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Development of Application for Booking a Rental Parking System (ParkSpes)

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ABSTRACT

In India, the rapid growth of newly registered vehicles was reported compared to the previous year's which makes it rough estimate to 14.5% increases year-on-year. Referring to parking statistics provided by the India Times newspaper the current transportation infrastructure and car park facilities are deemed insufficient in sustaining the influx of vehicles on the road. Rapid globalization and rising economies all over the world bring in the need for smart parking management solutions. Searching for a parking space is a routine activity for many people in cities around India. We typically obtain the parking spaces in a particular geographic area and the process is real-time to place vehicles at available positions. We provide an online-based parking solution system via the application. It involves providing an online commercial place, where parking providers and car owners associate for business for societal benefits. The parking providers provide their unused/vacant space for a parking lot as a rental basis to park the vehicles and help the government to maintain their routine activity. We provide a platform to find the perfect parking space and to pre-book the parking lot through the applications (Web & Android). It connects drivers or car owners to search for a parking space to anyone anywhere whether in the car park at hotel, office, retail center, private driven or garage and transforms their payment through UPI. The car owner or driver can search for their nearby location with multiple options to park their vehicles.

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1. INTRODUCTION

In India, the rapid growth of newly registered vehicles was reported compared to the previous years which makes it rough estimate to 14.5% increases year-on-year. Referring to parking statistics provided by the India Times newspaper the current transportation infrastructure and car park facilities are deemed insufficient in sustaining the influx of vehicles on the road. Due to the lack of sufficient areas for parking, open areas such as public squares, public fields, places of social gatherings are, over time and under the pressure of the problem, converted to the parking area. Most places the gap between existing parking programs and more widespread transportation system planning is, at a global scale, a massive missed opportunity for cities to reduce transportation-related emissions. In the current era rapid growth of vehicles resultant congestion even in small cities which should be amended.

Rapid globalization in the automobile industry and rising economies all over the world bring in the need for smart parking management solutions. There have been multiple attempts to find a partial
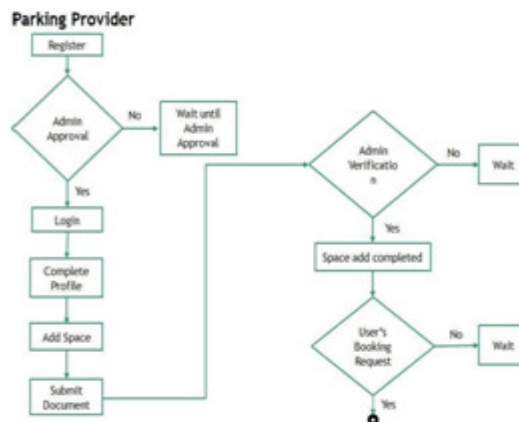
or global technological solution to this problem. We should be parked our vehicle at parking spaces in a particular geographic area and provide real-time to place vehicles at available positions. ParkSpes typically obtain the parking spaces in a particular geographic area and provides parking space to place vehicles at available positions. We provide an online-based parking solution system via an application. ParkSpes provide an online-based commercial parking system where parking providers and car owners association to provide the business of parking car/vehicle with rental space. The parking provider registers their vacant/unused space on ParkSpes with GPS location of their space and provides proper documents. The car owner and drivers register their vehicle's appropriate details with proper documents. We provide a platform to find the perfect parking space and to pre-book the parking lot through the applications (Web & Android). The car owner or driver can search for their nearby locations with multiple options to park their vehicles. It connects drivers or a car owner to search for a parking space to anyone anywhere whether in the car park at hotel, office, retail center, private driven or garage and transforms their payment through the UPI payment system. When it deployed as a system, it provides the facilities to park the vehicles with security, monitoring of vehicles parked and reduces the time of searching parking areas. It also helps to reduce the traveling time and availability of facilities in parking space through ParkSpes. It also permits cities to carefully manage their parking supply. reduce the traveling time and availability of facilities in parking space through ParkSpes. It also permits cities to carefully manage their parking supply.
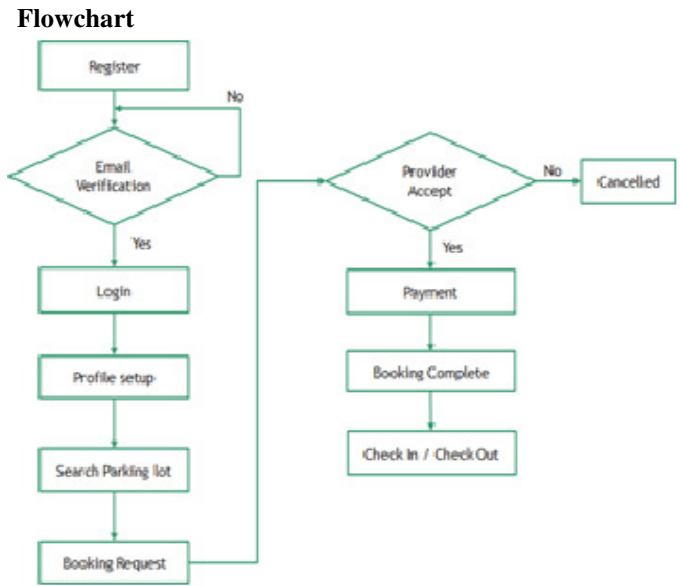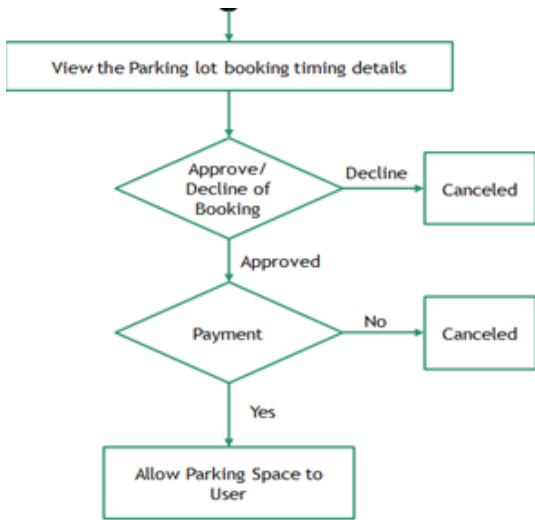
2.METHODOLOGY

A. Parking Provider

The parking provider is the common people who have some vacant/unused space in their place. They provide their vacant/unused space to ParkSpes to provide parking lot and help the government to routine activity as well as himself by earning money for their unused space. The Parking provider needs to register their space in ParkSpes sites where they need to wait for approval for providing parking space for car owners and drivers. For registration of their space, they need to upload their land document with land images. ParkSpes verification team verified their land and document if the land is verified with their authorized person then space holders are authorized to provide a parking lot and pre-booked the parking lot. The parking lots booking are provided by parking provider according to their convenience timing. They need to maintain their convenient timing for the parking lot in the ParkSpes. The payment allocated for parking lots depends upon the parking providers. The payment is held through the UPI payment system directly between the parking providers and car owners or drivers.

Flow Chart

Flowchart

B.Car Owners / Drivers

The car owners and drivers can search the parking lots nearby their location and parked their vehicles. They can also pre-book the parking lots according to their need and convenience. The car owner and drivers register their vehicle's appropriate details with proper documents and email and wait until their document's verification. Afte verification of their document, they are allowed to start the booking of the parking lots through their application. For booking or pre-booking, the parking lots they need to search the parking lots near their locations after finding the parking lots they have to park their vehicle into the parking lot and check-in into the ParkSpes application to point parking lots are allocated. When they are leaving the parking lot, they need to check-out to the points parking lot are vacant.

3.CONCLUSION

We searching for parking space to park our vehicle but we don't find such places and we parked in the no-parking area which leads to traffic congestion and sometimes our vehicles are towed by the traffic officer. We should be parked our vehicle at parking spaces in a particular geographic area and provide real-time to place vehicles at available positions. We provide car owners and drivers to find parking space and pre-book the parking lot. It helps to reduce the traveling time and availability of facilities in parking space. ParkSpes involves providing an online commercial place to park your vehicles. It provides the facilities to park the vehicle with security, monitoring of vehicle parked and reduces the time of searching parking areas. This will reduce approx. 30%- 40% parking system problem countries like India. This will provide the business potential for vehicle parking between parking providers and car-owners with rental space. It permits cities to carefully manage their parking supply. It helps the government to reduce the management load of parking system & traffic congestion to their routine activity. In the future,

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we will provide facilities to directly connected solution for rapidly locating available parking spaces on the street.

REFERENCES:

[1] K. Mouskos M. Boile N. A. Parker "Technical solutions to overcrowded park and ride facilities" New Jersey Department of Transportation Tech. Rep. 2007.

[2] D. Gavalas D. Economou "Development platforms for mobile applications: Status and trends" IEEE software vol. 28 no. 1 pp. 77- 86 2011.

[3] Y. Ji W. Guo P. Blythe D. Tang W. Wang "Understanding drivers perspective on parking guidance information" IET Intelligent Transport Systems vol. 8 no. 4 pp. 398-406 2013.

[4] R. Ranjini D. Manivannan "A comparative review on car parking technologies" International Journal of Engineering & Technology vol. 5 no. 2 pp. 0975-4024 2013.

[5] C. Doukas L. Capra F. Antonelli E. Jaupaj A. Tamilin I. Carreras "Providing generic support for IoT and M2M for mobile devices" Computing & Communication Technologies-Research Innovation and Vision for the Future (RIVF) 2015 IEEE RIVF International Conference on pp. 192-197 2015 January.

[6] J. Rico J. Sancho B. Cendon M. Camus "Parking easier by using context information of a smart city: Enabling fast search and management of parking resources" Advanced Information Networking and Applications Workshops (WAINA) 2013 27th International Conference on pp. 1380-1385 2013 March.

[7] V. P. Kafle Y. Fukushima H. Harai "ID-based communication for realizing IoT and M2M in future heterogeneous mobile networks" Recent Advances in Internet of Things (RIoT) 2015 International Conference on pp. 1-6 2015

[8] T. Rajabioun P. A. Ioannou "On- street and off-street parking availability prediction using multivariate spatiotemporal models" IEEE Transactions on Intelligent Transportation Systems vol. 16 no. 5 pp. 2913-2924 2015