Efficient Doctor Patient Portal

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Abstract: **We here propose a doctor patient handling, managing system that helps doctors in their work and also patients to book doctor appointments and view medical progress. The system allows doctors to manage their booking slots online. Patients are allowed to book empty slots online and those slots are reserved in their name. The system manages the appointment data for multiple doctors for various date and times. Each time a user visits a doctor his/her medical entry is stored in the database by doctor. Next time a user logs in he may view his/her entire medical history as and when needed. At the same time a doctor may view patients medical history even bore the patient visits him. This allows for an automated patient doctor handling system through an online interface. This system also allows users to upload their images or any reports to the required doctor.**

Keywords: **Agile Model, Codeigniter, MVC (Model, View, Controller), NetBeans, PHP Scripting, Third Party Developers, XAMMP.**

I.   INTRODUCTION

Currently, the scenario is such that the patient who's suffering from any disease has to go to the doctor's clinic in order to book an appointment. There is no such software that can tell the patient what disease he/she is suffering from based on the symptoms given. Similarly the software nowadays don't give you the option of finding a doctor based on the location or may be on his name or may be on the specialty.

Similarly for the doctor, the doctors ask the patients to get their prescriptions when they come for the next appointment. The doctors don't keep track of when the patient appeared last to him/her did. The doctors don't even know who they are going to visit for the day so that they can manage their appointments according to that. Efficient doctor patient portal is a managing system that helps doctors as well as the patients by providing options of booking appointments as per the convenience of both doctor and patients with the motive of medical progress. Through this system, doctors can easily manage the appointment slots online. System will make all the empty slots visibly available to the patients, which are booked by the name of any particular patient. The system makes it easy to manage various doctors and their availability on various dates and timings. Doctors maintain the medical history of the patient into their database so that every time any particular patient logs into the system, he/she can easily access their complete medical history whenever needed. In addition, it helps the doctor to refer their patient's medical history for any further prescriptions. This allows for an automated patient doctor handling system through an online interface. This system also allows patient to send their documents may it be their reports or any other images.

II.   BODY OF ARTICLE

We have come up with a software allows the patient to book online appointment as well as can help the patient to find out which doctor would be suitable for him based on the locality he/she lives in or may be what his symptoms are. In this software, the patients need to register themselves by filling up the required fields after filling up those fields the patients are going to get a verification saying that they are a "verified user". After doing this the patients shall get to choose
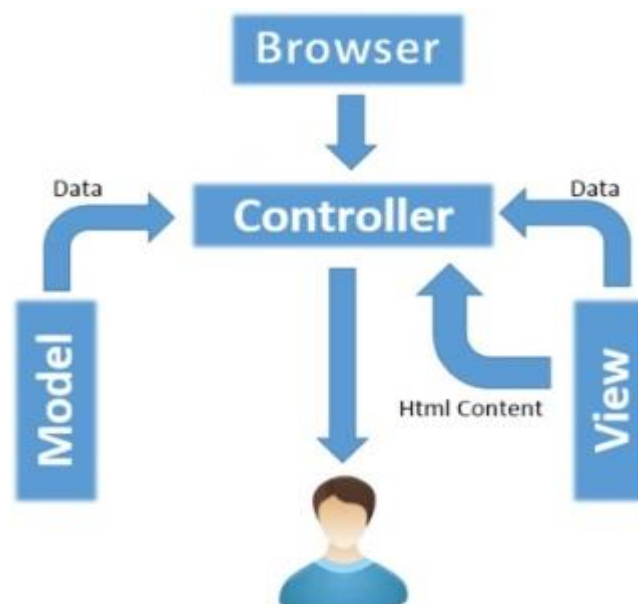
between the options like: book appointments, cancel appointments, search doctor, upload images or logout. The additional options that the patient can also check are: the patient can view which is the current appoint running and manage their time accordingly and reach on time to the doctor.

Similarly for the doctor, the doctor needs to get registered with the admin first. After the admin accepts the doctor, the doctor gets a message saying that the doctor is "verified". After the doctor is a verified doctor, the doctor can login with the username and password. After logging in, the doctor will have to choose from the following options: my appointments, view patient, add description, my details or may be log out. The additional options may be that the system allows the doctor to view which patients are going to visit, even view the patient's details and update the prescription and also to check the reports the patient has sent him.

The software components are:

1. CodeIgniter:

CodeIgniter is based on the **Model-View-Controller (MVC) development pattern**. MVC is a software approach that separates application logic from presentation. In practice, it permits your web pages to contain minimal scripting since the presentation is separate from the PHP scripting.

The **Model** represents your data structures. Typically, your model classes will contain functions that help you retrieve, insert and update information in your database.

The **View** is information that is being presented to a user. A View will normally be a web page, but in CodeIgniter, a view can also be a page fragment like a header or footer. It can also be an RSS page, or any other type of "page".

The **Controller** serves as an intermediary between the Model, the View, and any other resources needed to process the HTTP request and generate a web page.
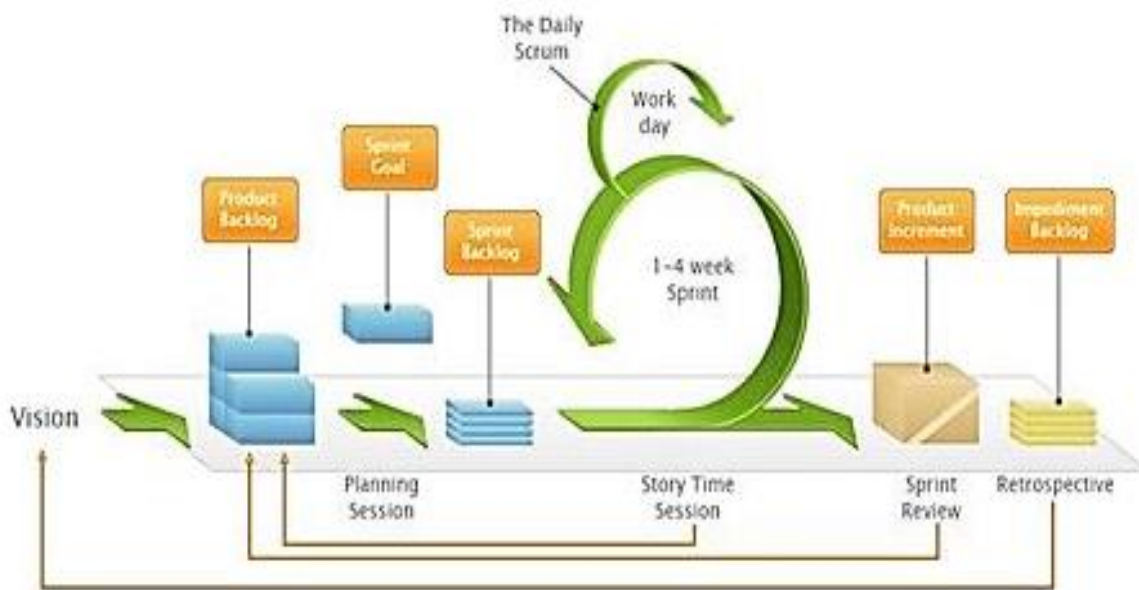
2. XAMPP:

XAMPP is a free and open source cross-platform web server solution stack package developed by Apache Friends, consisting mainly of the Apache HTTP Server, MariaDB database, and interpreters for scripts written in the PHP and Perl programming languages. XAMPP stands for Cross-Platform (X), Apache (A), MariaDB (M), PHP (P) and Perl (P). It is a simple, lightweight Apache distribution that makes it extremely easy for developers to create a local web server for testing and deployment purposes. Everything needed to set up a web server – server application (Apache), database (MariaDB), and scripting language (PHP) – is included in an extractable file. XAMPP is also cross-platform, which means it works equally well on Linux, Mac and Windows.

3. NetBeans:

NetBeans is a software development platform written in Java. The NetBeans Platform allows applications to be developed from a set of modular software components called modules. Applications based on the NetBeans Platform, including the NetBeans integrated development environment (IDE), can be extended by third party developers. The NetBeans IDE is primarily intended for development in Java, but also supports other languages, in particular PHP, C/C++ and HTML5.

System model:

1. Agile model

Agile software development refers to a group of software development methodologies based on iterative development, where requirements and solutions evolve through collaboration between self-organizing cross-functional teams. Agile methods or Agile processes generally promote a disciplined project management process that encourages frequent inspection and adaptation, a leadership philosophy that encourages teamwork, self-organization and accountability, a set of engineering best practices intended to allow for rapid delivery of high-quality software, and a business approach that aligns development with customer needs and company goals.

Scrum is a subset of Agile. It is a lightweight process framework for agile development, and the most widely-used one.

- A "process framework" is a particular set of practices that must be followed in order for a process to be consistent with the framework. (For example, the Scrum process framework requires the use of development cycles called Sprints, the XP framework requires pair programming, and so forth.)

- "Lightweight" means that the overhead of the process is kept as small as possible, to maximize the amount of productive time available for getting useful work done.

III. CONCLUSION

This system is very useful for the doctor as well as the patient. The doctor can manage his appointments as well as his time and can take care of the patient's history. The doctor does not have to depend on the patient to check his/her medical history as the doctor already has a database in which all the patient's previous visits are stored along with the medications provided. For the patients, this system is again very useful as it allows the patient to check the availability of appointments based on date and time. The patients do not have to travel to the doctor's clinic to show the doctor their reports while they can upload the reports in form of images to the doctor.

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