rightarrow$ Amount
Transaction no	$\rightarrow$ Booking no

Here Transaction no is candidate-key so it is in **BCNF** form.