Project Title: PANDEMIC TRACKING SYSTEM (PST)

1. Introduction

PANDTRACK is an online website that completely automates the process of daily activities of Health Care System. This project will help medical officers, patients and doctors to simplify and generalize the activities of the healthcare system by providing a platform where they can meet all their medical requirements.

System is mainly used by medical officers in health department to access the pandemic patients details and also include their symptoms. The software has the facility to give a unique ID for every patient and stores the details of every contact listed people. It will separate the pandemic areas into different hot-spots. The software updates the number of pandemic patients and hot-spot areas.

2. Technology Stack and Tools

Backend:

This application has a back-end that is developed using PHP and MySQL. PHP code may be embedded into HTML code or it can be utilized in combination with a range of web template systems, web content management system and web frameworks. PHP has been extensively ported and can be deployed on most web servers on almost every OS and platform.

MySQL is a relational database management system (RDBMS) that runs as a server, providing multi-user access to a variety of databases. The MySQL Database Server is extremely fast, reliable and easy to use. It allows all the necessary CRUD operations to handle the patient, users and hot-spot details.

Frontend:

It is written in Bootstrap which is a free front-end framework for developing easier and quicker website. It contains CSS and HTML based design templates for typography, forms, buttons, tables, navigation, modals, image carousels and lots of other, like optional JavaScript plugins. Bootstrap also allows you to develop responsive websites. Responsive web design is creating web sites which automatically adjust themselves to look good on all devices, from small phones to large desktops.

JavaScript is used to write down functions that are embedded in or included from HTML pages which interact with the Document Object Model (DOM) of the page.

CSS is used primarily to allow the separation of document content from document presentation, including elements like the colors, fonts and layout.

HTML is used to allow images and objects to be embedded and used to create interactive forms. It provides a way to make structured documents by denoting structural semantics for text like headings, paragraphs, lists, links, quotes and other items.

3. Features and Functionalities

- Online registration for pandemic diseases.
- Medicine and Consultation history.
- Pandemic areas are identified into hot-spots.
- Find contact and primary contact listed people.
- Disease, symptoms, medicines information.
- Duty schedule of available Doctors.
- Table data can be copied/download in CSV, XLS/XLSX and PDF formats.

4. Benefits and Applications

The project is developed in a client server architecture. The USER MODULE resides in the client side and the server side is the ADMIN MODULE. The project has 3 modules namely Patients, Users/Doctor and Health care department/Admin.

The Admin has the privilege to manage and maintain all the information in the website. The admin can view/manage the Patients Information, Pandemic Areas, Doctor Types and Patient Diagnosis Report.

In the client side, the website is used by Patients, Doctors and Medical officers. They should register and login to the website, and can make use of the services provided by the site. Doctor module contain daily duty list, consultation date and time, discharge details, diseases, symptoms and medicines. Pandemic Areas with high incidence of the disease are identified as hot-spots and daily case reports are shown. Patient module contain patient symptoms, diagnosis and their contact list. Patients can view and update their profile. Every information about patient consultation history and medicines are included.

5. Conclusion

PANDTRACK provides the facilities for online registration for pandemic diseases, symptoms diagnosis, source, contact list details, consultation history and divided into hot-spot areas. All system modules are tested and found productive. The system is well efficient and can easily interact with the users. In future, any modifications or enhancements if required can be done to suit the requirements of the time. Also further modules can be added to it, to add more features.