

# **System Analysis Report for**

www.echannelling.com

Name – K.A. Gayara Romini Kendawela

Bridge ID – 17851

SLASSCOM Software Development Bootcamp
2023



### **Contents**

1.	Intr	oduction	3
1.	.1.	What is eChannelling?	3
1.	.2.	eChannelling service in Sri Lanka	3
1.	.3.	Benefits in eChannelling	5
2.	Serv	vices	6
2.	.1.	Doctor Channeling - System and Service	6
2.	.2.	Doctor Channeling - Mobile Application (eChannelling)	7
2.	.3.	HIS - (Hospital Information System)	8
3.	Fun	ction and Features	9
3.	.1.	Main Function and Features	9
3.	.2.	Other Functions and Features	10
3.	.2.1.	Tele - Channeling	10
3.	.2.2.	Driving License Medical	11
3.	.2.3.	PCR	12
3.	.3.	Additional Functions and Features	13
3.	.3.1.	Quick Access Options	13
3.	.3.2.	Top Specialists	13
4.	Use	r Guide	.14
5.	Use	rs of The System	.21
5.	.1.	Benefits for users	23
6.	Con	nparison of a similar system	. 25
6.	.1.	Performance	25
6.	.2.	SEO - Search Engine Optimization	26
6.	.3.	Accessibility	26
7.	The	data stored in the database in eChannelling	.27
8.	Tec	hnical diagram of eChannelling syatem	.28
9.	Figu	ıres	.29
10	Rofe	pranca	30

#### 1. Introduction

#### 1.1. What is eChannelling?

eChannelling is an online platform that provides a way for people to schedule appointments with doctors and healthcare providers using the internet. It allows patients to find doctors and make appointments with them from the comfort of their own home or office, without the need to physically visit a hospital or clinic. eChannelling systems typically include a website or mobile app that allows users to search for doctors by specialty, location, and other criteria. Once they find a suitable doctor, they can book an appointment and receive confirmation of their appointment via email or SMS. eChannelling has made it easier for people to access medical care and has helped to streamline the appointment booking process for both patients and healthcare providers.



**Figure 1.1.1** 

#### 1.2. eChannelling service in Sri Lanka

A pioneer in providing a complete ecommerce-based service, eChannelling was launched in 2001 becoming the first software development and ICT service provider to enter the digital healthcare industry in Sri Lanka.



**Figure 1.2.1** 

Over the last 2 decades, eChanneling has revolutionized the Sri Lankan healthcare sector with its innovative doctor channeling service. Strengthening the country's healthcare offerings with cutting-edge technologies, eChannelling has been bridged the gap between healthcare service providers and the public, by improving effectiveness and efficiency in a user-friendly manner. The company's dominance over this domain over the last 2 decades has seen it carve a large market share, with the brand undoubtedly at the forefront when it comes to doctor channeling in Sri Lanka. This has been further validated by the eChannelling brand consistently being a part of the 100 top brands in Sri Lanka, while the latest Brands Annual has placed eChannelling as the top brand in the country. In addition, the Company was awarded as the Best ICT Service Provider -2019 by CFI.Co, United Kingdom.

eChannelling is a subsidiary of Mobitel (PVT) Ltd, a fully-owned subsidiary of Sri Lanka Telecom PLC, and plans are currently in place to further develop the eChannelling network to offer greater value and benefits to the end-user.



**Figure 1.2.2** 

#### 1.3. Benefits in eChannelling

- Convenience: eChannelling provides a convenient way for patients to book appointments with doctors and healthcare providers from the comfort of their own home or office. This eliminates the need to physically visit a hospital or clinic and saves time.
- Access to a wide range of doctors: eChannelling platforms typically have a large database of doctors and healthcare providers, which allows patients to find the right doctor for their needs.
- **Reduced waiting times:** By booking appointments online, patients can avoid long waiting times at hospitals and clinics. This helps to improve the patient experience and reduces the risk of exposure to infectious diseases.
- **Improved efficiency:** eChannelling can help to streamline the appointment booking process for both patients and healthcare providers, which can lead to improved efficiency in the healthcare system.
- **24/7 Availability:** eChannelling systems are usually available 24/7, which means that patients can book appointments at any time, even outside of normal business hours.
- Improved patient outcomes: By making it easier for patients to access medical care, eChannelling can help to improve patient outcomes and reduce the incidence of serious health conditions.



**Figure 1.3.1** 

#### 2. Services

#### 2.1. Doctor Channeling - System and Service

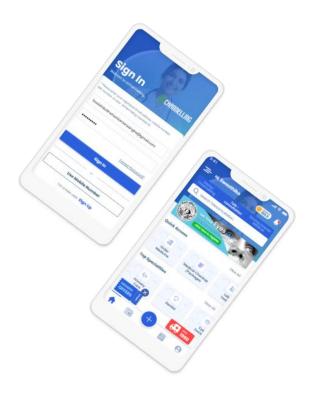
The eChannelling portfolio at present includes a doctor Channeling System and Service that has been implemented in 260-plus hospitals both Private and Ayurvedic; over 5500 doctors; 2000-plus channeling agents; a Hospital Information system; an eChannelling member card; and a mobile application.



**Figure 2.1.1** 

#### 2.2. Doctor Channeling - Mobile Application (eChannelling)

eChannelling is conceptualized to empower Sri Lankans from all walks of life by providing state of the art facilities to enable millions of Sri Lankans residing island wide, thousands living abroad, as well as tourists to obtain health services at the touch of their fingertips. In addition to this, in order to reach remote locations, eChannelling has partnered with various institutions such as Banks, Post Offices, Pharmacies, Supermarkets, third party applications to enhance its services into different market urban and rural areas. Being a sophisticated and comprehensive system with various modules, eChannelling is a user-friendly system designed to provide speed and convenience for its customers. The system is updated real-time, so that patients can see the most up-to-date schedule of a consultant, make appointments with a consultant, and process the payment at their own convenience. Additional features include the doctor notification service, which sends an SMS notification to patients about the doctor's arrival, delay or any other status for the specific session which is a free-of-charge service to all hospitals.



**Figure 2.2.1** 

#### 2.3. HIS - (Hospital Information System)

eChannelling also includes a Queue Management Service that provides customers updates on the current serving appointment number at the room in the hospital for the doctor they have channeled. This can be viewed in both the eChannelling website and the mobile application. eChannelling also offers a Hospital Information System (HIS), which is an integrated hospital management software that supports the complete automation of operations of a multiple-care, residential hospital. eChannelling has also introduced a member card, which is a loyalty card that provides special discounts to customers to channel a doctor. Due to continuous excellence, eChannelling has won multiple awards both locally and internationally, making its mark as the only digital healthcare provider to win such recognitions in Sri Lanka. With this, eChannelling strives to further improve its services by extending its facilities to international providers with the goal of connecting professionals and patients globally with no geographical boundaries.



**Figure 2.3.1** 

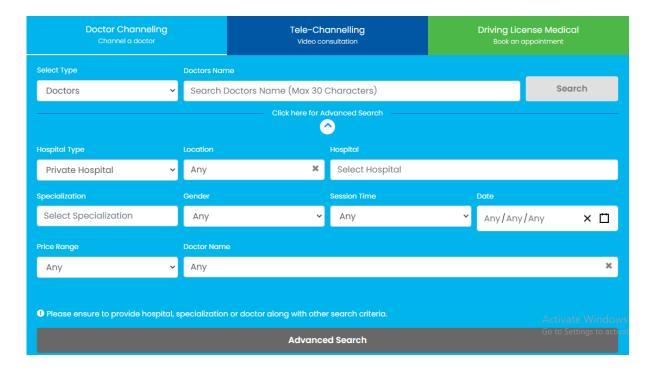
#### 3. Function and Features

#### 3.1. Main Function and Features

The analysis of the system shows that the main function here is that any patient can easily book dates and times online for channeling any doctor in a hospital in his area or in another area. It can be done in two stages. That is normal searching and advanced searching.

Imagine, if you want to be channeled under a doctor you know, you can enter the name of the doctor in the **Search Doctors Name** textbox under normal searching and search. Then he will show the hospitals where he is currently working. From there, select the most convenient hospital for you and click on the Book Now option.

Also, you have been given the opportunity to channel a doctor according to your budget, according to the location, according to the doctor's gender, according to the session time and according to the type of hospital. For that you should use advance searching.



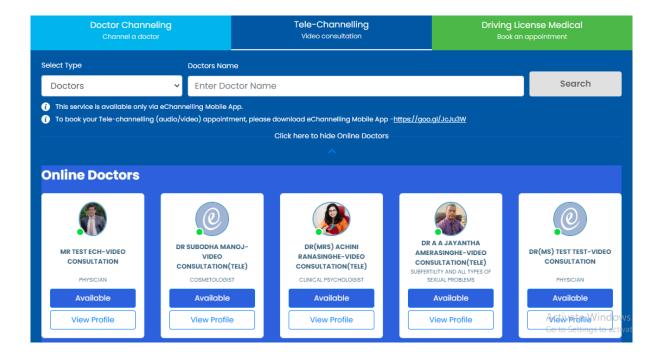
**Figure 3.1.1** 

#### 3.2. Other Functions and Features

Other functions found here are Tele-Channeling, Driving License Medical and PCR.

#### 3.2.1. Tele – Channeling

Through this you can get advice from your doctor online. It happens through video consultations. You can enter the name of the doctor in the **Enter Doctor Name** textbox and search. After you can get advices from you doctor.

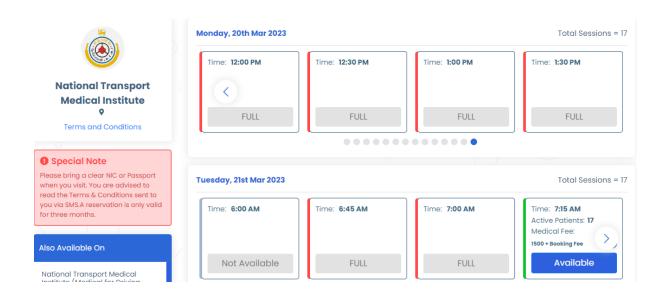


**Figure 3.2.1.1** 

#### 3.2.2. Driving License Medical

This allows you to book dates and times online to get your required medicals for driving license. There you can reserve the dates by specifying the branch and date under the branch name and search.



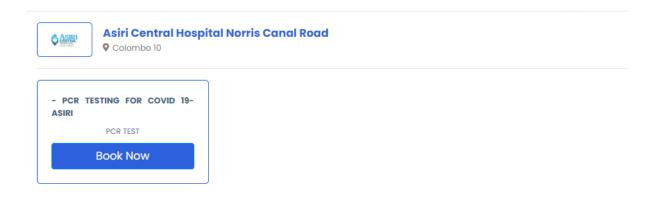


**Figure 3.2.2.1** 

#### 3.2.3. PCR

ASIRI

If you want to get a PCR done, this will show you the places where it will be done. Therefore, this enables you to book an appointment for the same at near Hospital.



# Book PCR Test Saturday, 18th Mar 2023 Total Sessions = 2 Time: 8:00 AM Patient Count: 0 Test Fee: 6500 + Booking Fee South Available Available Available Available

**Figure 3.2.3.1** 

#### 3.3. Additional Functions and Features

Additional functions found here are Quick Access options and Top Specialists.

#### 3.3.1. Quick Access Options

Through this you can get services via online.



**Figure 3.3.1.1** 

#### **3.3.2.** Top Specialists

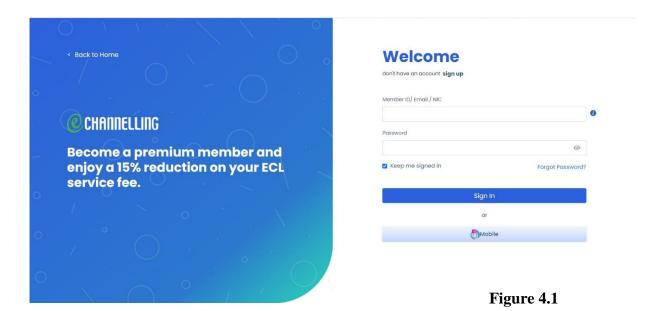
Through this you can select a doctor you want via online.



**Figure 3.3.2.1** 

#### 4. User Guide

- First you have to enter to the system by **Sign In** option.
- Then you can see the below interface.
- If you already have an account, you can log in to the system by entering the **email** and **password.**



• You can log in to the system by the entering the mobile number and enter the OTP code received to your mobile phone.

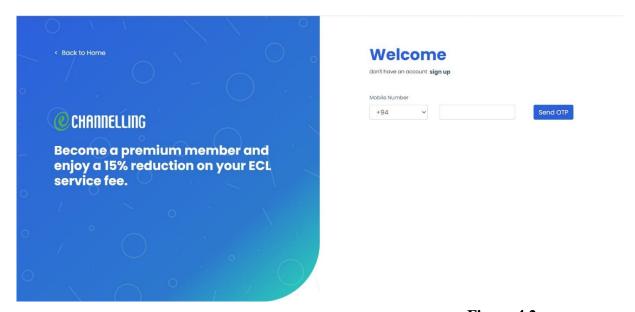


Figure 4.2

- If you already have an account, you can log in to the system by entering the email and password.
- If not, you need to click sign up option and fill below details.

#### Step 01 – Select your nationality and add your phone number.

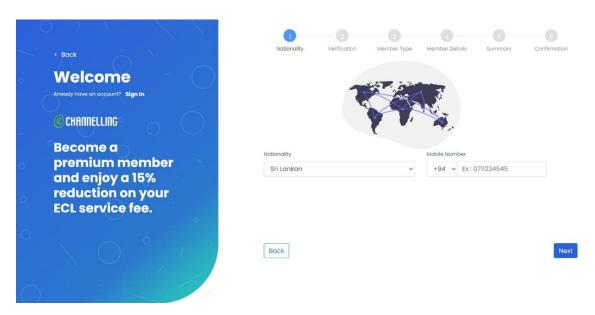


Figure 4.3

# Step 02 – After entering you phone number; they have sent OTP to your mobile number. So, enter it and press verify.

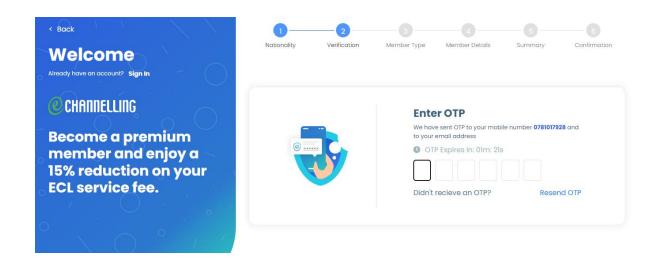


Figure 4.4

Step 03 – Next select your package and press next.

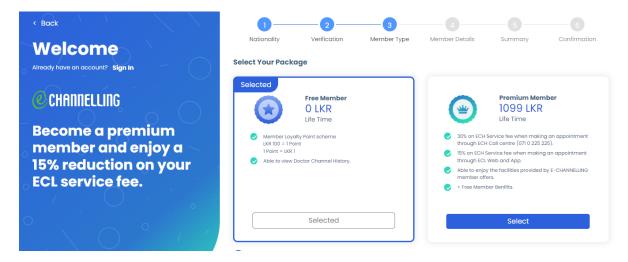


Figure 4.5

Step 04 – Now you want to fill details about you and press next button.

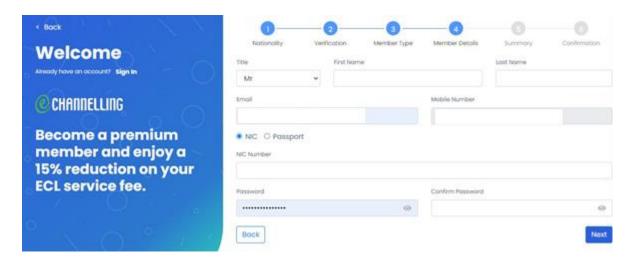


Figure 4.6

When you create a password, you should need to follow below conditions.

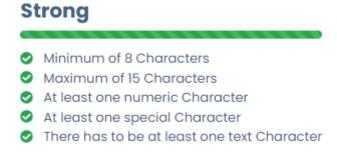


Figure 4.7

Step 05 – After you can see a summary. Then you want put a tik for "Click here to Agree". Next press the next button.

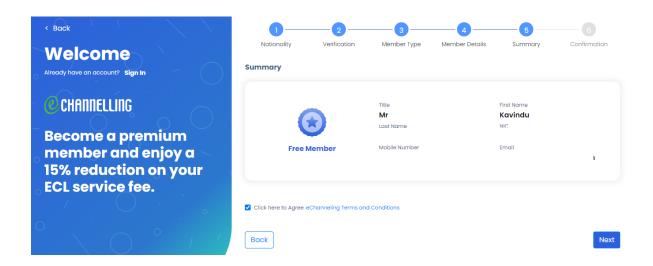


Figure 4.8

• After successfully sign up, you can see the below interface with your user's name.



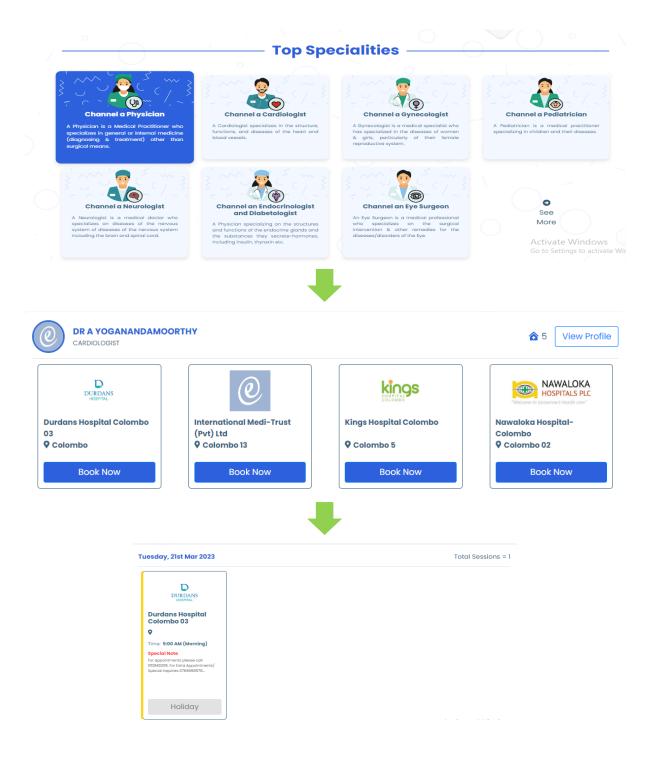
Figure 4.9

• Okay, now let's channel a doctor. If you want to channel the doctor you used to channel, you can mention the select type and doctor name and click the search button to book the appointment.



Figure 4.10

• If you want to channel a top specialist, then go to the top specialist section. Click on the category you want to be a channel from. Then select the relevant specialist and make the booking.



**Figure 4.11** 

• Follow above instructions to log in the system through eChannelling App also.



Figure 4.12

#### 5. Users of The System

A typical web – based system has users with different right and permissions who use it for different purposes. Some users retrieve data and some back it up. The users of this web – based system can be broadly categorized as follows.

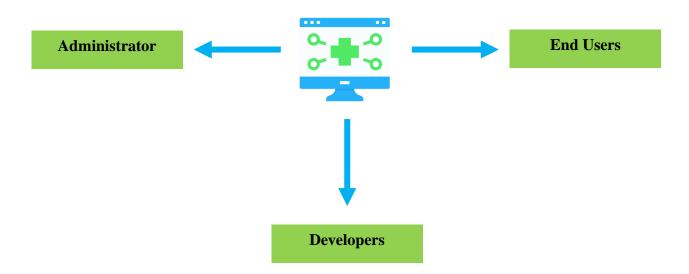


Figure 5.1

#### **Administrator**

Administrator maintain the web – based system and responsible for administrating the database. He is responsible to look after its usage and by whom it should be used. They create access profiles for users and apply limitations to maintain isolation and force security.

Administrators play a crucial role in managing eChannelling systems. They are responsible for overseeing the day-to-day operations of the platform, ensuring that it runs smoothly and efficiently, and addressing any issues that arise.

#### **Developers**

The group of people who actually work on the designing and developing part of the system.

eChannelling systems are typically developed by software development companies that specialize in healthcare technology solutions. These companies have expertise in developing software applications that can be used to manage medical records, patient appointments, and other healthcare-related tasks.

For example,

Mobitel is a leading telecommunications company in Sri Lanka that offers a range of digital services, including eChannelling. Its eChannelling platform allows patients to book appointments with doctors and healthcare providers using their mobile devices.

#### **End Users**

End users are those who actually reap the benefits of having a web – based software system.

- Patients: Patients can use eChannelling platforms to book appointments with doctors and healthcare providers. They can search for doctors based on specialty, location, availability, and other criteria. Once they find a suitable doctor, they can book an appointment and receive confirmation via email or SMS.
- **Healthcare providers:** Healthcare providers can use eChannelling platforms to manage their appointments and patient records. They can view their schedules, update patient records, and communicate with patients via the platform.
- **Hospitals and clinics:** Hospitals and clinics can use eChannelling platforms to manage their appointment booking systems. They can use the platform to manage patient records, monitor appointment schedules, and optimize their resources.
- **Insurance companies:** Insurance companies can use eChannelling platforms to manage their policyholders' medical appointments. They can use the platform to track appointment schedules, monitor treatment outcomes, and analyze medical costs.

#### **5.1.** Benefits for users

#### Administrator

- Accessibility: Because a web-based system can be accessed from any device with an internet connection, administrators can access the system from anywhere, at any time.
- **Easy updates:** Updating a web-based system is usually easier than updating a desktop-based system, and updates can be pushed out automatically to all users.
- **Reduced costs:** Web-based systems can often be less expensive to set up and maintain than desktop-based systems, since they require less hardware and IT support.
- **Scalability:** Web-based systems can more easily accommodate growing numbers of users or increasing amounts of data than desktop-based systems.
- Collaborative capabilities: Web-based systems can enable multiple users to collaborate on the same data or project, no matter where they are located.
- Integration with other web-based tools: Web-based systems can often integrate more easily with other web-based tools, such as online storage solutions or project management tools.

#### **Developers**

- **Increased functionality:** Web-based applications have come a long way in terms of functionality, thanks to advancements in technology, security, and internet speeds. As a result, developers have more options when it comes to delivering complex functionality to end-users.
- **Streamlined updates:** Web applications allow developers to easily roll out updates to users, rather than having to push updates out to individual machines. This means that developers can quickly address issues and add new functionality, without causing significant disruptions for users.
- Accessible documentation: Many web applications offer API documentation that
  developers can use to build their own applications and integrations. This documentation
  makes it easier for developers to work with the application, and ensures that they have
  the information they need to build effective solutions.
- Reduced reliance on front-end developers: Content management systems (CMS) can be used to publish web pages, which reduces the need for front-end developers to make changes.

#### **End Users**

- Accessibility: Web-based applications can be accessed from anywhere with an internet connection, allowing users to use the system regardless of their location or device.
- Cost-effectiveness: Web-based applications often require less hardware and software, reducing the overall cost for organizations and potentially lowering subscription costs for individual end-users.
- **Scalability:** Web-based applications can easily handle multiple users and accommodate growth in usage without the need for significant upgrades or modifications.
- Ease of use: Web-based applications usually have a simple and intuitive user interface that requires minimal training, allowing end-users to easily navigate and utilize the system.
- **Automatic updates:** Web-based applications are updated automatically by the provider, so the end-users always have the latest version without having to manually upgrade or install updates.

#### 6. Comparison of a similar system

I am using the website <a href="https://www.doc.lk/">https://www.doc.lk/</a> for comparison. The factors I want to compare here are performance, accessibility, SEO, and plugins (Publisher Ads). First of all, let's see what this doc.lk is.

Doc990, launched in 2016, has connected more than 5000 doctors in over 140 hospitals within five years of its inception, through its digital health platform which is accessible to users via www.doc.lk, by dialing 990 or via the Doc990 app, available both on Android and iOS. Doc990 currently offers a range of medical services including doctor channeling sessions at hospitals island wide for physical consultations while connecting qualified Doctors, quality pharmacies and laboratories virtually through digital health tech with the aim of transforming the delivery of integrated healthcare through home-based solution.

Sri Lanka's leading medical booking app, Doc990 app, is integrated to all mobile operators and banks for multiple payment options such as add to bill, eZ Cash, Genie, Amex, Visa and Master Card.

#### **6.1.** Performance

Website performance can have a significant impact on a variety of factors, including conversion rates, sales, user satisfaction, and search engine rankings. Studies have consistently shown that faster loading times result in better conversion rates and increased revenue. Slow loading times, on the other hand, can lead to high bounce rates, low user engagement, and lower search engine rankings. It is important to optimize website performance by testing website speed, optimizing images and code, minimizing HTTP requests, reducing server response time, and using content delivery networks (CDNs) when appropriate. Additionally, website performance can be affected by factors such as latency, file size, and DNS poisoning, blocking IP access, or other types of website attacks.

www.doc.lk	www.echanneling.com		
Fast loading speed	Slow loading speed		
Simple and attractive design	Not simple and attractive design		

#### 6.2. SEO - Search Engine Optimization

SEO stands for search engine optimization, which is the process of improving the visibility and ranking of a website or a web page in search engine results pages (SERPs). The goal is to increase the quality and quantity of website traffic by improving the relevance and authority of the website or web page to the search query.

www.doc.lk	www.echanneling.com		
SEO friendly	Not SEO friendly		
Mobile compatibility	Lack of mobile compatibility		

#### 6.3. Accessibility

Firstly, accessibility ensures that websites are usable by individuals with various disabilities, such as visual, auditory, or motor impairments. This means that websites need to be designed and coded in a way that allows users to navigate and consume content easily, even with assistive technologies such as screen readers or braille displays. Failing to make a website accessible can exclude a significant portion of potential users, which can hurt the site's engagement and conversion rates.

www.doc.lk	www.echanneling.com
Accessibility to all users.	Not accessibility to all users.
Optimized for mobile devices and different	Lack of optimized for mobile devices and
screen sizes.	different screen sizes.

#### 7. The data stored in the database in eChannelling

In an e-channeling system, a database can store various types of data related to healthcare services, patients, doctors, appointments, and transactions. Some examples of data that can be stored in the database are:

- **Patient data:** This can include personal information such as name, address, phone number, email, date of birth, gender, medical history, and insurance information.
- **Doctor data:** This can include information about the doctors such as name, specialization, qualifications, working hours, fees, and availability.
- Appointment data: This can include data related to the appointments such as the date
  and time of the appointment, the doctor assigned, the patient's name, and contact
  details.
- **Prescription data:** This can include data related to the prescriptions such as the name of the medicine, dosage, frequency, and duration.
- **Billing data:** This can include data related to the financial transactions such as the total amount charged, payment method, and transaction status.
- **Feedback data:** This can include data related to patient feedback about the healthcare services received, which can be used to improve the quality of the service.

It is important to ensure that the data stored in the database is accurate, up-to-date, and secure to ensure the smooth functioning of the e-channeling system.

## 8. Technical diagram of eChannelling system

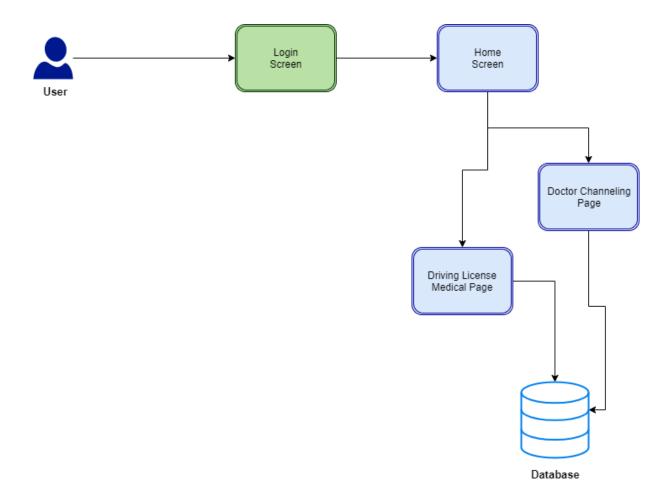


Figure 8.1

# 9. Figures

<b>Figure 1.1.1</b>	eChannelling Service
<b>Figure 1.2.1</b>	eChannelling Service Logo
<b>Figure 1.2.2</b>	SLTMOBITEL Logo
<b>Figure 1.3.1</b>	Benefits in eChannelling
<b>Figure 2.1.1</b>	Doctor Channeling – System and Service
<b>Figure 2.2.1</b>	<b>Doctor Channeling – Mobile Application</b>
<b>Figure 2.3.1</b>	<b>Hospital Information System</b>
<b>Figure 3.1.1</b>	eChannelling Main Feathures
Figure 3.2.1.1	Tel – Channeling
Figure 3.2.2.1	<b>Driving License Medical</b>
Figure 3.2.3.1	PCR
Figure 3.3.1.1	eChannelling Quick Access Option
Figure 3.3.2.1	eChannelling Top Specialists
Figure 4.1	eChannelling Sign In Option - 1
Figure 4.2	eChannelling Sign In Option - 2
Figure 4.3	eChannelling Sign up Option - 1
Figure 4.4	eChannelling Sign up Option – 2
Figure 4.5	eChannelling Sign up Option – 3
Figure 4.6	eChannelling Sign up Option – 4
Figure 4.7	eChannelling Sign up Option – 5
Figure 4.8	eChannelling Sign up Option – 6
Figure 4.9	eChannelling Home Page
Figure 4.10	<b>eChannelling Searching Process</b>
Figure 4.11	eChannelling Top Specialists Process
Figure 4.12	eChannelling Mobile App Logo
Figure 5.1	Users of the System
Figure 8.1	Technical diagram of the System

10.	Reference			
wv	ww.echannelling.com			