Unox Database Case Study

Unox Multiplexes Inc. is looking to build an online portal to enable customers to book tickets on the internet. You have been assigned the task of creating this portal application. The following are the detailed requirements:

There are four screens in the multiplex. Each screen will have four shows in a day –
morning show(10am), matinee (1.30pm), evening show(5pm) and first show (8.30 pm). The same screen may have different movies in different shows. The schedule of shows changes every Thursday night. Following is the seating capacity of each screen:
Screen A (Gold class) – 150 seats
Screen B (Silver class) – 200 seats
Screen C and D (Iron class) – 250 seats

The rates for the tickets
Gold – Rs. 500/ticket
Silver – Rs. 300/ticket
Iron – Rs. 200/ticket

Movie information that would be displayed on the portal would be Title, Genre, Rating, Status, Poster Image and the star cast. Star cast would be name of the person with their role in the movie. Movie would also have reviews. Reviews are written by the review team. A review would typically have content [the actual review written], date and time of the review and the reviewer name.

User can book tickets online by selecting the movie, screen and show and by entering information like name, credit card number, pin number, no of tickets and the date for which booking needs to be done. Total cost for the entire booking is also stored. User would also choose the Payment Gateway either PayPal or Bill Desk to make a payment.

We need to implement the abstraction of booking a ticket by also making a payment. User will choose the Movie, Show, time, seats and give the credit card information of Name, Expiry Date, CVV Code and Amount to book tickets. A Booking manager will take the data provided from the client and provide the confirmation back as approved. We also need to implement business rules of payment like insufficient funds, expiry data validity and cvv verification. If any of them is not going through, then a custom exception should indicate the reason for the failure.

We also need to enable the design to accommodate more payment gateways like Verizon in the future.

Every transaction performed must be logged in the database for an audit trail since it is dealing with money from user.

Once a ticket is generated, a WhatsApp message is delivered with the QR Code. This code can be swiped at the cinema hall. Once scanned it should record the entry of the individual. If the user was not able to receive the QR Code, an option is provided on the mobile to download

code from the app. We should be able to track if the QR Code was downloaded from the App or was scanned from WhatsApp.

User after booking tickets will also have the option to order food online. Items like Popcorn, Beverages, Sandwiches are available to be ordered. Every Item ordered will have rate associated. The rates would vary depending on the size or quantity. For example, a Large Pepsi, Medium Pepsi, Small Pepsi would have rates of 100, 200, 300 INR. Likewise a Popcorn. User can also go in for a combo which would items with varying sizes and quantity and have rates for each combo.

If user wishes to have it delivered to the seat, they must scan the QR code or select the screen no and seat to which order has to be delivered. We would also like to track how many people opted for this service to plan for the team capacity.

If a customer has got Membership of Unox, then they are eligible to earn points for each transaction. Every 10Rs gets a point. Customer can also redeem points when they reach every 1000 Points.

We are building a mobile app and a database has to be designed for the same. Design should

1. Address current needs
2. Should be futuristic – Enabling extension
3. Should handle 1 Lac Transactions a day
4. Secure – Critical Information should be encrypted.
5. Design enabling Marts for Analytics and AI
6. To store Text, Image in Database

Looking forward to a great Design and Implementation

Deliverables

1. Data Dictionary
2. ER-Diagram
3. Excel with generated data – (Real Data)
4. Data Cleaning
5. KDI – Key Decision Indicators
6. Analytics in Excel
7. Presentation