VIVA Institute of Technology 9<sup>th</sup> National Conference on Role of Engineers in Nation Building – 2021 (NCRENB-2021)



# VIVA-TECH INTERNATIONAL JOURNAL FOR RESEARCH AND INNOVATION

### ANNUAL RESEARCH JOURNAL

ISSN(ONLINE): 2581-7280

## **Digital Case Paper**

Bhakti Patil <sup>1</sup>, Manish Patil <sup>2</sup>, Ashwanti Pawar<sup>3</sup>, Ameya Purandare<sup>4</sup>

<sup>1</sup>(Department of EXTC, VIVA Institute of Technology, Mumbai University, India)

**Abstract:** In today's world, a lot of innovation has been going on in the field of medicine and hospital management. But still waiting in the queue for case paper is everyday phenomenon. In hospital there are large patient's data to handling such huge data is difficult some time data regarding patients is a lost too. So, to solve this problem we are developing the app which can access from anywhere and generate case paper and also print that paper using wireless printer in hospital. Our system will have face detection for direct login and case paper generating once registration of patient is done. It will automatically assign doctors available. So, it saves time and easy to use.

The problem of data storage is solving by using MySQL database this store all the data for further use. Digital case paper is to be designed with user friendly interface which can beneficial to patients. Users must be able to get the information within a minute without wastage of time. The implementation of system is primarily as a means to improve the patient service. It provides the security of data and ensure data accuracy. It also minimizes manual data entry.

**Keywords** - Hospital management, Queue, MySQL, Face detection, Digital case-paper, wireless printer.

## I. INTRODUCTION

In general, every organization or line of business requires a person to book appointments, which needs to be confirmed or verified. In today's society individuals are generally on the go and appointments are made, modified and confirmed at a rapid rate, requiring patience, time and cost. Furthermore, there is generally a lag between requesting an

appointment time and having the appointment approved. One such area where appointments are made is in the medical field where a patient or user needs to book appointment with a family doctor who may then subsequently require the patient to book an appointment with a specialist, hospital, It is not unusual for the patient to repeat basic information all over again. There have been various attempts to improve this scheduling issue. It is an objective of this system to provide an improved online booking service. Keeping in mind today's fast day-to-day lives, the time is very important factor.

People are demanding more for new technology that would help in making their normal life easier. In other words, technology became one of the most important tools in our daily life. So, scientists, researchers, doctors and even students are trying to add more value to our life by developing new systems and one of them is the online appointment system which is a useful tool that can reduce costs, time and efforts; this issue can give people the freedom to choose suitable appointments with the desired doctor in a suitable time and location. Online appointments are growing more by the growth of technology and internet; therefore, we need more researches and harder work to keep up with the rapid changes and developments. Healthcare sector is one the most important sectors that needs more attention due to the high sensitivity so, developing such systems is very complicated and must be more accurate with very high confidentiality.

<sup>&</sup>lt;sup>2</sup>(Department of EXTC, VIVA Institute of Technology, Mumbai University, India)

<sup>&</sup>lt;sup>3</sup>(Department of EXTC, VIVA Institute of Technology, Mumbai University, India)

<sup>&</sup>lt;sup>4</sup>(Department of EXTC, VIVA Institute of Technology, Mumbai University, India)

9th National Conference on Role of Engineers in Nation Building – 2021 (NCRENB-2021)

Nowadays Android operating system is an important platform that provides a dynamic way of developing innovative third-party applications. The android operating system gained popularity among developers for its customizable nature. It is very efficient to build an application in one platform and deploy it in several platforms simultaneously without having a concern about changes to be made. Android is a hugely popular operating system for mobiles and its prevalence is only increasing. Since it is open source, custom applications for users can be developed and deployed easily. We seek to use these features of Android to bring to the doctor 1.1 Importance of Project:

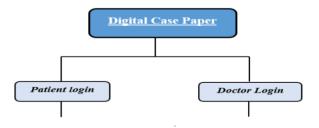
Booking an appointment online has grown in popularity over the past few years. Many different types of businesses use some type of Web-based online appointment management system and application-based system to help make the appointments setting process more streamlined. An online appointment management system allows patients to register and book appointments. System important are in today's society individuals are generally on the go and appointments are made, modified and confirmed at a rapid rate, requiring patience, time and cost.

#### 1.2 Motivation:

In general, every organization or line of business requires a person to book appointments, which needs to be confirmed or verified. In today's society individuals are generally on the go and appointments are made, modified and confirmed at a rapid rate, requiring patience, time and cost. People are demanding more for new technology that would help in making their normal life easier. In other words, technology became one of the most important tools in our daily life. Online appointments are growing more by the growth of technology and internet. Android is a hugely popular operating system for mobiles and its prevalence is only increasing. Here we are developing the app which can access from anywhere and generate case paper. Our system will have face detection for direct login and case paper generating once registration of patient is done. It will automatically assign doctors available. So, it saves time and easy to use. The problem of data storage is solving by using MySQL database this store all the data for further use.

#### II. METHODOLOGY

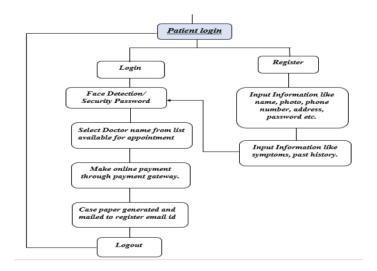
#### 2.1 Flowchart



2.1.1 Flowchart

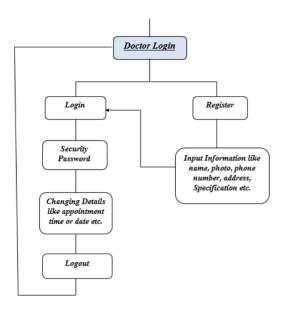
Figure 2.1.1 shows the flowchart of overall process. As shown in figure the main case paper is form bye two different characters that are Doctors and patients. Hence as shown in figure there are two different login section that are doctor's login and patient login.

9th National Conference on Role of Engineers in Nation Building – 2021 (NCRENB-2021)



## 2.1.2 Patient Login

The fig. 2.1.2 shows how the patient login and registering process will flow by using various inputs from users and some system generated inputs at the end case paper is generated and also mail to their register mail address and then they simply need to logout.



## 2.1.3 Doctor Login

The fig 2.1.3 show the flow of doctor's login and registering process the doctor changes some input after successful login that are available slots and date at the end they need to logout.

9<sup>th</sup> National Conference on Role of Engineers in Nation Building – 2021 (NCRENB-2021)

#### **2.2** Working: -

As we open the login window or login page there are two options for login one is patient and other is doctor login option. As we click on patient login option another window is open for login process. In this login process patient have to enter their email-id and password and simply login. If Patient is new, they have to create new account for login process for this purpose in Patient login window there is another option for signup. After clicking on signup option, the new patient has to enter their personal details like name, profile photo, Phone number, date of birth, and select their gender and past history etc. and generate password for login process. After creating an account, they can simply login. In app there is option for direct login into system that is done by scanning the patient face if a patient already has account. After login into system, they have to select specialization like OPD, Dentist, General etc. and select date, day, time of appointment and doctor which are available on that time and according to their dieses and simply submit it. After that the PDF of appointment is generated and send to patient through email-id or their phone number. For doctor login in login window there is an option as Doctor login in that as same as patient login the doctor has to login and simply see that which and how many patients that they have to attend in that day or slot. If doctor in hospital is new so they have to create their account for that purpose they have an option as signup in that they have to enter their personal details like name, address, phone number etc. and they also have to select specialization, their availability day and time and create an password for security purpose and then submit it. After creating an account, they can login into their account for details. After that they can logout from account

#### III. FIGURES

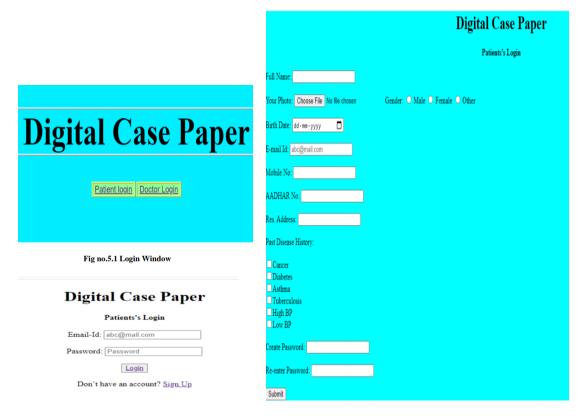


Fig. 3.1 Patient Login Window

Fig. 3.2 Patient Signup Window

9th National Conference on Role of Engineers in Nation Building – 2021 (NCRENB-2021)

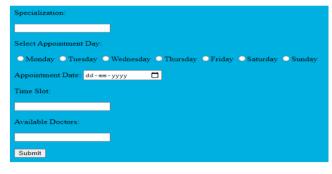


Fig no.5.4 After Patient Login Window

## **Digital Case Paper**

Doctor's Login

Email-Id: abc@mail.com

Password: Password

Login

Don't have an account? Sign Up

Fig no.3.3 Doctor Login Window

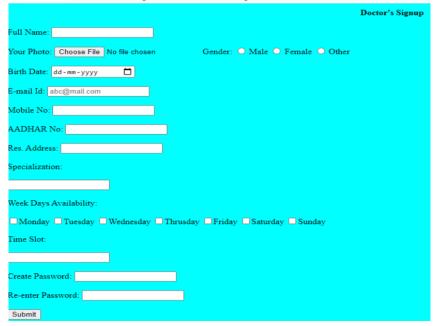


Fig no.3.4 Doctor Signup Window

## IV. CONCLUSION

The project is all about people through a friendly interface with the use of digital case paper system problem of waiting in queue for a long time for case paper is solve. Existing system generated case paper on paper so there is chance of lost that paper so this system also solves that problem we are also store the data like photo of patients, symptoms, past history of disease and visit timing of patient so the previous data easily accessible if needed our system will have ai face detection for direct login. Our aim is to taking appointment with doctor in hospital by online technology the person can write their health query, attach his/her picture or upload lab report and ask for advice and they will receive response either by email or on their phones

9th National Conference on Role of Engineers in Nation Building – 2021 (NCRENB-2021)

## Acknowledgements

We would like to thank our Professor cum Guide of Project Mrs. Ameya Purandare who has constantly motivated and guided us through this truthful endeavor. We extend our gratitude for his patience, motivation, enthusiasm, his exemplary guidance and immense knowledge that has helped us to shape this work. We could not have imagined having a better advisor and mentor for our project. Here would like to thank our honorable principal Dr. Arun Kumar, who made all the facilities available for us in the college premises. It has been great experience to work together with staff and group members. And financial support from our parents is greatly acknowledged. We also would like to thank the HOD Prof. Archana Ingle and the staff members of Department of Electronics and Telecommunication, Viva Institute of Technology for their cordial support and granting us permission for our practical training. We are very thankful to Mr. Ankit Sir the honor of EXTC lab Assistants for their valuable guidance, co-operation and sparing their valuable time. Lastly, we thank the Almighty, and we extend our sincere thanks to our family, friends and all those who helped us in various ways in successful completion of THIS PROJECT WORK.

#### REFERENCES

- [1] Learning OpenCV –Computer Vision with the OpenCV Library O'Reilly Publication.
- [2] Learning OpenCV: Computer Vision with OpenCV Library, Kindle Edition. Gary Bradsk1 and Andrian Kehlar
- [3] M.A. Turk and A.P. Pentland, —Face Recognition Using Eigenfacesl, IEEE Conf. on Computer Vision and Pattern Recognition, pp. 586-591, 1991.
- [4] KyungnamKiml Face Recognition using Principle Component Analysisl
- [5] Learning OpenCV: Computer Vision with the OpenCV Library 1st Edition, Kindle Edition
- [6] H. Wang, Q. Wu, B. Qin and J. Domingo-Ferrer, "FRR: Fair remote retrieval of outsourced private medical records in electronic health networks", Journal of Biomedical Informatics, vol. 50, pp 226-233, August 2014.
- [7] J. Li, C. Liu, B. Liu, R. Mao, Y. Wang, S. Chen, J.J. Yang, H. Pan and Q. Wang, "Diversity-aware retrieval of medical records", Computers in Industry, vol. 69, pp. 81-91, May 2015.
- [8] Nashwan Adnan OTHMAN, Ilhan AYDIN —A Face Recognition Method in the Internet of Things for Security Applications in Smart Homes and Cities in Proc.2018 6th International Istambul Smart Grids and Cities Congress an Fair (ICSG).
- [9] T. Ojala, M. Pietikainen and D. Harwood, —A comparative study of texture measures with classification based on feature distributions, Pattern Recognition vol. 29, pp. 51-59, January 1996.
- [10] Raj G Anvekar, Dr.Rajeshwari M Banakar —Design Alternatives For End User Communication In IOT Based System Modell in Proc. 2017 IEEE International Conference on Technological Innovation in ICT For Agriculture and Rural Development(TIAR 2017).
- [11] Monica Chillaron, Larisa Dunai, Guillermo Peris Fajarnes, Ismael Lengua —Face detection and recognition application for Androidl in Proc. IECON2015-Yokohama November 9-12, 2015.
- [12] L.A. Shanley, C. Hronek, M. Hall, E.R. Alpern, E.S. Fieldston, P.D. Hain, S.S. Shah and M.L. Macy, "Structure and Function of Observation Units in Children's Hospitals: A Mixed-Methods Study", Academic Pediatrics, vol. 15, Issue 5, pp. 518-525, September–October 2015