PROJECT DESIGN REPORT: CARRIER DOME TICKETING SYSTEM

Project Summary

'Carrier Dome Ticketing System' is an online system developed to digitalize the various processes involved in booking a match ticket. The booking process also involves booking a meal plan, reserving a parking spot. The purpose of this project is to make the experience of buying a game ticket more user-friendly. It combines all the previously mentioned processes in one system in the form of booking specifications and stores the customer data in a database.

The current system does not allow customers to book the meal plan, parking spot and seats of their choice before-hand. They need to reach the dome well before the game starts to select their preferred choices. The problem with this is that it creates a lot of chaos before the game. There is a huge queue on the counter for selecting meals. Parking slots are manually allotted on first come first basis and creates a havoc as the parking space gets occupied at its full potential. If people do not find a slot they need to make other arrangements for their vehicles. All this occupies a lot of time and efforts unnecessarily. These major drawbacks would be overcome by the new online ticketing system using a database.

The new online ticketing system for the Carrier Dome comes with a series of options to choose while booking the game ticket. This is designed such that it would reduce the waiting time of the customers, the chaos at the counters and the inconvenience caused to the customers. It would allow the user to select a meal plan which they would just be collecting from the food services at the Dome providing their Order ID. Next, users would get an option to reserve a parking spot online during booking. In the situation where there is no parking spot left, the system would notify the same during the booking process. This allows the users to find an alternative way to commute to the Dome. This database would help the employees at the Dome to have a better-managed event and reduce the difficulties arising due to last minute chaos. A potential feature which can be added is a Kiosk System which can be installed outside the Dome for customers to book a ticket just before the event.

This online ticketing system helps the Dome Management as well in a number of ways. The availability of all the data in one place makes it easy to manage the bookings and the finances of the Dome. The staff required for event management is reduced which saves the labor cost. Furthermore, the availability of a database for the customers gives scope for analytics. Trends in the reservations of the tickets can be observed and this can be used to improve the services, give promotional offers and anticipate the revenue from a potential game event.

Business Rules

1. A customer can make only one order per game
2. One order can contain a maximum of 5 tickets
3. If an order has more than one tickets and that order is cancelled, all the tickets get cancelled
4. In case of cancellations, refund would be initiated if cancelled 24 hours prior to the game time
5. A Syracuse University student gets 20% discount on the original price of the ticket
6. A premium ticket holder gets a complimentary parking spot along with the ticket
7. A VIP ticket holder gets a complimentary parking spot and meal plan along with the ticket
8. A person can update his ticket specifications until 5 hours prior to the game time

Major data questions

1. Which teams have the highest number of bookings?
2. Which is the most preferred parking zone?
3. What is the distribution of meal type among the customers?
4. How many students visit the match compared to the locals?
5. What is the distribution of the class of the tickets (VIP, Premium, Economy) ?
6. What is the percentage of cancellations for any particular match?
7. What is the most preferred seating zone?
8. What is the average age of any particular match?

Entities and attributes

OBJECTS	DESCRIPTION
1) Customer	**Any person buying a ticket**
Customer_ID	Unique identifier of the customer
First_Name	First name of the customer
Last_Name	Last name of the customer
Email	Email address of the customer
City	The city in which the customer lives
Age	Age of the customer
Student	Customer is a Syracuse University student? Yes/No
2) Match	**The game event taking place in the Carrier Dome**
Match_ID	Unique identifier of the Match
Team1	The name of the first team
Team2	The name of the second team
Game_date	Date on which the match is scheduled
Game_Time	The start time of the math

3) Order	Orderline of the customers
Order_ID	Unique identifier of the Order
Customer_ID	Foreign Key: Unique identifier of the customer
Match_ID	Foreign Key: Unique identifier of the match
No_of_tickets	The number of tikets booked in one order (Max:5 Min:1)
Order_Date	Date on which order is placed
Order_Time	Time stamp of the order
Total_Price	The total price of the order(Total ticket price, meal price, parking price)
4) Ticket	**The ticket for a particular match**
Ticket_ID	Unique identifier of the ticket
Order_ID	Foreign key: Unique identifier of the Order
Class	The type of ticket purchased: VIP, Premium, Economy
Ticket_Price	The individual price of a ticket
5) Seat	**Seating in the Dome**
Seat_ID	Unique identifier of the seat
Order_ID	Foreign key: Unique identifier of the Order
Ticket_ID	Foreign key: Unique identifier of the ticket
Seat_Zone	The zone in the carrier dome
Seat_Number	The seat number in a particular zone
6) Meal	**Meal Plan**
Meal_ID	Unique identifier of the meal plan
Order_ID	Foreign key: Unique identifier of the Order
Ticket_ID	Foreign key: Unique identifier of the ticket
Meal_Type	The type of the meal
Meal_Price	The price of the meal
7) Parking	**Parking spots**
Parking_ID	Unique identifier of the parking spot
Order_ID	Foreign key: Unique identifier of the Order
Ticket_ID	Foreign key: Unique identifier of the ticket
Parking_Zone	The zone of the parking
Spot_Number	The spot in a particular zone
Parking_Price	The piece of a parking spot
8) Cancellation	**Cancellation entry**
Cancellation_ID	Unique identifier of the cancellation
Order_ID	Foreign key: Unique identifier of the Order
Cancel_Date	The date of cancellation
Cancel_Time	The time stamp of cancellation

Entity Relationship Diagram