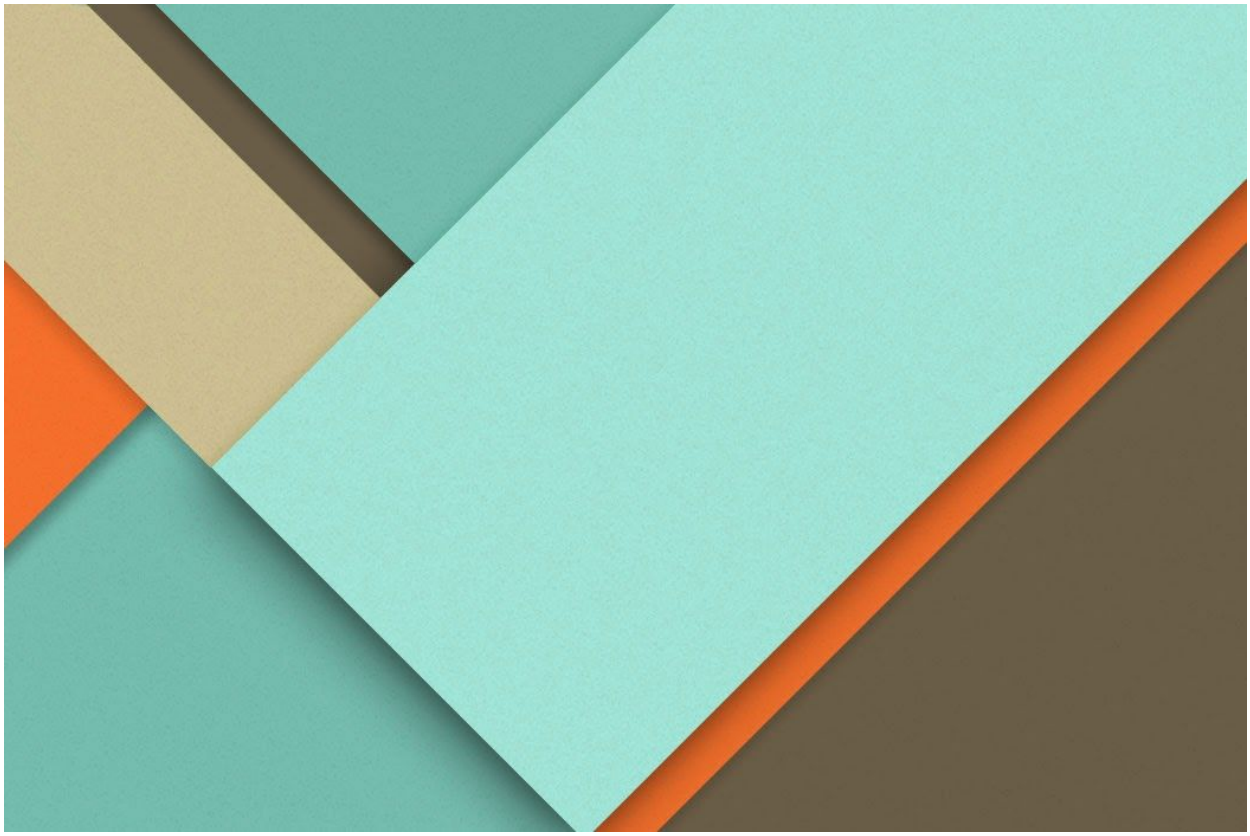

SHUTTLE SERVICE

Kasukabe Corp.

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We would also like to acknowledge the role of various open-source platforms that have scoured us throughout the project. Websites that like Geeks For Geeks, that acts as a catalyst in expanding the horizons for newbies and pave out a way to learn from anywhere, deserve appreciable homage.

During this quarantine, it was a bit difficult to communicate and understand each other for us, but facilities like Microsoft Teams and G suite provided to all the students by SNU have helped to cope up with the problem and maintain the smooth functioning of the project. For this we are extremely thankful to SNU.

Starting this project from almost nothing, the team has come a long way up. After several sleep deprived days of hard work and the allegiance of the team to effectuate the complete project before the deadline, we have come a long way. This project not only helped us in the programming part but also helped us to solve problems that come up during a real-world project, understanding the importance of teamwork and not to disregard use of Git and working on Github that we learned throughout the course of "El Proyecto".

Overview

Shuttle service is a shuttle booking and management system which comes with easy maintenance and usability for the user-end and the admin-end both.

Descriptive video:

Project execution on GCC (LINUX)

Project execution on CodeBlocks.

Goals

1. To provide fast and robust service for shuttle booking.
2. Interactive and user friendly interface for booking and management operations such as status tracking, cancellation etc.

Specifications

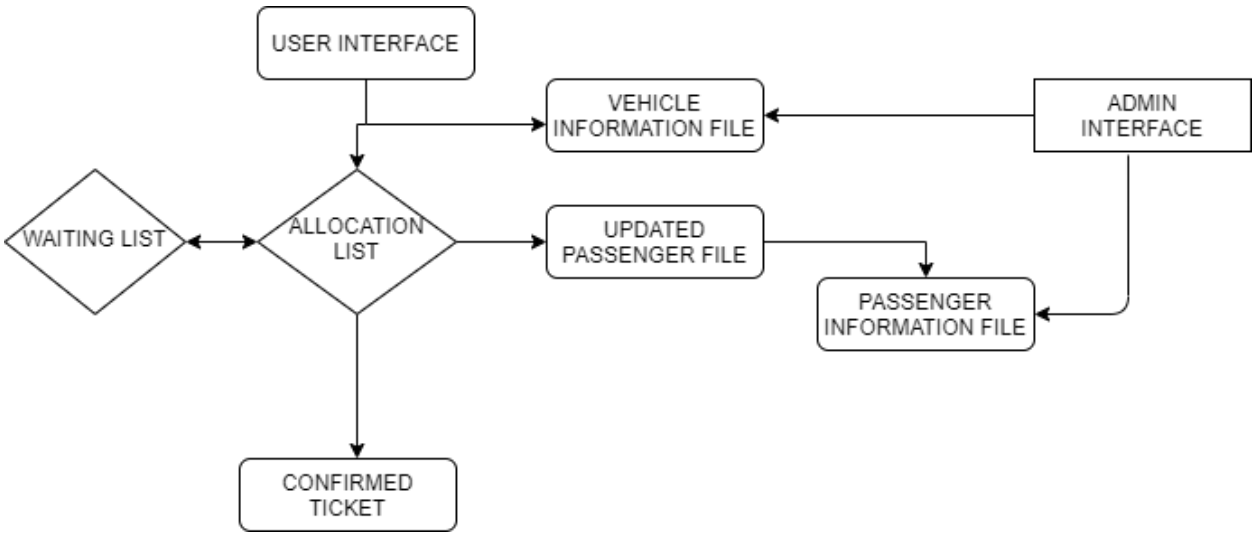
Built entirely using C programming language with following concepts :

- Data Structures **(Linked List)**
- File handling
- Data Abstraction

Can be executed using CodeBlocks, GCC, Dev C++ ,etc.

For Data Management both linked lists (mostly) and dat files are used.

Working & Functionality



Functions used:

- **vehicle vinput(vehicle) :** This function is used to take details of the vehicle (bus) which is used as the shuttle. Details like bus number, driver's name, contact number, seats, destination, source, arrival and departure time is taken.
- **void voutput(vehicle) :** This function is used to print all the details of the vehicle (bus).
- **passenger pinput (passenger p) :** This function is used to take input of details of passenger viz name, age and other things defined in passenger structure.
- **void poutput (passenger p) :** This function is used to print out the details of passengers.
- **int display_ticket(char*) :**This function displays ticket using user menu.

- **void new_booking(char*):**This function is used for allocation of new tickets.

- **Int cancel_ticket(char*):**This function is used to change the status from allocated to cancelled and allocate the waiting passenger in its place.

- **int display (passenger *) :** It is used to display details of all passengers in the present queue.

- **int isempty(passenger *) :** To check if the list of passengers is empty or not.

- **void deleteList (passenger *) :** To delete the entire list of passengers

- **void appendl(passenger **,passenger):**This function is used to append in the existing passenger list.
.
- **void delay (int) :** To pause the program for a while. Int input is number seconds of pause.

- **void runner () :** To initiate the main screen which has Admin login, User Login and Exit options.

- **void admin () :** To initiate int admin_login function and go to void admin_login function if correct input is entered.

- **void admin_login () :** To take admin login details, verify admin username and password.

- **void admin_menu () :** It shows all the actions that admin can take. He can look for revenue service update, vehicle information and change password.

- **void service_update () :** This is one of the most important functions, it show what changes can be made. It shows buses, update an existing entry of bus, add or remove busses. This deals with buses.dat file.

- **void user () :** This function is used to show all the actions that a user can perform. Adding new user or log in as old user.

- **void change_pass() :** This function is used to change password and send the updated password to file password.dat.

- **void pass_setter() :** Function to get password from file password.dat and assigning it to variable at the starting of the execution.

- **int check (char *, passenger *) :** Function to check if the passenger is registered or not.

- **passenger * create_list() :** Function to create list of passenger from file.

- **int get_pcount(char *):**This function is used to return current passenger count in a bus.

- **void appendp(passenger):**This function is used to append a new passenger in the passenger file.

- **void old(char *):**This function is an utility function for old user.

Contributions

Aman Pareek	: Admin authentication system, file handling, starting logo, etc.
Devansh Goel	: Linked List,Testing, Updation & debugging, video recording etc.
Keshav Khandelwal etc.	:Data Structures, User interface, core file handling functions & integration
Madhav Agarwal	: Linked list and related functions, Ticket UI, debugging, etc.
Pranav Soni	: Testing, Database management,Linked List, etc.

Scope of Improvement

- Improved login system with masked passwords.
- Introduce payment gateway in the UI.
- Introducing real time updation of status using time functions.
- Adding option to print Ticket.