

# AUTOMATED OPD CARD SYSTEM

<sup>[1]</sup>Prof. Pranali Hatode, <sup>[2]</sup>Saurabh Dambal, <sup>[3]</sup>Amisha shinde

<sup>[1-3]</sup>Electronics & telecommunication Engineering, K.J.Somaiya Institute of Engineering & IT

## ABSTRACT

In today time hospitals are facing a need of better patient-doctor management system. In peak hours, when the number of patient are more, better data and patient management is required. Our project 'Automated OPD Card System' is based on this intension to reduce and improvise the patient-doctor management. This project is designed to automate OPD system. This is achieved by using RFID technique, HTML and PHP language. RFID is used so that the data can be synced at one place and it can be retrieved after scanning. For e.g., if the user wish to take treatment, he or she has to follow some protocols. By using 'Automated OPD Card System' efforts of paper work and storage of data are reduced. Automate OPD card is used to keep a tract of services provided to patient and medical history of patient. Data of patient will be stored on the server and whenever RFID is scanned, data will be displayed on the computer. GUI of the system is made up of using HTML codes and Data is connected with database using PHP language.

**Index Terms-- Database Management, OPD Card, RFID, Server.**

## I. INTRODUCTION

This project is used to sync and store information of patients. In hospital, paper work is more before and after of treatment. To avoid this paper work and storage of heavy files, OPD card system is useful. By using this system, longer queues for paper making will reduce to greater extent. In this system, RFID card is used to sync and store data on server. User can store his/her personal information and medical history using RFID card. When RFID card is scanned by doctor, he/she will get all information of patient. After treatment, list of prescribed medicines also gets updated. This card will remain with patient. Whenever user come for treatment, he/she can directly meet the doctor without waiting in queue.

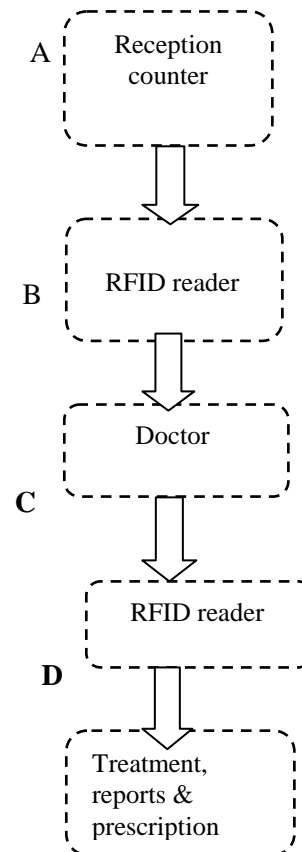
User interface is created with HTML language. 6 forms of various sections are included in Graphical User Interface. Uploading and downloading of data is arranged with the help PHP language. By this system, requirement of paper is eliminated. Paper will require only for print of prescribed medicines.

## II. PROCEDURE OF DATA FLOW

### 2.1. Flow of data and Procedures

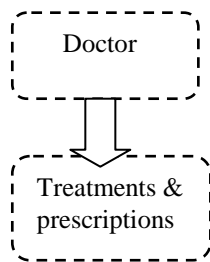
#### • 1st time user:

- A. 1st time user will get RFID card after basic amount of down payment of the card. The RFID number will be saved along with the name of the patient.
- B. On the same counter, basic details of patients like name, age, address, contact number, gender etc. is saved along with date and time.
- C. When patient will reach particular OPD doctor will have patient full basic details through RFID reader.



- D. Health problem of patient along with treatment and medicines details will be saved on RFID card at doctor's end. A printer will be connected to this computer from where medicine receipt and other details can be printed

• **2st time user:**



E. When same patient will come for re-checking or any other health issue, he/she need not go to counter, and instead he/she can bypass point A and B and can directly go to OPD

F. Here point C and D will be repeated.

This project is used to sync and store information of patients. In hospital, paper work is more before and after of treatment. To avoid this paper work and storage of heavy files, OPD card system is useful. By using this system, longer queues for paper making will reduce to greater extent. In this system, RFID card is used to sync and store data on server. User can store his/her personal information and medical history using RFID card. When RFID card is scanned by doctor, he/she will get all information of patient. After treatment, list of prescribed medicines also gets updated. This card will remain with patient. Whenever user come for treatment, he/she can directly meet the doctor without waiting in queue.

### III. BASIC REQUIREMENTS OF AUTOMATED OPD CARD SYSTEM

The basic requirements of AUTOMATED OPD CARD SYSTEM are listed below:

1. A desktop application like computer or laptop
2. RFID card
3. RFID reader/scanner
4. Internet connection.



Fig.1 Arrangement of project

The arrangement for AUTOMATED OPD CARD SYSTEM is as shown below in Fig.1 :

The arrangement for the project is very simple. Just a RFID scanner needs to be connected to the PC, laptop or any desktop application. No need to add complex devices.

### IV. RELATED WORKS

In this section some advantages of ‘Automated OPD card’ are-

- a) Lots of time consuming paper work is saved.
- b) To increase accuracy of data using RFID card and database (digital storage). Life span of the database increases as all the data will be stored virtually on the server.
- c) Earlier queue system for patient can be avoided. Patient management will become easy task.
- d) Keeping a track of any patient's medical history is very easy.
- e) Data maintenance is improved as everything is saved in server directly.
- f) If incase same doctor is not available on the session, then any doctor can access the previous medical history of the patient using patient's RFID card.

### V. RESULTS & DISCUSSION

#### i. Webpage using HTML, CSS & PHP:

We have made web pages (medical forms) using HTML coding with CSS to give its font, colour, size etc. Page of personal information have a submit button which is used to connect this data with our database according to the medical proforma the data will be saved or taken from.



Fig. 2. Webpages

User interface is created with HTML language. 6 forms of various sections are included in Graphical User Interface. These forms are designed according to requirements of physiotherapy department.

Fig. 2 shows one of the webpage in the collection. This page is “welcome” page, which is basic introduction page. Similar 6 pages of various sections in defined sector are made

## ii. Database using MYSQL:

When the data of patient will be filled in the form, the data will be saved on the server as per the RFID card number which will be unique of every patient. The data will be updated through MySQL which is a management system for our local and sever database.

Further, the data according to specification of patient problem will be updated for the particular select. Updated database can be any time accessed by any doctor having information about patient’s RFID card number, which will help doctors to analyze and track the progress of patients.

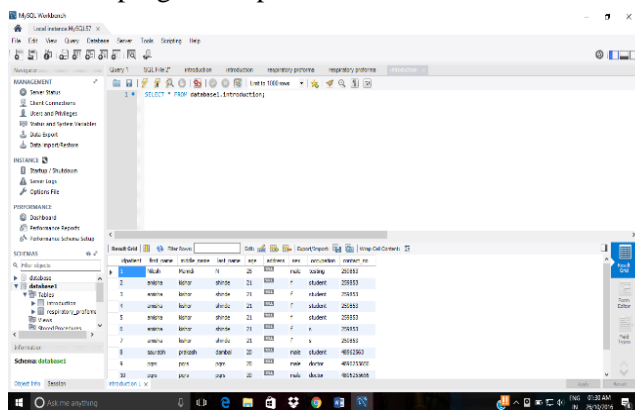


Fig.3. Database of webpages

Fig.3 shows the database of the webpages. When data is filled in webpage and submitted, then all the data gets arrange in proper tables in respective database.

## ii. Connection to Server:

We have the XAMPP sever along with the cmd having local database data entered in it. In XAMPP control panel we have to connect it with MySQL local database which we have made earlier and the after entering the data in the forms the data of the patient will be entered in the database according to its particular RFID number.

## VI. CONCLUSION

. The amount of paper work and the amount of paper used both can be reduced by using this system. Not only paper but it also minimizes our effort to maintain the data of patient. Along which this system can in future be linked with internet to fall in Internet of Things and can contributed to Digital India.

## VII. ACKNOWLEDGEMENT

We would like to express our whole-hearted thanks to our project guide Prof.Pranali Hatode, who shared with us her valuable experiences, time and knowledge and provided us constant guidance from starting to the completion of our project “AUTOMATED OPD CARD SYSTEM”.

We would like to thanks to our HOD Prof. Jayashree Khanapuri. We are greatly thanked to other prof. for thier help and guidance. We are also greatly thanked our collage and lab assistant for proving us lab facilities, which shows their support. And last but not the least; we want to thanks all those important people who have directly and indirectly given their special time and attention towards making project successful

## VIII. REFERENCES

### Technical books:

- [1] Stacia Varga, Denny Cherry, and Joseph D’Antoni "Introducing Microsoft SQL Server 2016: Preview Edition Microsoft Press December 2015
- [2] MySQL Essentials Techotopia
- [3] Preston Prescott "SQL: Learn the Structured Query Language for the Most Popular Databases including Microsoft SQL Server, MySQL, MariaDB, PostgreSQL, and Oracle Kindle Edition"
- [4] ClydeBank Technology “SQL: QuickStart Guide - The Simplified Beginner's Guide to SQL (SQL, SQL Server, Structured Query Language) Kindle Edition"
- [5] David Pitt "Modern Web Essentials Using JavaScript and HTML5” InfoQ May 2014
- [6] S. Sumathi, S. Esakirajan “Fundamentals of Relational Database Management Systems”
- [7] Thomas M. Connolly ”Database Systems: A Practical Approach to Design, Implementation and Management”

### Technical Reports:

- [8] Balazs Bevezcky. Integration of a BECKHOFF PLC into an HVAC model plant. Technical Report 183/1-177, A-Lab @ Automation Systems Group, TU Vienna, December 2015.
- [9] Thomas Johannes Stipsits. Security Analysis of the Austrian Citizen Card Environment MOCCA. Technical Report 183/1-174, A-Lab @ Automation Systems Group, TU Vienna, August 2015
- [10] Clemens Pühringer. Cloud Computing for Home Automation. Technical Report 183/1-167, A-Lab @ Automation Systems Group, TU Vienna, March 2014

### Links:

- [11] [https://www.w3schools.com/php/php\\_mysql\\_intro.asp](https://www.w3schools.com/php/php_mysql_intro.asp)