**National University of Sciences and Technology (NUST)**



**CS-220: DATABASE SYSTEM**

**Project Proposal**

**BESE 12-B**

**Lecturer**

**Dr. Bilal Ali Rizvi**

**Group Members**

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**Project Name: Cinema Ticketing System**

**Project Details:**

The aim is to build a complete system that simulates the workings and logistics of a generic ticketing system in a cinema. Our program will have a plethora of dimensions which include, but are not limited to:

1. Administrator End
2. User End
3. Database End

To start, we intend to make our project such that it intricately mimics the daily occurrences inside a cinema, using samples and templates. Our goal is to make it workable, such that it can be implemented and used by any cinema in the region, e.g., The Arena in Bahria Town, Rawalpindi.

**Project Idea and Purpose**

The project aims to digitalize the management and business model of a movie theatre. It will assist in helping the cinema managers and stakeholders to manage the timings of their movies and will help them in ticketing of the movies. It will also be much more efficient from the user perspective as well. The user will also be able to book seat from before instead of being physically present at the counter. The Web app will do the job much more efficiently and faster.

**Basic Implementations & Features:**

**Database:**

In the modern world, almost everything is connected digitally. A Cinema can provide customers with a better experience by digitalizing its business model. It also includes making an effective database system that manages all kinds of records, including movies being displayed, ticketing management, and multiple other features. Keeping this perspective in mind, we shall be working with our aim of building a web-based Cinema Ticketing System.

In our database, we will be building a schema regarding what data should be stored, and how different data would relate to each other. It will include creating different tables, including the customers' table, movies table, etc. We shall be making our database by writing SQL queries in MySQL.

**Front-End**

We intend to use HTML, CSS and Java Script for building the frontend of our website. The interface created will allow the administrator to interact freely with the application. We will set up navigation bars to access each page. These pages include but are not limited to Homepage, Admin Login, Available Shows, Ticket Booking, seat-display and Comments/ FAQs Section. To make it more appealing, we shall add simple animations such as those enabled on hovering, etc.

**Admin Controls**

A core component of our application will be Serial Controls for the Administration (Manager/Clerk, in general). These controls will enable the Admin to book, cancel, confirm and provide tickets to a customer. The Admin will have access to all the Movie Titles (inflow as well as outflow).

**Dynamic Search**

This feature will allow the users to search for any movie available by entering the movie title, film star or production company.

**Seat Selection Pane**

When booking tickets online, a Seat Selection Pane would display the seats in their respective rows for the customers to choose. Each seat will be color-coded to show their availability. Red would indicate sold-out seats, while Yellow would indicate booked seats which have not yet been bought, and Green would suggest that the seats are available. The customer can choose multiple seats depending on the availability. However, the limit must not exceed 10 seats.

**Membership & Discounts**

Based on their CNIC and Email IDs, customers can obtain Membership for a fixed monthly fee and initial registration fee. Membership perks include 15% discount on all their tickets, 10% discount on food items, and other mega discounts during the weekdays. For members, seats will remain booked till before the start of the show.

For non-members and students, multiple discounts will be available that would be applied where applicable.

**Movie Descriptions & Show Times**

The web application will display all on-going shows, their descriptions, trailer clips, and show times. It will also show Upcoming Movie posters and any related announcements.

**Reservation & Cancellation**

For all booked tickets, the seats will be reserved till half an hour before the show. If the customer fails to buy the tickets at the counter before the time runs out, the booking will be cancelled.

If a customer wishes to return their tickets, they will be fully refunded an hour prior to the show and their reservation will be cancelled.

**Tech Stack:**

*Frontend:*HTML, CSS, JavaScript

*Backend:*Node JS

*Database:*MySQL

**Group Members and Their Allocated Tasks**

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| **Group Member Name** | **Member Title** | **Role / Tasks Allocated** |
| Muhammad Bilal | Back-end Developer | **Manager**   * Project Management * Designing Database Schema * Defining datatypes, relation of different data and their use case |
| Muhammad Ashhub Ali | Front-end Developer | **Frontend**   * Design of Graphical User Interface * Making Frontend Data Management * Ensuring Better User Experience |
| Abdul Arham | Database manager | **Backend**   * Business Logic * Integrating Backend JavaScript with Frontend * Integrating Backend with Database Layer |