iJRASET
International Journal For Research in Applied Science and Engineering Technology



INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Volume: 10 **Issue:** III **Month of publication:** March 2022

DOI: https://doi.org/10.22214/ijraset.2022.41063

www.ijraset.com

Call: 08813907089 | E-mail ID: ijraset@gmail.com

International Journal for Research in Applied Science & Engineering Technology (IJRASET)
ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 7.538
Volume 10 Issue III Mar 2022- Available at www.ijraset.com

Hospital Management System: Using Cloud Technology

Shubham N. Deshmukh[1], Shweta M. Ghode[2], Apurva V. Dhomne[3], Payal D. Ghumade[4], Priya Dhoke[5], Prof. Roshan R. Kolte[6]
[1, 2, 3, 4 5, 6]*Information Technology, KDKCE, Nagpur, India*

Abstract: ***Nowadays health is the most important concern in the whole world. Due to that demand of new healthcare technologies are also increasing rapidly. New technologies help people in getting facilities more quickly to ensure getting help in less time than conventional facility. This paper is concerned with modern cloud technology and smart system that can manage and help patient and doctors basically hospital department to maintain data and records of hospital in more efficient way. This system is working on cloud so it's easy to access, handle and most importantly is more secure without the use of hardware and software which reduces cost and time.***
Keywords: Cloud, Salesforce, CRM

I. INTRODUCTION

Cloud technology or cloud computing is the on demand delivery of services especially data storage and computing power. It includes servers, storage, databases, software over the internet ("the cloud"). There are three services provided by the Salesforce which is known as Cloud Services.

1) Infrastructure as a service (IAAS) : IAAS includes accessing of infrastructure over the internet such as application and storage servers.
2) Platform as a service (PAAS) : PAAS is a model in which service provider provides platform to the users over the internet.
3) Software as a service (SAAS) : Accessing a software over the internet is called as SAAS [5].

Many big enterprises, companies, businesses have their own Customer Relationship Model (CRM) system which plays a most vital role and helps in development of an organization. CRM system keeps track on every department and monitor them individually in order to make them grow which helps to grow organizations overall. There are many benefits of using CRM for the companies which includes better customer service, increased sales, detailed analytics, higher productivity and efficiency, centralized database of information, more accurate sales reports and data. Basically CRM is the combination of planning, strategies, practices, technologies that companies use to manage and analyze users and customers data [1-9].

Salesforce is world's no.1 Customer Relationship Management (CRM) platform. CRM in Salesforce works by managing standard objects, and maintaining relationship between them, and standard in built functionalities.

Different clouds available in it are sales cloud, service cloud, marketing cloud.

This project is about making Hospital Management System CRM application which provides enhanced administration and control, superior patient care, cost efficient, data management and improved profitability. This Hospital Management System provides Patient and Doctor Administration, Billing and Appointment Management, and other services for the hospital.

II. MODULES OF THE SYSTEM

1) Admin
2) Development
3) User

A. Technology used

1) Cloud
2) Salesforce CRM

B. Purpose

The purpose of the "Hospital Management System" application is to maintain data of hospital and provide facilities to the patient online to make their treatment goes smoothly and fast without waiting for a longer time. It is also used for managing patient, doctors and all other data over the cloud for faster access and also provides security.

©IJRASET: All Rights are Reserved

ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 7.538
Volume 10 Issue III Mar 2022- Available at www.ijraset.com

C. Previous System

In the previous system, hospital requires lot of hardware and software services to maintain their data and requires huge time to deal with other operational stuffs. Users also has issues related to sharing their personal data due to security concern and also there is a risk of losing data. Users are unable get the confirmation of their status related to registration, appointments etc. Heavy loads of data and bulk of records are difficult to handle and maybe get crash sometimes or requires more time to process.

D. Proposed Architecture of System

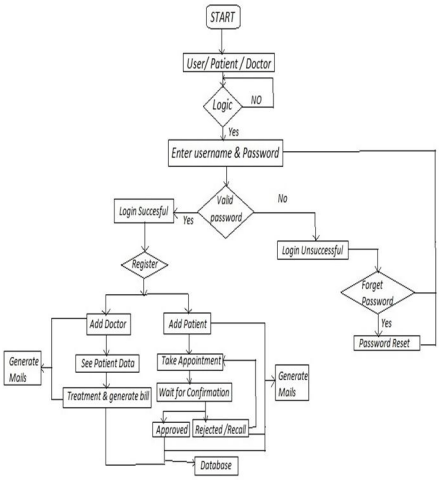
Hospital Management System is the cloud based system which works over a cloud to manage all sorts of activities including data management as well.

It can be access over any browser or from mobile using Salesforce Mobile app (having version 8.0 or later).

App consist of three logins 1.For Doctor login 2. For Patient login 3. For Hospital department. The workflow of the system is when customer/patient logins to the system which redirects it to the main screen interface through which they can

access facilities of the system. They can login through the proper/correct and unique username and password only which they used while registering over here. After login patient can register (booked) their appointment as per convenience with doctors and wait for their appointment to get confirmed for particular slot. Doctor can login and access the details of the patient they treated and other patients having appointments with them. For all the processes patient and doctor will get e-mails for confirmation. All the data is saved over the cloud which provides security to data and can be access from anywhere. If hospital management needs more facilities they have to pay some amount and can access premium use of the sales cloud to manage their database and other important stuffs.

III. FLOW CHART DIAGRAM



IV. ADVANTAGES

1) Data is much secured.
2) Does not require high cost hardware.
3) Highly scalable.
4) Ease of use.
5) Flexible - as there is no need of installing any software and can be accessed from any location.
6) Increased storage capacity.
7) Great compatibility [7].

V. DISADVANTAGES

1) It is cloud based; if your internet services are intermittent, then so is your access to the service.
2) Too complex for small businesses.
3) Due to network traffic it may be crash or slower loading speed.

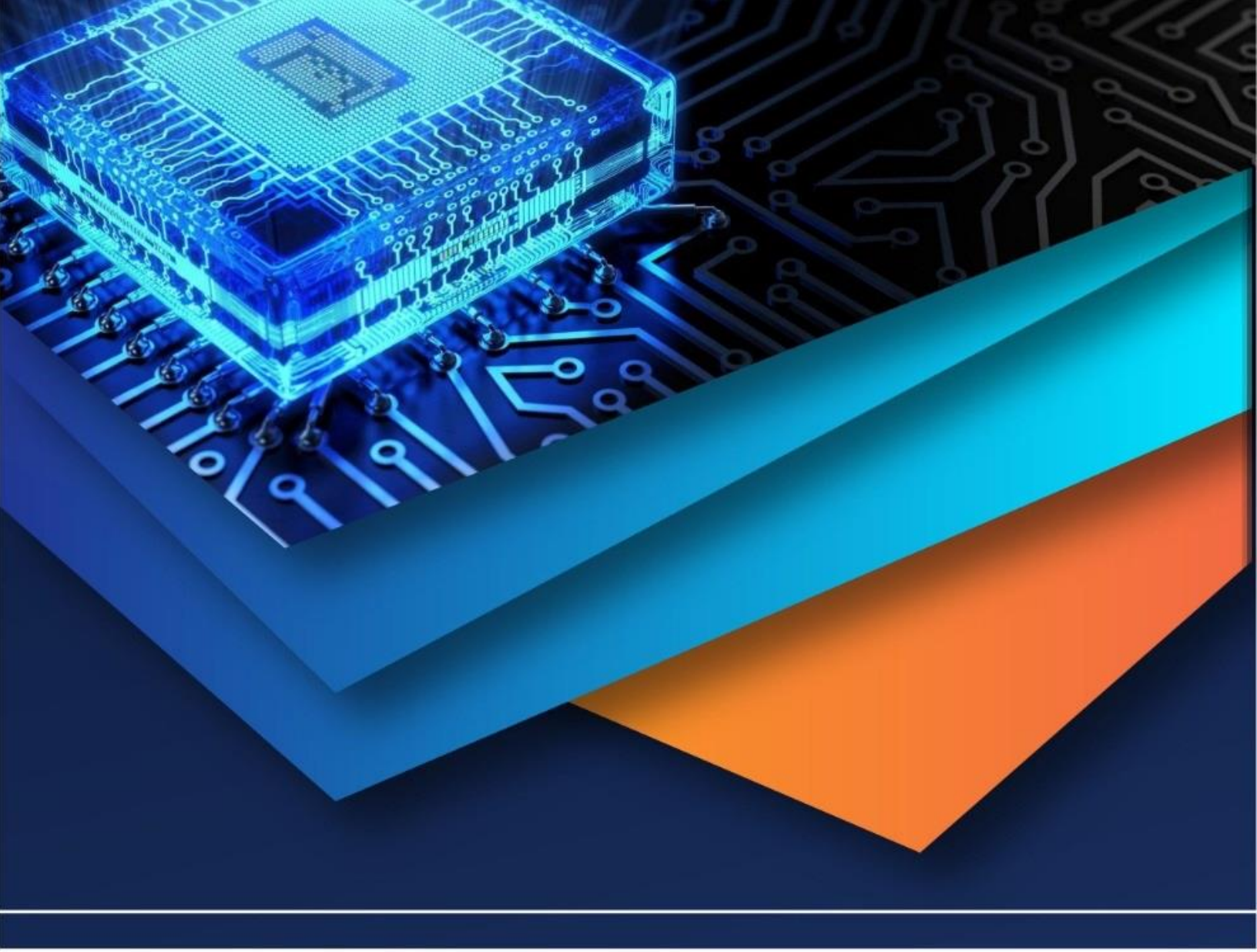
©IJRASET: All Rights are Reserved | SJ Impact Factor 7.538 | ISRA Journal Impact Factor 7.894 |

VI. CONCLUSION

In this research and development work, we have provided a cloud service that handles data management over cloud and also various features for health management system. This system is effective and user friendly and exposed us to the new technology of cloud computing. For this project to work, strong internet connection is needed as it uses cloud technology and services. Thus this project successfully demonstrated a Cloud based " Hospital
Management System " using Salesforce Technology.

REFERENCES

[1] Goodey, P. (2013). Salesforce CRM: The definitive admin handbook (2nd ed.). Packt Publishing, Ltd.
[2] Greenberg, P. (2004). CRM at the speed of light, essential customer strategies for the 21st century (3rd ed.). Manassas, VA: McGraw Hill Professional.
[3] Josyula, V., Orr, M., & Page, G. (2011). Cloud computing, automating the virtualized data center. Cisco Press.
[4] Shrivastava, M. (2014). Salesforce essentials for administrators. Packt Publishing, Ltd.
[5] Christos Stergiou, Kostas E. Psannis, Byung-Gyu Kim, Brij Gupta, "Secure integration of IoT and Cloud Computing", Future Generation Computer Systems, 2018.
[6] Entao Luo, Md Zakirul Alam Bhuiyan, Guojun Wang, Md Arafatur Rahman, Jie Wu, and Mohammed Atiquzzaman, "Privacy Protector: Privacy-Protected Patient Data Collection in IoT-Based Healthcare Systems", IEEE 2018.
[7] Peter C. Verhoef "Understanding the Effect of Customer Relationship Management Efforts on Customer Retention and Customer Share Development" Journal of Marketing Vol. 67 (October 2003), 30–45.
[8] Mohamed Elhoseny , Gustavo Ramírez-González, Osama M. Abuelnasr, Shihab A. Shawkat, Arunkumar N, And Ahmed Farouk, Secure Medical Data Transmission Model for IoT-Based Healthcare Systems", IEEE 2018.
[9] A. Manchar and A. Chouhan, "Salesforce CRM: A new way of managing customer relationship in cloud environment," 2017 Second International Conference on Electrical, Computer and Communication Technologies (ICECCT), 2017, pp. 1-4, doi: 10.1109/ICECCT.2017.8117887.
[10] Stephanie B. Baker, Wei Xiang, (Senior Member, Ieee), And Ian Atkinson, "Internet of Things for Smart Healthcare: Technologies, Challenges, and Opportunities",IEEE Access, 2017.



10.22214/IJRASET

45.98

IMPACT FACTOR: 7.129

IMPACT FACTOR: 7.429

INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Call : 08813907089 (24*7 Support on Whatsapp)