Carpooling (also car-sharing, ride-sharing and lift-sharing) is the sharing of car journeys so that more than one person travels in a car, and prevents the need for others to have to drive to a location themselves.

By having more people using one vehicle, carpooling reduces each person's travel costs such as: fuel costs, tolls, and the stress of driving. Carpooling is also a more environmentally friendly and sustainable way to travel as sharing journeys reduces air pollution, carbon emissions, traffic congestion on the roads, and the need for parking spaces. Authorities often encourage carpooling, especially during periods of high pollution or high fuel prices.

Car sharing is a good way to use up the full seating capacity of a car, which would otherwise remain unused if it were just the driver using the car.

In 2009, carpooling represented 43.5% of all trips in the United States and 10% of commute trips. The majority of carpool commutes (over 60%) are "fam-pools" with family members.

Carpool commuting is more popular for people who work in places with more jobs nearby, and who live in places with higher residential densities. Carpooling is significantly correlated with transport operating costs, including fuel prices and commute length, and with measures of social capital, such as time spent with others, time spent eating and drinking and being unmarried. However, carpooling is significantly less likely among people who spend more time at work, elderly people, and homeowners.

Carpooling usually means to divide the travel expenses equally between all the occupants of the vehicle (driver or passenger). The driver does not try to earn money, but to share with several people the cost of a trip he would do anyway. The expenses to be divided basically include the fuel and possible tolls. But if we include in the calculation the depreciation of the vehicle purchase and maintenance, insurance and taxes paid by the driver, we get a cost around 100DA/km. There are platforms that facilitate carpooling by connecting people seeking respectively passengers and drivers. Usually there is a fare set up by the car driver and accepted by passengers because they get an agreement before trip start.

Existing Systems for carpooling

**Websites**

**Europe:** BlaBlaCar.com**,** carpooling.com**,** GoMore.com

**France:** covoiturage.fr

**USA:** car.ma , www.rdvouz.com

**World:** Outpost.travel , joinntravel.com , www.letsride.in

**Mobile Applications**

**World:** Uber, sRide, RideShare,

**USA:** Uber, Lyft

**France:** Karos, Wever, BlaBlaCar, OuiHop

Project Description

This project (Frides) aims to develop a website for carpooling, this website allows nonprofessional drivers to submit rides for specific targets and allows passengers to reserve/request rides from drivers all while being secure and having a simple interface.

This website will help users save money and also reduce the pollution of the environment and effects of vehicles.

The website will have a simple and easy interface, Users must register at first before using the application, after that they must choose between a driver or a passenger, a driver can offer a drive to a specific location while a passenger can find or request a ride to a location.

The following section contains the user and system requirements for the carpooling application.

The website is a meeting point for carpoolers, both drivers and passengers. Users can share and find

rides. The application will be divided into two main parts. The first one is for intercity trips where users

can post their trips and register for trips created by other users. In addition to that, a check in system is

available to notify the users when the driver or the passenger reaches the meeting point. The other part

is for frequent trips. Frequent trips are trips that occur on a weekly basis. A person who commutes to

work, for example, may be interested in creating a frequent trip to find other passengers to ride with.

Given the fact that the application should be socially enabled, the user should be prompted to share his

trips on social media. The access of the application is only granted to authorized users.

The users of the website are travelers and commuters who want to go from one place to

another or users that are driving a trip and want to find passengers. Users can act as both passengers and

drivers while using an application. The users use their social media accounts in order to log in the

application. Any user of the application can act as:

 **A driver** is any person that owns a car and wants to go from one place to another and publishes

his trip on the application in order to find passengers to share the ride with.

 **A passenger** is any person that doesn’t own a car and wants to join a driver in a trip he posted

and agrees to all the conditions specified (price and general behavior).

The website will highly depend on the geo-localization and mapping system of Google. This

will be used for showing itineraries and maps. Also, GPS data will be processed using Google Maps.