ONLINE MOVIE TICKET RESERVATION SYSTEM

PROJECT REPORT

PROBLEM DESCRIPTION

The purpose of this project is to develop a database management system which simplifies ticket booking at theatres and at booking kiosks. Customers can book tickets themselves at booking kiosks and administrator controls the database.

Customer can view all the movies and the theatres playing them and then choose their favourite show .They can choose the seats they need in the cinema hall using the user-friendly interface. Tickets, for any show of the week, can be booked in advance. This database system can be integrated to ATMs and such other ticket booking systems.

Administrator can enter the details of movies, theatres etc. and also manage the customer transactions. Overall, this database system eases the process of booking tickets for a movie show.

Entities and Their Attributes

Metro Theatres is a Cineplex company new started in state of Karnataka. It has total six movie theatre location all around state of Karnataka. This company maintains a website through which one can book movie ticket online.

Each theatre maintains information regarding various aspects such as unique area number, Name of the theatre, No. of screens, Address, Manager currently in charge of the theatre.

Movies running in the theatre and information regarding the movies such as Movie ID(Movie Name), Description about the movie, Director, Cast, Music Director and Review about the movie.

Each screen in the theatre also has a Unique screen ID(Local to the particular theatre), Capacity of each screen, Movie ID and Theatre ID.

The database maintains the details about all registered members such as unique member no, Member name, Password, Address, Pin code, Contact No and Email Id.

The customers can access the website but in order to book a ticket he has to become a member. Registration process is simple as the customer only has to fill the required fields in a form. Once registered, the user will be able to book tickets. On the contrary an unregistered member can only browse through the movies running in the theatre. On the home page of the website the user, once logged in, can click on the movie that he wants to book a ticket.

The following page will display a list of theatre venues currently running the movie from which the user can choose from. Following which the next page will display the show timings available, for the movie chosen, in the theatre. Then he will have to choose the number of tickets that he needs and the section in which he wants it (Platinum, Gold or Silver). After choosing the appropriate show time and no of tickets the next page will prompt the user to type his Bank account number and will display all the details of the transaction such as Member Name, Movie name, Theatre Venue, No of tickets, Ticket Number and Show Timings. Then he will be prompted to confirm his decision for booking the tickets. Once confirmed the system will display the details of the transaction as mentioned above and will prompt the user to take a printout of the details for confirmation of his purchase of tickets.

In order to keep the customer Personal details secure the database will not be storing the Bank Account Number of the member.

The customer can cancel his booking by going back to the website but this can only be done, anytime before 1 hour, prior to the Show Timing. Cancelling a ticket after the time given will not be allowed by the system. On cancelling the show the user will be prompted to enter his Bank account number so that the money can be refunded to his account if the above conditions are met.

In case the printout is lost the customer can log in back to the website where he can get details about his recent transaction, using which he can get another printout of the confirmation.

Entity Description and Attributes

Entity: **USER**

User is the person who accesses the website and purchases the tickets, all his transaction information are stored in the database. It gives the information about the user himself

Attributes:

User ID: This is a unique ID given to each user

User Name: This attribute gives the name of the user. It is further divided into First Name and Last Name

Password: It's the secret alphanumeric word which only the user knows and also it allows him to access his account and book tickets

Age: This attribute displays the age of each user

Phone Number: Contains the Phone number of each user. Since one user can have more than one phone number this attribute is multi-valued

Email IDs: Contains the email ids of each user and again since one user can have multiple email accounts this attribute is also multi-valued

Entity: **TICKET INFO**

This gives the details of the transaction that the user has performed and about the details of the tickets that he has purchased

Attributes: **Ticket ID:** This gives the seat number that was booked by the user during the purchase

Number of tickets purchased: This gives the number of tickets that the user has booked

Entity: **THEATRE**

This entity acts as a many base for a number of screen which it has and it gives information about theatre itself, its address and the Manager currently in charge

Attributes: **Theatre ID:** A unique ID that is given to the theatre

No. of screens: Displays the number of screens the theatre contains Address

Manager: Displays the name of the Manager currently in-charge of the theatre

Entity: **SCREEN**

This entity is part of the theatre which is used to store more precise information about the movie currently running in the theatre, movie's show timings and the number of seats it has

Attributes: **Screen ID:** A unique ID given to the screen, which is local to the theatre which contains the screen

Capacity: Gives the number of people (no of seats) that can be accommodated in the screen

Entity: **MOVIE**

This entity gives information about the movie itself

Attributes: **Movie ID:** This gives the name of the movie

Description: This gives a brief summary of the movie

Cast: This gives the names of the actors in the movie

Director: This gives the names of the various directors involved with the movie

Show Timing: This gives the time and date on which the movie is to be displayed

Review: This gives a rating about the movie i.e. how the people feel about the movie and their opinions about the movie

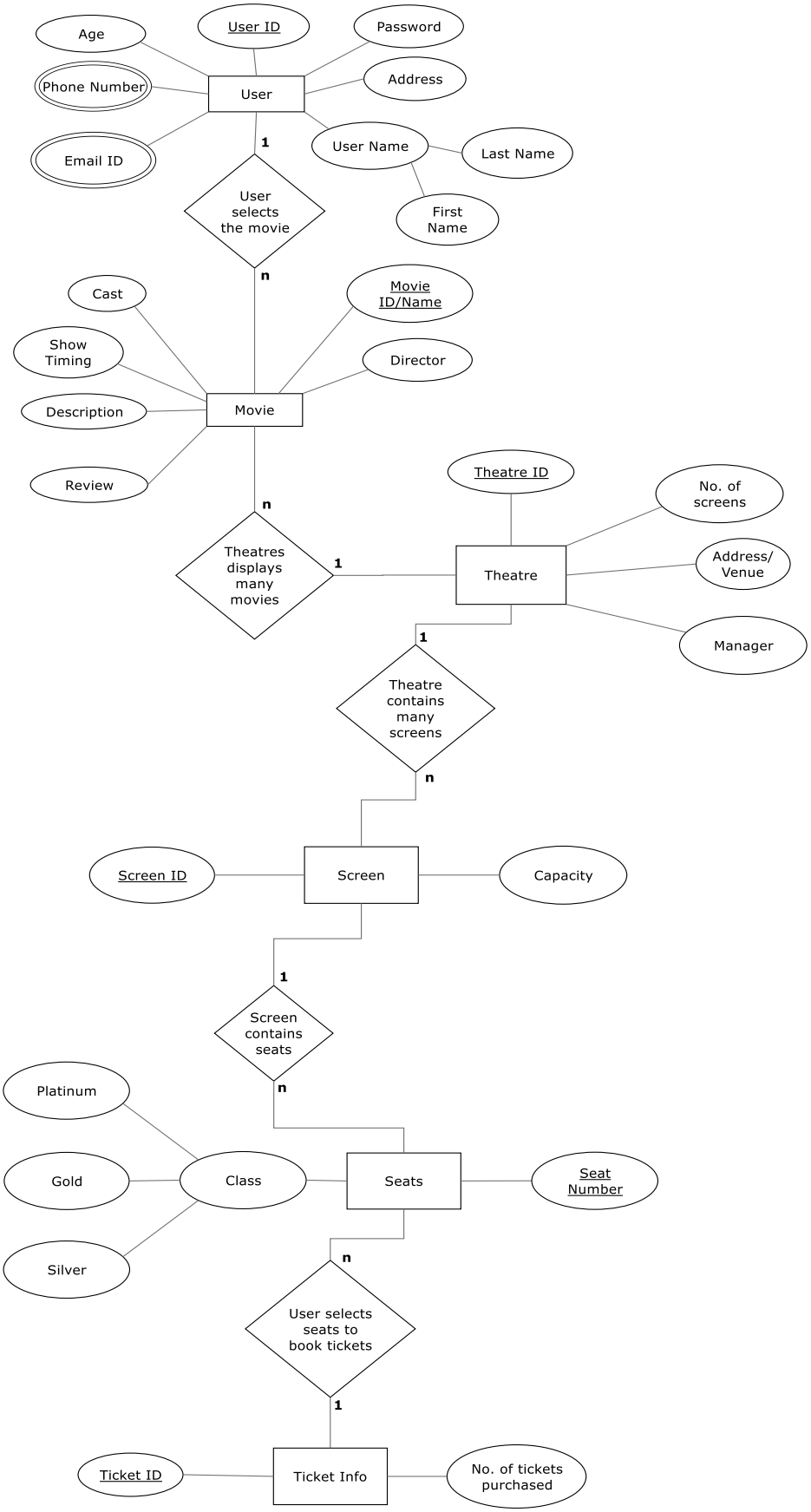
Entity: **SEATS**

This entity gives information about the number of seats numbers available in each screen and the type/class of seats available

Attributes: **Seat Number:** This gives the seat numbers present in the screen

Class: This gives the type of seat. This is divided into three types of seats and each type of seat has a different cost

1. Entity Relationship Diagram



2.Constraints

1) **User constraints**

User ID	First Name	Last Name	Password	Age	Address	Phone Number	Email

Unique key: Email

Primary key: User Id

Age: 18 or above to hold a bank account (although he can book ticket for member with age less than 18).

Name attribute *should not* be null

2) **Ticket Info constraints**

Ticket ID	No of Tickets purchased

Primary key: Ticket Id

No Of Tickets Purchased should not be null

3) **Movie constraints**

Movie ID/Name	Description	Show Timing	Director	Cast	Review

Primary key: Movie Id

4) **Theatre constraints**

Theatre ID	No. of Screens	Address	Manager

Candidate key: Address

Primary key: Theatre Id

Foreign key: Movie Id

No. Of Screens *should not* be null

5) Screen constraints

Screen ID	Capacity

Primary key: Screen Id

Foreign key: Theatre Id

Capacity attribute has a fixed domain value (i.e capacity is same for all screens)

6) Seat type constraints

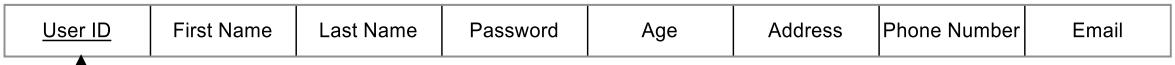
Seat Number	Class

Primary key: Seat Number

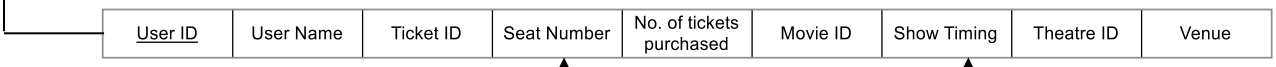
Class attribute domain values are platinum, gold and silver

3. Relational Model

USER



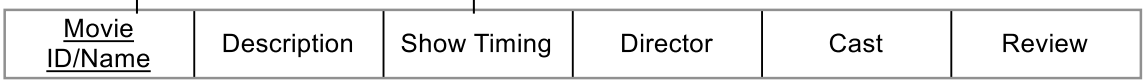
Ticket INFO



Theatre

Screen

Movie



Seat Type

4.E/R TO RELATIONAL SCHEMA COVERSION

SCHEMA OF A RELATION

R(A1,A2,A3,A4….An)

r(R) is a subset of dom(A1)xdom(A2)xdom(A3)…dom(An)

1.User (User ID, User Name, Address, Password, Age, {Phone Number}, {Email ID})

User1

(AQ123, Vivek Simha, Bangalore, abc123, 25, {9258125252, 080-26254582}, {Vivek@gmail.com})

User2

(AQ853, Vikram Thakur, Bangalore, vik123, 28, {9854585252, 080-26235482}, {Viram@gmail.com})

- **r(R)**

t1 = (AQ123, Vivek Simha, Bangalore, abc123, 25, {9258125252, 080-26254582}, {Vivek@gmail.com})

t2 = (AQ853, Vikram Thakur, Bangalore, vik123, 28, {9854585252, 080-26235482}, {Vt@gmail.com})

- **Relation State** – r(R) is a subset of dom (User ID) X dom (User Name) X dom (Address) X dom(Password) X dom(Age) X dom({Phone Number}) X dom({Email ID}).

2. Ticket Info (User ID, User Name, No of Tickets Purchased, Movie ID, Seat Number, Ticket ID, Show Timing, Theatre ID, Venue)

Ticket Info1

(AQ123, Vivek Simha, 1, GAALIPATA, 56, TIC803, 7.30pm, 98, Bangalore)

Ticket Info2

(AQ853, Vikram Thakur, 1, EK THA TIGER, 86, TIC893, 7.30pm, 109, Bangalore)

- **r(R)**

T1 = (AQ123, Vivek Simha, 1, GAALIPATA, 56, TIC803, 7.30pm, 98, Bangalore)

T2 = (AQ853, Vikram Thakur, 1, EK THA TIGER, 86, TIC893, 7.30pm, 109, Bangalore)

- **Relation State** - r(R) is a subset of dom (User ID) X dom (User Name) X dom (No of Tickets) X dom(Movie ID) X dom(Seat Number) X dom(Ticket ID) X dom(Show Timing) X dom(Venue) X dom(Theatre ID).

3. Movie (Name, Director, Cast, Description, Review)

Movie1

(EK THA TIGER, S S Rajamouli, Salman Khan, Thriller , 4/5)

Movie2

(GAALIPATA, Yograj Bhat, Ganesh, Romantic Love Story, 4/5)

- **r(R)**

T1 = (EK THA TIGER, S S Rajamouli, Salman Khan, Thriller , 4/5)

T2 = (GAALIPATA, Yograj Bhat, Ganesh, Romantic Love Story, 4/5)

- **Relation State** – r(R) is a subset of dom(Name) X dom (Director) X dom (Cast) X dom (Description) X dom (Review)

4. Screen (Screen ID, Theatre ID, Movie ID, Show Timing, Capacity)

Screen1

(SC100, 98 , GAALIPATA , 7.30pm , 450)

Screen2

(SC200, 109 , EK THA TIGER, 7.30pm, 500)

- **r(R)**

T1 = (SC100, 98 , GAALIPATA , 7.30pm , 450)

T2 = (SC200, 109 , EK THA TIGER, 7.30pm, 500)

Relation State – r(R) is a subset of dom (Screen ID) X dom (Theatre ID) X dom (Movie ID) X dom(Show Timing) X dom(Capavity)

5. Theatre (Theatre ID, No of screens, Address/Venue, Movie IDs, Manager)

Theatre1

(98, 5, 5th Cross Gandhi Bazaar Bangalore – 560056, {SC100, SC101, SC102, SC103, SC104}, Haris)

Theatre2

(109, 5, 8th Cross Kaul Bazaar Bangalore – 560356, {SC200, SC201, SC202, SC203, SC104}, Prakash)

- **r(R)**

T1 = (98, 5, 5th Cross Gandhi Bazaar Bangalore – 560056, {SC100, SC101, SC102, SC103, SC104}, Haris)

T2 = (109, 5, 8th Cross Kaul halli Bangalore – 560356, {SC200, SC201, SC202, SC203, SC104}, Prakash)

- **Relation State** – r(R) is a subset of dom(Theatre ID) X dom(No of Screens) X dom(Address) X dom(Movie ID) X dom(Manager)

6.Seat Type (Seat Number, Class, Theatre ID, Screen ID)

Seat Type1

(56, Gold, 98, SC100)

Seat Type2

(86, Gold, 109, SC200)

- **r(R)**

T1 = (56, Gold, 98, SC100)

T2 = (86, Gold, 109, SC200)

- **Relation State** – r(R) is a subset of dom(Seat Number) X dom (Class) X (Theatre ID) X dom(Screen ID)