DR. PHARMA - LIVE DOCTOR CLINIC AND MEDICAL STORE

This pdf is an introduction to the project, some plans and ideas, and some sort of a to-do list for the developers working on it. We shall update this pdf as and when we update the work done on this project. This will act as a guide to the general structure and some general conventions to follow to keep track of our work and debug when necessary.

This is a first draft of the PROJECT PLAN ahead. Along with an initial commit of the Appointments feature. Lets MAKE A MIND-BLOWING WORK AND HAVE LOADS OF FUN AHEAD 😎😎😎😊😊😊😁😁😁😁😁😁😄😄😄🥳🥳🥳🥳!!!!

Project Name: **DR. PHARMA - LIVE DOCTOR CLINIC AND MEDICAL STORE**
Team:
- Ankan halder : Login/Sign up , Appointment booking , Live Video Conferencing
- Suchana Nag: Ecommerce - Medicine Shop
- Soumajit Ghosh: Admin Dashboard

PRIMARY FEATURES OF THE PROJECT:
- **Login or Sign Up as a Doctor**
- **Login or Sign Up as a Patient**
- **Patients can book and cancel Appointments**
- **Doctor can Accept and Cancel Appointments**
- **Patients and Doctors can view their corresponding Appointments**
- **Patients can Doctors can Video Conference(yet to be set up)**
- **Ecommerce- Customers can Browse different categories of medications**
- **Medications have different Options like - Paracetamol - 500,650,1000mg , thus would need a mysql structure of 3 tables**
- **Filtering and Sorting of Medical shop**
- **All features of a modern Ecommerce**
- **Cart Feature with extra table with cus id(patient id or doctor id)**
- **Checkout Page with Address, dynamic Price from Cart , Cash on Delivery - no need of Payment APIs**

- **Individual Pages for products with suggestions for more products**
- **Admin - can view All Appointments**
- **Admin can View All registered patients and Doctors**
- **Admin can Add/Edit/Remove Products, Categories**

Videos For Getting into JSP AND SERVLETS:

1. **https://www.youtube.com/watch?v=4ZmohlE3toQ(setting up)**
2. **https://www.youtube.com/watch?v=rkAayxUcHAY&t=741s(1st prog)**
3. **https://youtube.com/playlist?list=PLfu_Bpi_zcDOn8ajnuLY6g1C6 hc_eeDFl&si=orDcW-4NGFQ6zU_r (V.IMP covers basics, great playlist for getting started)**
4. **https://www.youtube.com/watch?v=Yb688IQjPnc&t=7965s (V.V.imp , complete project with jsp and servlets)**

Now, lets get into our Project Structure:

I have tried to keep a monitored project structure to ensure scalability and easier debugging. So please no random jsps in webApp. Folders are created for specific jsps and packages for specific servlets and classes and I would advice for the same to make debugging easier.

PROJECT STRUCTURE:

- **When you open the project, You will find several packages for specific project functions.**
- **com.DAO for all DAOs**

- **Com.db is done … it is to connect to mysql .. no need of modification**
- **Com.modals is for ALL the Database Schemas that u would make/require. It is for the Object Modals to store in Database**
- **Com.routes is to handle ROUTING for Individual MAIN PAGES of these applications.**
- **A USER MUST NEVER BE ABLE TO ACCESS A FREE JSP LIKE THE ABOVE YOUTUBE TUTORIALS SHOW. A AND ALL JSP MUST ONLY BE SERVED THROUGH routes i.e servlets in com.routes package under src/main/java**
- **Utility Servlets are for utility , i.e they handle rerouting, click events, parameter management, data fetching , etc that do not involve directly serving a main page. Main pages are served through com.routes package and utility servlets are in com.utilityServlets…..**

- **Now lets come to the Folder structure for JSPs**
- **As I said, no loose jsps that can be accessed by clients by typing the url**
- **Any JSP directly under webapp can be accessed by clients by typing {domainName}/{projectName}/{filename.jsp} which is unintended and unprofessional . So All jsps have their own folders and thus hidden from direct access and are served through servlets**
- **All MAIN pages are under the webapp/pages directory. These are the main pages that are served by the Route Servlets in the com.route package.**
- **MAIN pages are just giant containers for actual page functionality. You are advised to completely break appart the page functionalities and create separate components and include them in the MAIN pages. Routing Servlets only serve MAIN pages i.e jsps under the webapp/pages …. These jsps are built of tiny component jsps that live in the webapp/component Folder**

- **Please Do large JSPs in the pages folder or any large jsp. Please break up your code into tiny components so that they are easier to debug and understand and fix for all of us. Looking at a 100 line html/jsp and finding the bad code is ver difficult**
- **Eg. I have a Login main jsp broken up into a Sign In component, A sign up components and and a welcome screen component**
- **Breaking a page into components also increases readability and reusability.**
- **So components jsps that make up the main jsp page that you are serving, lives under the components folder**
- **I have create my own subFolder called APPOINTMENTS under components that has ALL my component jsps ….**
- **Please create your own subFolder under components like MEDISTORE for SUCHANA and ADMIN for Soumyajit**
- **Please create subFolders within your folder as and when required to increase scalability and readability as per your judgement…. Like I have separate folders for Doctor and Patient components**
- **Same Goes for CSS STYLES ….. All Css stylesheets live under webapp/styles folder … Again 3 SubFolders ….. Appointments, medistore and admin for storing our respective css files**
- **Now, Sir was using Bootstrap. Bootstrap needs a lot of customization and still looks very dull and bland… Please Use tailwind instead … Tailwind offers a lot more customization and control**
- **BOOTSTRAP OR NOT,TAINWIND OR NOT , POSITIVELY INCLUDE CSS RESET IN YOUR CODE. CSS RESET IN INCLUDED IN THE STYLES UTIL FILE I HAVE CREATE BUT IT COMES WITH TAILWIND.**
- **So, under components/commons/utils or components/utils/commons u will find tailwind_and_css_reset.jsp plugin that would include css reset and tailwind in your project . You can use that BUT PLEASE DO NOT EDIT THAT FILE AS ALL MY JSPs USE IT AND IT WILL COMPLETELY BREAK MY CODE IF U EDIT THIS FILE.**

- If u need Bootstrap(please dont), create a separate included.jsp and use at your own discretion by including in your main pages under webapp/pages. Also include a css reset or my include file(tailwind_and_css_reset.jsp) to get the css reset.
- The css reset is very important as we do not know which computer/browser we will show the demo of the project and the reset will remove browser added styles ensuring browser compatibility.
- Ignore Chat Files created by me. Those are experimental and will be deleted. All chat files jsp and servlets are experimental and will be deleted.
- TO ENSURE WE DO NOT BREAK EACH OTHER's CODE DUE TO UNKNOW REASONS PLEASE MAKE SURE TO POSITIVELY CREATE SEPARATE JSPs AND FOLDERS …. Eg Appointment and Medistore under components and Appointments,Medistore,Admin in styles… Do DONT edit someone else's components/pages … it make break code unnecessarily as we do not know what logic was implemented in their code.
- So to recap , route servlets in com.routes, utility servlerts in com.utilityServlets, db connect is sorted, DAOs in com.DAO , and please follow the folder structure

If Any doubts remain, we can talk and chat and go a gmeet .

WORK LEFT TO BE DONE:
 ANKAN:
 1. Fix a lot of the UI
 2. Logout for Doctors (easy)
 3. Make Changes to View Appointments to reflect status of appointments more clearly
 4. Add video conferencing functionally cross computers using a hosted self-made signaliing server
SUCHANA:

1. No ideas much .. just create A modern Ecommerce Platform with catagories, subcategories, Product options, Category Pages, Product Pages, FILTERING(BY PRICE RANGE,CATAGORY,etc HAve fun with this one) AND SORTING(BY PRICES), Add to CArt , Checkout , create a customer table with email as a primary key maybe , i do not know, I have created doctor and patient table, no need of a separate login, signup … just figure it out girl , I know u can do it.
2. Get Good UI ideas from Youtube videos . You will find a lot of them on Ecommmerce. Keep professional colour scheme but elegant and beautiful. DO NOT GET UI IDEAS FROM JSP ECOMMERCE VIDEOS. That UI is absolute crap. Built React/Next like UIs.. U will find a lot of them in youtube .. I do not Expect too much UI from JSP and Servlets , just that we will showcase Your project to the whole class and 90% of them are making an ecommerce and I want us to stand out of the crowd. But this project is somewhat meaning less as we are not allowed to use more than half of the modern frameworks and hence not too much worries - do, what you can do and forget the rest. We are probably not deploying it and so chill.
3. You can add/update CATAgories and Products using mySQL workbench or create simple UIless page to do so…. Soumyajit Will create a proper page for Admins….

   Soumyajit:
   1. Discuss Later

GETTING STARTED:

1. Download and setup Eclipse
2. Using Tomcat version 9 or below is required
3. Download and set up mySQL, mySQL Workbench and the mysql-connector jdbc MVN jar as per the youtube videos

4. Implement the following query to set up databases for login sign up so that the project is up and running on your side.

```
create database PHARMACY;
use PHARMACY;
CREATE TABLE DEPARTMENTS (
    dept_no INT PRIMARY KEY,
    dept_name VARCHAR(50) NOT NULL CHECK (
        dept_name IN ('NEUROLOGY', 'MEDICINE', 'PEDIATRICS', 'DERMATOLOGIST',
                'UROLOGY', 'GYNAECOLOGY', 'CARDIOLOGY', 'OPHTHALMOLOGY')
    )
);

CREATE TABLE Doctors (
    id INT AUTO_INCREMENT PRIMARY KEY,
    email VARCHAR(20) UNIQUE NOT NULL,
    name VARCHAR(20) NOT NULL,
    password VARCHAR(20) NOT NULL,
    join_date DATE NOT NULL,
    qualifications VARCHAR(20) NOT NULL,
    dept_no INT,
    gender ENUM('M', 'F') NOT NULL,
    FOREIGN KEY (dept_no) REFERENCES Departments(dept_no)
);
CREATE TABLE Patients (
    id INT AUTO_INCREMENT PRIMARY KEY,
    email VARCHAR(20) UNIQUE NOT NULL,
    name VARCHAR(20) NOT NULL,
    password VARCHAR(20) NOT NULL,
    gender ENUM('M', 'F') NOT NULL
);
```

```sql
CREATE TABLE appointments (
    id INT AUTO_INCREMENT PRIMARY KEY,
    made_on DATE NOT NULL,
    scheduled_date DATE NOT NULL,
    status ENUM('PENDING', 'COMPLETED', 'ACCEPTED') NOT NULL,
    diagnosis VARCHAR(100),
    pat_email VARCHAR(20) NOT NULL,
    doc_email VARCHAR(20) NOT NULL
);
```

- **You will find the above sql queries and this pdf in webapp/for devs**

IMPORTANT NOTES

- **Make sure not not edit others code yet. Create and work in separate folders under components and styles. We do share the pages folder and The JAva packages. But do not edit precreated Java packages by others without telling them.**
- **PLEASE SET UP MYSQL Connector.**
- **IMPORTANT: In the com.Db package , in DBConnect, you will find a connection to mysql. Change and update it with your own mysql password for the code to work.**
- **For Further Discussions, lets do a gmeet someday ..**

THANKING YOU,

ANKAN HALDER
IT 407
(TEAM 5)