Car Rental

Project Specification

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Car Rental Group 2018

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1 Goals

The aim of this work is to develop web application for a fictitious car rental company located in Bratislava. The main purpose of this application is to allow users fast and simple car renting. Users will be able to search cars by classes and brands for specific date interval and places for pick-up and drop-off. Selected cars can be ordered by submitting order form. Second part of the application will be the administration. Company employees will be able to edit cars, view orders and manage them.

2 Users

In this section we introducing possible scenarios of usage our application. First scenario is for first persona described in file persona-1.pdf. Second scenario is for second persona described in file persona-2.pdf.

Scenario 1 - before

It's Saturday morning. **Jozef** plans his holiday next week. He would like to go camping with his grandchildren, but he needs a larger car to bring all the equipment with them. He wants to rent the car quickly and cheaply. He is renting car first time, so he does not know what exactly to do.

In order to do this he needs to visit his local car rental company in person, only to find out that all cars are currently rented. Then he gets an idea - he will find another car rental companies in Yellow pages and rents a car by phone. By the time his order is completed, it's already afternoon.

Scenario 1 - after

It's Saturday morning. **Jozef** just woke up and decided to go on holiday with his grandchildren next week. He wants to spend some time with them and show them nature, so he decides to go camping with them. His car is unfortunately pretty small Skoda Fabia, and because he had three grandchildren, they will need considerably larger car to fulfill their needs.

Because Jozef had never rented a car before, he (on mobile) makes a quick google search for car rentals. Then he clicks a link leading him to our website, which provides him with clean and concise user interface in his language. After using the **search** filter on main page, he is presented with several affordable and high quality choices. There was no need to know technical terms, whole process was easy and accessible even for a layman like himself.

He was then even able to **choose**, where and when he can pick up his car, which saved him ton of time and stress over using taxi or public transport. When he was ready, our driver delivered his car to the exact spot previously picked on a map.

Scenario 2 - before

It's monday morning and **Juraj** just arrived to the work as an employee of the company. His responsibility consist of approving or rejecting orders and editing or adding cars. He is storing all orders (which arrived by email or by phone) in the Excel table. He has to send this document three times a day to his boss, so he can stay up to date.

Scenario 2 - after

It's monday morning and **Juraj** just arrived to the work as employee of the company. His responsibility is **approving or rejecting orders** and **editing** or **adding cars**. Juraj opens the administration panel of the application on his laptop, where he can **check** the new incoming orders that he can confirm or decline with a click. He can also check the orders of concrete users with a click on the user's name, he doesn't need to filter the users' names as it was in the case of Excel tables. For **adding** new cars to the database here's a simple form available. The boss has access to the administration panel too, where he can **control the orders**, so Juraj doesn't need to send any Excel tables with orders.

3 Competition analysis

- *www.rai.sk* - it offers a quiet professional platform for car renting, we can find here so many options especially about car accessories, but the technically lesser talented or older members may find the page a bit unintuitive.
- *www.globalcar.sk* - offer of services is very good, but the page has very old design and has very poor access time (one page is loaded after 5-6 seconds without images).

- ***www.avis.sk*** - it offers personal and utility cars too, it's and international company that has offices in Slovakia and in foreign countries too, while it has an considerable capital.

  Their webpage is visually attractive, selection of cars is big, in addition they offer an option, that allows pick up and deliver the car back into an arbitrary office, what can be a bonus for tourists. For the use of the page we doesn't need registration. The website is missing an advanced search filter, or so it appears. They have a refined mobile version too, although it needs a newer mobile device for smooth operation.

4 Functional requirements

In this section, we will introduce all functional requirements of the application.

4.1 General

1. Web page will honor responsive web design and will adapt to various devices and screen sizes.
2. Customers will be able to use the service without registration and/or logging in.

4.2 Search

3. The main search form will be on the homepage.
4. Customers will be able to search with these parameters: car class, brand and model name, car delivery and return locations and times..
5. After selecting preferred car classes users will be able to choose preferred brand and model. Only brands appropriate for car class/category will be presented. After submitting search form, users will be redirected to search results page.
6. Users will be able to edit search parameters on results page, where a search form equal to the one at home page will be presented.

4.3 Car profile and order

7. Car profile page will contain these fields:
    a. name of the car - combination of brand name, model name and motor label
    b. photo gallery of car - it opens when user click on first photo of car
    c. price per day
    d. status of car - if car is available, lent or in service station
    e. parameters of car - engine label, number of seats, type of fuel and transmission
8. The ordering form will be on the bottom of specified car profile page.
9. The order form will have these mandatory fields: email, postal address and phone number. Information about car, date, time and place of pick-up and drop-off will be pre-filled.
10. After order, application will send email with complete voucher.
11. Users will be able to edit or cancel their order for some arbitrary time until that order is delivered. For manipulation with past orders, they will use specific alphanumeric code, which will be delivered to their email addresses.

4.4 Administration

12. Application will have an administration section, where company employees will be able to log in with their passwords.
13. Administration will have two sections - administration of cars and orders.
14. In the car administration section administrator will be able to edit existing or add new cars.
15. In the order administration section administrator will be able to list and review orders. It will be possible to approve or reject any order or contact customer.
11. It will be possible to add, remove and edit places for delivery and car returns. Employees will be able to set name, address and GPS coordinates, photos for each of these locations..
12. It will be possible to change administrator password by authorized user.

5 Non-Functional requirements

1. Since the application will run only in the web browser, implementation language will be Javascript, HTML, CSS.

2. Because we will store personal information about customers, it is necessary to ensure secure storage. Minimal requirement for this is safe database which can be accessed only from localhost. In case of storing or transferring passwords, we have to ensure their encryption.

3. Web app should be able to run in all major desktop and mobile browsers correctly.

4. Webpage should be comfortably usable on HiDPI (High dots per inch) displays.

5. Regular backups of database and web application in order to avoid data loss.

6 Schedule

21.10.2018 - Specification, wireframes, scenarios

11.11.2018 - Prototype development and testing

20.11.2018 - The default database schema done

30.11.2018 - Application in alpha version with working basic functions and database

16.12.2018 - Fully featured, but untested application with dummy content

23.12.2018 - Fully featured and tested application with dummy content

31.12.2018 - Project submission

7 Budget

Budget is the estimated amount of money needed to create and maintain the application. Here you can see the budget of our application:

- Web application - 2000€
- Maintenance of web application - 10€ / hour
- Webhosting (online virtual server) - 15€ / month

8 Responsibilities

Roman Brojo - frontend/backend

András Szabó - frontend/backend

Milan Cifra - frontend