Proposal: Perfect Parking

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Table of Contents

Aim

Parking is a major problem in cities around Ireland and in the world. Parking is important in cities because some people may not have the option of getting public transport and if having very little amount of parking in towns and cities it could have a huge impact on the city as people would go to local towns to shop instead of the city.

my aim for the "Perfect Parking" application would be to help people find parking in big cities and towns. It would be perfect for them because let's be honest every person has their own preferred way to park, parking spots that they do find available may not suit them as they may not be able to parallel park or reverse park into the available spots.

Perfect Parking would be an app where you can input the location, you're in and it would show on screen available parking spots in your area, it would also allow you to pay for your parking on the app if supported by that certain car park, the app will also state if the carpark has parallel or reverse parking for people's preferences.

I feel like the "Perfect Parking app" would combat these parking issues in cities and allow people to feel comfortable parking in cities and towns where parking is scarce while also making it convenient for all drivers.

Objectives

When I thought about the Perfect Parking Application it really excited me, it excited me because I thought of a real-world problem, and I will be trying to come up with the program to fix it.

My objectives that I want to achieve for this application are as follows:

- My first objective is that I want to be able to come up with a prototype that will outline what the application could potentially look like.
- My second objective would be to design a Database and have an outline to what it would look like.
- My third objective would be to get familiar with map API's so I can be more confident when implanting map APIs into my application.

These were just a few objectives that I would like to achieve in the beginning design stage of this project.

When the project is completed, I would like to have achieved many things in the project output.

Map API to name one, I would like my application to have a functional map that the users can use and be able to clearly see where there is parking in the city.

Car Details form, this is a form that the user will be prompted to fill out once they selected there parking location, this form would include Name, Address, Car Registration, phone number. When the user fills this out it will be saved for the future when they try to find more parking.

Payment, this would be another form this would be used if the user wanted to purchase parking, it would include fields such as Name of Card Holder, Card Number, Expiry, CVV number, and a pay now button, this would then save the payment in the database and prompt the user saying parking is purchased successfully.

Login/ Out/ Create Account, this would be an optional option for the users, if they would like they can create an account and login, if they do create an account, it saves all their information for when they are using the application again.

Delete account, this will be an option for the administrator of the application for if users don't pay for parking on a number of occurrences the admin can find there account and ban/ delete them from the application.

Background

The reason that I believe that my Perfect Parking application is a great solution to the problem that we are facing in cities nowadays which is parking is because I feel like it is an application that will be comforting to use in the way that there will be a map for the user to use and while using the map it shows them where the closest and best parking is for them depending on their preferences.

For the reasons stated above I believe that the Perfect Parking App is the best possible solution to address the problem of scarce parking in the cities.

From doing research into parking problems in cities across Ireland I have learned that parking is getting more and more scarce in cities such as Dublin and limerick due to the volume of cars in the cities

"Public parking controls include pay parking, multistorey car parks, permits, and other measures aimed at controlling the number of vehicles in city centers like Cork, Dublin, Waterford, Limerick, and Galway, which all have been strangled at various times in recent years due to the sheer volume." (Hoare, 2021)

From this research I feel like my Perfect Parking application will be able to help take the stress of the people willing to park in Limerick City by providing them with various parking locations at which they can park.

Research Approach

While thinking about the project I am going to undertake I came across some questions that I had to ask myself such as "What software am I going to use", "What language will I use", "what database structure will I build", and "how I am going to go about the design stage".

I have answers for some of these questions after looking into some of the options available to me.

For the design process of the project, I have decided that I will design a prototype using Microsoft Visual Studio to give me a feel to what it would look like and to make sure that it is even doable to build in the future or if it will be too complex.

For the building process I have done a bit of thinking into what structure to build it and I feel like I would like to build the project using a Model View Controller (MVC) I'm thinking of doing this as it will give the project a structural frame and organized structure.

Potential Outcomes

From doing some thinking and researching about my project and where it would like to go, I have decided that there might be more then one outcome these outcomes are dependent on several factors such as time, complexity, and if certain aspects of the application are even doable.

The most ideal outcome for me is that I will have an application where a user has the option of creating an account or logging in as guest. When the user is logged in, they could select from two cities, Limerick, or Galway where they could view the map to find parking, they can also pay for parking in advance if they so wished.

The admin will also have their own separate login and a different view to those of the users.

This outcome even thought would be the most ideal may not be completely doable, an aspect that may not be doable would be having two different cities as this would make the application more complex, but it would also require a bigger database also. If this does become a problem that I will face down the road I will cut it back to only having one city or a certain are of the city.

From undertaking the Perfect Parking application, I feel that it would be a great advantage for me as I will get a chance to research and learn new coding techniques while also making me stronger in other fields also.

Bibliography

Hoare, P. (2021, November Friday). *Irish Examiner* . Retrieved from
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