**Project Plan**

***Web-based System for Car Rental Firm***

*Eindhoven Rent*

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| **Date : 9/11/20** |
| **Version : 2** |
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# Project assignment

## Context

A car rental company, Eindhoven Rent, has been running a relatively successful car rental company in Eindhoven for the past 3 years and is expanding at a quick rate. Up until now all their business was conducted by phone and records were stored locally in text files. Recently they approached us with the request of developing a web application, which would allow a variety of functionality, for both customers and management, to be moved from the current, inefficient phone system, to something more fitting with the times.

## Goal of the project

The goal of this project will be to provide the customer(Eindhoven Rent) with a fully functional web application which allows them to run their company in a way that is fitting with the 21st century.

## Requirements (Functional/Non-Functional)

* **Customers:**
  + Functional log-in, as well as registration system to be able to access the site
  + Ability to view and filter the cars that are currently available for them to rent
  + Ability to view all features that a car they are looking to rent has(GPS/Air Con/Etc)
  + Ability to reserve a car that they would like to rent
  + Ability to modify their rental date(potentially at an extra cost)
  + Ability to view their previous, as well as current, rental agreements and view the total bill for them
* **Employees**
  + Functional log-in to be able to access the site
  + Ability to register/remove vehicles from the company database
  + Ability to modify customer rentals in case of errors
* **Owner**
  + Functional log-in to be able to access the site
  + Ability to manage/create employee accounts
  + Ability to view revenue, in daily, monthly as well as yearly formats

Providing this app for the client allows the company to operate in a much more smooth, efficient and streamlined manner to their current phone operation and should increase their overall reputation as well

## Strategy

In this project I will be using the agile approach as it seems like the most efficient and fitting way to approach it, as well as being required by the course

## End Products

By the end of this project, the goal will be to deliver a fully functional web-app that meets the requirement laid out by the client mentioned in section 1.2. The client had no preference on the coding language the final product is delivered in, therefore I will be using Java for the back-end of the application and a Javascript framework to provide a front-end that is directly interacted with by the end user

# Project organisation

## Stakeholders and team members

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Abbreviation** | **Role and functions** | **Availability** |
| *Felix Morenc* | *Felix* | *Project Leader* | *Always* |
| *Kiavash Bahreini* | *Kiavash Bahreini* | *Product Owner* | *During class meeting periods* |

## Communication

When it comes to communicating and meeting with the product owner, this will be done pretty much exclusively online due to the ongoing health situation. Contact will be kept regularly through emails when questions arise about the project, and meeting will be scheduled with the project owner when they are needed, for example to ensure everything being developed is going as the client wishes.

# Activities and time plan

## User Stories

Customer:

* (1)As a customer, I need to be able to securely log in so I can safely manage and create my rentals
* (2)As a customer, it’s crucial that I am able to create an account securely so I can safely make use of the rental services on the site
* (3)As a customer, it is integral that I am able to view the available cars to make a selection
* (4)As a customer, I must be able to filter the vehicles in the database, so that it is easier for me to make a selection in terms of the vehicle I will be renting
* (5)As a customer, I will want to make reservations from rentals through the website, so this is a crucial feature to implement
* (6)As a customer, in the event of changes in my schedule, I might need to be able to modify the time and date of my rental, even if this comes at an extra cost
* (7)As a customer, I will want to be able to track and see what I’ve spent and what I will need to spend on rentals through the web app

Employee:

* (8)As an employee, in the event of a rental vehicle being crashed or sold, I need to be able to remove it from the database. In the event of a new vehicle being purchased, I will also need to be able to add it into the database
* (9)As an employee, I need to be able to modify rentals for users, specifically the rental vehicle, as time can be modified by them already, since they might change their mind closer to rental date

Owner:

* (10)As the owner, I need to have complete control of which accounts can access the employee features of the web app, this it is integral I have full control over the creation and deletion of these accounts as I see fit
* (11)As the owner, I want to easily be able to track the revenue being made in my company, It would also be helpful if I could view these statistics in a daily, monthly and yearly format

## Time plan and milestones

In this project, I will be using 3 week sprints as it seems like the best approach for a long term project like this one

|  |  |  |  |
| --- | --- | --- | --- |
| **Phasing** | **Effort (User Story To Tackle)** | **Start date** | **Finish date** |
|  | Initial back end set up and creating connection with front end (no specific user stories yet) | 31/08/20 | 18/09/20 |
|  | Back end for DB CRUD(no DB yet): 1,2,6,8,9,10 | 21/09/20 | 9/10/20 |
|  | Implement DB(1,2,6,8,9,19), and create front-end that displays data | 12/10/20 | 6/11/20 |
| 4 | Create Front-End for Account Creation and Log-In functionality: 1,2,10  Display and initial filter functionality for Vehicles(3,4) | 9/11/20 | 27/11/20 |
| 5 | Implement the making and managing of reservations(5,6,7,9) | 30/11/20 | 16/12/20 |
| 6 | Finish up any requirements or bugs that have come from the previous steps and ensure a fully functional and tested product(1-11) | 17/12/20 | 22/1/21 |

# Testing strategy and configuration management

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## Testing strategy

In this project I plan to make use of various strategies to test, such as unit, integration and acceptance testing. I’ll be doing this to ensure that as development goes on the project is fully functional. I’ll ensure this is accomplished as well by implementing CI on my gitlab repo which will ensure that I don’t wind up pushing non-functional code to the repository

## Test environment and required resources

I’ll be using JUnit5 tests inside my application to perform all the unit/integration test that I need for the application. In addition I’ll make use of my CI pipeline to ensure only functional code is pushed the git repo

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