IJIRCCE

e-ISSN: 2320-9801 | p-ISSN: 2320-9798

INTERNATIONAL JOURNAL OF INNOVATIVE RESEARCH

IN COMPUTER & COMMUNICATION ENGINEERING

Volume 10, Issue 7, July 2022

INTERNATIONAL STANDARD SERIAL NUMBER INDIA

Impact Factor: 8.165

9940 572 462 | 6381 907 438 | ijircce@gmail.com | www.ijircce.com

International Journal of Innovative Research in Computer and Communication Engineering

| e-ISSN: 2320-9801, p-ISSN: 2320-9798| www.ijircce.com | |Impact Factor: 8.165 |

|| Volume 10, Issue 7, July 2022 ||

| DOI: 10.15680/IJIRCCE.2022.1007016 |

Veterinary Health Care and Clinical Appointments

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ABSTRACT: The paper is focused on veterinary field. In this paper we present veterinary health care and clinical appointments Which is based on android application. If a customer wants to get treatment for their animal, he/she has to visit the clinic and might wait in the queue to get treatment. So, to overcome these problems a software is proposed which is an android application which will make the process easier. The main motive of the project is to help the customers through an android application which will facilitate to take appointments and treatment for animals. It also helps the owner of the animals.

In today's world if someone wants to book a Doctor's Appointment we need to call in clinic or personally go to that place and book the appointment. This consumes precious time of the patient. Also if the doctor cancels his/her schedule, the patient does not come to know about it unless he/she goes to the clinic. The objective of this project is to build a system that will ease the process of booking appointment of the doctor. The patient will book the appointment through his/her mobile phone. The doctor will come to know the number of patients he has to attend whole day. The system will save patient's as well as doctor's time. It will save the receptionist's paper work. The system will prove to be useful for doctor as he can check his appointments whenever and from wherever he wants from his mobile phone

I. INTRODUCTION

This paper to provide treatment for animals through online. The main goal Of this project is to bridge a communication between pet owners and veterinary doctors. Through this android app uses can take the appointment from the vet doctors. Non-availability of doctor to get treatment: When a customer wants treatment for his pet, the doctor may not be present in the clinic or the customer may need to wait to get treatment for their pet. In city there are many veterinary hospitals and doctors in which customers are not aware of which doctor is available on the particular day and in which time doctor is free. Our proposed android application provides a platform to connect to all veterinary doctors in the city and to view their availability status based on customer can book appointment for that doctor in specific timeslot. If any customer wants to visit a doctor for pet's check-up, he or she needs to visit the hospital and waits until the doctor is available. The pet owner also waits in a queue while getting appointment.

If the doctor cancels the appointment for some emergency reasons then the patient is not able to know about the cancelation of the appointment unless or until he or she visits the hospital. Proposed application provides a facility of notifying a customers about doctor's availability status. Proposed system provides a feature which connects different veterinary doctors in a single platform and users can view all available doctors and their information. Proposed system also includes doctors sending notification to the customers regarding any emergency or their availability in hospitals.

Through the connection between mobile terminals and specific service, both doctors and patients are able to obtain required data to achieve a better interaction. Android is a Linux based open source operating system which is mainly used in portal devices with excellent performance thus making its market share growing. The platform, Web services and database technology are all gradually maturing, so that we can develop a doctor- patient interaction system on Android platform to meet the needs of the patient and provide doctors more efficient and convenient means of communication with patients

III. LITERATURE SURVEY

Here we present a doctor-patient interaction system based on Android. Its excellent performance on mobile terminals makes it possible that patients are able to access the hospital server to obtain the necessary suggestion about the

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symptoms and interact with the doctors on their own mobile terminals,
Paper describes the needful things that the Doctor has to do every day. In this paper, we solve this problem by proposing a new system based on android technology, through that the doctor can manage his/her appointments from anywhere. In addition to this the patient who is unable to go to the clinic and take the appointment can also book his/her appointment from a mobile phone within 2-3 min. Our solution is to build a system that will help the needful people or every person who wants to save their precious time.

Mr. Qin Qiu, Shanshan Cao and Wei Sun published a paper on Veterinary Drug Warehouse Environment in 2021 IEEE International Conference on Power Electronics, Computer Applications. Authors proposed Veterinary warehouse management system through which medicines and drugs data can be maintained. The warehouse where all veterinary products are stored must be organized in systematic way to achieve goal. Authors focused about handling stocks and concerned manufacturing unit [1]

Mr. Kongkarn Dullayachai and Mr. Attawit Changkamanon published a paper on The Performance of Electronic Veterinary Management in 2020 Joint International Conference on Digital Arts, Media and Technology with ECTI). Paper focused about 3 types of user's employee, veterinarian and manager. They proposed handling online veterinary hospital registration. They compared many existing system and discussed about it. [2]

Mr. Ploy Tangtulyangkul and Chun Che Fung published a paper on Model of Data Bases of Veterinary Medical Journal of Apiary in 2019 II International Conference on High Technology for Sustainable Development (HiTech). Authors proposed a model of structure for an automated database for a veterinary medical journal of an apiary. The structure of separate tables and their distribution are considered.[3]

Mr. Jaroslav Majerníky , Marián Maďar and Jana Mojžišová published a paper on Integration of virtual patients in education of veterinary medicine in 2017 Federated Conference on Computer Science and Information Systems (FedCSIS). Paper contains idea about utilizing simulations and virtual reality tools represents one of the approaches integrated into the education of veterinary medicine practice. [4]

Mr. Dian Aryanti Hapsari , Mr. Adhistya Erna Permanasari , Mr. Silmi Fauziati and Mr. Ida Fitriana collectively proposed Management information systems development for veterinary hospital patient registration system in 2016 1st International Conference on Biomedical Engineering (IBIOMED). Authors have used First In First Out algorithm for registering the patients. They proposed a systematic system for enrollment of patients through online and maintaining the database.[5]

IV. FEASIBILITY STUDY

The feasibility study is major factor which contributes to analysis of system. In earlier stages of S/W development, it is necessary to check whether system is feasible or not. There are 4 aspects of checking feasibility. Detail study was carried out to check workability of proposed system, so the feasibility study is system proposal regarding to its workability, impact on organization, ability to meet user requirements & effective use of resources thus when application progresses, it normally goes through a feasibility study & risk analysis.

V. EXISTING SYSTEM

The existing system consists of booking a doctor's appointment through the website. The website is called „practo.com". The website is very useful as it provides various features. The appointment confirmation is given by a sms. The main drawback of this system is that, it is a website and one requires a very good internet connection as loading of web pages may take a long time. Along with this, there is another android app available on play store but it is a paid app, hence everyone cannot afford to use it.

VI. PROPOSED SYSTEM

The proposed system consists of two panels: Doctor and Patient. The users will first have to download the application and install it in their mobile devices. Once installed, this application will remain into the device permanently until the user deletes it or uninstalls it. The patient will have to register into the application for the first time. On registering, the patient will receive a username and password. The patient can use this username and password for logging into the app each time he uses it. After logging in, the doctors list will be displayed. The patient can select any particular doctor and view his profile. Also the patient can view the doctor's schedule and look for an appointment according to his convenience. The patient will then send a request for appointment. The doctor can either accept the appointment or reject it. The database will get updated accordingly and the patient will get a confirmation message. The add-on to this system is that the patient will receive a notification 2 hours before the actual appointment. This will be very useful in

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case the patient tends to forget the appointment

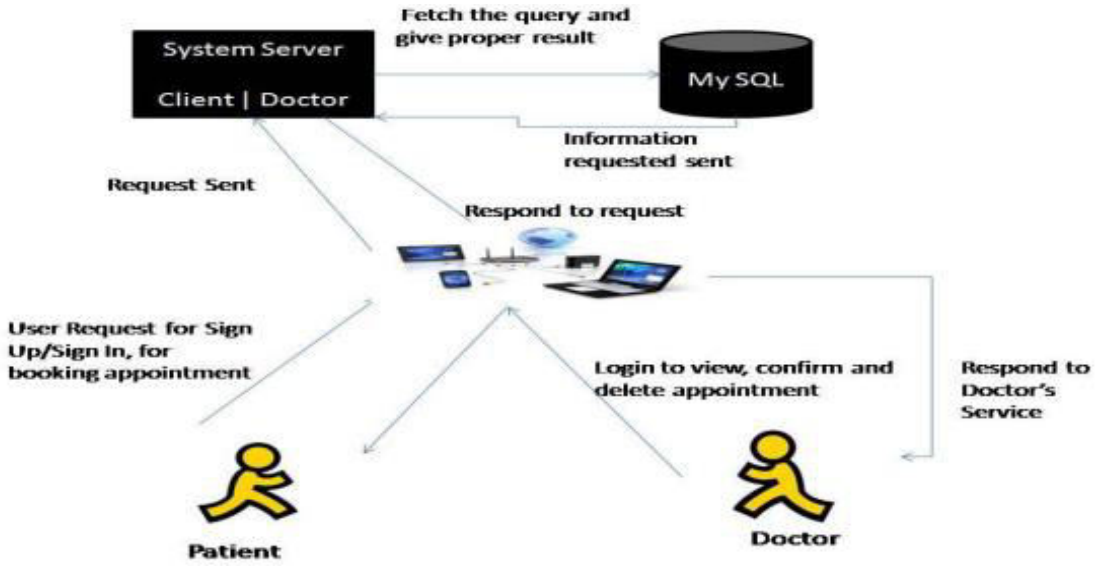

Fig 1.1 System architecture

VII. METHODOLOGY

The study adopts the use of Object Oriented Analysis and Design (OOAD) method. The underlying principle is that one model software systems as collections of cooperating objects, treating individual objects as instances of a class within a hierarchy of classes (Booch, 1998). Object-oriented analysis describes an information system by identifying things called objects. An object represents a real person, place, event, or transaction. For example, when a patient makes an appointment to see a doctor, the patient is an object, the doctor is an object, and the appointment itself is an object. Object-oriented analysis is a popular approach that sees a system from the viewpoint of the objects themselves as they function and interact. The end product of object-oriented analysis is an object model, which represents the information system in terms of objects and object-oriented concepts. The following procedures shall be followed in the execution of the work:

i. Data Collection/Information Gathering: Information was gathered on flow of the manual method of medical appointment and consultation.

ii. Modeling: Well-defined UML diagrams (Data Flow Diagram, Use Case Diagram, Sequence Diagram) were used for the modeling the proposed system.

iii. Design and Implementation: Object-oriented design approach is adopted for the design of the proposed system, which is to be implemented as android-based.

Fig 1.2 Diagram showing the research methodology

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VIII. DESIGN

System design is systematic wherein it takes into account all related variables of the system that needs to be created, from the architecture, to the required hardware and software, right down to the data and how it travels and transform throughout its travel through the system

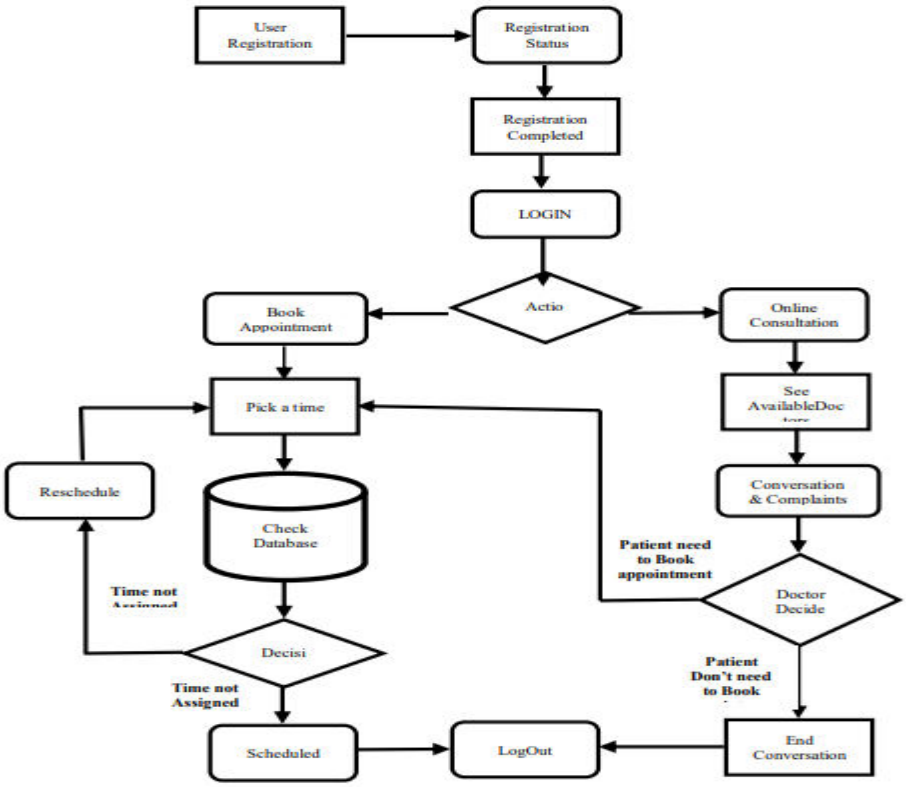

Fig 1.3 Flow diagram

IX. IMPLEMENTATION

A. Implementation Approach

The implementation approach adopted for this study is V-Shaped Development Model. The V-Shaped is considered as an extension of the waterfall model. Instead of moving down in a linear way, the process steps are bent upwards after the implementation phase, to form the typical V-shape (Yadav, 2012). This development model was adopted because it allows for effective planning and requirement analysis phase which then lead to both architectural and detailed design of the system to implement which enable and aid in the implementation and execution of the system, another important feature of this model is the testing phase which integrate the unit testing, integration testing and the system testing, all of these enable and avoid flaws in the system.

B. Language of Choice

Java programming language which is an object-oriented language with features for objects and methods that allows for code structuring in modules, and also being the google official language for developing and creating android mobile application, was made the choice of programming language. The language is used for the logically development of the system. Specific logic and the process that allows for communication with server, data validation and display of that data are integrated into construct called methods. Also, PHP will be used for the server-side scripting language, will be used as the host language for performing the backend logic like interacting with the database and also communicating with the system by feeding it with data, MySQL which is a high-end relational database management system is used for effective data storage and retrieval.

C. Development Environment

Android Studio (Android Studio 3.0.1 – Google Developed Integrated Development Environment) is well enriched. It

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has lot of facilities that aids mobile application programming, for debugging and also for compiling the program into an Application.

X. CONCLUSION

Each of the activity designed in this veterinary health care application have independent functionality. Every attempt has been made to ensure that the application is fully functional and works effectively and efficiently. During the development of this software, some important suggestions were taken from the veterinary doctors to know how the software can be developed more efficiently to overcome the problems being faced in the veterinary field. The application has been tested with all possible data to cover all possible options and checked for all outputs. Since the application is flexible and modular, further modification of this package can be easily incorporated.

This system aims to simplify the task of the patient and the doctor. It will make patients more relaxed as they do not have to stand in a long queue to fix their appointment and also book an appointment according to their choice in a more convenient way. Doctors need not worry about managing their appointment. Though you are not going to clinic for taking an appointment, your appointment gets booked from anywhere and however you want. This helps to save the time of patient. Also the patient can get the doctor of his choice through various filters used in the application. The doctor is also able to view his day to day appointment list which makes it easier for him to plan his schedule. This application will help to optimize the work of patient and doctor.

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