



USER GROUP: II B.Tech I Sem CSE

LAB NAME: Advanced Data Structures Using C++

LAB THEME: Application Driven

Purchased a New Phone

Stored all Friends Contacts

Hurray!! Alphabetical order

Sorting Algorithms Applied

Calling Radhika...

Searching for a Contact(Binary Search)

Call Log

Recent Calls on Top(Stack)

Frequently Contacted

Priority Queues

WhatsApp Messages

First Sent First received(Queue)

Searching for a Location

Short Path Distance By Graphs

Efficient Techniques of Organizing Data

Some More...

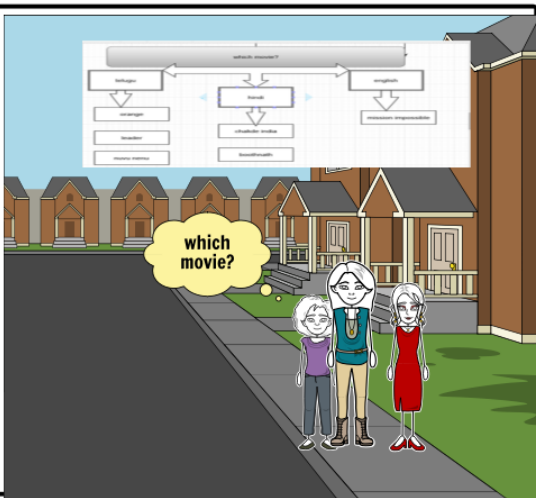
- ❖ Search Engines
- ❖ IRCTC
- ❖ RED BUS

A Group of Friends decided to watch a movie on a holiday...



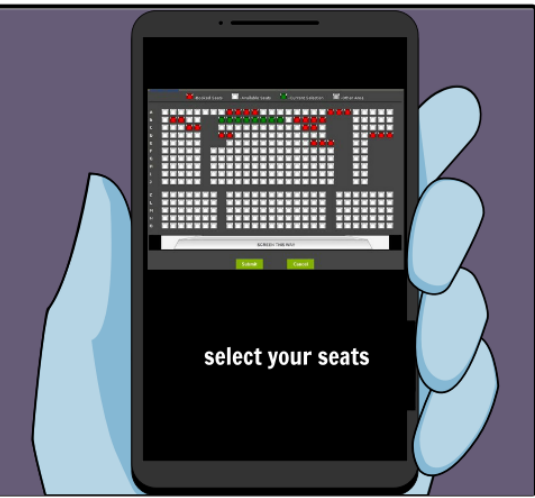
Illustration of Real Life Example .. which used different Data Structures....

They started searching the hit MOVIE in the city on their mobile...



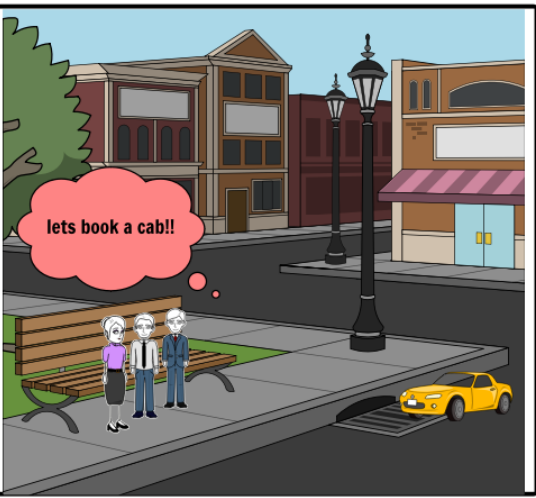
Searching the movie....An appropriate search algorithm helps them to quickly trace out the movie...Like Linear Search or Binary Search. The arrangement of movies based on the language in a TREE fashion....

They finalized a movie and wants book the tickets... Opened a mobile app and selecting the seats...on their mobile APP



The arrangement of Seats in a Theater is virtually placed on the mobile App in LIST fashion....

...they decided to book a CAB to reach the theater..



Allotment of CAB by travel agency is in First Come First.. (QUEUE)

They are in a hurry to reach the theater so searching for the nearest way/shortest route...on their mobiles using google maps



Calculation of shortest path usesBFS and DFS of GRAPHs will helps them...

....they reached the theater and stands in the QUEUE to enter in the hall..



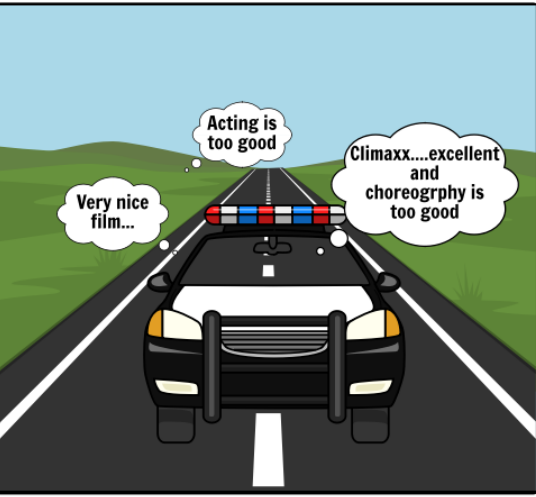
People standing in a queue illustrate the example of first in first out(FIFO)

.in the break they came out to CAFE to have some snacks...and drinks...



They took pop corn and drinks and the arrangement of glasses on the table is like a STACK (Last in First Out)

..they enjoyed the movie and returned back to their homes...



All the details of group are stored in some databases using data structures like HASH TABLES , DICTIONARIES etc...