Karachi Institute of Economics and Technology Collaboration with Pakistan Air Force	COLLEGE OF COMPUTING AND INFORMATION SCIENCES
	PROJECT REPORT (Spring 2023 Semester)

Project Title : Cinema Management System in Python

Project Members:

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Project Description: The proposed project is a cinema management system developed using the Python programming language. The system will provide an easy-to-use interface for cinema staff to manage movie showings, ticket sales, and customer information.

FEATURES:

•**Linked list** data structure can be used to manage the cinema seating plan. Each node in the linked list can represent a seat and store information such as seat number, row, and column.

OPERATIONS

•**Add a seat:** A new seat can be added to the linked list by creating a new node and inserting it at the appropriate position in the list.
•**Remove a seat:** A seat can be removed from the linked list by finding the corresponding node and removing it from the list.
•**Find a seat:** The linked list can be searched to find a specific seat based on its number, row, or column.
•**Update a seat:** The information stored in a node representing a seat can be updated, such as changing the seat number or row.

•**Display the seating plan:** The linked list can be traversed to display the seating plan, showing the arrangement of seats in each row and column.

•**Dictionary** data structure can be used to manage the movie library. Each movie can have its own dictionary containing its title, director, actors, release date, and other relevant information

OPERATIONS

•**Add a movie:** A new movie can be added to the dictionary by creating a new key-value pair where the key is the movie title and the value is a dictionary containing the movie's information.
•**Remove a movie:** A movie can be removed from the dictionary by deleting the corresponding key-value pair.
•**Find a movie:** The dictionary can be searched to find a specific movie based on its title or other information.
•**Update a movie:** The information stored in the dictionary for a specific movie can be updated by modifying the corresponding key-value pair.
•**Display the movie library:** The dictionary can be traversed to display the entire movie library, showing the information for each movie

•**Stack** data structure can be used to manage the cinema ticket booking system. When a customer books a ticket, their details can be pushed onto the stack, and when they cancel their booking, their details can be popped from the stack.

OPERATIONS

•**Book a ticket:** When a customer books a ticket, their details (such as name and contact information) can be pushed onto the stack.
•**Cancel a booking:** When a customer cancels their booking, their details can be popped from the stack.
•**View bookings:** The stack can be traversed to view all current bookings in the order they were made.
•**Check availability:** The size of the stack can be checked to see how many tickets have been booked and if there are any available seats left.

•**Queue** data structure can be used to manage the snack bar orders. Customers can join the queue, and the next person in the queue will be served next.

OPERATIONS

•**Place an order:** When a customer places an order at the snack bar, their order details (such as the items they want to purchase) can be added to the end of the queue.
•**Serve an order:** The next order in the queue can be removed from the front of the queue and served to the customer.
•**View orders:** The queue can be traversed to view all current orders in the order they were placed.
•**Check waiting time:** The size of the queue can be checked to see how many orders are waiting to be served and estimate the waiting time for new orders.

Technology:

The system will be developed using the Python programming language .The **GUI (Graphical** User **Interface) is built** on Tkinter.