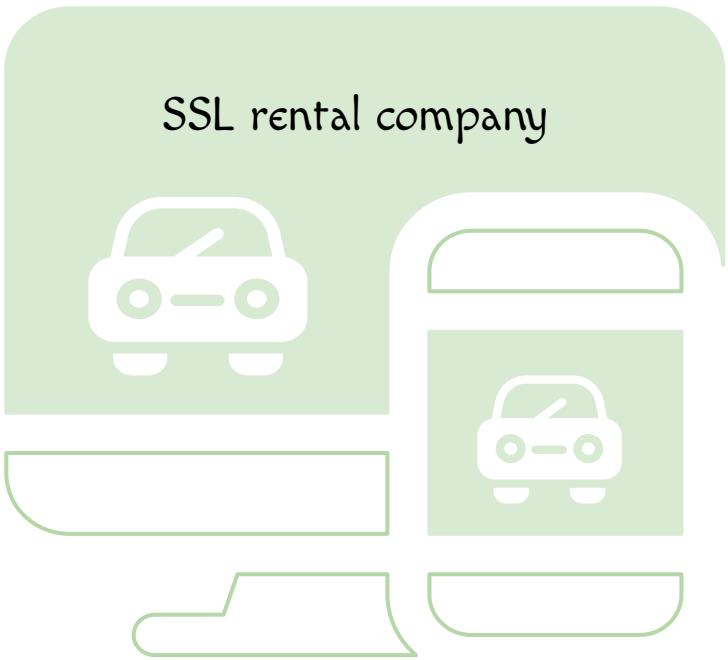
Vehicle rental application

Team leader: Layan A. Alateeq

Team members: Selma Aksoy, Saadet Yılmaz, Layan A.

Key:

Word when tasks are related
Slides under each person's name is the program they have completed
Together: slide is a contribution on whoever uses/needs the function first
Word: title of the section



Progress report

Tasks

1. Display all vehicle information.//saadet
2. Display available vehicles currently.// selma
3. Display vehicles that will be available after x days. //selma
4. Create a new reservation.//saadet
5. Add a new vehicle.//selma
6. Search for a vehicle using the license plate number//saadet
7. Sort and display all vehicles according to their daily rental price.//layan
8. Display the top 3 most reserved vehicles.//layan
9. Display all reservations.//selma
10. Remove a vehicle. (delete)//saadet
11. Cancel a reservation. (delete)//layan
12. Display the name, surname and Client ID of all clients who have rented a vehicle (not necessarily the same) more than 3 times.//selma
13. Save all reservations with a total cost exceeding x to a new file.//layan
14. Modify information for a vehicle using its plate number.//saadet
15. Add images (BONUS)

Grading criteria

Each student evaluation will be based on these components:

✓ 10% - Team management ~ The team leader will be responsible for assigning tasks to his

team members (including himself), to organize team meetings and to report the work progress.

✓ 5% BONUS (additional) - New Features ~ You can add a “special feature” to your project,

which is not included in lectures such as: adding images, etc.

✓ 50% - Overall Project ~ Functionality and Efficiency of the project. Code must be

executed/tested at the time of presentation. Presentation materials.

✓ 40% - Individual Contribution ~ Each student will present and explain its own work;

however, each student must be able to answer any question about the project.

PLAN

27TH OF MAY

- Have at least 2 programs done ✓

30ST OF MAY

- All the programs done

31ST OF JUNE

- Join the programs together
- Distribute pwp parts

4TH OF JUNE

- PWP complete

5TH OF JUNE

- Review the PWP together

7TH OF JUNE

- Submit the project

Data use

We will use linked lists instead of arrays bc we don't need to specify the size

Requirements

✓ The project must include the following topics: Selection or Insertion Sort, Structures,

Linked Lists, Files, Pointers, 1D / 2D Arrays, Linear and Binary Search.

✓ Each operation must be implemented using functions.

✓ Functions must be stored in header files.

✓ The program must be able to save and retrieve information after closing and reopening.

Test Files

prog files - Google Sheets

Structures:

```
struct vehicle{
   char plateNum[8];
   int year;
   char model[30];
   char fuelType[30];
   int consumption;
   int seats;
   double dailyPrice;
   int CarRentalCnt;
   int availability ;
   struct vehicle *carNext;
};

struct reservation{
   int reservationID;
   int date[3];
   int clientID;
   int numOfDays;
   char carID[8];
   double totalPrice;
   struct reservation *resNext;
};

struct client{
   char name[20];
   char surname[20];
   int clientID;
   char passportID[6];
   int  state;
   double phone;
   int ClientRentalCnt;
  struct client *clientNext;
};
```

Heads:

```
struct reservation *res=NULL;
struct client *cus=NULL;
struct vehicle *car = NULL;
```

Layan's Tasks

1. Get data from files DONE
2. Cancel a reservation. (delete) DONE
3. Display the top 3 most reserved vehicles. DONE
4. Save all reservations with a total cost exceeding x to a new file.
    a. Binary search DONE
    b. array
5. Sort and display all vehicles according to their daily rental price. DONE
    a. Selection sort

Saadet’s Tasks

1. Search for a vehicle using the license plate number.
2. Modify information for a vehicle using its plate number.
    a. Selection search
3. Remove a vehicle. (delete)
4. Display all vehicle information.
5. Create a new reservation.
    - Using queues {FIFO} +linked lists
    a. Discounts are applied at 10% for a week's rental,
    b. 15% for two weeks,
    c. and 20% for a month.

Selma's Tasks

1. Display available vehicles currently. : done
2. Display vehicles that will be available after x days. :
3. Add a new vehicle.
    - Using linked lists : done
4. Display all reservations. : done
5. Display the name, surname and Client ID of all clients who have rented a vehicle (not necessarily the same) more than 3 times. : done