

OPEN-SOURCE DASHBOARD DESIGNED AND IMPLEMENTED TO STORE MEDICAL RECORDS BY USING WEB

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Abstract

Medical records are organized records of a patient's health history and care received from a single healthcare practitioner over time. In government hospitals, all of these records are kept manually, which has a number of difficulties. Patients frequently fail to report several health conditions for which they have previously received treatment, even though these particulars may be essential in treating the current health conditions. A web-based dashboard that keeps track of all past medications has been developed as a remedy to address these shortcomings and aid in the more effective treatment of current medications. We outline cutting-edge software that gathers, stores, and presents data necessary to raising the standard of care for patients with chronic rheumatic disease. Patients readily adopted the software, and

Keyword's: Dashboard, Digital, Effectively, Prescriptions, Patients, Medical History, Records, Web Application.

1. INTRODUCTION

A Web application (Web app) is an application program that is supplied via the Internet via a browser interface and is kept on a remote server. In government hospitals, all of these records are kept manually, which has a number of difficulties. Patients frequently fail to report several health conditions for which they have previously received treatment, even though these particulars may be essential in treating the current health conditions. The development of a web-based dashboard that keeps track of all the past

drugs that enhance the effectiveness of the active medications. An program that uses a website as the interface or front-end is known as a web-based application. Using a common browser, users can quickly access the application from any computer connected to the Internet.



These platforms are intended to

Fig 1- Web Application

Web applications, often known as web apps, are essentially server-side and client-side software programs that the client

runs or makes requests for via a web browser. Following a request, the web server responds to the client. When there is information duplication or editing by an unauthorized person, the administrator manages the pressure and deactivates.

1.1. Apache Tomcat:

Apache Tomcat, often referred to as Tomcat Server, is an open-source java servlet container developed by the Apache Software Foundation(ASF). Tomcat implements several Java EE specifications including Java Servlet,JavaServer Pages(JSP),JavaEL,andWebSocket,andprovidesa"pureJava" HTTP web server environment in which Java code can run. Tomcat is developed and maintained by an open community of developers under the auspices of the ApacheSoftware Foundation, released under the Apache License 2.0license, and is open-source software.

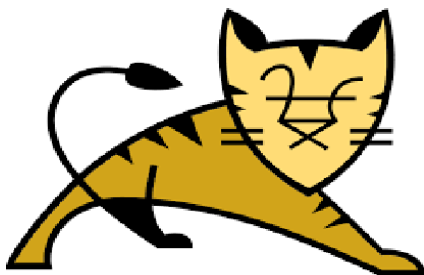


Fig 2- Apache Tomcat

1.2. HTML and CSS:

HTML Stands for "Hypertext Markup Language." HTML is the language used to create webpages. "Hypertext" refersto the hyperlinks that an HTML page may contain. "Markup language" refers to the way tags are used to define the page layout and elements within the page.It is used for client- side.

CSS Stands for "Cascading Style Sheet." Cascading style sheets are used to format the layout of Web pages. They canbe used to define text styles, table sizes, and other aspects ofWeb pages that previously could only be defined in a page's HTML.

Many dynamic websites generate webpages on-the-fly, using a server-side scripting language like PHP or ASP. However, even dynamic pages must be formatted using HTML. Therefore, scripting languages often generate the HTML that is sent to your web browser.



1.3. Java:

that executes JVM are also getting more and more powerful.

Now, Java is one of the fastest programming languages. Well optimized Java code is nearly as fast as lower level languages like C/C++, and much faster than Python, PHP etc.

- Fig 3- User Interface

D) Java is secure: The Java platform provides various features for security of Java applications.

The Java platform is designed with security features built

Java is a general-purpose language used as both server-side and desktop programming language. Java is compiled and strongly-typed language.

Features of Java Programming Language:

A) Java is platform independent: Java was built with the philosophy of "write once, run anywhere" (WORA). The Java code (pure Java code and libraries) you write on one platform (operating system) will run on other platforms with no modification. To run Java, an abstract machine called Java Virtual Machine (JVM) is used. The JVM executes the Java bytecode. Then, the CPU executes the JVM. Since all JVMs work exactly the same, the same code works on other operating systems as well, making Java platform-independent. The language and runtime system such as static type-checking at compile time and runtime checking (security manager), which let you create applications that can't be invaded from outside. You never hear about viruses attacking Java applications.

E) Large Standard Library: One of the reasons why Java is widely used is because of the availability of huge standard library. The Java environment has hundreds of classes and methods under different packages to help software developers like us.

B) An object-oriented Language: There are different styles of programming. Object-oriented approach is one of the popular programming styles. In object-oriented programming, a complex problem is divided into smaller sets by creating objects. This makes your code reusable, has design benefits, and makes code easier to maintain.

1.4. MySQL:



Many programming languages including Java, Python, and C++ has object-oriented features. If you are serious about programming, you should definitely learn object-oriented style of programming.

Java is fast: The earlier versions of Java were criticized for being slow. However, things are completely different now. The new JVMs are significantly faster. And, the CPU MySQL is an Oracle-backed open source relational database management system (RDBMS) based on Structured Query Language (SQL).MySQL runs on virtually all platforms, including Linux, UNIX and Windows. Although it can be used in a wide range of applications, MySQL is most often associated with web applications and online publishing. SQL is the most popular language for adding, accessing and managing content in a database. It is most noted for its quick processing, proven reliability, ease and flexibility of use. MySQL is an essential part of almost every open-source PHP application. SQLyog is one of the GUI tool for the RDBMS MySQL. It is developed by Webyog, Inc. based in Bangalore, India and Santa Clara California.



Fig 5-SQLyog



2. EXISTING SYSTEM:

The existing system is purely manual which involves in duplication of the record, requires paper and copying supplies, as well as the staff to create and distribute the copies. One of the great concerns is the lack of access to the record. Only one person at a time may use the report and the report has to be in a single location. Staff needing access to the record must wait until it is available for their use. Searches for misfiled charts waste time. Staff members' time is required to deliver paper records to a specific location.

Fig 6- Stained Documents

If the paper record is not readily available, clerical staff responsible for filing documentation may need to make

several attempts before the task is completed and if it doesn't work out the patient has to undergo all the tests once again which may degrade his health and even it takes much time. There are limitations to the physical quality of the paper record. The paper is fragile and does not last permanently. Normal use of the record may result in torn or stained documents.

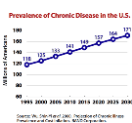
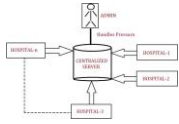


Chart 1-Showing the Constant Increase of Chronic Diseases in the U.S.

PROPOSED SYSTEM:



We propose a system that allows to procure the medical records digitally by scanning them and integrating these records with all the branches of the Government hospitals. This comes into handy when a doctor wants to review ones inactive medications.

Fig 7-Block Diagram

When a health facility has documented their workflow and chosen their software solution they must then consider the hardware and supporting device infrastructure for the end users. Staff and patients will need to engage with various devices throughout a patient's stay and charting workflow. Computers, laptops, all-in-one computers, tablets, mouse, keyboards and monitors are all hardware devices that may be utilized.



Fig 8-Digital Medical Records

3. CONCLUSION:

Digital health record systems hold great promise for improved patient care. These digital records made everything more easy and comfortable plus the entered data and information is more accurate and safety.

Computer-based patient records and the systems in which they function are becoming an essential technology for health care in part because the information management challenges faced by health care professionals are increasing daily.

The convenience of Digital Medical Records is spreading like the plague, and will only continue to do so in the future.

While spreading, the conveniences gained from using Digital Medical Records will also increase and end up being a huge factor for many places to save time and money. The rapid daily increase of technology will only serve as a catalyst to what the modern-day System could possibly transform into. Digital Medical Records are the topmost-have for the future of the medical fields

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