# Chapter 4 **System Design**

#### **SYSTEM DESIGN**

#### 4.1 Software Design In Context

System Design is the abstraction of a solution; it is a general description of the solution to a problem without the details. Design is view patterns seen in the analysis phase to be a pattern in a design phase. After design phase we can reduce the time required to create the implementation. HHH has created an organization that we believe fulfills the promise of health information on the Internet. We provide credible information, supportive communities, and in-depth reference material about health subjects that matter to you. We are a source for original and timely health information as well as material from well known content providers.

The HHH content staff blends award-winning expertise in journalism, content creation, community services, expert commentary, and medical review to give our users a variety of ways to find what they are looking for.

And that, we believe, requires dedicated professionals with state-of-the-art expertise in:

- Health news for the public
- Creating and maintaining up-to-date medical reference content databases
- Medical imagery, graphics, and animation
- Communities
- Live web events
- User experience
- Interactive tools

#### 4.2 Methodology

We are dedicated to providing quality health information and to upholding the integrity of our editorial process. As serious as we are about credibility, we also know that at times, health information can and should be engaging, exciting, and entertaining.

We pride ourselves in knowing our audience's needs and delivering the most appropriate experience. We know that there is a difference between using a health site for health "performance" issues vs. health research needs vs. community support. Our mission is to fulfill all these needs in the most appropriate ways possible.

HHH is passionate about helping Doctors deliver better patient care. Our products are designed to make managing clinics a breeze. We empower Doctors with critical patient information anytime, anywhere so that they can make better decisions for patients. We pride ourselves for being super focused on the basics - Ease of use, honest pricing, great service, and respect for trust that Doctors place in us.

It also helps connects hospitals, doctors, patients in such a way that the wall of ignorance comes down. The whole process is meant to bring together these three entities in such a way that transparency ensues. The idea of Heal Helping Hand is to actually extend e-help and make this health-procedure better and rewarding for all of us. Since it is so difficult in India to gather complete information before reaching the test center, we designed for it all to be available at one site. As an ambitious dream, we see it actually decreasing differences between all kinds of people. We will also empower the poor to have full knowledge of cheaper and free dispensaries to make an informed decision about their health. Since a mobile phone is in everybody's hands these days, it makes sense to give them a tool to find relevant information.

- ✓ HHH offers a hassle-free online feature to doctors. With HHH, doctors can manage appointments, distinguish consultant appointment and chat within the site with prospective patients for an indefinite time.
- ✓ Treatment: HHH enables doctors to manage and search billing information and suggest future tests on the same screen. Doctors can also easily search patient treatment history.
- ✓ Blog: Doctors can very cheaply manage their practise and grow their presence online by being active bloggers and posting health tips that are very useful to anyone logging onto the site.

HHH is committed to empowering doctors with pivotal patient information. Go online to start a live chat or simply call us.

# 4.3 Design Stakeholders

i.	Patients	The patients who log in to the website to view their reports and consult a doctor using the chat feature.
ii.	Doctors	Can analyze the reports of their patients, can give them recommendations. They receive their consultation fee through PayPal integrated within HHH.
iii.	Hospitals	All hospitals in the network have their details, video tours, geo locations, test prices in the DB and their login is important for all prices to feature in the main panel.
iv.	Site Admin	The main person responsible for the smooth functioning of the whole site, approval for changes and updating to the details is a very important stakeholder.
v.	Random Users	These are the users whose search keywords will correspond to the data in our site and will land on HHH to view our content specific search results.
vi.	Health Aficionados	These people will log in, or visit our site and blog for the daily health and wellness updates.
vii.	Medical Agents	Search for offers, list of tests. Provide offers to their customers. Help old people to do the test process the simpler way.
viii.	Users with Pets	Look for basic dog tests, vets, grooming centers, etc.
ix.	Autistics, Infants, Differently- abled	LEARN App makes communication and learning easier. Constructing simple sentences, learning about rooms and what inhabits them. All crucial life exercises made easier.

Table 4.1: List of HHH Stakeholders

#### 4.4 Why Heal Helping Hand

In today's world of ever-expanding healthcare options, insurance labyrinths and multi-faceted teams of healthcare professionals, our patients and their families often find that they must be their own advocates as they navigate through their plans of care and sort out how to pay for them.

As a developing, unique brand, we're active at the state level in helping to influence healthcare legislation in and we're rapidly expanding in Delhi. We attempt to add multitude of features every fortnight. Our patrons will inspire us to teach as well as learn, and we remain apprised of developments in technology, education and in the medical device and pharmaceutical industries that have the potential to make an immediate, positive impact in the lives of our clients.

That's Helping Hands Healthcare at its core, and that's the Helping Hands difference. Our clients are the center of all we do. We understand how to give you the best care possible, and at Helping Hands Healthcare, we put your needs first.



Figure 4.1: Heal Helping Hand Logo

#### 4.5 Design Rationale

## QR Code For Doctor

The Doctor can login only after scanning and authenticating the QR code from the app available exclusively to the Doctors registered on HHH.

#### **OTP for Patients**

Patients will receive a OTP which when confirmed with the DB will allow patient to log in.

## Speech Recognition For Hospital

Accessed through their Android phones and authenticated using Speech recognition.

#### Super-Admin authentication using Secure USB

Only the pen drive can allow the Superadmin access and make changes to the system, permissions.

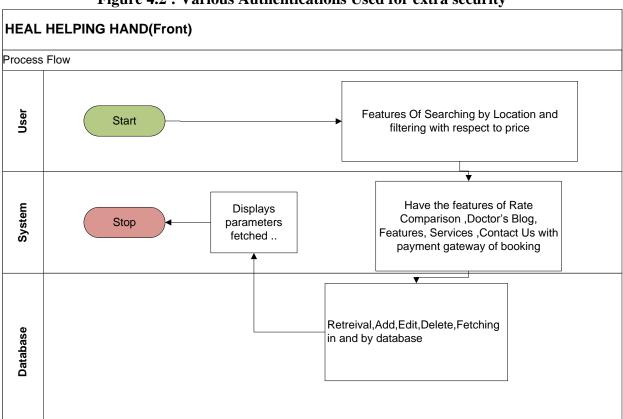


Figure 4.2: Various Authentications Used for extra security

Figure 4.3: Front Panel Functionality

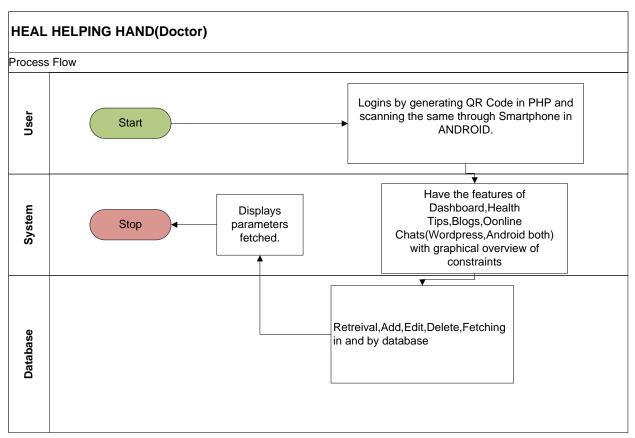


Figure 4.4: Doctor Panel Design

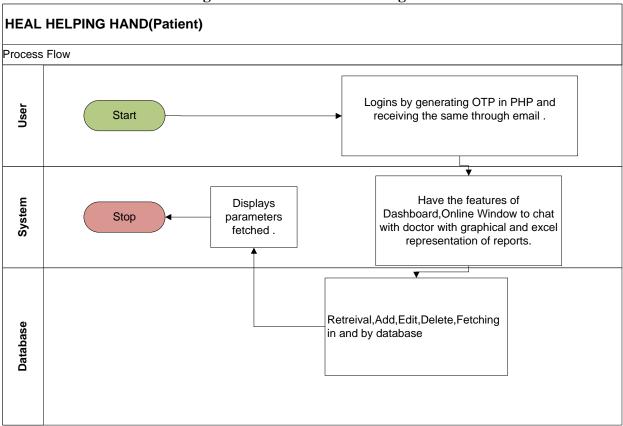


Figure 4.5: Patient Panel

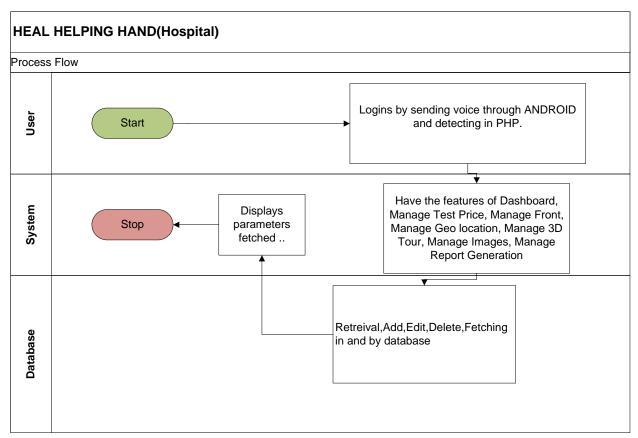


Figure 4.6: Hospital Panel

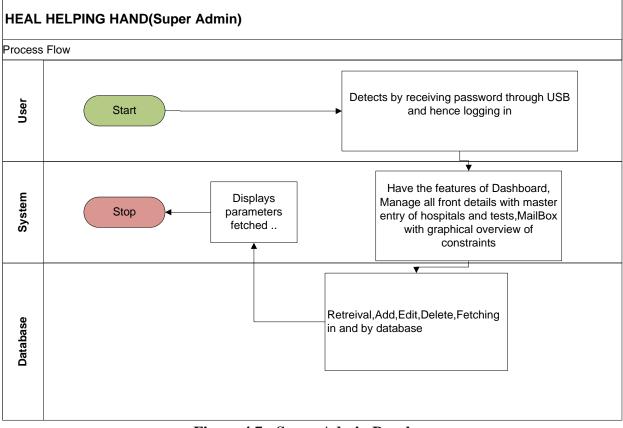


Figure 4.7: Super Admin Panel