

Application for controlling public transport in town

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Abstract

In today's world, the Internet has become an integral part of our daily lives. A huge number of people on the Earth now use the Internet for various purposes. The Internet helps people in communicating with each other, transferring various data, finding the necessary information, and in general – make our life easier. By virtue of its nature, a person has limited resources, one of which is very important for any person – time. Time is a resource that a person cannot, at the moment, increase to himself at any moment. Therefore, human time is a very expensive and very important resource that must be used as rationally as possible. To rationally use time, people often resort to using taxi services. If a person does not have a car and he urgently needs to quickly move from point A to point B – a taxi will help a person to pass this way. This work will resolve the main problems with taxi service in the city.

1 Introduction

Taxi (or taxicab, cab) – is a type of vehicle for hire with a driver, used by a single passenger or small group of passengers, often for a non-shared ride. [1].

The advantages of this vehicle include the speed of the vehicle, since it does not need to stop at stops and drop someone off, like in public transport. A taxi carries a person from A to B without any unnecessary stops, with the exception of unforeseen circumstances. Also, of the advantages of a taxi – a passenger might carry a lot of baggage, which will be inconvenient to carry in public transport, if you also take into account the fact that buses need to pay extra for oversized baggage.

The disadvantages of taxis are, first of all, the high cost of taxi services. Since the taxi driver receives money from one person for each trip, he needs to calculate the cost of the trip to the passenger, the cost of the trip with the passenger to the place of arrival, depreciation, profit and interest to the company that holds the state of this taxi driver or the percentage of the application in which he registered his car as a taxi. From the aggregate cost of these actions comes a considerable amount that you need to pay as a passenger for one trip. Another disadvantage of a taxi is its low passenger capacity. If there is a need for a huge company, for example, more than 6 people, to use a taxi – they will either need to look for a taxi bus, which are not so popular in a taxi, or order 2 cars. Both options will increase the cost of paying for taxi services. The last point I want to highlight is the coverage of the city by taxi drivers in regions or districts. Sometimes it is impossible to find a taxi in a specific area, as they simply are not there, and a taxi driver from a neighboring area may not agree to go, as it is not beneficial for him.

The main task of this thesis project is to apply theoretical and practical knowledge in programming for the implementation of this product, familiarize yourself with the finished functionality, familiarize yourself with the development, testing of this software product and prepare a report.

2 Overview

The features of the subject area are to enable the user, in real

References

[1] Taxicab – Wikipedia <https://en.wikipedia.org/wiki/Taxicab>

time, to track the movement of road vehicles in the city, view the route and where the taxi is at this moment on the route, and get the exact time the vehicle arrives at a specific location on the map.

The application should solve the following problems:

- notification of the user about the timely arrival of a taxi;
- display taxi on the map;
- display of the full taxi route on the map;
- save money on taxi services for the driver and passenger at the same time.

In this subject area, there are also a number of restrictions that relate to the confidentiality of information, such as:

- the personal data of the user should not be visible to anyone except the user (not taking into account the data that needs to be shown about the user in order to identify him);
- the location should not be accessible to anyone except the passenger and driver.

3 Decision

During the analysis of analogues, the following requirements were identified:

- the application must have adaptation for different mobile versions of the Android platform (5+);
- the application should show in real time the movement of the vehicle;
- the application should be accessible with the minimum required set of information;

The system must be adapted to the loads and protected from unauthorized user access to real-time taxi or user position display devices.

4 Conclusion

When writing the first part of the graduation project, the problems of the developed software product were determined, the development goals, the subject and the object of development were formed. To understand the developed product, information about this area of its advantages and disadvantages was displayed. Development goals were set in order to form the functionality of an optimal project that would have fewer disadvantages and more advantages.