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A Car Breakdown Service Station Locator System

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Abstract— **While travelling sometimes vehicle is breakdown, and searching garage it is waste of time. Driver searches garage near to his location. In virtual garage system provides accurate information about nearest garage and also provides facilities around any location, allowing drivers to reduce the time spent searching for garage at the time of incident occur. This virtual garage system informs drivers about nearby garage with facilities and have available and at what price.**

KEYWORDS: Android Application

I INTRODUCTION

In this paper, the Car Breakdown Service Station Locator System will be developed on android platform due to the time constraint and a lot of research need to be done to develop the system. The system will use the driver's current location to determine the nearest CRSP available and display a list of CRSP nearby for the driver to choose. In order to perform the search of nearest CRSP, Google Places API for mobile will be used to connect people to places of interest with the power of location awareness on Android. As for the cost of service, the price charged by each CRSP is impossible to be displayed as the root cause of car breakdown must be determined before the cost can be calculated. The scope of this system will focus on searching the nearest CRSP for the drivers, providing help to people who do not possess any mechanics number in hand. The business deal is between the CRSP and the driver which is out of the systems control. Here virtual garage provides detailed and accurate information about nearest garage facilities around any location or destination, allowing drivers to reduce the time spent searching for garage once the incident happens. This innovative service informs drivers of nearby garage facilities that have available and at what price.

II LITERATURE REVIEW

Jet packs, self-driving cars, universal translators, space tourism; many of the science action dreams of yesterday are on the verge of becoming realities of today and promise to transform the world of tomorrow. We have complex communicators/supercomputers in our pockets that would make Captain Kirk proud; robotic dogs that could play fetch with R2D2; and computers, though maybe not quite up to HAL 9000 standards, that can play a mean game of Jeopardy. (Still waiting for that ying car in every garage!). [1]

Apart from the optimal real-time electricity price to buy the electricity, the optimal, time dependent, capacity contracted with the DSO is of crucial importance for concerted charging of electric vehicles in a parking garage. The battery management system, on its turn, imposes constraints on the sequence of steps in which power is transmitted. Maximum power in individual charging steps has to vary as a function of the state-of-charge to keep an optimal state-of-health of the battery. Finally, the mobility wishes of the car user, given by the desired departure time and SOC will vary. In the Power Matching City Smart Grid living lab a strategy has been developed to optimize the charging strategies of a collection of cars by using a combination of agent-based optimization, using the Power Matcher, and constrained, combinatorial optimization. In this article, this solution approach, the algorithms and the configuration are described. Furthermore, the implementation in the Power Matching City virtual power plant configuration with a eet of 10 vehicles is discussed. First simulation results of constrained optimization for forecasting are analysed. [2]

This paper studies the machine repair problem, There are K identical unreliable machines, N identical unreliable service stations and c identical reliable repair facilities in the system. The service stations maintain the failure machines only, and the repair facilities repair the breakdowns of unreliable service stations only. Every distribution of time lasting is exponential distribution. The breakdown rate of each service station is changeable; it may be different between busy time and idle time. We give the transition rate matrix of the model. The availability characters in symbol form for the special case of the model. The numerical example is presented. [3]

Car sharing is a new mode of transportation that is gaining increasing popularity with its promise to reduce tra c congestion, parking demands and pollution in our cities. Despite this potential, the properties of car sharing systems, e.g., in terms of spatiotemporal characterisation of how customers use the service, remain largely unexplored in the research literature. In order to ll this gap, in this work we analyse one month of online car-sharing map data from a large station-based car-sharing operator in France, which has 960 stations and more than 2700 electric cars. First, we study the spatial and temporal patterns of station utilisation, uncovering a dichotomy in station usage (stations that attract cars mostly in

the morning vs. stations attracting cars mostly in the evening). We also find that this dichotomy is linked to the destination (residential or business) of the zone in which the station is located. In addition, we statistically model the users' demand in terms of drop-o and pickup rates, and the parking times of vehicles. Finally, we propose a classifier that exploits simple average statistics (average pickup rate and car availability of a station) in order to understand whether the station is pro table or not for the operator.[4]

III MODULES

1.User Management

User is our main prior of our system, user management module deals with users registration and access.

2 Locations

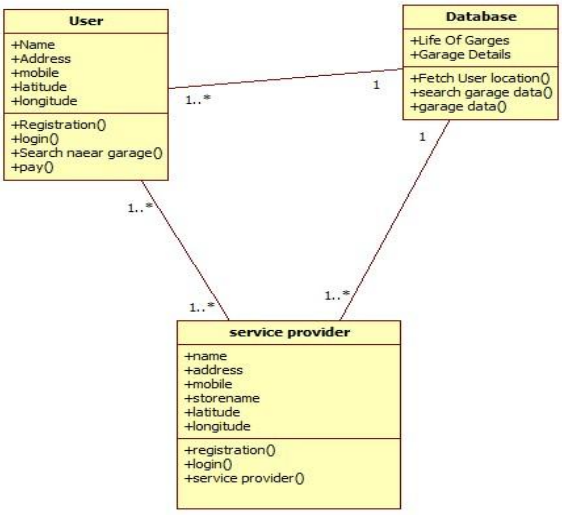
Location of user and respected garage services around an area is mapped & based on it the distance is calculated using Dijkstra algorithm. We use Google map API Application Interface for getting detailed geographical information for identifying mess around the user over a fixed radius.

3 Online Searches

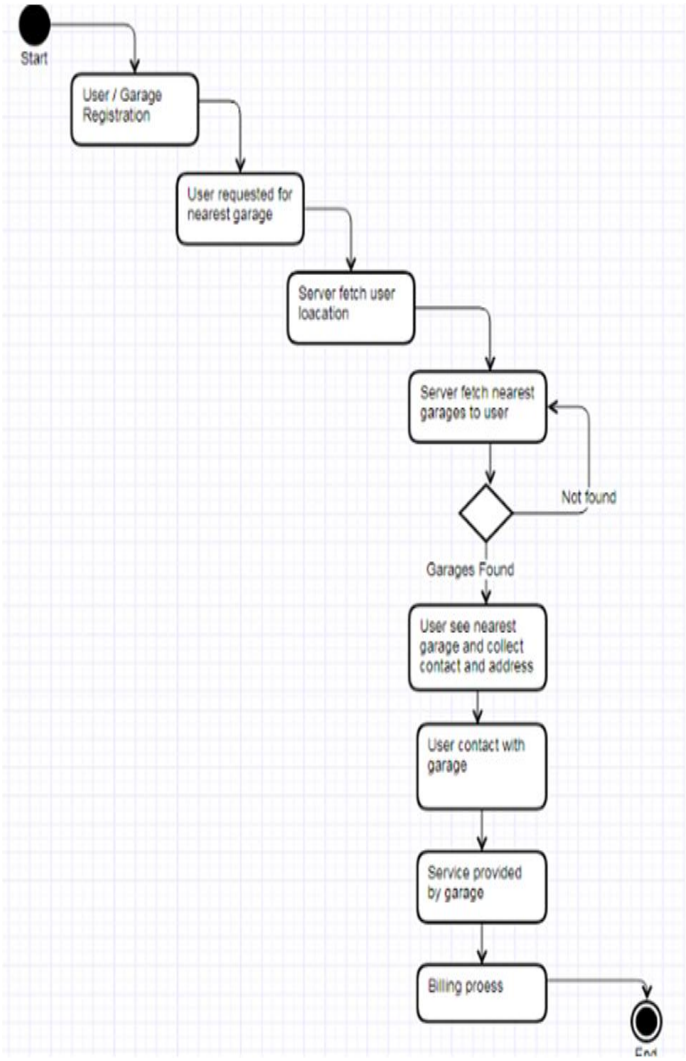
Our applications automate traditional dealing and subscribing garage service over. Before placing request we make sure that the user is registered to avoid anonymous entry, If user gives repeated fake request misusing our application will be blocked by checking their record. Request is placed after selecting garage based on customers' requirements such as price, time, type, rating, reading reviews, popularity, etc. This is done by using appropriate liters which will sort accordingly. Request is only proceed after there is conformation from customer as well as garage service provider for that customer.

IV SYSTEM ANALYSIS

1. Class diagram



2. Activity Diagram



V ADVANTAGES

- Easy to Find nearest Garage
- Virtual payment Facility
- Easy to access
- Save time.

VI HARDWARE AND SOFTWARE RESOURCES

1. Hardware Resources

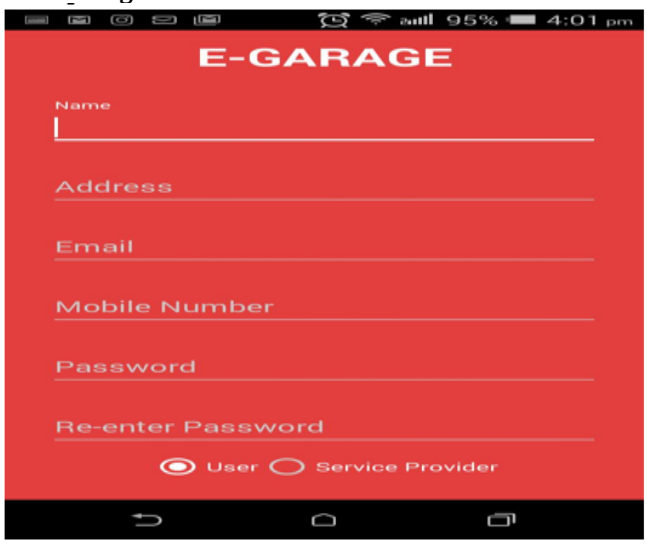
- Processor - Pentium IV 2.4 GHZ
- Speed - 1.1 Ghz
- RAM - 512 MB(min)
- Hard Disk - 20 GB
- Key Board - Standard Windows Keyboard

2. Software Resources

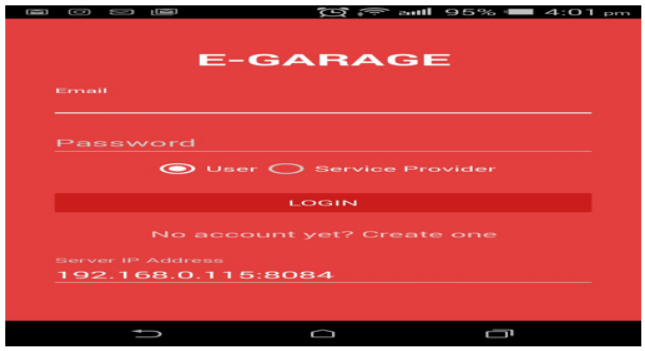
- Operating System : Windows/XP
- Front End : Java
- Scripts : JavaScript
- Tool : Android studio, MySQL Server
- Database : MySQL

VII RESULTS

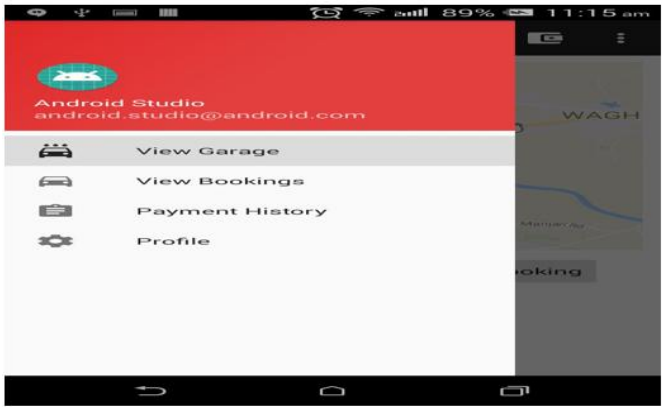
1. User Registration



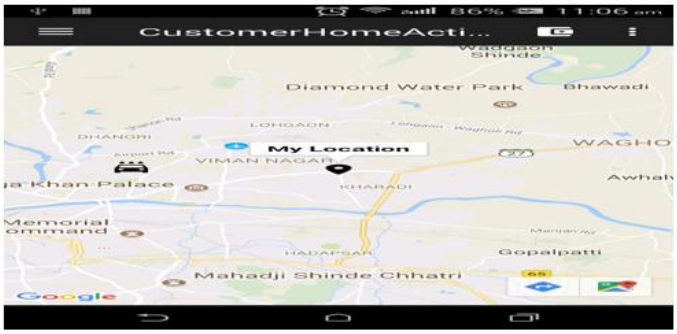
2.User Login



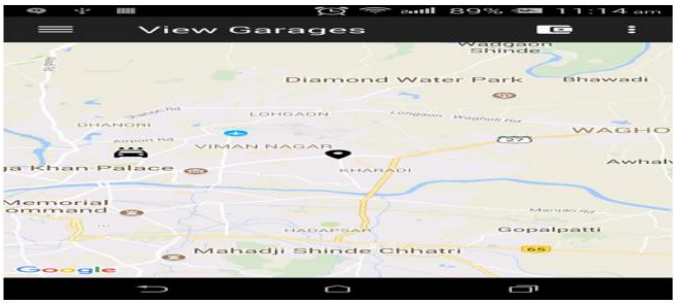
3.User home page



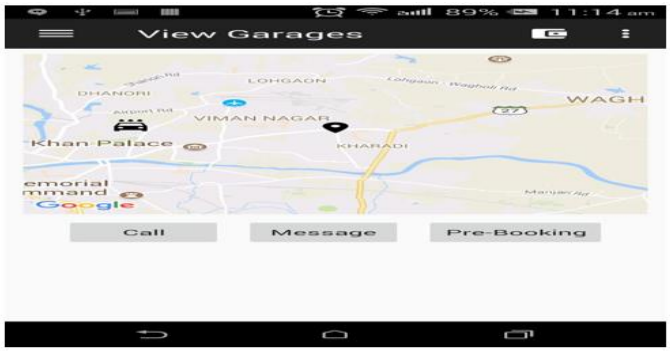
4.User Location



5.View Garages



6. Activity-Call/ Message/ Pre-Booking



VIII CONCLUSION

In this paper we have proposed a system which will helps people to find nearest garage on road when their car has breakdown. This will provide accurate information about nearest garage and all the contact details of nearest garage. Virtual garage system will save time and energy.

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