Misr University for Science & Technology (MUST)

College of Information Technology and Artificial Intelligence

Department of Computer Science- CS

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Graduation Project: Parking Finder Application

Hesham Radi
89431

Solafa Salem
89409

Belal Abdrabo
89411

Esraa Adel
89517

Under the supervision of:

Dr. Maged Khafagy

TA. Ahmed Abdallah

TA. Sherein Youssef

ABSTRACT

The obstacle of locating a vacant spot in streets that are also available is not an easy task for people. As drivers waste a lot of their time and effort driving through the streets trying to find a spot and they get more unsatisfied with this process that they go through repeatedly during their daily life. Hence, our purpose and motivation are to try to improve our problem.

We want to save people's time and effort they exert every day, so we thought of an application that provide the user to book a parking hourly, daily or monthly and this will be prepaid, that in turn will be sent to our system to illustrate them as results to users through the application so that they can view the locations with their number of vacant spots and decide which place is better and which they would like to head to.

Our Project mainly focuses on solving the parking issue whether in the streets and help user to get his desired destination with estimated duration and price.

INTRODUCTION

Nowadays the world is getting bigger and the digital world is being expanded. In addition to the issue of the expansion of population all over the world especially in Egypt. It is thought that most people already own at least one car.

The number of drivers is getting bigger on a daily basis, and more people are having an issue that they cannot find a place to park their car easily and it takes them a lot of time. Hence, parking slots are getting more insufficient every day. As drivers waste a lot of their time and effort driving through the streets trying to find a spot and they get more unsatisfied with this process.

We want to save people's time and effort they exert every day, so we thought of an application that works to help user to find parking , users through the application they can view the locations with their number of vacant spots and decide which place is nearer and which they would like to head to.

Our Project mainly focuses on solving the parking issue whether in the streets or garages. We all are encountering that issue on a daily basis and it leads to wasting a lot of time and effort to find a vacant spot.

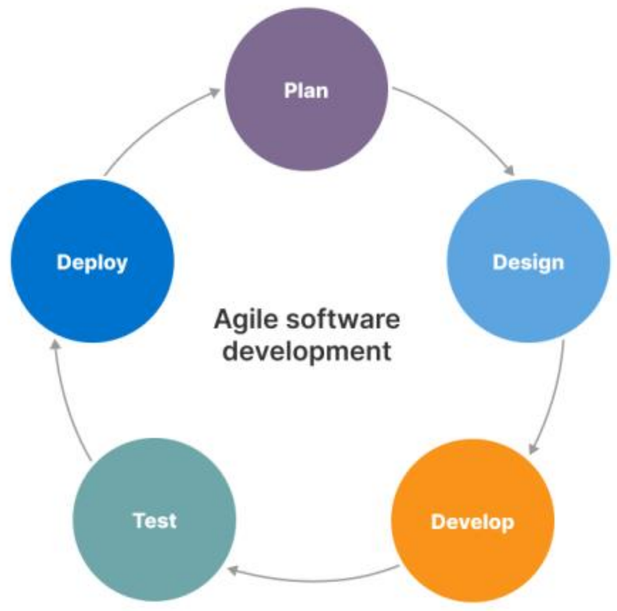
Our Goal is to facilitate the operation of finding vacant spots in the crowded streets, the uncrowded streets and the garages, also to minimize the messy process of parking Our app allows user to compare spots, rates, and pre-paid by visa or Fawry.

PROBLEM DEFINITION

Our problem can be defined as the unorganized way of parking in Egypt. Drivers can waste much time trying to find a vacant spot in the street or nearby garage to park their cars. Such as searching for a vacant spot in a street especially if it's crowded it may take a long time, or searching for empty spot can take a long time too. Which may lead to the possibility of parking the car in an unauthorized or unsafe parking spot and result in even more crowded and unorganized street.

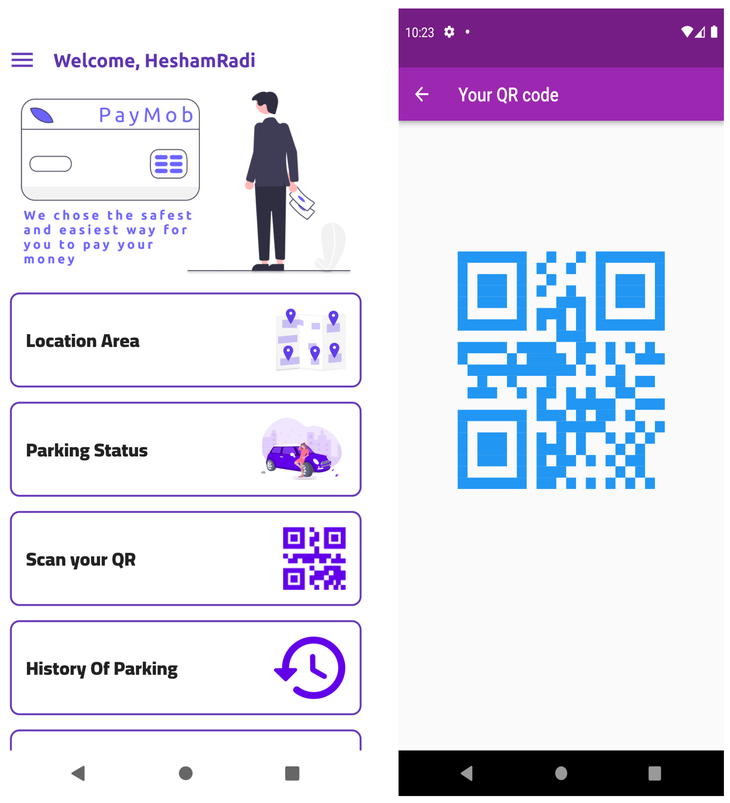
METHODOLOGY

Agile methodology: it is a project management methodology purposely adopted for the development of sophisticated software. The framework allows for iterations, which helps a lot in minimizing mistakes and errors that commonly occur.



RESULTS / OUTCOME

-Users are able to login/register/book/pay (Visa/Fawry).
-Users are able to express their feedback freely.
-A complete mobile application working on platform (Andriod).
-In our app , we try to help user to find suitable parking by the easiest way to search, book, pay.



ALGORITHMS

1- Firebase authentication: To verify E-mail and password.

2- Firebase fire store: Cloud real time database.

3- One-time passwords (OTP): It's an algorithm that provide a mechanism for logging on to a network or service using a unique password that can only be used once, as the name suggests. One-time passwords are a form of strong authentication, providing much better protection to eBanking, corporate networks, and other systems containing sensitive data. OTP is an automatically generated numeric or alphanumeric string of characters that authenticates a user for a single transaction or login session. It's also more secure than a static password, especially a user-created password, which can be weak and/or reused across multiple accounts. OTPs may replace authentication login information or may be used in addition to it to add another layer of security.

CONCLUSION

Our goal was to make an application that provides users an easy way of reserving a parking online where users can view various parking spaces and select specific area of their choice to view whether space is available or not.

If the booking space is available, then user can book it for specific time slot. The booked space will be marked and will not be available for anyone else for the specified time. Users can also view previous parking booking details, it will saves user time and effort. So user will book and prepaid before he goes to the parking.

At the end, we have come up with a program that made it easier for drivers to find suitable vacancies for them in terms of time and money.

ACKNOWLEDGEMENT

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his constant guidance and willingness to his vast knowledge made us understand this project and its manifestations in great depths that helped us to complete the assigned tasks on time. Our thanks and appreciation also go to our colleagues who helped us develop this project and people who are willingly helped us out with their position/abilities.

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