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## Implementation of Information KIOSK for Hospital

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**ABSTRACT:** Kiosk has been part of human life for many years and centuries. Technology impacted kiosk to be operated independently to serve mankind. In modern world kiosk is not just a computer with a touch screen enclosed in a box – it is an integration of Mechanical, Computer Hardware, Software, Peripherals and Embedded Controllers, and to build it requires high order domain expertise and intellectual power. The aim of the hospital Kiosk project is to pave the way for more advanced hospital services applications with user interface. This paper is used to guide technical audiences who want to develop kiosk systems, organizations willing to start sale through kiosks and functional beginners who want to possess basic knowledge of the kiosk systems. In IT world it is a common scenario where client provides business objectives and high level requirement to build the complete system and they are not in a position to provide all the details of the system one is expecting to be developed.

**KEYWORDS:** Kiosk, Integration, Peripherals, Embedded, User Interface, To pave the way

### I. INTRODUCTION

Self-service kiosk (Information Kiosk) deployment in hospital has gain a big attraction due to the importance of the information existing on the kiosk as well as ease of use. “KIOSK ” physical prototype is to be designed with user friendly interface which can benefit visitor or patients. Moreover, this kiosk should be designed to cater for those with limited skills or experience, physical and cognitive impairments, also the interface should be intuitive, clear and pretty. Users must be able to get the information within a minutes without the knowledge of others and wastage of time; in a queue waiting for administration to answer their queries. Hospital justify the implementation of kiosk primarily as a means to improve the patient service, not strictly as cost-saving measure. Hospital justify the implementation of kiosk primarily as a means to improve the patient service, not strictly as cost-saving measure. The experiences of leading organizations have shown that kiosk can increase patient satisfaction by reducing waiting times and offering greater convenience and privacy.

### II. RELATED WORK

The author has succeeded in reducing the stance of hospital but has failed in various aspects like it supported only in English. It is natural that a device kept in a public place should follow rules for communication and behaviour that its users are already familiar with. Kiosk users comes from a broad range of backgrounds and will not have an opportunity for extensive training with the interface. So it became the big issue of handling. The major challenge is that the kiosk user-interface must actively participate in initiating and regulating interactions with its users it without any issue. It should greet person who approaches it and engage people at a distance only. The next issue was the ability to interact with multiple users simultaneously, and dynamically adjust .

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## III. PROPOSED ARCHITECTURE

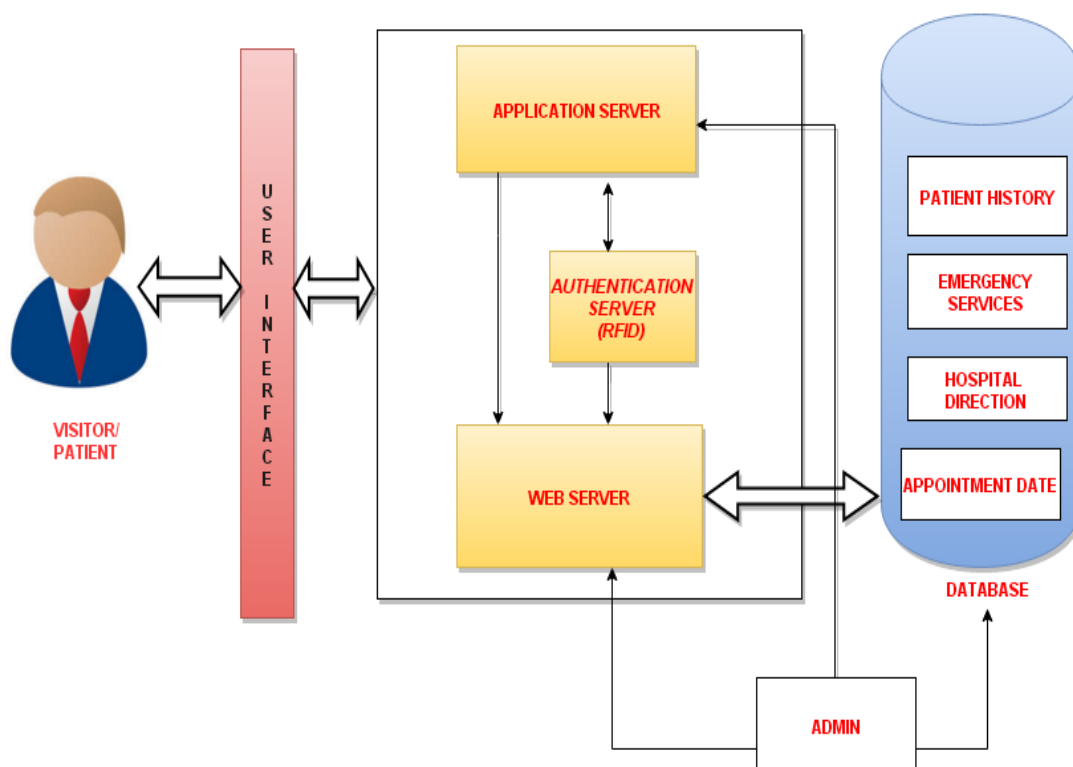


Fig1: System Architecture

### A. Architectural Description

This system architecture is a three-tier architecture which has been designed in MVC based pattern. For implementing user interfaces, **Model-view-controller (MVC)**; a software architectural pattern is required. A given software application is divided by MVC into three interconnected parts, to separate internal representations of information from the user in a three-tier architecture. Traditionally it is used for desktop graphical user interfaces, for designing web application; this architecture has become extremely popular.

To get into the system, the user first request through the user-interface. The request then first goes to the web server where it searches for the static content like facilities, services, emergency services etc. through HTTP protocol to display the information on the screen. Here, in first stage the user is either the visitor or patient. The visitors request is a short process compared to the patients request as the visitor has only simple query which will be stored in the web server itself. But, in case the user is patient then the request further goes to application server that forwards the request to the authentication server to validate the particular users identity and further sends it to the web server which is directly has connection to the database to fetch the dynamic information which has to be displayed on the user-interface (screen) that includes- the appointment dates, availability of doctors patient's history, recent reports etc.

The user(patient/visitor) uses the system for services through a simple system called "KIOSK". A normal visitor has no

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authentication permission where as the employees have to authenticate into the system for getting the personal details like getting recent medical reports, their history, appointments dates etc. The employees authenticate themselves by using their RFID. The employees have full access to the system where as visitor can only get the normal queries easily on the user-interface.

## IV. SIMULATION RESULTS

The proposed solution Kiosk like structure, where the vital information regarding hospital can be easily found by patient or visitor on the front-end. The interface will display all the required information which is easy to use. A friendly interface, will be in multi-lingual so it would be easy for user to use. The data which is collected is used in a backend database (offline or tele-based) for providing on-the spot and self-service based diagnosis. No long queues or waiting for small check-ups will be an issue for the patient. Kiosk is economically viable for suppliers and within reach of most users. Our primary duty is to keep “kiosk” hygienic and safe equipped with high precision and quality devices. The user who already has logged in (like in an ATM) is given his summary report, and is offered either preliminary solution or recommended to nearest specialty hospitals if any emergency, and his record is updated with the new diagnosis and recommendations.



Fig2: Front screen of hospital kiosk

## V. CONCLUSION AND FUTURE WORK

The project is all about serving all groups of people through a friendly interface where getting information has become an easiest way. Patients as well as medical professionals could save up to 90% of their formerly wasted time. Most important, the quality of the medical services has been increased, since the newly created workflow brings together patients and doctors in front of the clinical workplace, to check whether all entries are correct. KIOSK is growing very fast in this particular self-service technology where a person can ask a doctor for advice via kiosk. 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. Kiosk does the work of self-assessment that will deliver a “Health Age” to the user by estimating the user’s biological age based on their health habits and biometrics. The assessment also calculates age, gender, weight, BMI, pulse, blood pressure and other queries that takes only 4 to 5 minutes to get on the touch—screen KIOSK. In addition to this, it also give users their top five health risks based on their information. The reports can be



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received by users on their health strengths and weakness.

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## BIOGRAPHY

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