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# Railway Reservation System

DIV-E

GROUP NO.-4

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# INTRODUCTION

- This system is basically concerned with the reservation of railway tickets to the passengers.
- In this we are discussing that how the reservation is done with the feature of cancelling and waiting list.
- In the project we are going to include entities like:

Reservation

Cancellation

Display reserved and waiting list passengers.



# OBJECTIVE OF THE PROJECT

- All the manual work should be converted into computerized so that the load of employees should decrease.
- The data should be stored in computer rather than in register manually.
- Booking can be done by sitting at your home only, no need to visit the booking counter.

# Data Structures Used

## 1.Singly Linked Llst

- Linked List is a sequential collection of nodes.Which is faster than array in terms of deletion of nodes. It's memory is dynamically allocated in runtime. This saves time and space.
- Each node consists of four different data field :
  - #Name
  - #Age
  - #Registration Number
  - #Link to the next node

# Data Structures Used

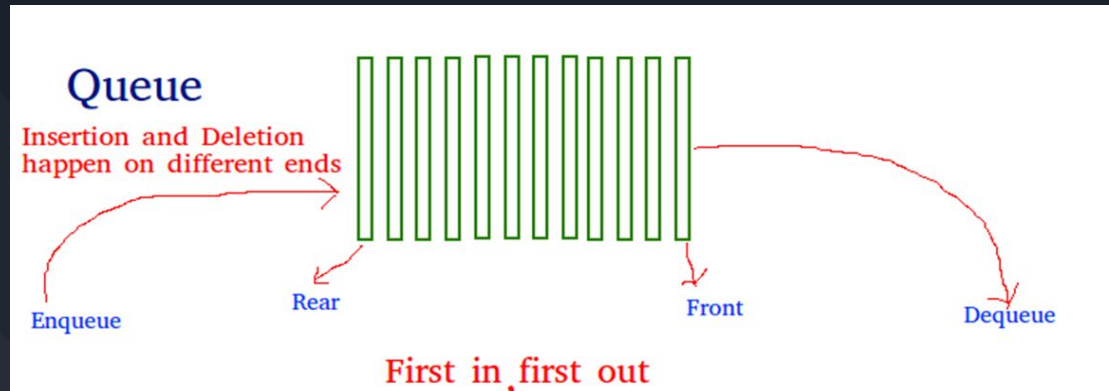
## 2.Queue

- Queue is a data structure in which insertion and deletion takes place from the ends. It follows First In First Out Principle.
- Queue data structure is used here to store the waiting list passengers. If anyone cancels their ticket then that seat is allocated to the first passenger in the queue.

# Data Structures Used

## 3.LINEAR QUEUE

A Queue is a linear structure which follows a particular order in which the operations are performed. The order is First In First Out (FIFO) .In a queue, we remove the item the least recently added.



# SYSTEM REQUIREMENTS

## SOFTWARE SPECIFICATION

- Operating System : OSx
- Frontend : C programming
- Backend : C programming
- IDE : Visual Studio Code





# ADVANTAGES

- Reduces the burden of traveler waiting in the booking counter.
- User-friendly.
- Convenient.
- Time savings.
- Helpful during COVID.

# Future Enhancements

- We can optimise our time complexity using some different data structure.
- We can add features such as prioritising on the basis of age or railway employees and gender.
- We can add feature of tatkal reservation.
- We can provide this solution on online portal.



# References

- [www.youtube.com](http://www.youtube.com)
- [www.tutorialspoint.com](http://www.tutorialspoint.com)
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**THANK YOU!**