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Integrated Health Care Portal

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A B S T R A C T

- Technology integration is now essential in the changing healthcare landscape to promote better patient outcomes and more efficient healthcare delivery. The idea of a state-of-the-art healthcare portal that aims to improve overall healthcare coordination and change the patient experience is presented in this abstract.

In order to create a safe and convenient online environment for patients, healthcare professionals, and administrators, our suggested healthcare portal acts as a primary hub. The main goals of the site are to empower patients by providing them with simple access to their medical records, to foster effective communication between stakeholders, and to enable proactive health management.

The portal includes capabilities for medication management, telehealth integration for virtual consultations, and a powerful appointment scheduling system. It ensures a full view of patient information by smoothly integrating with current healthcare systems, prioritizing interoperability. Collaborative care planning and coordination are fostered by the use of a secure messaging platform to improve communication between healthcare providers.

1. INTRODUCTION

The project Hospital Management system comprises computerized billing in the labs and pharmacy, as well as patient registration and data storage. Every patient can have a unique ID assigned to them by the software, which also automatically saves all of the patient and staff information. It has a search function to find out each room's current condition. Using the ID, the user can look up a doctor's availability and a patient's data. With a login and password, one can access the Hospital Management System. An administrator or a receptionist can access it. The database can only contain data that they add. It is simple to retrieve the data. It has an extremely user-friendly interface. The data processing is incredibly quick and is well-protected for personal usage. Hospital Management System was created with the intention of providing hospitals with tangible, imaginable benefits. It is strong, adaptable, and simple to use. A comprehensive range of hospital administration and management tasks are covered by the Hospital Management System, which is intended for multispecialty institutions. It is a seamless, integrated end-to-end hospital   management

system that gives pertinent data to help efficient decision-making for patient care, hospital administration, and vital financial accounting.   A software suite called Hospital Management System is intended to enhance hospital management in the domains of clinical process analysis and activity-based costing. With the help of the Hospital Management System, you can grow your company and raise the productivity and caliber of your output.

Effectively managing the hospital's essential processes is essential to its success and aids in process management.

2. LITERATURE REVIEW :

The term "mHealth," or "mobile health," refers to a global phenomenon that has attracted a lot of interest in the last 10 years. In order to assist people achieve their health objectives, mobile technologies—such as smartphones, software programs, and gadgets—are combined in the rapidly developing field of mHealth. Global health service delivery could change if mobile and wireless technologies are adopted in the healthcare industry. The aforementioned achievements have played a role in this shift: Considerations include the tendency of incorporating mobile health solutions into institutional health systems, the quick development of mobile networks and applications, and the rise in funding, legislation, and supporting data.

mHealth is considered as a component of eHealth. However, there isn't currently a consensus definition of mHealth. mHealth is defined by the WHO Global Observatory for eHealth (GOe) as:

"Medical and public health practice supported by Mobile devices, such as mobile phones, patient monitoring devices, personal digital assistants (PDAs), and other wireless devices. mHealth involves the use and capital ization on a mobile phone's core utility of voice and short messaging service (SMS) as well as more complex functionalities,"

One of the industries that is growing the fastest and liveliest right now is health technology. Innovative technologies like remote monitoring and virtual consultations are being used by healthcare organizations to increase patient access, reduce costs, and enhance patient outcomes. Consequently, investors who wish to make investments in healthcare technology that has the potential to upend the current healthcare system are showing a lot of interest.

The majority of funding this year is probably going to go to digital health businesses due to growing investment in the healthcare industry.

In a setting where introducing healthcare technology solutions is getting easier, investors and innovators in healthcare software development anticipate that the quantity of agreements and total amount of money invested will create new records.

With a 25% compound annual growth rate, the worldwide digital health industry is projected to be valued $660 million by 2025.

With smartphones quickly becoming an extension of our lives in today's technologically advanced world, a fascinating trend of mHealth apps has gained huge appeal, enabling people to take charge of their well-being like never before. Therefore, it is not surprising that by 2020, businesses and investors in digital health would have spent over $21 billion on these initiatives.

There were over 52,565 healthcare apps on the Google Play Store and 51,370 apps on the Apple App Store in the first quarter of 2022, according to Statista. Since the COVID-19 epidemic began, the number of downloads for healthcare apps has increased by 60% globally.

This is a comprehensive analysis of research studies that were published in science between 2012 and 2016. This review's phases adhered to a predetermined procedure in order to preserve methodological and scientific rigor, specifically:

1. Detailed formulation of the research query

2. defining the parameters for research inclusion and sample selection (search or sampling), including literature sampling;

3. a table-style representation of the study that takes into consideration all of the commonalities (data collection);

4. a thorough review of the publications on the list, pointing up contradictions and differences;

5. Analysis and discussion of the findings;

6. Clearly and impartially integrated presentation review, using data and supporting evidence.

3. OBJECTIVES :

The goals of deploying healthhub connect solutions are on enhancing healthcare quality, efficiency, and accessibility while tackling a range of issues in the medical industry. Our project's primary goals are to provide an online application for the detection of acute diseases in smaller towns and villages.

The remaining goals consist of:

Improving Access to Healthcare: To offer remote medical help and early diagnosis, particularly in underprivileged or isolated locations with limited access to medical experts or facilities.

Enhancing Efficacy: To minimize wait times and optimize the medical procedure by swiftly assessing symptoms and provide preliminary direction or suggestions for suitable measures.

Increasing Diagnostic Accuracy: To improve the initial diagnosis accuracy and reliability of common disorders, enabling faster identification and the recommendation of suitable medication for recognized diseases.

Lowering Healthcare expenditures: By reducing needless trips to medical facilities for minor illnesses and facilitating more effective resource allocation, it may be possible to reduce healthcare expenditures.

Patient Empowerment: To enable people to take control of their health by making health information easily accessible and comprehensible, so they can make more educated decisions about seeking medical attention.

Supporting Healthcare Professionals: To help healthcare providers focus more on complex patient care by providing data-driven insights, supporting decision-making, and lightening their workload for routine or small situations

5. MODULES :

5.1 Module for administration:

1. observe doctor appointments.

2. oversee the hospital department's user, physician, nurse, pharmacist, and laboratory accounts.

3. observe the patient payment transaction reports.

4. Status of beds, wards, and cabins.

    5.   observe blood bank report.

    6.   observe hospital stock status of medications view the birth, diagnosis, and death reports.

    7.   View the operation report.

5.2 Patient user module:

    1.   View the doctor's appointment schedule and status.

    2.   See the specifics of the prescription.

    3.   View the doctor's prescription.

    4.   See the list of doctors.

    5.   Check the status of the blood bank.

    6.   Examine the history of operations.

    7.   View the history of admissions. like a bed, an ICU ward, etc.

    8.   Control your own profile.

5.3 Module of doctors:

    1.   Organize patients.

    2.   create and update accounts.

    3.   Establish and oversee a patient appointment.

    4.   Make a prescription for the patient and give them medicine Concerns patient operations and generates an operation report.

    5.   Control your own profile.

5.4 Module for Accountants:

    1.   Make a bill of sale for payment.

    2.   Send the patient an order invoice.

    3.   Accept cash.

    4.   Examine the patients' payment history.

    5.   Control your own profile.

5.5 Module for nurses:

    1.   Organize patients.

    2.   Create and update accounts.

    3.   Give patients a bed, ward, or cabin.

    4.   As directed by the patient, administer medication.

    5.   Oversee the blood bank and provide status updates.

    6.   Record patient procedures, births, and deaths.

    7.   Maintain personal profile.

5.6 Module on Pharmacists:

    1.   Maintaining medication.

    2.   Maintain data on hospital medication inventories and status Control the classifications of medications.

    3.   Observe the patient's prescription and administer medication as directed.

5.7 Module for Laboratorists:

    1.   Observe the prescription list.

    2.   Provide a diagnostic report.

3. Preview of report files such as MRI results, CT scans, and xray pictures.

4. Control your own profile.

6. IMPLEMENTATION:

User Experience:

- Intuitive Interface:
  - o Create an interface that is easy to use, with obvious navigation and visual hints.
  - o Take into account a range of technological capabilities and user needs.
  - o Offer thorough directions and support at every stage of the procedure.

- Personalization:
  - o Permit users to start a fresh discussion and, if necessary, erase the previous conversion.
  - o Provide individualized advice based on personal health data and indicate the likelihood of other illnesses.
  - o The response may be generated again at the user's convenience

- Treatment Suggestion:
  - o Provide the greatest treatment alternatives in accordance with guidelines and best practices.
  - o Take into account any possible drug interactions as well as patient-specific variables (cough, headache, fever, allergies, and common cold).

- Accessibility: o
  - o Make sure that users with disabilities may utilize assistive technology.
  - o Facilitates voice search and text-based communication.

SOFTWARE REQUIREMENTS:

The term "software requirements" refers to the specifications of software resources and prerequisites that must be installed on a computer in order for a program to operate as well as possible. Before installing the software, these prerequisites must be installed individually as they are typically not part of the software installation package.

Software requirements for present project:

- operating system: windows 7/ xp/8.
- Front end: html,css,javascript.
- Server side script: php
- Database: Mysql

HARDWARE REQUIREMENTS:

Hardware, or physical computer resources, is the most frequent collection of requirements defined by any operating system or software program. A hardware compatibility list (HCL), particularly when it comes to operating systems, is frequently included with a hardware requirements list. Hardware devices tested for compatibility and occasionally incompatibility with a specific operating system or application are listed in an HCL. Subsections that follow go over the many facets of hardware requirements.

Hardware requirements for present project:

- Processor: intel dual core, i3
- Ram: 1 gb
- Hard disk: 80 g

CONCLUSION:

. Over the past ten years, mobile health has gained a lot of attention as a global phenomenon. mHealth is a rapidly developing field that uses devices, software, and mobile technology to assist individuals in achieving their health objectives. Global health service delivery may change if mobile and wireless technologies are adopted in the medical field. This change is the result of several achievements, including the quick development of mobile networks and applications, the growing trend of incorporating mobile health solutions into institutional health systems, and more funding, regulation, and empirical data.

Technology advancements have greatly expanded the potential of mobile health. Smartphones and tablets are transforming the way we utilize mobile devices for health management with features like a high-resolution camera, GPS, and embedded sensors that offer greater capabilities than a laptop or desktop.

Systemic lupus erythematosus and rheumatoid arthritis are probably typical of a wide range of chronic illnesses that may eventually take over the U.S. health care system. Integrated research and longitudinal studies are necessary to fully understand the care systems for chronic diseases like SLE and RA, even with the inherent constraints posed by shifting health care practices, patient and physician characteristics, population demographics, and financial constraints.

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