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 ijircce@gmail.com

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A Survey on Smart City Using Internet of Thing (IOT)

Mrs. Gayatri Mujumdar¹, Srushti Kute², Shruti Pandarkar², Shruti Singh², Vaishnavi Nakhate²

Professor, Department of Computer Technology, Pimpri Chinchwad Polytechnic College, Pune, India¹

Student, Department of Computer Technology, Pimpri Chinchwad Polytechnic College, Pune, India²

ABSTRACT: An efficient bed management system tool, Smart Android application for 24*7 Emergency Need, is being developed within the hospital environment to meet the health industry's patient management protocols and to address community concerns. Inefficiencies and continuing difficulties in management of available and appropriate beds within hospitals have not been overcome and continue to be a source of practical, financial and management frustration.

This system is a practical, flexible and dynamic tool that aids planning and management of bed numbers, types and location for the allocation of in-patients. It also help in record management, patient enters the hospital the workflow starts as the reception user creates new record by entering the personal info and sends the record to assigned department; at this stage the nurse starts update the record by entering the physician comments, required treatment, and sends lab test when it is required. The procedure continues as long as the patient still in the hospital. At last when the patient recovered or died record is updated. Suppose in some critical situation like in car accident a person having huge injury so that we can search for a nearby hospital depends upon injury bed booking for that person and also see nearby ambulance of that hospital and book the ambulance. User can track the ambulance using GPS and ant colony algorithm can be used to find the shortest path.

KEYWORDS: patients, lab test, ambulance, GPS

I. INTRODUCTION

Through increased public scrutiny there is also a greater degree of accountability required from health care professionals with regard to facilities management and information administration. Our hospitals are running at peak capacity which almost guarantees queuing in the emergency department for available beds. Bed availability is significant as a bed can be viewed as "one of the most fundamental inputs in the provision of acute health care". Using new and emerging technologies in the areas of healthcare sector will help to save many lives.

The system Smart app for 24*7 Emergency Need is a centralized database contains the in-patient record. The database record contains the patient personal info, department lies-in, physician, tours, treatment and lab results.

II. LITERATURE SURVEY

Title: Doctor who? – A customizable Android Application for Integrated Health Care.

Author name: Md. Nasfikur Khan, A K H E Mashuk, Mehdi Alam

Description: "Doctor who?" has been designed and developed, which makes an easy and effective communications with the users to the doctors and hospitals. Using this app, patients can make appointment with doctors of different specialties in different locations and can take help for a 24/7 online medical consultancy and emergency ambulance service.

Title: Design and implementation of doctor-patient interaction system based

Author name: Ran Wei ; Zhimin Yang

Description: It is only doctor and patient interaction. Patient has to tell about the medical history by his own. He can take online appointment and can get query answered by doctor.

Title: A Fast Interactive Search System for Healthcare Services

Author name: Maria Daltayanni ; Chunye Wang ; Ram Akella

Description: System is made which will store info user login and get all info. If doctor wants to access info still patient has to login. Patient have to remember his credential. It will be difficult for patient to remember credential if he is in critical situation.

Title: Smart Healthcare in the Era of Internet-of-Things

Author name: Tanesh Kumar ; An Braeken ; Madhusanka Liyanage ; Mika Ylianttila.

Description: The development in the Internet-of-Things (IoT) has advanced healthcare. The direction of healthcare has been transformed from treatment to health management. Thus, more data are being generated and aggregated than ever before while healthcare moves toward patient-oriented and analytic application. This paper discusses the different aspects of smart healthcare along with the health data and patient-oriented health management.

III. PROBLEM DEFINATION

One of the major problems within a hospital environment is dealing with the bottleneck of availability of beds and there record management. This project will help to get real time bed information, patient record management ambulance booking system and ambulance tracking system using GPS.

IV. ARCHITECTURE DIAGRAM

Nowadays, smartphones have reached every hand and every home. As a result, people are making use of the beneficial mobile applications to make their everyday life easier. This project focuses on development of a mobile application(app) to help providing an effective health care system. Using this app people can get numerous benefits like finding hospital information in the city, information about cabin, cabin booking with payment, intelligent suggestion on choosing suitable hospital,

ANT COLONY Algorithm:

The first ACO algorithm was called the ant system^[25] and it was aimed to solve the travelling salesman problem, in which the goal is to find the shortest round-trip to link a series of cities. The general algorithm is relatively simple and based on a set of ants, each making one of the possible round-trips along the cities. At each stage, the ant chooses to move from one city to another according to some rules:

1. It must visit each city exactly once;
2. A distant city has less chance of being chosen (the visibility);
3. The more intense the pheromone trail laid out on an edge between two cities, the greater the probability that that edge will be chosen;
4. Having completed its journey, the ant deposits more pheromones on all edges it traversed, if the journey is short;
5. After each iteration, trails of pheromones evaporate.

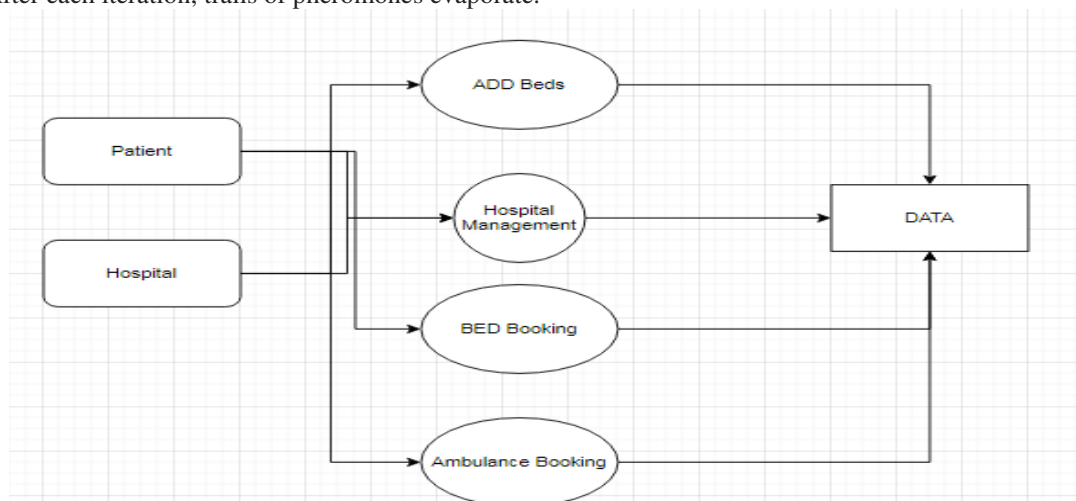


Fig No 1. Architecture Diagram

V. CONCLUSIONS

We will be creating an android app which can be used to Book and bed in hospital ,record management of patient medical history and can book ambulance in emergency situation.



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- 3 Doctor who? – A customizable Android Application for Integrated Health Care.
- 4 Design and implementation of doctor-patient interaction system based
- 5 A Fast Interactive Search System for Healthcare Services



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