

Programming Exercise – SS17 – Sabba – Fuel Application

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1 General

In our time, the most used transport vehicle is the car. Today it is so that the car is an integral part of our life. That means you quickly lose the overview how much money you already spent on refueling. The main focus in our project is to document different kind of vehicles that use some fuel to move on. The goal is to rethink the different kind of actors in the sector consumption and consumer goods, as well to save some money on their own interests. An important aspect is generally the respective use of the drivers and their attitude. In conclusion, the aim is to provide a better insight into the behavior relating to the vehicle.

1.1 Product environment

It is important for us that our Fuel-Application is reliable and user friendliness. We have programme it for a Computer no matter for which operating system. The program language is Java and we had use NetBeans and IntelliJ. We have written the source code in a such way which the program combines with our database. For the database, we use SQLite.

1.2 Team

Name	Matriculation number
Firat Bostan	1133853
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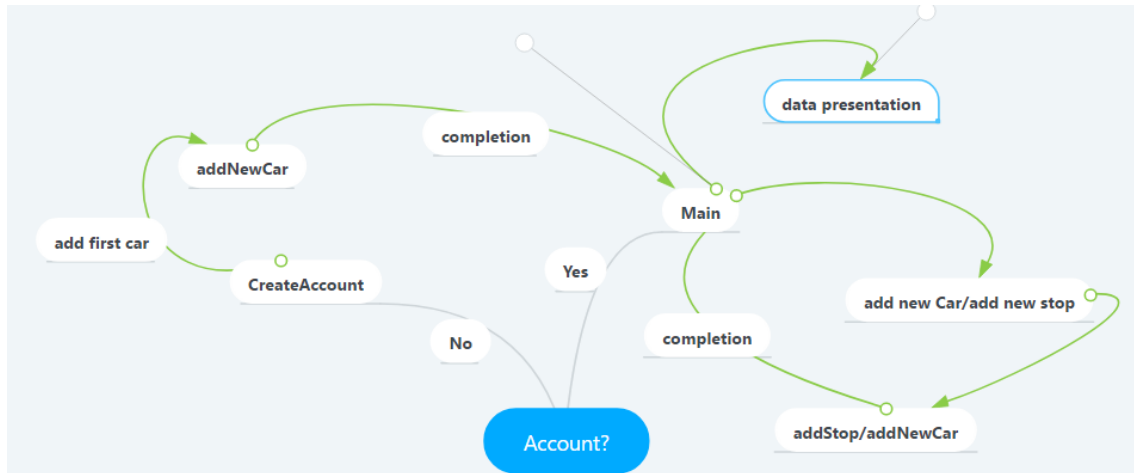
Firat Bostan is the project leader and he is the person in charge for testing before the result. EmreDogan is the database administrator and developer. Dominik Marino is the SW-Architect.

2 Target specifications

One of the important thing is to creating an user friendly applications that can easily use form the user. The specifications are generally based on the input of the user. At the beginning the user should be able to create an account or login. In addition, the user is always to include new cars in his vehicle fleet with the function images into the application. For the graphic representation of the data, there are some predefined graphs and can be taken and evaluated. These should give him an insight into his driving. With this assessment, the user can see in what relationship is the average consumption stated by the manufacturer and his own. The program should be able to return in an algorithm how well the user has been driven or returned in the ratio a cost utility bill. This means in how for he saved or wasted.

3 Product use

First of all, only registered users are able to use this software. Therefore, with some personal data, like an user name and a password , he/she is also able to create an account. Now the user is able to login to the system with his user name and password. Logging off is also always possible. After the log-in process, the system opens and the user is able to see all his entry's. These entry's are fuel records, so when did he fuel the car, how much liters, how high were the costs per liter and total. The user is able to click on any record and change some data, maybe the date has to be changed, the price, or even the car. If the entry is completely wrong, it is also possible to delete an entry. But a new user has to add first of all a new car. In this section, the user fills in the information of the car, so which brand, kilometer status, fuel. After adding a new car, the user can now create a new entry/record by using this new car otherwise it's not possible to create a new record. If the car is not available anymore, it can also be deleted from the system.



3.1 Application area

This software can be used from any person who would like to save his fuel history to check the consumption of a car. For example a company which lends his cars to the employees could check the the consumption of the car to save more money for the future. Therefore statistical facts will help each user group to realize this process of saving more money. The software could also be a custom application for a certain user group, therefore it has to be implemented customized for this kind of solution. But all in all, it can be used by everyone and is also helpful for each user group.

3.2 Target group

So the target group for this product is once for the industry for example company's that in the car sector like taxi, shipping or post, but also in the private sector. Users who use this version of application can easily produce what cost they have with their vehicles. This program is useful to reduce the cost.

4 Product requirements

This application is intended to create and operate the data in a simple way. These data strings are stored in a database and should then be inserted into a table. This information can still be changed by the user after an incorrect entry. The most important feature is the graphic representation of various cars and tank stops.

4.1 Login

The user can use the system when he is registered and is announced. Any user can register himself under information of his desired user name, his desired password, his own user name. Only then he can use the system. The system is ready to him without restriction to the free use. A user can announce himself in the system under information of his user name and his password. The announced user can announce departure any time from the system.

A user login form with a light gray background and a dark gray border. It contains two text input fields: 'User' and 'Password'. Below the 'Password' field is a small 'OK' button. At the bottom of the form is a larger button labeled 'Create an account'.

4.2 Personal data

A user disposes of information, as for example his name, address, birth and so on. Furthermore, a user also orders information's of his car or cars. Car name, Max fuel for example . . . This are his personal data which he can freely form. The announced user can do himself any time his personal data from system allow to indicate. The user can update all his personal data up his user name or change.

A personal data form with a light gray background and a dark gray border. It contains several input fields and dropdown menus: 'Firstname:' and 'Lastname:' (text inputs), 'Birthday:' (text input) and a dropdown menu, 'Password:' (text input) and 'Confirm your Password:' (text input), 'Gender:' (dropdown menu), and 'Location:' (text input).

4.3 Personal profile

What shows the personal profile? First of all the personal profile shows personal data of the user and all his personal information. For example his name, surname, street address, phone number and the cars he owns. The main aspect in the personal profile is the users fuel history. When did the user refueled his car? How high were the costs, how much kilometers could he/she drive during the time of the last refuel till now? What is The difference in case of the consumption of different cars? All this questions are going to be answered in this section. The personal profile can be changed by user itself.

4.4 Data presentations

In the date presentations section can the user choose between predefined graphics. So in this charts are all important information that the user need. Also the program returns different kind of informations for example average consumption and the following costs of the car. The next thing is that