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|  | **PES UNIVERSITY, Bangalore**  (Established under Karnataka Act No. 16 of 2013) | **UE18CS202** |
| **B.Tech, Sem III**  **Session : Aug-Dec, 2019**  **UE18CS202 – Data Structures** | | |

**REPORT**

**ON**

**“Movie Theatre Booking System”**

**SECTION : H**

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**ABSTRACT**

The idea of our project is to build an efficient system for the booking in a cinema hall this project

has functions to handle every event in a movie theatre example ticket booking ,presenting the seat matrix of the theatre , relation between seats and differentiating the seats occupied by a family from the rest of the seats ,cancelling seats and calculating the bill for the customer .

All this is accompanied with the secured admin information with password to know the revenue generated in the cinema with risky user control that is ,These information will not be available to common public except the admin. The advantages of this project is that we can efficiently run a cinema hall without any hassle. This project mainly depends on the linked list data structure for the operations on the seats and doing other calculation on these seats [example silver gold and platinum seats with their cost ].

**DESCRIPTION OF DATA STRUCTURE, LOGIC AND FUNCTIONALITY**

Our project uses linked list data structure along with structures and array of pointers to do the task. The project has a functions to create a cinema hall seat matrix and this matrix is two dimensional array of structures . The structure used here is for a seat in the hall which can seen in the code . This structure has the type of seat and status [vacant or booked] of the seat along with cost and name of the person sitting on that seat . We have created a function to book a seat which

basically shows the cinema hall with vacancies and the user enters the number of the seats he / she wants for the family . This function will create a linked list of the seats booked by the person. These seats can be in any part of the cinema but still be linked . This will help in the billing and providing services to the customer . Once the seat location and name is provided it is

inserted in the linked list and then that particular seat will be shown as booked in the seat matrix

Every family will thus be a linked list and all these families linked list will be stored using their

Respective head pointers in an array of pointers. We can the cancel the ticket of any member in

the family just by giving the name of the customer .For the Admin there are certain function which will tell the total revenue collected in the cinema hall .These can also give the bills of the customers and give the current status of the cinema hall with number of seats left etc. There are also validations done to prevent booking of an occupied seats .

**CONCLUSION**

We have learnt how to apply linked list in the real world to simplify task which have links between

them .This experience of using linked list inspired us to appreciate such a good and efficient

data structure . This project could have been taken to next level if could handle some more

functionalities like waiting queues for the ticket and booking against cancellation .Overall this

was a great experience .