

Project description

There are 905 353 vehicles registered in Estonia as of 25.02.2021. Roughly 53% of them run on gasoline, 45% of them run on diesel, and the rest run on gas, electricity or a combination of any. In order to use the vehicles, the owner must purchase the suitable fuel type for the vehicle from a retailer. Every retailer has their own prices, loyalty programmes, websites and promotions.

For a vehicle owner to find the most suitable option, all of the retailers' offers and prices must be manually checked. This is time consuming and since offers and campaigns are not permanent, the customer can be confused easily. Some retailers do not even publish their prices on their official websites, so it is up to the customer to find out what the prices are.

It is clear that a system where the customer could see all possible options would not only decrease time spent on searching for the most suitable option, but enable the customer to easily see what each retailer has to offer and make it easier to compare different retailers.

The purpose of this work is to develop a system for estonian vehicle owners, in which they can see all estonian gas stations with their fuel prices and possible services both in a list and on the Estonian map, compare different gas station prices and have the system calculate the optimal refueling location for them, have their gas station customer cards in one place for a better overview of the discounts.

Such a system will benefit all vehicle owners, who seek to find the best offers and deals on fuel prices. Placing all the retailers side by side on the same website might also trigger new campaigns or competitions between retailers to lower the fuel prices or offer better discounts, from which the customer would greatly benefit from.

Today there are no such systems with such functionality. The closest alternative, according to the author, would be the navigation app 'Waze', in which the customer can look up different gas stations and see the fuel prices, but comparing must be done manually, the gas stations are not displayed on the map, last updated price time is unknown and customer discounts are not displayed. Another drawback of the alternative is that it requires an application download, but some vehicle owners definitely do not use a smartphone and according to the author, having to

install a navigation app to find out fuel prices is unnecessary, especially when the customer lives in the countryside, where navigation apps are not needed as often.

Actual content

The system will be a web based application in which the user can register or log in. Registering or logging in can also be done using third party login services.

On the main page the user has a view of the main menu and a premium retailer advertisement with a link to all of the retailers' gas stations. The main menu has options to view all of the retailers, all of the gas stations, the Estonian map on which all of the gas stations are marked, the user profile and help pages.

The retailers page has a list of all estonian fuel retailers, with additional information like the main office address, phone number, email address and everything else that is stored in the system database. The retailers are ordered based on how many users have marked the retailer as their favorite, but premium retailers are separately put before the regular retailers and in a different color. The user can choose how to order the retailers based on their information.

Each retailer can be clicked on, which would result in showing all of the retailers gas stations on a new page. The gas stations are ordered by location, the closest ones to the user coming first. If the user has disabled location services, the ordering will be random.

The list of all of the gas stations is also ordered by how many users have marked the gas station as their favorite, with premium retailers gas stations being on top in a different color. The user can also choose how to order the gas stations based on their information. If the gas station retailer has not officially accepted their manager account, the user can edit the information about the gas station, e.g the fuel prices and information, for the system to have as much coverage as possible.

The Estonian map page has a map of all the gas stations, with options to choose which retailers' gas stations to display. The default is to display all retailers' gas stations.

The user profile page consists of all the information of the user, with a sub page to manage the users discount cards. The subpage has options to create, delete and edit their discount cards, that the system uses to calculate the personalized fuel prices for the user.

The help page has basic information about how to navigate the webpage, as well as FAQ's and tutorials on how to edit user information.

There are pages where an authorized person can create and delete gas stations, edit fuel prices in different gas stations and update retailer and gas station information. These pages are only visible in the main menu if the user has certain rights. These accounts will be pre-made and handed to retailers, it is up to them if they want to use these accounts to update their gas station prices or let the community update them.