WE4YOU - System for Online Medicine Purchasing and Online Consultation

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Abstract - Health is a vital part of our life, we must ensure that we get the best quality of treatment and also the purchase of medicine through pharmacies is not easily accessible. There are situations when the medicines are not available in the hospital pharmacy or any local pharmacy at the time of requirement which has resulted in people's lives in critical condition. Especially during this pandemic situation all our basic needs have come to a halt and there is a need to depend on online platforms for our livelihood including purchasing groceries, consulting doctors online. We propose a system which will make the users' life easier. "We4you" is an online platform for purchasing medicine anytime from any location within a fingers tap. Users can purchase medicine online through our app provided they upload their prescription and get it delivered at their doorstep through our agents at the earliest. Once the prescriptions are verified, we place the order with our medicine agents. We have a chatbot system where the users can have a live communication with their preferred hospital staff for enquiries. The users can also consult the doctors online. We will assign the doctors who are available at that time which will avoid the pain of searching for a doctor and also reduces the rush in taking the appointment at the hospital. The medicines which are prescribed by the doctors are send to the pharmacy directly without the involvement of users. The doctors can suggest for a further check-up and the appointment can be made right away. We also filter out the best hospitals or doctors around the users opted location through their previous reviews and ratings which makes the app more user friendly. Our app makes our users' lives more relaxed and simpler.

Key Words: Online medicine, Online Consultation, Medicine purchasing, Live chat, Application

1.INTRODUCTION

The aim of the project is to develop a system which can be used to purchase medicine and consult doctors anytime from anywhere. It is developed using android studio with flutter language. Our system can be used by any person irrespective of their age. The main purpose of our project is to avoid the time taken in purchasing medicine in a physical store and waiting long hours to get an appointment with the doctor. Also the doctors can give a convenient time and date to the patients if further check up is needed which will avoid the time delay in getting an appointment with the same doctor. Through this platform not only the users can purchase but also can get it delivered to their location. The services we provide are accessible in a finger tap and also it can be utilized by anyone as we tried to bring out the minimal design. Purchasing medicine has become a tedious job nowadays. One of the main problems that we face in our daily routine is the unavailability of required medicines at the time of your need and also a huge rush in pharmacies which keeps patients or customers waiting, which results in wastage of time. There are also people who don't have easy access to pharmacies. Secondly, Pre-booking systems are not often followed in Kerala. Also to get an appointment as a walk-in patient requires a lot of patience as there can be a huge rush in the booking counter or many procedures we have to go through to get registered there. Finally in India several cases are being reported for misuse of drugs among the youth which happens due to the mere carelessness of pharmacists or the doctors. The project is based on an online medicine purchasing application where all the registered users can purchase their medicine by just uploading their prescription. The user can register in our app by providing their basic details such as mobile number, Email-id etc. The logged in user can avail any of our services without any interruptions. The primary feature of our system is the online purchasing of medicines. The user has to upload their prescriptions and can purchase any of the medicines which are listed on the prescription. The prescribed medicine will be delivered to the customer. The customer has the option to pay the amount online or during the delivery. This helps the individuals in saving time going to the pharmacy and purchasing the medicines. The user can also avail our online consultation option. Once the user conveys their symptoms that they are facing, we will direct them to the concerned doctor who's available at that time. The doctor can prescribe them medicines which will be uploaded to the app and the admins will send it to the pharmacy nearby to the customers locations and from there the delivery person will collect and hand it over to the user. This avoids the pain of the patients in purchasing the medicines from the physical store. If the doctor cannot identify the problem by examining the patient online, he will assign them a date and time to have a physical consultation with him.The user can also search for the best

hospitals or doctors according to their condition. We filter out the hospitals and doctors upon their request. There is also a chatbot system where the user can have line enquiries with our team. This project will help all those people who have faced a number of difficulties in purchasing their required medicine and also for those who haven't got an appointment with doctors in their convenience. This system will be a life saver for old aged people who don't have a readly access to the pharmacies nor the hospitals, who depend on others for help. It will also help all those who don't know the place, who have come for a visit to the country.

2. PROJECT OBJECTIVE

The main objective of online medicine purchasing and online consultation is reduce the time and difficulty in going to the hospital and pharmacy especially in this pandemic situation. To avoid this problem we have planned to develop a mobile application for online consultation and medicine purchasing.

● Easy to purchase medicines

● Medicines get delivered at the users doorstep

● Takes less time for consulting with doctor

● A user friendly application

3. EXISTING SYSTEMS

There are some sources that provide an online platform for medicine ordering and online consultation. For example, there is a mobile application named 1mg,[1] for medicine ordering,delivery, online consultation and lab tests.Besides delivering your online medicine order at your doorstep, they provide accurate,[5] authoritative & trustworthy information on medicines and help people use their medicines effectively[10] and safely[6].They facilitate lab tests at home[11]. You can avail over 2,000 tests and get tested by 120+ top and verified labs at the best prices[1].

Netmeds is a website that provides various facilities like ordering of medicine,[2] lab test, online consultation and medicine subscription.At Netmeds.com, they ensure that you get high-quality life-saving medicines delivered to you on time. Order medicines online at your convenience from across the country[2]. They also deliver Ayurvedic, Homeopathic, Unani and Over-The-Counter (OTC) products to over 19,000 pin codes across the country. Remembering to refill medicines month on month to address chronic conditions can be a hassle. Netmeds' subscription service will ensure that you never run out of these vital medicines[2]. Just set it up and your medicines will get refilled and delivered automatically every month to your doorstep[2].

HyperGO is a hyperlocal delivery/e-commerce company devoted towards delivering the best service at your doorstep[7]. The parent company Hyperthink Technologies LLP, has launched HyperGO, an online platform for delivery of pharmaceutical items and groceries (including vegetables and meat) at doorstep[7]. Online Pharmacy Customers can order medicines by sending a doctor's prescription (for prescription medicines). On the other hand they are selling groceries, vegetables, fish and meat in an innovative manner where the customer has an option to book 'HyperGO truck' through the mobile app allowing customers to pick and choose all their items from their doorstep[3].

PharmEasy enables you to order pharmaceutical and healthcare products online by connecting you to registered retail pharmacies and getting them delivered to your home. [4]They are an online medical store, making your purchase easy, simple, and affordable. Their doorstep delivery service is available in PAN-India across top cities like Bangalore, Delhi, Mumbai, Kolkata, Hyderabad, Gurgaon, Noida, Pune, etc. Their online medical store also allows you to choose from 1 lakh+ products incl. OTC products and medical equipment[8]. PharmEasy is a one-stop online medical platform where you can also book diagnostic tests including blood tests[4], full-body checkups, and other preventive health check-ups at an affordable cost, right from the comfort of your home[12]. They have partnered with trusted & certified labs that arrange for a sample pick-up from the convenience of your home[9]. They also provide you with timely reports[9]. It's tough to remember to refill every month, especially in the case of chronic diseases[4]. PharmEasy's subscription service not only ensures that you are reminded of your refills but also makes sure that you are never out of your medical essentials. You will get a reminder every month and your order will be delivered at your convenience.

4. PROPOSED SYSTEM

To design and implement a system which can be used for purchasing medicines and for online consultation. This system brings out the easiest way to achieve all the above functions in less time. As in this pandemic situation, pharmacies and hospitals are not easily accessible. The system allows the users to purchase the medicine which is prescribed by the doctors once they upload the prescription. The patients can also have online consultation with any of the available doctors once booking is confirmed. The system will have different types of accounts for different users such as Admin, Login, User, Pharmacy. Each user can access the system through their

login id and password. The system uses firebase for database management.

5. SYSTEM DESIGN

The system is divided into 4 modules as Login module, Admin module, User module and Pharmacy module. Each module has the same login page.

5.1 Login Module

Input to the login module is the user login credentials and the output is the successful login of the user. An already registered user can login to the app using their login credentials. Once the user enters the login ID and password it will be validated by the administrator module. There is a chance that user may forget his/her password, in such

a situation we provide a forgot password option for through which they can reset their password. For a new user to access the service they have to get registered with our app. For this purpose, they have to provide their name, email ID, phone number, address and can set a unique password. The password can be a combination of special characters, capital letter, small letter and numbers. This will be stored to our database next time when the user tries to login with these credentials admin module will check for its validity and then only access will be provided for the user.

5.2 Admin Module

Input to the administrator module is user requests for various services and the details entered by the user. The output is the permission to access the various services provided. When a user tries to login, their credentials are passed to this module and gets verified. Once. The verification is done, the user can login to the app .For resetting the password, the user has to provide their email address which they have provided at the time of registration. Once they enter the email address the administrator checks whether the email address provided by the user is already registered with us or not. If it is already registered a link will be sent to that address for resetting the password. Users can use that link to reset that password and again login to our app with the new credentials and use the services. If the email address doesn't match with any address in our database the user won't be able to reset the password instead, they have to open a new account to access the service.

5.3 User Module

The user module has two functions such as purchasing medicines and online consultation. In order to purchase medicine, the user has to upload the prescription provided by the doctor to the user. Once the user uploads the prescription, we extract the medicines provided in the prescription and display it to the user as a drop-down list. The user can select the medicine from the drop-down list and place the order. Users can order medicine only if they upload the prescription and can order only the medicines in the prescription and the quantity less than or equal to the one prescribed in the prescription. Users who use our online consultation can also order their medicines through our app. For this they don't have to upload the prescription separately as the doctor is uploading the prescription directly. Once the user places the order it will be passed to the nearby pharmacies and the pharmacy who accepts the order first will be considered. When the pharmacy accepts the order an order confirmation message will be sent to the user. Users can do their payment in online or offline mode.

Online consultation is provided for direct doctor patient interaction. Users can simply request to talk with a doctor. If such a request arrives, we will connect our user with the doctor who is available at that time in our app. Users can use this facility to clear their queries. Also, we provide another option in which the user can enter their disease symptoms based on that we redirect the user to the doctor who is related to that disease symptoms and is available in our app. If he is not available at the time of request we ask the user to wait till the doctor is available. When the doctor is available, we pass a notification to the user and they can meet the doctor. If the user needs to meet the doctor at the request time itself then we will redirect them to the doctor who is available at that time and later they can talk with the right doctor. If the doctor wishes that he needs to see his patient physically for further examination, he can ask the patient to visit him at his hospital and give an appointment. The user can go and meet the doctor at that time. After the online consultation, if the doctor prescribed some medicine, users can order them through our app itself. A copy of the prescription can be downloaded from our app and can be kept with the user.

5.4 Pharmacy Module

Input to this module is the order placed by the user and the output is the order acceptance. Once the user places the order it is passed to all the nearby pharmacies. Along with the order details the prescription uploaded by the user is also shared with the pharmacy. When the order request comes to each pharmacy, they check the order and if all the medicine in the list is there in the pharmacy then they confirm the order. The order will be placed to the pharmacy who confirms the order first.

6. TECHNOLOGY USED

● Visual studio code

● Flutter

● Dialog Flow

● Firebase

● OCR

7. RESULT

The login page of the system is shown in Figure 1. The user can login to the app using their credentials.

Figure 2 : Medicine order

The admin dashboard is shown in Figure 3 which shows all the orders placed.

Figure 1: Login Page

The user uploads their prescription to the system, the list of medicines they can purchase will be shown as in Figure 2 with the quantity required and the price.
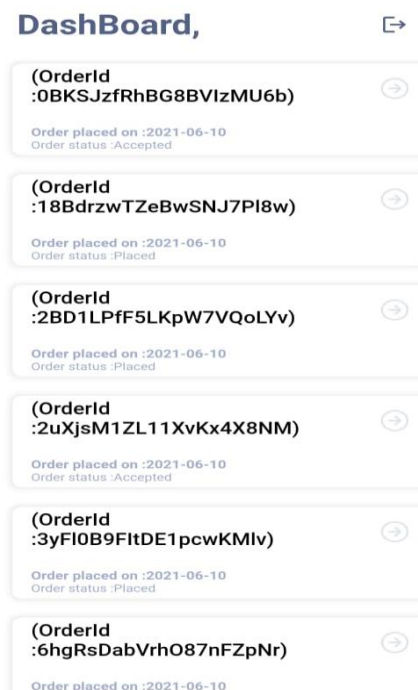

Figure 3: Admin Dashboard

The details of the medicines purchased with the total amount in the admin page as shown in Figure 4.

Figure 4: Order Details

8. CONCLUSIONS

The purpose of this project "WE4YOU" is to provide a platform where purchasing of medicine and consultation with doctors can be done in no time. Through this the user can order the medicines that are prescribed and get delivered at their doorstep in less time. They can also avail the online consultation feature that we provide. The patient can provide us with their symptoms and we connect them to a doctor who's available at that time. The administrator plays a major role in our project as he is the one who verifies the user, connects the user to the respective doctors and connects with the pharmacies. This project will help all those people who have faced a number of difficulties in purchasing their required medicine and also for those who haven't got an appointment with doctors in their convenience. This system will be a life saver for old aged people who don't have easy access to the pharmacies nor the hospitals, who depend on others for help. It will also help all those who don't know the place, who have come for a visit in the country.

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