



An Undergraduate Internship Report on Front-End Web Design of Birdem Hospital

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Dissertation submitted in partial fulfillment for the degree of Bachelor of
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Attestation

This is to certify that the report titled “Front-End Web Design of Birdem Hospital” is completed by me, Amir Hamza (1631040), submitted in partial fulfillment of the requirement for the Degree of Computer Science and Engineering from Independent University, Bangladesh (IUB). It has been completed under the guidance of Md. Asif Bin Khaled Sir. I also certify that all of my work is genuine and done by me only, which I have learned during my Internship at ATI Limited. All the sources of information used in this project and report has been duly acknowledged in it.

Amir Hamza

June 15, 2021

Signature

Date

Amir Hamza

Name

Acknowledgement

Firstly, I would like to thank the Almighty Allah for all of his blessings and giving me the endurance and opportunity to do my internship course and finishing this report safe and successfully.

Secondly, I would like to thank my honorable faculty and supervisor Md. Asif Bin Khaled, Lecturer, Department of Computer Science Engineering, Independent University, Bangladesh, for his invaluable guidance, patience, time, constructive criticism and thoughtful advice regarding various aspects of my internship and preparation of this report.

Then I would like to express my gratitude to Md. Quamruzzaman Morshed (Chief Technology Officer), Md. Anisul Islam (Senior Technology Manager) and Md. Abu Saleh Yusuf (Manager, Business Strategy Engagement) for giving me the opportunity to complete my internship at ATI Limited and contributing their guidance and support in these three months internship program. The learning and experiences I have gathered here have groomed me a lot as a developer and this will surely help me in the next phase of life.

Lastly, I would like to thank my parents and mentors for their immense love, support and letting me to complete my internship during this pandemic. Without their blessings I could not have come this far.

Letter of Transmittal

June 15, 2021

Md. Asif Bin Khaled

Lecturer

Department of Computer Science and Engineering
Independent University, Bangladesh.

Subject: Internship Report Submission, Spring'2021.

Dear Sir,

With due honor and respect, I, Amir Hamza, from Spring 2021, Section 10, would like to submit my Internship report. This report is written, kindly to inform you that I have completed my internship program and here are all the necessary information provided.

It's a pleasure and honor to submit this report on Front-end Web Design of BIRDEM Hospital under your precious guidance. I have tried my best to present all of my project work, my experiences and achievements in this report.

I have joined at ATI Limited as a Front End Web Developer and conducted from 2nd January to date. Over the period of my internship at ATI Limited, I found out that I learned and applied a lot of new skills and technologies. The company comprises of a huge team of software craftsmen who learn, collaborate, and innovate together.

Sir, I would like to thank you for your immense support, guidance and kindness. I have tried to complete this with utmost honesty and sincerity. I hope and pray that this report fulfills all the requirements and is up to your expectations.

Sincerely,

Amir Hamza.

Evaluation Committee

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Supervisor

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Abstract

In this report I have described all of my work throughout my internship period and experiences that I have gathered at ATI Limited [1] as a Front-End Web Developer. My task was to build a complete Front-End Web design of BIRDEM General Hospital with the help of their existing website.

This project has several parts but among them two are most essential, Front-end design which the users will interact with and the database of the Doctors which the Admin and Doctors can only access. Also the customers can post their queries and feedback through forms which will be stored in the database for further inquiry. Since this is a website of a hospital, the project is mostly all about storing and viewing information or data which the user or customer can easily get an access to view from all over the world. All the detailed information are mentioned in this report. The requirement to use this website has none for the users.

Both the users, admins and doctors can post their feedback and share their thoughts but only admins and doctors have access to modify and update their data accordingly. The admin can modify or update the latest news, events, data and etc up to the date as per the requirement.

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Chapter 1

Introduction

1.1 Overview

As we are living in this modern generation, where almost everything has become a part of technology. We can literally search, gather and share any kind of information within a few seconds. So, as it is so much convenient to interpret within everyone, this has been very effective to our life. Nowadays, people have become more efficient with their lives and they also expect others to do as well. So, in order to make our life more simpler and others to feel the same, we also need to involve with the digitization. As we have faced recently, a global pandemic situation all across the world, we have become immensely involved with the Internet and Online platforms [2].

Since most of the work and assistance has been shifted towards online platforms, one of the most important changes that needs to be aware of is Medical and Emergency assistance. With the help of internet and medical online platforms, we can easily communicate with the Doctors and can seek help or assistance from them. Also, to mention that we can gather information regarding Doctors and appointments only in a few seconds, without having any kind of issues of visiting there or spending hours only to seek assistance [3]. So, it is important to build a Web Application Platform with all the necessary changes and upgrades that need to be include and fix so that there is no gap remains between the Medical, Doctors and Patients.

There are lots of existing medical websites which are helpful nowadays and promising but the only thing which lacks the most in most of the websites are upgrades, details and convenient to all device platforms. So, the main aim of this project is to build a Medical Website that needs to be point out all the details and information to be input and how to make the website more efficient and responsive to everybody who uses different kind of platforms for viewing. And that makes it more challenging and unique from other websites which is less convenient to the users.

1.2 Objectives

The objective of this project is to develop a website for all the users, public to provide them a better platform to get connect with the BIRDEM Medical, doctors and their services easily from the comfort of the users at anywhere. Among all the categories of this website, my objective is to build the Front-End Design along with its Full Responsiveness.

Objectives of BIRDEM Hospital Website:

1. To reinforce and grow community health and medical services.
2. To encourage advanced medical care and distribute it to the world.
3. Attract future clients that are suitable for the hospital's proficiency, projects, and system.
4. To get lists of all the Doctors and their appointment time.
5. Allowing the users to display all the details in a more convenient way.
6. Inviting healthcare professionals by putting on view of events, residency programs, and fellowships.
7. Allowing different users to get services in multiple platform.
8. To receive feedback from the users.
9. To help in business growth.

1.3 Scopes

Here is the list of features included in the Website and available for the user to interact with:

1. Landing page
2. Responsive to large, medium and small devices
3. Lists of all the Doctors
4. Feature of Best Specialists
5. Feature of all the Medical Departments
6. Feature of all the latest news and announcements.
7. Research and Academic pages
8. Feature of all the Recent Activities
9. Career Information or latest recruitment notices
10. About page
11. Contact page

Chapter 2

Literature Review

2.1 Relationship with Undergraduate Studies

2.1.1 Introduction

Appropriate sketch has become an evaluative key material needed to captivate website and also mobile app users. Internet usage all over the world has escalate immensely and swiftly in the past few years. Online websites of all types have become the most principal public conveying gateway for most and not to mention that businesses and organizations are at the top of that. Because the link between consumer and business interchange primarily occur in online platform [4], website design and structure is so much crucial in engaging clients. Inexpertly styled websites or web pages may let down the users and out-turns in a terrible “bounce rate”, or users visiting the home pages without even look into rest of the pages within the site.

In terms of medical purposes, it is seen that building websites and applications are very essential and become useful for the companies as well as hospitals. Number of views and businesses increases gradually because most of the services and queries were all can be able to solve or approachable online immediately. So, the users can easily have an idea in advance of what they are dealing with or will be.

2.1.2 How the project is related to the undergraduate courses:

CSE-101 Introduction to Computer Programming, C++: I believe this is one of the most important courses for me as well as computer science students because this is the course where we began our journey for computer science and get to understand the basic root of programming. Although learning C++ doesn't help me in this project but yes, the programming concept did, as I have needed JavaScript as the programming language for Web Design. The basic programming algorithm remains same for all the languages so it helped me a lot to learn JS easily.

CSE-303 Database Management: Although I haven't done the blackened part of this project, but still I would like to mention this course because the journey of Web development began from this course. Since we needed to showcase a project including database, we also had to show the front-end part so we had to learn the Markup languages as well. And by learning that it helped me a lot in further courses as well as in this project.

CSE-307 System Analysis and Design: This course definitely has helped me to achieve the overall structure of the project before even begin to work with all the coding. All the required analyses that was necessary to be considered such as requirement analysis, flow diagrams, UMLs, Rich picture, Functional and Non-functional requirements, methodology, WBS, Gantt Chart, etc. were taught in this course. Not only for the project but also the report, this course was of great help. This course has helped in planning the whole project from the beginning to the end.

Web Application and Internet: This the most important course of all the mentioned courses above because from this course I have started to find my aim. And finally decided to work with Web Development in near future. From this course, I have learned basic HTML, CSS, JavaScript, etc. This course is a huge help for me as the basic touch of Website has been introduced to us and taught really well so that we can have an idea of how the website works and how it can be presented to the users.

2.2 Related works

BIRDEM General Hospital: Although there is a website of BIRDEM exist already but the services and designs look not satisfactory and most importantly it is not made for viewing in multiple devices or platforms, which is not beneficial for the users. So, most of the concepts and information for my project and designs based on the existing website. As the information and services of the hospitals still remains same up to some extent [5].

Evercare Hospital, Dhaka: Evercare Hospital Dhaka is part of Evercare Group, present in over 25 cities, with 30+ hospitals, 15 clinics and 50+ diagnostic centers across 2 continents, in their mission to provide quality healthcare in emerging markets. Evercare Hospital Dhaka was first accredited by JCI in 2008 and till date remains the only hospital in Bangladesh to hold this international recognized standard [6].

Popular Diagnostic Centre Ltd.: This is another popular hospital in Bangladesh and has a full maintaining website for their user which is very impressive. It is one of the prestigious diagnostic complexes of Bangladesh which started its activities in 1983. Popular Diagnostic Centre Ltd. is the largest diagnostic services provider organization in private sector of the country [7].

City Hospital Ltd.: This hospital is also started on 19-02-1999 as 20 bed Specialized Burn Plastic Surgery Hospital at 69/I/1, Panthapath, Dhanmondi, Dhaka-1205, then shifted to Lalmatia, Dhaka from 15th July, 2006. They have a good working website which has an impressive service for the users [8].

Chapter 3

Project Management & Financing

3.1 Work Breakdown Structure

Work Breakdown Structure is a hierarchical structure that shows the breakdown of a project into smaller parts. It helps us to organize the tasks of the team members included in this project into manageable sections. So, I have created a WBS on my own for this project so that the work that I have been doing can be visualized easily. At first we began with the initialize process where we discussed with the project work, its requirements and analysis. Then I have started with the Wire frames and similar websites to get an idea of how to make it more useful and productive. Then comes the design part, where I had to search for all the required designs and clues to input the details into the website. After that, the data collection part comes where I had to gather and import all the data from existing website to the one, I am working on this project. Finally, all the markup codes and programming are implemented accordingly for all the design and changes in their behaviour.

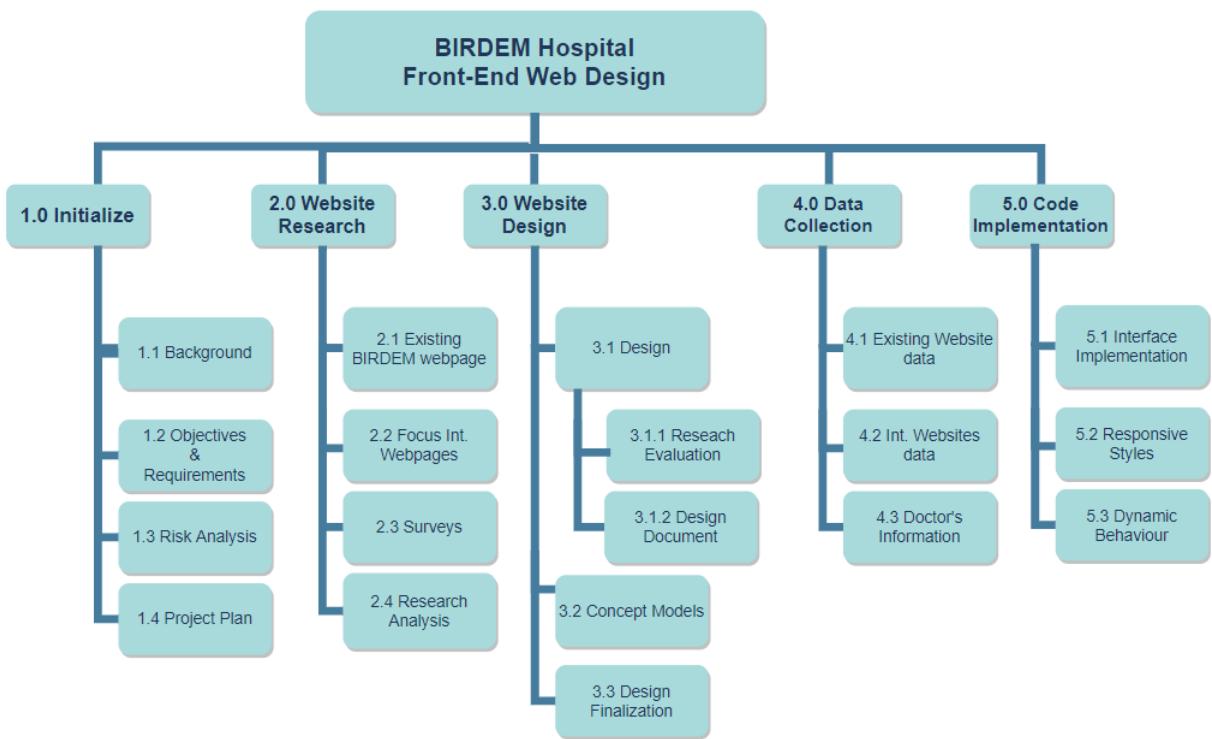


Figure 3.1: Work Breakdown Structure for Front-End of BIRDEM

3.2 Process/Activity wise Time Distribution

For each part of the project, time was allocated precisely according to the WBS mentioned above so that we might not get behind the time. The table below shows the time allocation of the work.

Time Distribution	
Task	Days
Initialize	06
Website Research	07
Website Design	25
Data Collection	10
Code Implementation	15
TOTAL	63 days

Table 3.1: Time Distribution.

3.3 Gantt Chart

BIRDEM Front-End

ATI Limited

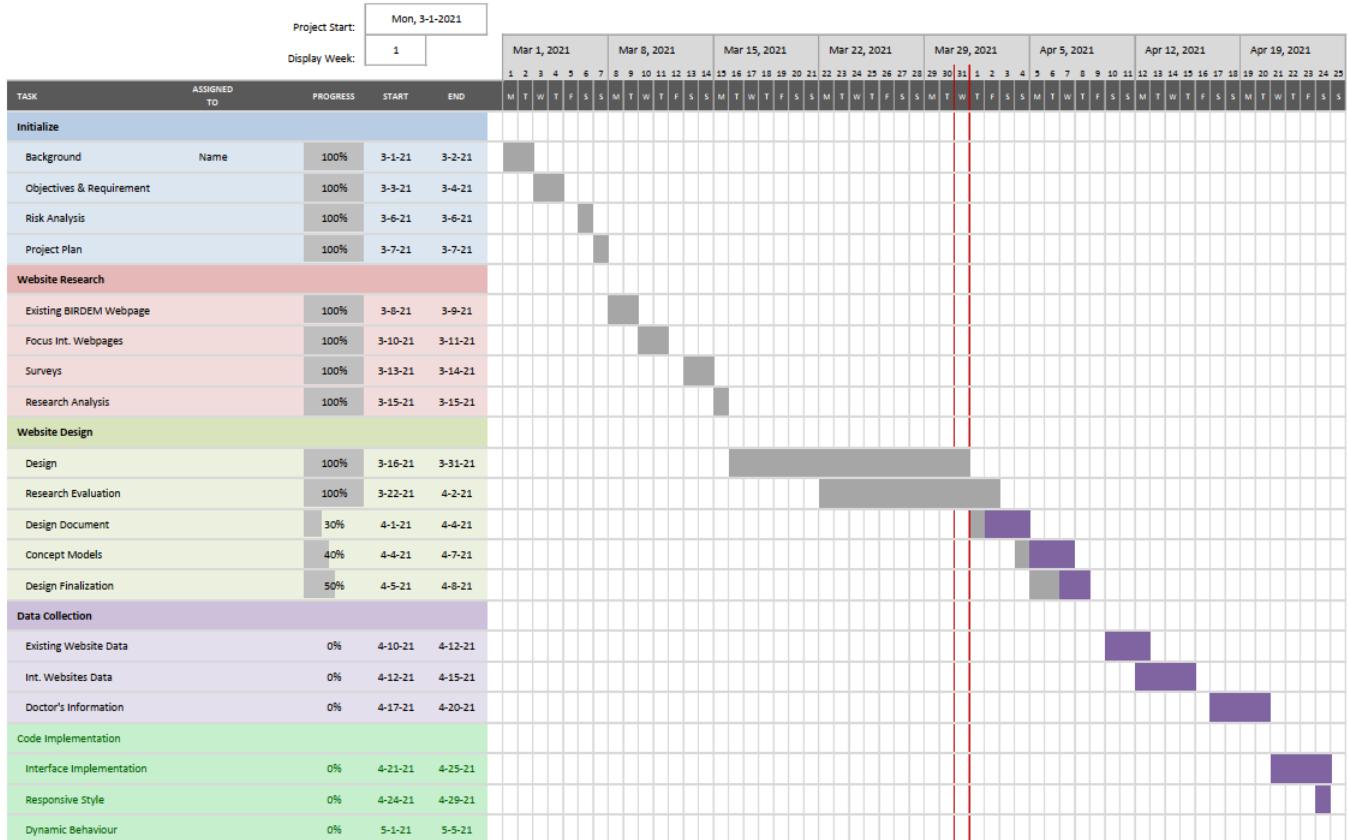


Figure 3.2: Gantt Chart for Front-End of BIRDEM

3.4 Process/Activity wise Resource Allocation

Resource Allocation			
TYPE	Name	Description	Availability
HARDWARE	PC	Platform needed to work	HIGH
	Routers	Assigned to a number of employees for individual support	HIGH
	Flash Drive	Required for offline data transfer among developers	HIGH
NETWORK HUMAN	Internet	Required to connect to web	HIGH
	Project Manager	Required to organize and allocate work	HIGH
	Ui / Ux Designer	Required to generate and test the design	HIGH
	Developers	Required to code and develop the website	HIGH
SOFTWARE	Microsoft Visual Studio	Required to run framework used to develop the website	HIGH
	Windows	Operating System for Windows user	HIGH
	Linux	Operating System for Linux user	HIGH

Table 3.2: Activity wise Resource Allocation.

3.5 Estimated Costing

The cost is calculated on the basis of the features the client demanded for the website. It depends on the size, requirements, functionalities and design of the website. My task is to build a complete prototype design first by analyzing the previous website and then finalize about all the requirements, inclusion pre-designed themes, logo design cost, search engine optimization, chat option, social media connection and many other tools. The cost of developers and resources used were also be taken into note later. And lastly the additional charge for the deployment of the website will also be discussed later.

Estimated Costing	
Features	Costs
Internet Bill	2,500
Transport	2,000
Project Manager	30,000
Developers	70,000
TOTAL	10,45,00

Table 3.3: Estimated Costing.

Chapter 4

Methodology

4.1 Design

A software development methodology is a process of developing software by dividing it into separate stages to plan, structure, improve and control the process of the software. Victorious projects or work are mostly lead well. To manage a project intelligently, the developer group must choose the software development methodology that will service best for the project at hand. Almost all of the methodologies have different robustness and flaws which exist for different reasoning.

4.1.1 Various Methodologies

There are various methodologies to develop a software which includes:

1. Waterfall
2. Prototyping
3. Iterative and incremental development
4. Spiral development
5. Rapid application development
6. Agile
7. Extreme programming

4.1.2 Agile Development

Here in this project, we have chosen an Agile development methodology because it is based on iterative development. It includes adaptive planning, evolutionary growth, early delivery and quality improvement and also promotes agile response to changes.

Agile development has more people-centric viewpoint than other traditional approaches. During the development phase, the project is simultaneously being observed by the client so changes are made during the development process according to their requirements [9].

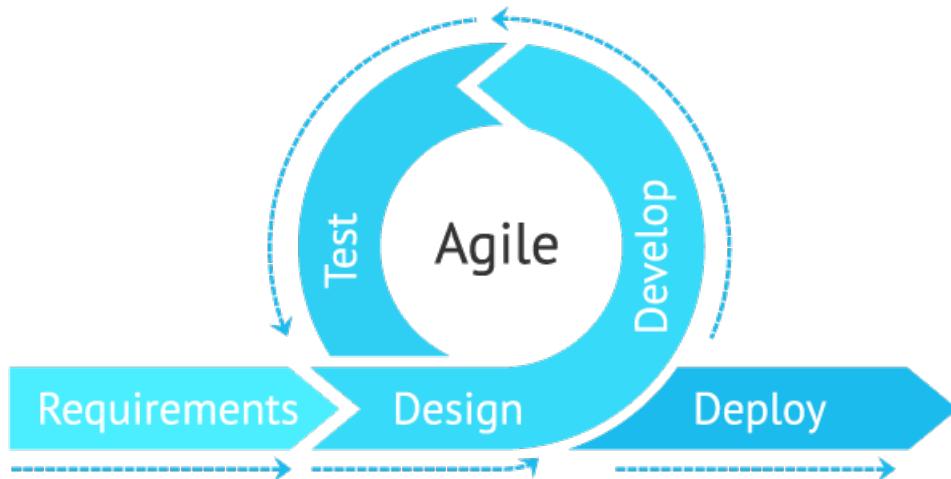


Figure 4.1: Agile Software Development Methodology Model

4.2 Reasons for choosing Agile methodology:

1. **Faster development:** In Agile methodology, the project or software is developed in phases and each phase is treated as an individual project. This project is divided in several parts so all the member in related to this project, aware of their deadline and the work has little dependencies on one another. Thus this methodology speeds up the development process and provides faster delivery.
2. **Customer satisfaction:** This method allows the team to work closely with the clients and understand the client's requirements in the project. It helps to keep both the parties at the same page and allows to make any required changes before going forward to the next phase. Agile also brings transparency to the project as the software is not delivered to the clients at the end rather multiple sprints are delivered to them throughout the development process.
3. **Quality Assurance:** Unlike other methodologies, Agile does not test the app at the end of the development period. At every stage the software is tested which reduces the chances of getting a bug at the end of the project development. This also allows us to inspect the software at every level and make changes as per requirements. Thus ensuring a higher quality of software at the end.
4. **Reduced risks:** Many times it is seen that we use outdated data while developing the software but Agile allows to take calculated risks. This methodology allows to

make required changes to any particular sprints without disturbing the previous sprints of code. So it accepts changes even at the end of the project development.

5. **Feedbacks are incorporated quickly:** Delivering a product quickly is of no use if the product does not fulfill the requirements demanded by the client. Agile gives importance to feedbacks which helps to develop the software in an efficient way and incorporate the changes before the next meeting. So it helps to gather the recent development feedbacks so that the project can be modified within the next meeting with clients
6. **Productive level is high:** Agile methodology gives programmers a clear vision and goals. The timeline of the work is divided and each team member know their task. So it contributes to the increase in productivity level of the project.

Chapter 5

Body of the Project

5.1 Work Description

This project is basically a whole Front-End Web design of BIRDEM General Hospital Website in a new advance way representing every aspect of their existing website. The task of mine is to build the website in a full responsive way and implementing all the latest modules that needs to be present in a medical website by researching other medical websites and include to this project. The task includes a brand new homepage with an advance design which can attract and help the customers or clients to be more effective and helpful regarding the website. All the medical departments available at BIRDEM, are included in the homepage for easy access. Latest news and headlines are added using sliding movements so that customers are up to date with the latest news of the hospital. There are several other sections or pages also needed to design accordingly and the information of the pages must be rearranged so that it looks more efficient and elegant. The contact page and about page is now more advance designed with lots of features included like query and feedback options for the customers as well as any user. The about page is now more easily accessible with the help of hover sidebar effect.

5.2 System Analysis

5.2.1 Six Element Analysis

System Roles						
PROCESS	Human	Non-Computing Hardware	Computing Hardware	Software	Database	Communication
Visit Website	All Users	N/A	Computer	Any Web Browsers	SQL	WAN
Sign In/Up	Admins	N/A	Computer	Any Web Browsers	SQL	WAN
Admin Panel	Admins	N/A	Computer	Any Web Browsers	SQL	WAN
AboutUs Page	All Users	N/A	Computer	Any Web Browsers	SQL	WAN
Dept. and Service Page	All Users	N/A	Computer	Any Web Browsers	SQL	WAN
Reserach and Academic Page	All Users	N/A	Computer	Any Web Browsers	SQL	WAN
Notice and Event Page	All Users	N/A	Computer	Any Web Browsers	SQL	WAN
ContactUs	All Users	N/A	Computer	Any Web Browsers	SQL	WAN
Doctors	Admins or Doctors	N/A	Computer	Any Web Browsers	SQL	WAN

Table 5.1: Table to test captions and labels

5.2.2 Feasibility Analysis

Feasibility Study is used to determine the reason-ability of a project. It determines whether the project is legal, technically, economically feasible and importantly whether the project is worth investing in. It evaluates the potential of the success of the process. Five feasibility studies are considered for this project.

1. **Technical Feasibility:** ATI Limited is an established company. It is capable of meeting all the technical requirements and the team is capable of converting the idea of the project into reality. All the hardware, software and other technical requirements needed to complete this project are available making this technically feasible.
2. **Economic Feasibility:** The cost and benefits of this website have been considered in this section. After completion, this website will be open for all kinds of users. Since this is a Medical website, there is nothing to do any kind of business from it other than the hospital itself. After gaining popularity, the company might decide to allow any paid advertisement for the website if needed. Till then the company will hope to gain credibility and positive economic benefit for the users.
3. **Legal Feasibility:** All the legal constraints have been considered before proceeding with this project which includes data protection acts, social media laws, or zoning laws so that it does not face any legal constraints in the future.
4. **Operational Feasibility:** Operational feasibility is a measure of how well a proposed system solves the problems and satisfies the system requirements identified during the scope definition and problem analysis phase.
The ongoing pandemic and economic situation will make the website very helpful to the public as it is very much risky to go to the hospital physically regarding any information or suggestions. With the help of this website, users can be very easily find all the necessary information regarding doctors or hospital.
This project is a well planned system. Anybody will be able to use it. It reduces physical and technical hardships. Users need not have a lot of technical knowledge to run this system. Every instruction is very clear to the users. We hope this system will be able to fulfill the requirements of the users.
5. **Scheduling Feasibility:** To make a project successful, it is very important to complete a project at the given time. The project to date has been completed on time that has been designated for each task.

5.2.3 Problem Solution Analysis

There were a number of problems that were encountered while completing the project and they were solved accordingly. Some of the problems were:

1. Collecting data from existing website: Since the existing website is much older the data available there also not efficient or too outdated. The information given were not sufficient to include in this project. So I had to research in other platforms also to be more precise.
2. The images, banners and icons were unclear and too much distorted to use in the project so all of the images of the medical were reedited and retouched accordingly.

5.2.4 Effect and Constraints Analysis

This website helps the visitors to know about the true essence of this Medical Hospital and what its main goal is. Visitors are able to look at the medical profile, Doctor's to choose from for appointments and get all the necessary information, and also can apply for a job at Nursing Training. However, this system has some limitations. We are still thriving to bring out more changes and add more features to this website that would help and encourage more and more people for getting assisted as soon as possible rather than going around at the hospital looking for help. This will not only make people's lives easier but will also be a big advantage during the ongoing pandemic.

5.3 System Design

5.3.1 Rich Picture

The rich picture illustrates the main element and relationships that need to be considered. It helps to open discussion and go to a wide, shared comprehension of a situation. It identifies the richness and complexity of a situation.

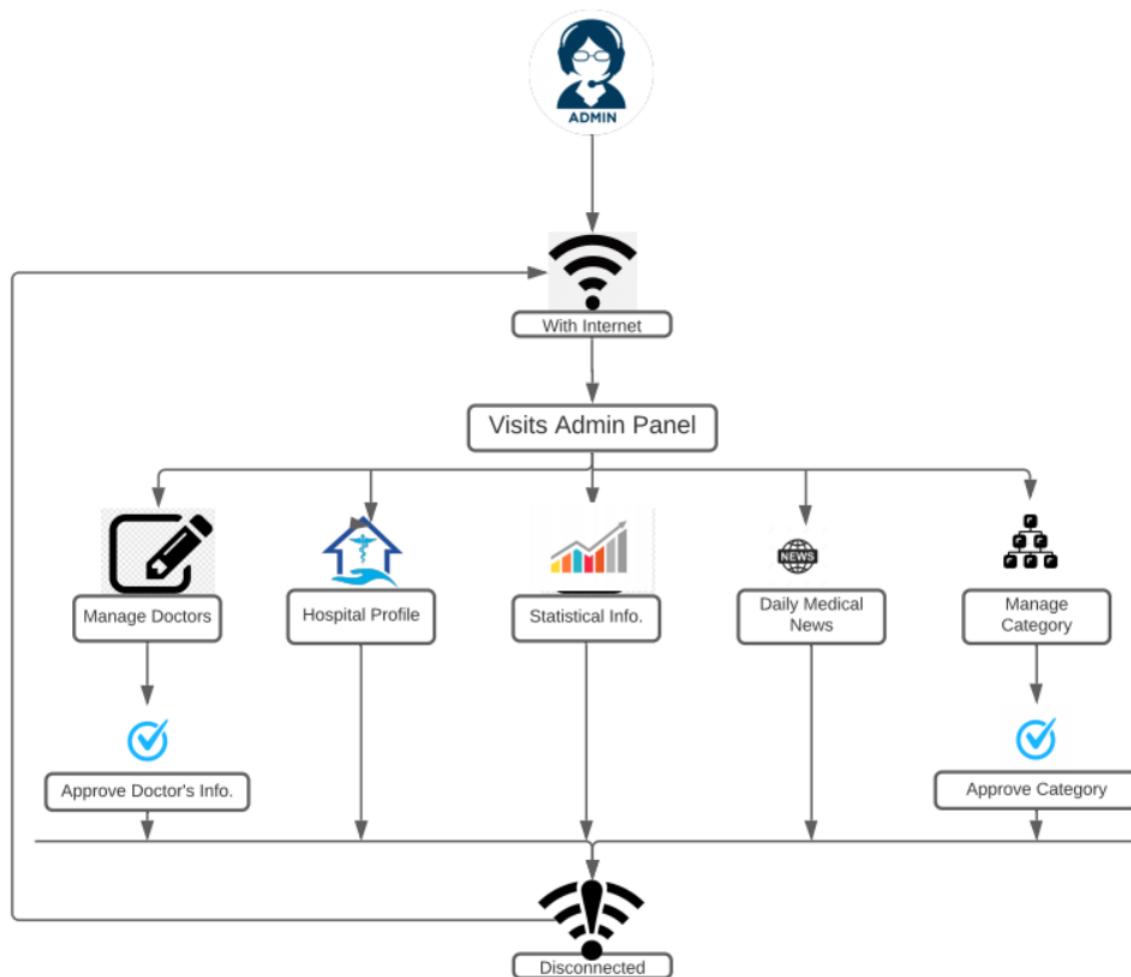


Figure 5.1: Rich Picture of Admin

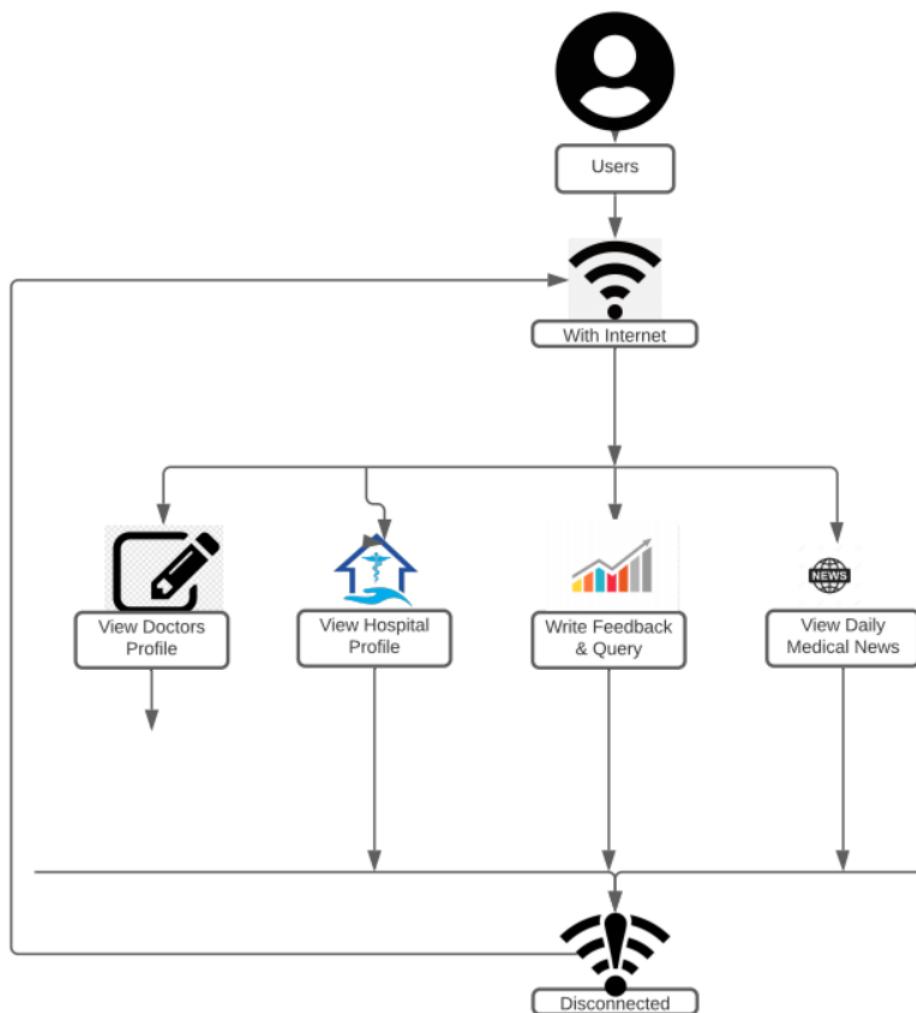


Figure 5.2: Rich Picture of User

5.3.2 UML Diagrams

1. Activity Diagram

The activity diagram is an important UML diagram that shows the flow of one activity to another. The activity diagram of the user and admin help to visualize the flow of their activity in graphical form.

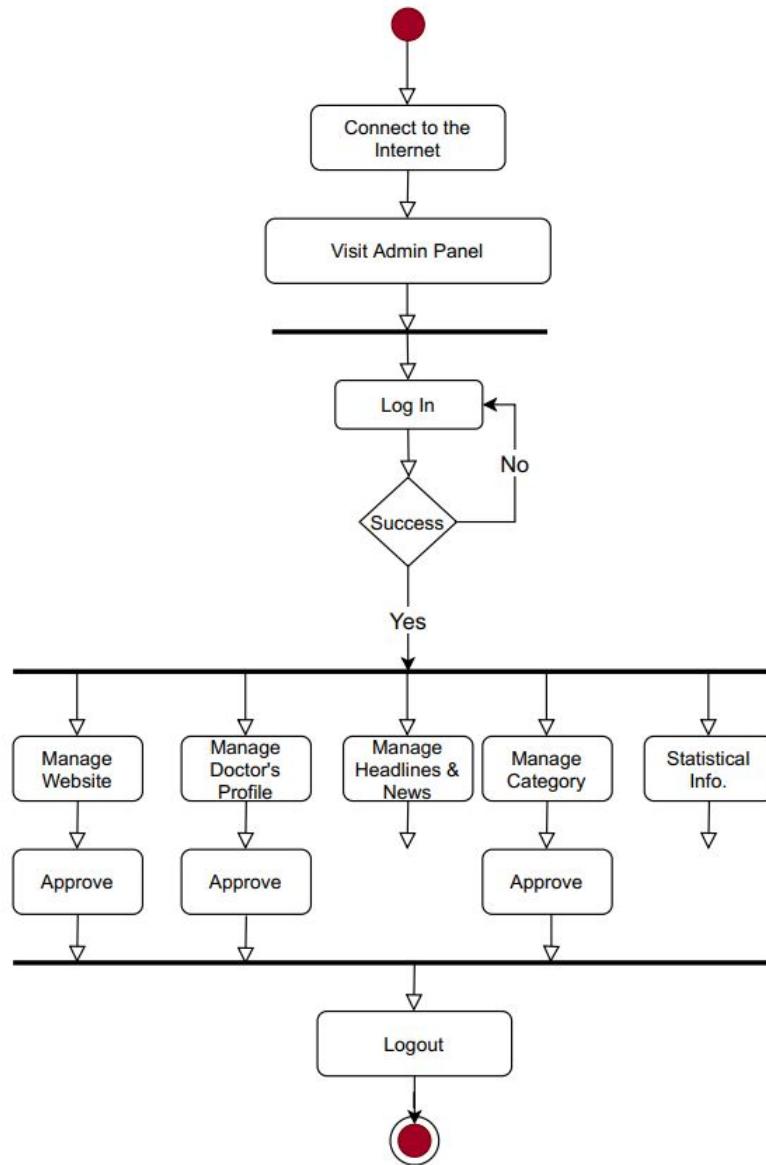


Figure 5.3: Activity Diagram of Admin

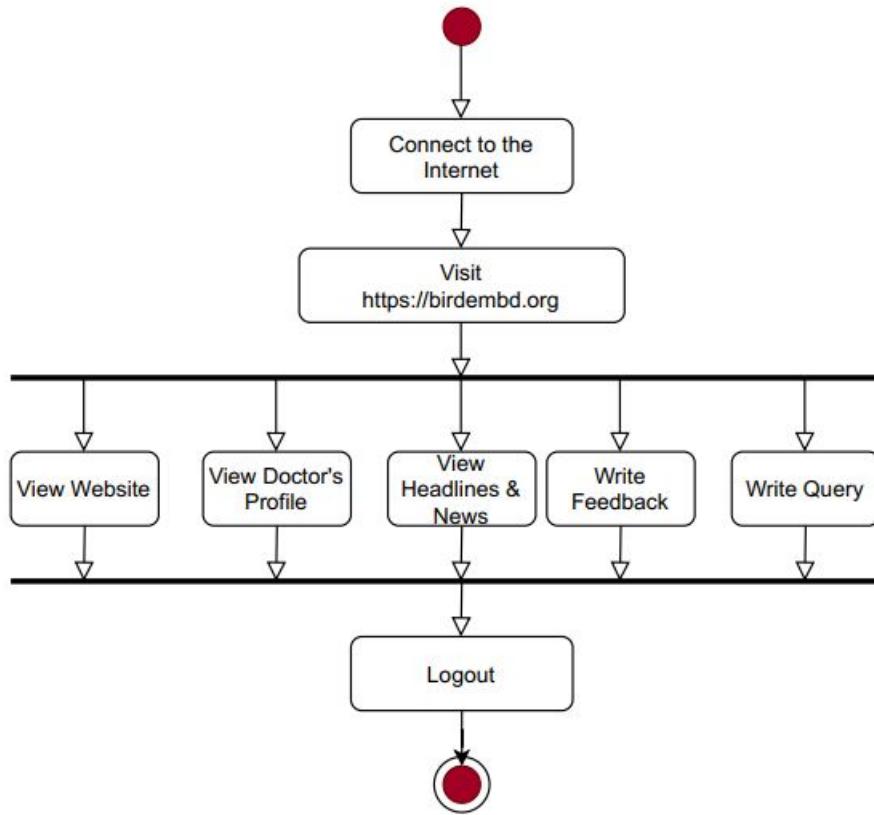


Figure 5.4: Activity Diagram of User

2. Use Case Diagram

The use case diagram represents the functional requirements of the system. It shows the actors, cases, communication links, system and relationship. This project has two actors which is the User and the Admin. This use case diagram shows the activity performed by the Doctor and the Admin and the common behavior from include use case and optional behavior from exclude use case.

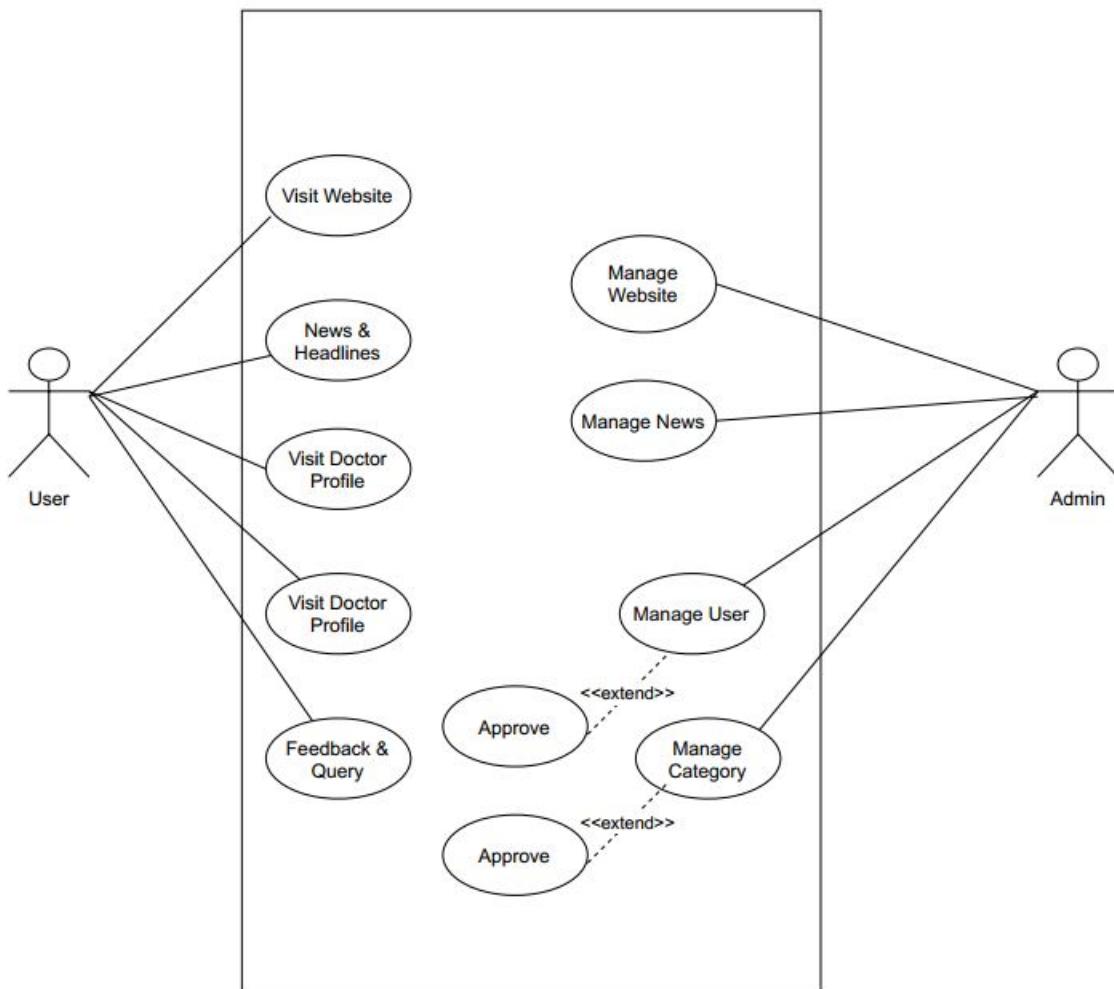


Figure 5.5: Activity Diagram of Admin

5.3.3 Functional and Non-Functional Requirements

1. Functional Requirements

Functional requirements explains the basic system behavior. This includes what the system actually does or not able to do and upon given the inputs how well a system acknowledge to it. Features that allow the system to operate because it was intended. The system might not work fully as the functional requirements are not encountered correctly. We need to keep in mind that product features are consider as Functional requirements which always focuses on requirements of the respected users. The functional requirements of this website are given below.

Function: Registration		
Input: Provide user Information	Process: Visits Website	Output: User successfully registered
Pre-condition: Must be connected to the internet with devices like any computer or mobile.		
Post-condition: Doctors visits Login Page		
Alternative Options:N/A		

Table 5.2: Doctor's Registration

Function: Login		
Input: Id and Password	Process: Login to User Interface	Output: User successfully Logs In
Pre-condition: Must be connected to the internet with devices like any computer or mobile.		
Post-condition: Doctors enters dashboard and can perform activities.		
Alternative Options: Request for new password.		

Table 5.3: Doctor's Login

Function: Change Password for Doctors		
Input: Old and New Password	Process: Enters the old and new password	Output: Successfully changed.
Pre-condition: Login and Old Password must match.		
Post-condition: Doctors change his Password.		
Alternative Options: N/A		

Table 5.4: Password Change for Doctors

Function: Profile for Doctors		
Input: N/A	Process: Doctors views and modifies his profile	Output: Successfully changed.
Pre-condition: Login.		
Post-condition: Modifies the profile successfully.		
Alternative Options:N/A		

Table 5.5: View and Modify User Profile

Function: Login		
Input: Id and Password	Process: Login to Admin Interface	Output: Successfully Login.
Pre-condition: Must be connected to the internet and have devices like computer or mobile.		
Post-condition: Admin enters the dashboard and can perform the activities.		
Alternative Options: If new password can be requested using Forgot Password option		

Table 5.6: Login for Admin

Function: Change Company Profile		
Input: N/A	Process: Admins Views and modifies profile	Output: Successfully changed.
Pre-condition: Login.		
Post-condition: Modifies the profile successfully.		
Alternative Options:N/A		

Table 5.7: Change Company Profile by Admin

Function: Notification		
Input: N/A	Process: Recieves Notification	Output: Notified for any new user, pending posts and categories.
Pre-condition: Login.		
Post-condition: Approves doctors, post, categories, news and headlines.		
Alternative Options:N/A		

Table 5.8: Notification for Admin

2. Non-functional Requirements

Non-functional requirements define "what a system should be". It describes the quality of the system to be implemented. It is not concerned with the functions of the website but requirements like performance, usability, reliability, response time, etc. The non-functional requirements of this website are:

- Usability Requirements: The website is made very user friendly so that everyone can easily have an access to it. The main focus is to give users a platform so that the customers can have detail information regarding BIRDEM and all the Doctor's

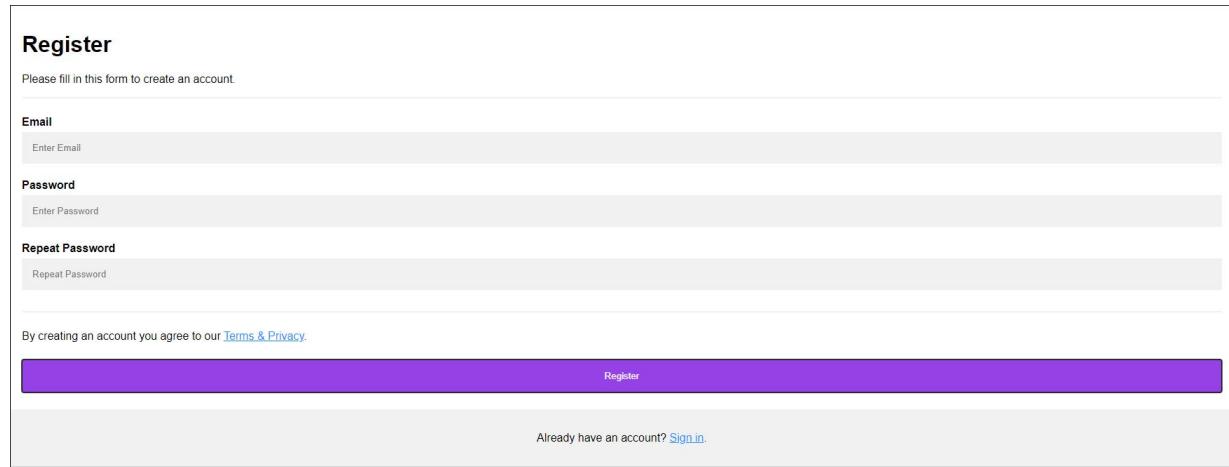
profile and their appointments as simple as possible. Users do not need any manual to use this website. Even the Admin panel has been created in an easy way so that the Admin can easily perform his activities.

- Performance Requirements: We plan to provide the best performance to the users so that they do not feel the need to switch to other blogging websites. We will make sure that the response time is as less as possible so that even the slowest page loading time is not more than 500milliseconds.
- Security Requirements: Security is a big concern for any website. Although the database part is haven't done yet but we are very much aware of its security and its flexibility.
- Availability Requirements: We will try to ensure that the website is 99.99percent of the times available so that a user can visit the website at any time they want.
- Maintainability Requirement: The website can be modified easily without making any changes to the existing system. If any error occurs, we plan to keep the Mean Time to Repair less so that the maintainability of the system is high.

5.4 Product Features

5.4.1 Input and Output

Registration Page: The Doctors can register to the system by filling up the form.



The screenshot shows a registration form titled "Register". It includes fields for Email, Password, and Repeat Password, each with placeholder text ("Enter Email", "Enter Password", "Repeat Password"). Below the form is a note about agreeing to Terms & Privacy, followed by a large purple "Register" button. At the bottom, there is a link to "Sign in".

Figure 5.6: Registration Page

Login Page: The Doctors can Login to the system by filling up the form.

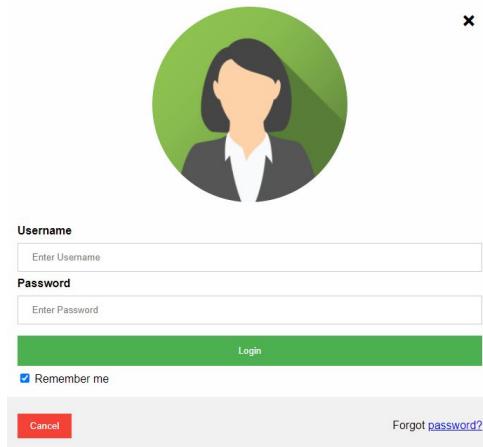


Figure 5.7: Login Page

Feedback Page: The Doctors or any Users can post their feedback on their experiences with the hospital or its services by filling up the form.

Feedback:

At BIRDEM General Hospitals, we place great importance to your feedbacks. Therefore, we would like to hear about your experience at BIRDEM Hospitals and understand if we met upto your expectations. All you have to do is fill in the form below and click on send. Thank you in advance for sharing your opinions with us and we assure you that we will utilise your opinions to develop processes to serve you better.

First Name*
Last Name*
Email ID
Mobile Number
BIRDEM GENERAL Hospital
Write your valuable feedbacks..
Submit
Cancel

Figure 5.8: Feedback Page

Feedback Page: The Doctors or any Users can post their queries regarding the hospital or its services by filling up the form.

Post your Query..

BIRDEM General Hospital is always focusing to make things easier for the valuable patients. Our view is to provide our customers with the best medical facilities, constant care, and reliable support. If you would like to get in touch with a doctor from a specific department, would like some specific information about the services we provide, or just have a question for us, please fill up the Form given below and we will get back to you.

First Name*	Home Address
Last Name*	City
Email ID	Street
Mobile Number	Postal Code
Landline Number (if any)	Post your query here..
Name of Consultant	
BIRDEM GENERAL Hospital	Submit
	Cancel

Figure 5.9: Query Page

5.4.2 Architecture

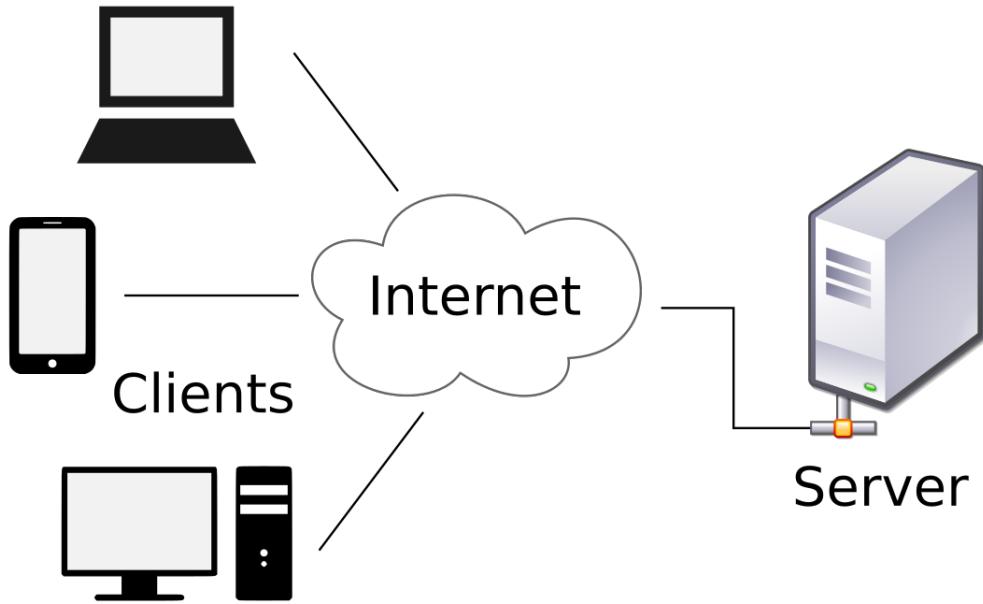


Figure 5.10: Client Server Model

System Architecture is the theoretical model that explains the building, behaviour and more views of a system. And it is one of the most important aspect to keep in mind while building a project. It gives an idea or concept of how the system will work and also gives us an approximate result of its manageability, performance and security issues. So it is very essential to think of the Architecture, as it will help us managing smartly, efficiently and long lasting. It can consist of system components and the sub-systems developed, that will generate together to enforce the generic system. Although there are lots of popular architecture to follow but the most favourable for this project is considered as the Client server architecture. This includes mainly two entities to communicate in between. In this architecture, the client side components sends a request to the server side. The server side in turn receives the request, process and responds back.

Chapter 6

Results & Analysis

While working on a project we always look for a good result. And with that aim, we have also put our best to make this project as good as it need to be for all kinds of users. Users can enjoy full benefit of the website even without any registration or sign up, they can have all the valuable information regarding the Medical just in a few click. Also the Doctors will have the flexibly to sign-up easily in the website. It is a 24x7 system. They can update their information and their profile as well upon the approve from the Admin.

Front-End View: Homepage of BIRDEM HOSPITAL.

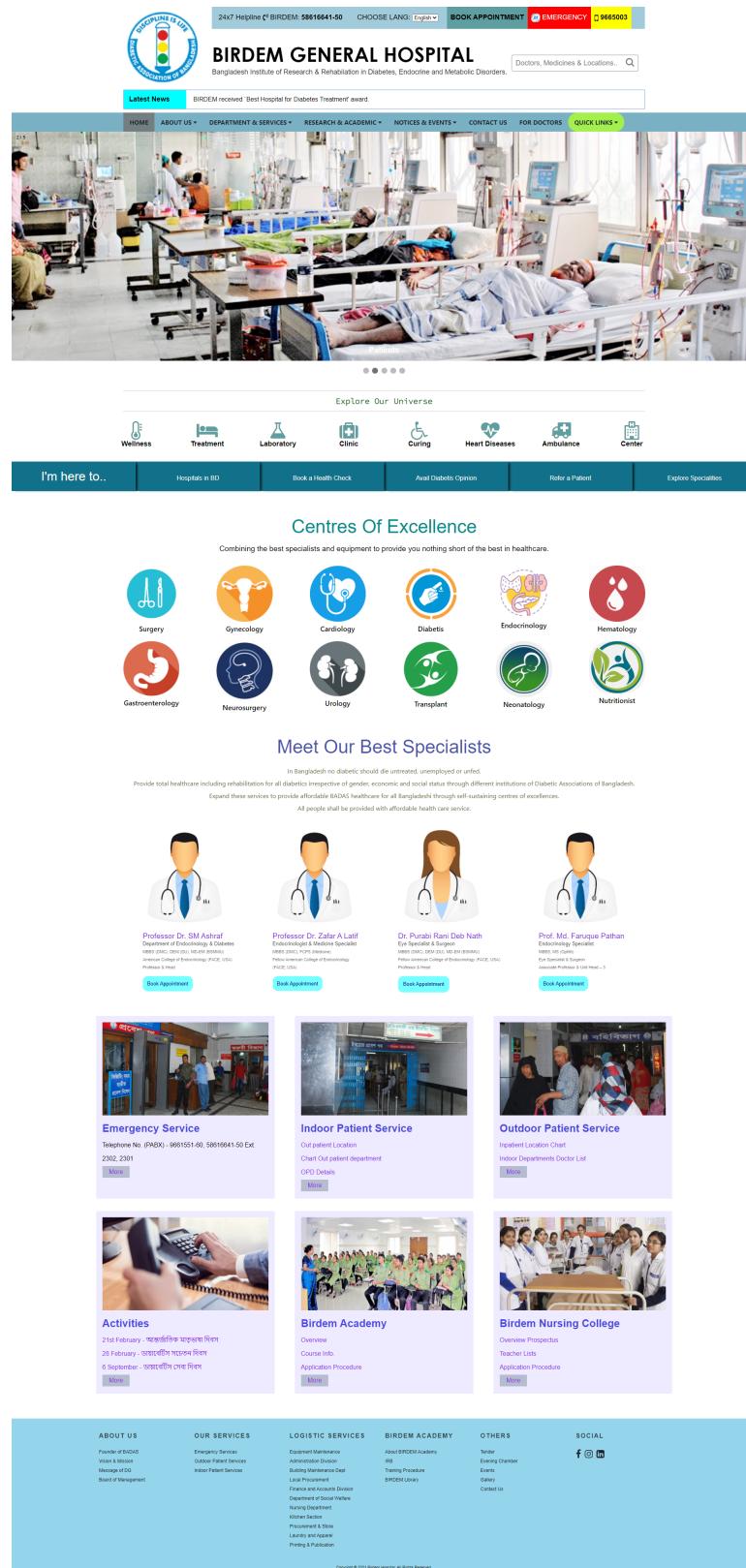


Figure 6.1: Homepage

Users can also have a look at the medical's background history and can easily gain knowledge of its records so that they can assure their trust upon us and rely upon our services.

Front-End View: About page of BIRDEM HOSPITAL.

Figure 6.2: About Page

The users can easily find their desired medical departments to look for as it is made in a way that is totally hassle free. Anyone can find it very easily without being look into various web pages. Upon clicking the desired department, it will be redirected to its page.

Front-End View: Department page of BIRDEM HOSPITAL.

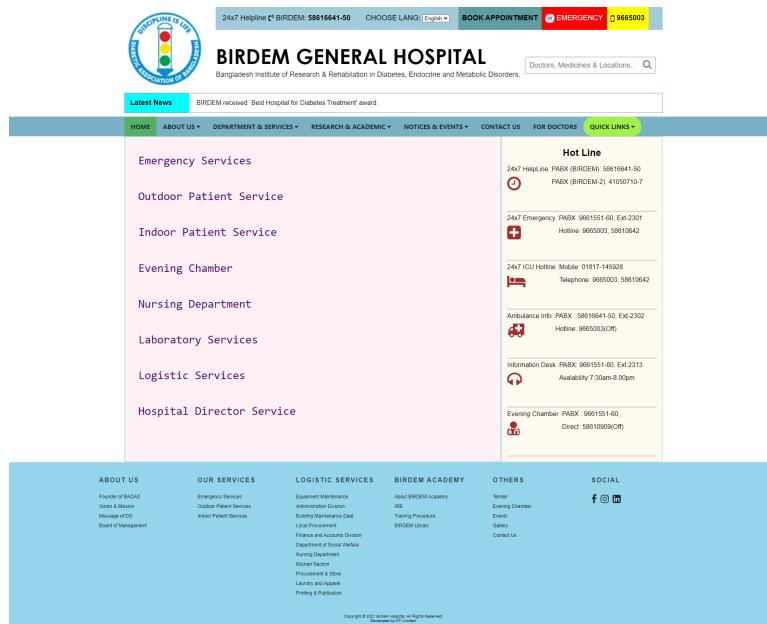


Figure 6.3: About Page

Contact plays a major role for every company and services where client or any user can have the opportunity to get connected with each other and begin a relationship. So it needs to be very impacting and smooth for both sides. Regular feedback and queries can help improve the medical's experiences and their approach towards their patients and clients which will definitely gear towards beneficial for both the company and clients.

Front-End View: Contact page of BIRDEM HOSPITAL.

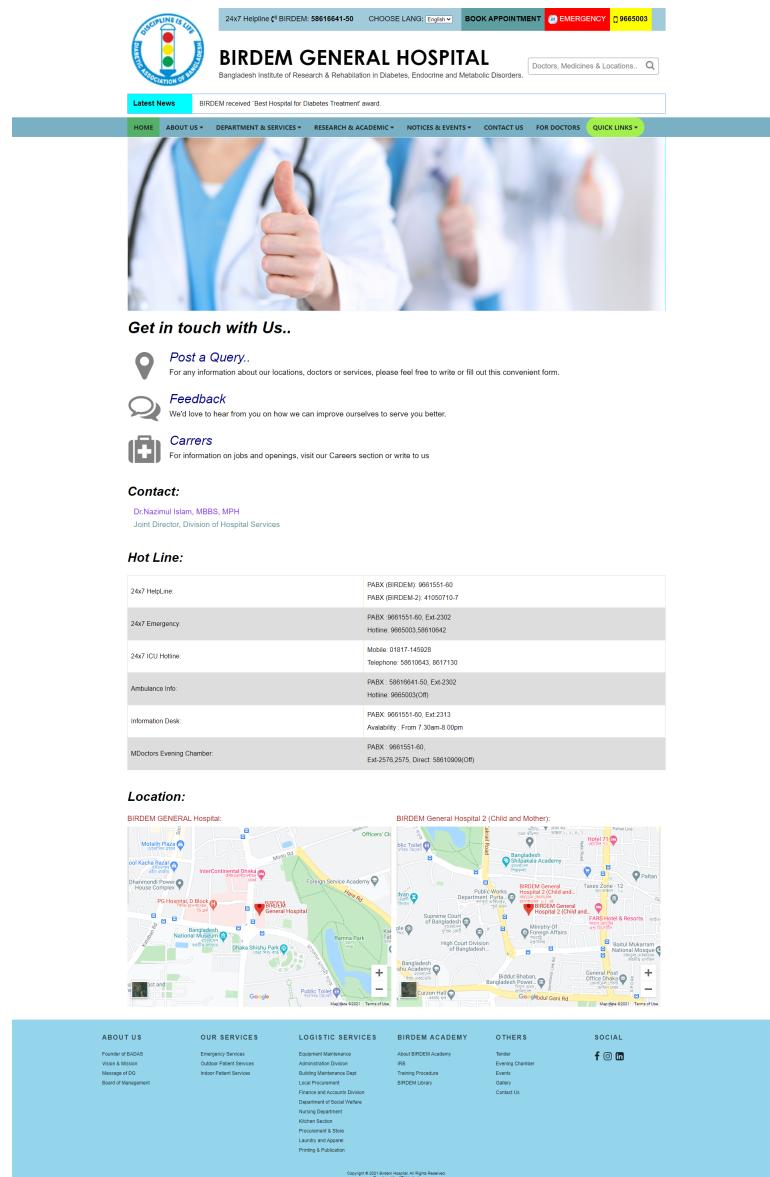


Figure 6.4: Contact Page

Chapter 7

Project as Engineering Problem Analysis

7.1 Sustainability of the Project/Work

The website has been made sustainable by making these small yet significant changes.

1. **Image optimization to reduce file size:** The size of the images and resolution has been kept fixed so that it does not burden load time and energy consumption. Moreover, the maximum number of images per blog has also been kept fixed.
2. **Delete unnecessary data:** We plan to delete unnecessary data or information periodically once every month so that we can free up space as well as users can have an access to the most recent data available.
3. **Site Navigation:** We have kept the website as simple as possible so that users do not find it difficult to use the website. So they do not need to click around the website and easily find the required information.

7.2 Social and Environmental Effects and Analysis

1. **Social Effect:** By making available this redesign website to the public will help in so many ways that it cannot be explain in short. Although it is going to help a lot of people for always but as the current situation of pandemic, it will become more and more helpful for the public to take full benefit of the medical information and helpline online. By doing this it will create an effect of enormous help socially towards all the people as people nowadays love being connected in social platforms so it will make them more comfortable.
2. **Environment Effect:** Those of us who will take the benefit of this website and its services will definitely advice others to try and visit the website in future whenever

in need of it. So this is basically creating an impact towards the environment, making it possible to grow and help each other in need and making others stay in safe and healthy. So environmentally, this will definitely be beneficial towards the people all over the world.

7.3 Addressing Ethics and Ethical Issues

People around the world have got a different set of ethics. Problems might arise when one's ethics are pointed wrong by others which may cause a problem. Other issues may arise if a Doctor have difficulty addressing the patient or client unknowingly. And it goes same with the services of the hospital mentioned in the website as well. Basically, there will be a lot of issues but all these issues will be monitored by authorized Admins of the website and management system of the hospital so that ethical issues can be avoided.

Chapter 8

Lesson Learned

8.1 Problems Faced During this Period

During the whole internship period, it was very much challenging for me to cope up with all the barriers and challenges that came across. First of all getting an internship at this time is not an easy job during this pandemic where everyone has risked their life to fulfill their dreams and needs. After few weeks of working over there under a supervisor, I had to take leave due to some health issues of mine. But after getting back to the office it was hard for me to know that my supervisor resigns from the office which makes me all alone working on this project as he was a helping hand of mine. When it comes to technical part, there were also some challenges I had to face in terms of learning and productivity as it is not an ordinary project to build and is very lengthy and time consuming. The information that I needed to collect from the internet is really a hard job as no kind of data or demo has been given to me for the project.

8.2 Solution of those Problems

By the grace of God, everything seems to work out very well throughout this journey. I have successfully completed my internship period from a well known and reputable company. As the day passes by, I gradually adjusted myself with the flow of the work and all the responsibility. During my illness also I have worked at home solely to finish this project and impress everyone with my work. I have learned so many things in terms of programming languages to help me building career on Front-End Developer. Although my supervisor suddenly left the office, but I haven't stop working on the project in fact I have tried more to make it better on my own. And that reflected on my work also as it appears to be very productive and valuable. And within the time limit I have successfully completed the project as well as the report to present to my internal supervisor.

Chapter 9

Future Work & Conclusion

9.1 Future Works

Of course this is not the end, another most important aspect which is database still need to add to this project which will be done by other developers soon. To develop this project further, ATI Limited will be in need of more skilled developers who can shape this project in a more attractive way. Developers who have a better idea in front-end design as well as back-end design could be used to make the website more appealing. In my perspective, features like chat bot or online assistance options could have been provided to the users to make the site more useful. Different languages option and more designs or images would have work great.

9.2 Conclusion

It is a wonderful experience working with ATI family as an intern. During the internship period, I have learned and applied a great deal. I was introduced to new cutting-edge technologies and I was pushed to do even better. I have also learned a great deal about different development styles. I was pushed to adapt to changes rapidly and come up with logical solutions. During my project, I cooperated with my mentors and seniors to solve the challenges faced. Despite their workload, my supervisors were always there to answer any queries and help me settle nicely. This internship opportunity has paved the way to investigate the development environment and marketplace. I would like to appreciate my supervisor, Md. Asif Bin Khaled Sir once again and everyone who has made my life easier and being helpful during this internship period.

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