Independent University, Bangladesh

An undergraduate internship report submitted by
Minhajuddin Ahmed (Student ID: 1720654)

In consideration of the partial fulfillment of the requirements for the degree of
BACHELOR OF SCIENCE
in

Computer Science and Engineering
Department of Computer Science and Engineering
Spring 2021

Web Development of "SERVIQ!" at Intraspace Limited

An undergraduate internship report submitted by
Minhajuddin Ahmed (Student ID: 1720654)

has been approved on -- / -- / --.
Sanzar Adnan Alam
Internship Supervisor & Lecturer

Department of Computer Science and Engineering
School of Engineering & Computer Science
Independent University, Bangladesh

Attestation

‘I hereby declare that this submission is my own work and to the best of my knowledge it contains no materials previously published or written by another person, or substantial proportions of material which have been accepted for the course of any other degree at Independent University, Bangladesh or any other educational institution, except where due acknowledgement is made in the report. I also declare that the intellectual content of this report is the product of my own work, except to the extent that assistance from others in the project's design and conception or in style, presentation and linguistic expression is acknowledged.’

10/05/2021

Signature **Date**

Minhajuddin Ahmed

Name

Letter of Submission

10th May 2021

Sanzar Adnan Alam

Lecturer,

Department of Computer Science and Engineering,

Independent University, Bangladesh

Subject : Letter of Submission for Internship Report, Spring 2021

Dear Sir,

I, Minhajuddin Ahmed (ID: 1720654) from Internship Course of Spring 2021 Semester, Section 08, hereby submitting my Internship Report title as, **"**SERVIQ!**".** This report focuses on my internship and the project I worked on during my internship period. I have got the opportunity to work in Intraspace Limited in "Web & App Development Department" for twelve weeks, under the supervision of Mr. Saqib Abdullah Quadir, Senior Developer.

The main objective of my internship was to gain as much as expertise in development field of IT industry. Making myself known to the techniques and technologies that are being used to design and develop IT projects including research, planning, development, implementation and testing. Made sincere efforts to get habituated with common office practices such as meetings with clients, maintaining work deadlines and preparing documents.

In presenting this report, I have tried my level best to include all the relevant information and the explanation, to make the report informative and comprehensive. I shall be highly obliged if you are kind enough to receive this report and provide your valuable judgment.

Sincerely Yours

Minhajuddin Ahmed

Id: 1720654

School of Engineering, Technology & Sciences

Independent University, Bangladesh

Evaluation Committee

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Signature

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Name

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Supervisor

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Internal Examiner

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External Examiner

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Convener

Acknowledgements

First of all, I wish to express my gratitude to the almighty ALLAH for giving me the strength to perform my responsibilities as an intern and complete the report within the stipulated time.

I am deeply indebted to my Faculty Advisor Mr. Sanzar Adnan Alam, Lecturer, Department of Computer Science and Engineering, Independent University, Bangladesh, for his whole-hearted supervision during my organizational attachment period. I am also grateful to Mr. Mr. Saqib Abdullah Quadir, as my organizational supervisor. It would have been very difficult to prepare this report up to this mark without their guidance.

My gratitude goes to entire CSE Department, of Independent University, Bangladesh for arranging Internship Program that facilitates integration of theoretical knowledge with real life situation.

Moreover, I would also like to express my gratitude to my Intraspace Limited fellows, seniors and colleagues who gave me good advice, suggestions, inspiration and support. I must mention the wonderful working environment and group commitment of this organization that has enabled me to deal with a lot of things.

Minhajuddin Ahmed

May, 2021

Abstract

In this time of World Wide Web, creating an online platform has become compulsory for any growing business. Websites can give that online space to businesses to stay competitive in this increasingly digital world. An HR Consulting agency which focuses on managing all aspects of HR and administrative work of a company, approached Intraspace Limited to build a website for their company, to make their business look more credible and professional, attracting new customers and show casing there services.

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Chapter 1: Introduction

Background

Employee management services are HR outsourcing companies that offer a higher level of protection, service and strategic help than most HR firms. They emphasis on taking all parts of HR and administrative work, allowing the company to focus on growing the business. This allows a business owner or leadership team to put more of their own time and resources into their vision for the company, and rest easy that the company is in compliance with all HR laws. In many cases, it also allows the business to save substantial money, both on direct HR costs like health insurance and indirect costs by reducing risk and the list goes on. So to attract more clients for the business, all these benefits and services information need to be placed in organized manner and should be available in one place. A website can be the right platform to solve this issue.

Living in the digital world, a website is crucial for any business. Having a website and online presence strategy allows companies to market there business online. If a website that it is accessible to anyone, anywhere, anytime. Even during non-business hours, customers can access a website and avail there services or get the information they need. Nowadays websites are an essential tool for businesses to establish their credibility and build trust with their customers. Helps businesses break geographical barriers and significantly increase their sales. On the other hand, creating a website is very easy and cost-effective.

SERVIQ Bangladesh Limited has chosen our company to build the website for their employee management services business. The primany goal for our developers, is to design the website in such a way, so that the clients can easily navigate through the website and doesn’t get any second thought of choosing any other employee management company.

Objectives

- **Website content management :** Providing quality content on the website, well-organized content, regularly adding new information.
- **Showcase portfolio or services :** Showing all the necessary information about there services. Making a portfolio for the business.
- **Human resource** : Attract and recruit new employees through online circulars.
- **Customer Support :** FAQ page visit, clicked email links, inquiry form submissions.
- **Compatibility and Security** : Integrate with other systems; meet security, performance and scalability requirements.
- **Blog posting :** Popular blog posts will increase website traffic**.**

Scope of the Project

Features available to the user after the development of this website:

- Multiple web pages Home page, Contact page, Blog page, About page e.t.c
- Will able to contact the company direct through this website
- Will be able to apply for jobs directly through this website
- Will be able to give reviews on Blog posts
- Will be able to visit social network sites of the company
- Will be able to get information of the services of the company

Company Profile

Figure 1.1: Intraspace Limited Logo

Background of the Company:

Intraspace Limited is a 360-degree marketing agency, equipped with all the solutions to any issue. Our specialization team with years of experience in on & offline marketing could provide exquisite and profound services that are guaranteed to fulfil the client's satiety. We provide all services, ranging from event management, brand awareness to strategy planning and consultancy. We are devoted to serving you in the most optimal time while ensuring prime quality. We acknowledge your endeavour, and we are here to join your adverse journey promising to alleviate your challenges and help your business to reach the apex of your dream! [1].

Product and Services:

Digital Marketing	Brand Activation	Web & App Development
Animation	Strategic Planning	Video Production
Event Management	Print Media	Creative Consultancy

Table 1.1: Product and Services of Intraspace Limited

Address and Contact Information:

Lane 1, House 158 (5th Floor), Baridhara DOHS, Dhaka 1206, Bangladesh

hello@intraspaceltd.com

02-48313520

Chapter 2: Literature Review

Project relation to Undergraduate Courses

Prior to the development of this project, all the knowledge and expertise that I had obtained through my university education has certainly aided me a lot in developing this project. Also given me the courage and ability to work with others, in genuine workplace environment. Some of the courses are:

- **303: Database Management:** This is the course were I learned about of database management. Where I practically learned the mechanism of storing and fetching data in an organized way using web servers and open-source software tool for database management. The course also covered development planning and strategy techniques like Six Element Analysis, Entity Relationship Diagram, Rich Picture, Business Process Model and Notation and various other.
- **CSE 307: System Analysis and Design:** This course taught me the tools and techniques used for the design and analysis of information systems. Topics covered include: Data flow diagrams. Systems development life cycle models, Use-case modeling, Unified Modeling Language. Feasibility analysis, Systems prototyping, User interface design. Case studies of Information Systems. These methods helped in preparing this report and planning and designing of the SERVIQ! project before going into development.
- **CSE 309: Web Applications and Internet:** Most of the knowledge that I have on Web development was by completing this course. The course introduced me to the web technologies such HTML and Cascading Style Sheet, HTTP, HTTPS, FTP, Client and Server side scripts, Scripting (JavaScript, AJAX, XML) with jQuery libraries, Web Servers, PHP, My SQL. The knowledge of all these tools played a vital role in developing SERVIQ! Project.
- **CSE 451: Software Engineering:** The course provide me with knowledge and skills necessary to analyze, design and implement engineering projects. The course taught how to manage a project by reviewing, refining and designing step by step. Project management and planning, tracking and scheduling, risk analysis, quality assurance techniques, software testing techniques are some of the skills that I got use in developing SERVIQ!

Chapter 3: Methodology

Software Development Methodology

Methodologies for Software Development are frameworks for planning, creating, testing and deploying successful software solutions. (bairesdev). It is commonly acknowledged as system development life cycle (SDLC). Software Development Life Cycle is the application of accepted business operations to develop software applications. Planning, Requirements, Design, Build, Document, Test, Deploy, and Maintain are the six to eight phases that are usually followed [2].

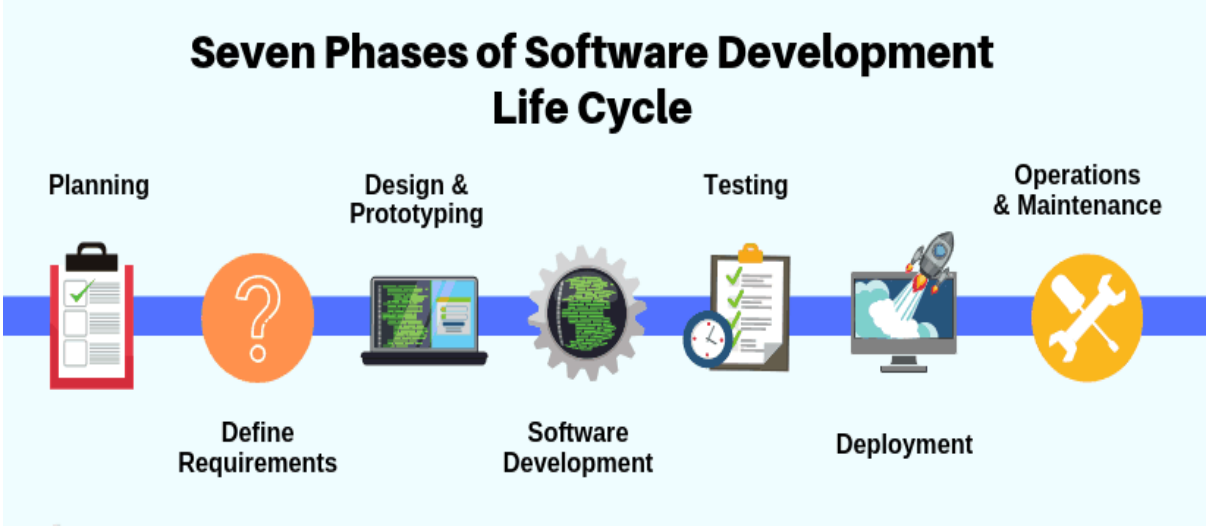

Figure 3.1: Software Development Life Cycle (SDLC)

SDLC methodologies are intended to make software development project task go as smoothly as possible, with efficient interaction, meetings, and management processes, as well as an optimized workload.

There are several types of SDLC methodologies, but the most popular ones are:

- Agile Software Development Methodology
- DevOps Methodology
- Scrum Development Methodology
- Waterfall Model
- Prototype Methodology
- Rapid Application Development (RAD)
- Spiral Model

- Extreme Programming Methodology
- Joint Application Development Methodology
- Lean Development Methodology

Prototype Methodology

For the development of the project, the developer team of Intraspace Limited had chosen Prototype Methodology to build this project. The Prototype Methodology is a software development technique that enables developers to build only a prototype of the project to show clients how it works. Using this technique, developers make the required changes before designing the actual system [3]. Most importantly our client will have precise feeling of the system to better understand the system and detect missing functionalities.

Few classic steps of prototype practice:

- **Requirements and analysis:** Gather the requirements of the system in detail with interviews and in-depth technical questions and expectations.
- **Quick design:** A primary design is made, with no coding.
- **Build prototype:** Once the design model is agreed, the building of the first prototype with basic and main features Is done.
- **User evaluation:** The prototype is put to the test by a variety of people in order to measure and detect its positives and negatives.
- **Refining prototype:** A more advanced version of the prototype is created and presented to the user using all of the knowledge obtained from the user assessment. Since several iterations are always required to achieve the desired end result, this is where the majority of time and money are spent.
- **Engineer product:** After the final prototype has been authorized, it undergoes a series of quality checks and rigorous tests before becoming a fully functional final product.

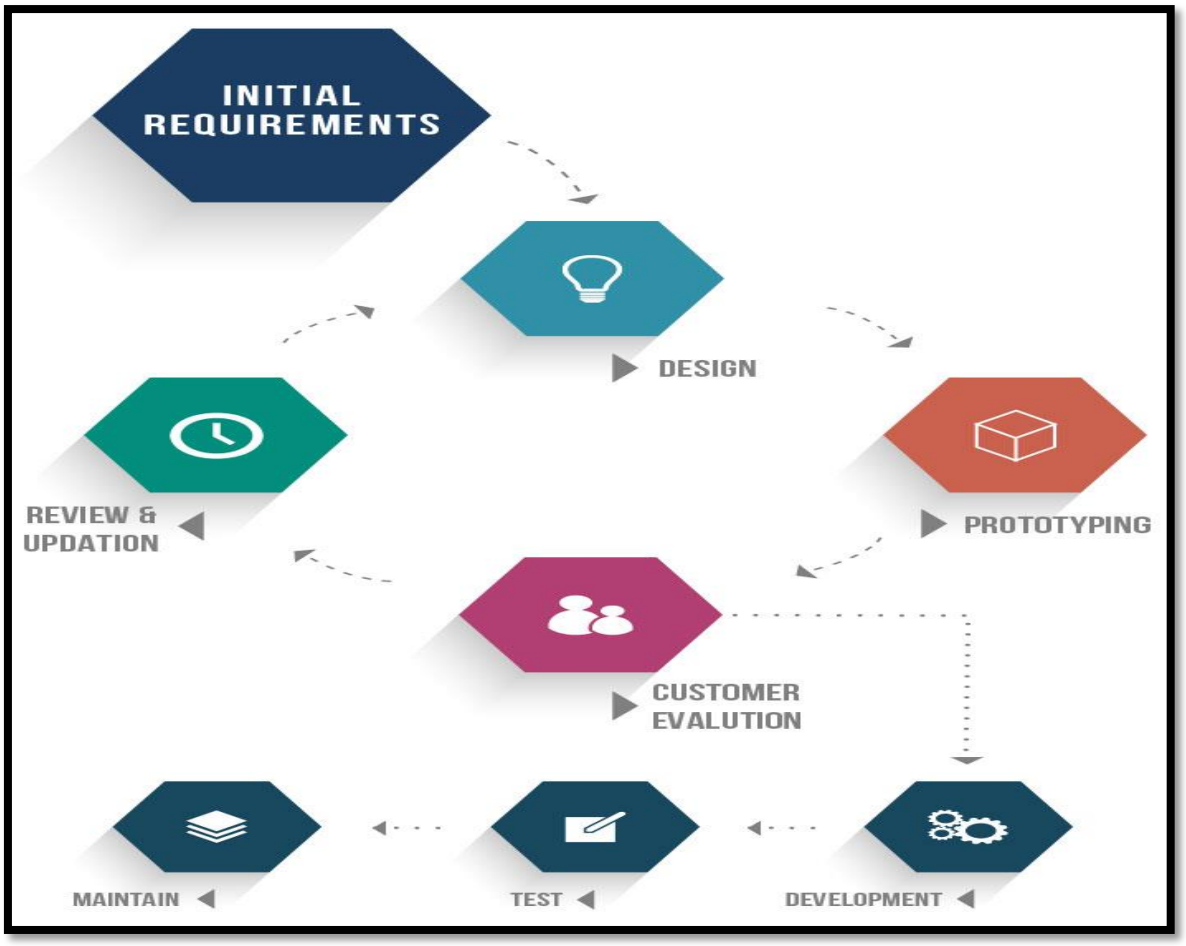

Figure 3.2: Prototype Methodology

Advantages of Prototype Model

- Show the client the prototype to ensure that they have a good understanding and full "feel" for the software's features. It means that customers are more satisfied and comfortable.
- Determine the extent of the refinement and adjust the specifications to accommodate new changes.
- This approach significantly reduces the risk of failure by identifying possible risks early on and taking fast moderation measures.
- During a project development, clear communication between the software development team and the client creates a very good and favorable setting.

Web Development

Web development is the process of creating and maintaining websites and applications for the internet or a private network known as an intranet. It's the work that goes on behind the scenes to make a website look attractive, work rapidly, and have a good user experience. Web development is not concerned with the design of a Web site instead, it is all about the coding and programming that feeds the functionality of the Web site. Web developers use a number of coding languages to accomplish this. The languages they use are determined by the tasks they're doing and the platforms they're using [4,5].

Web development can be broken down into three layers: client-side coding (frontend), server-side coding (backend) and database technology.

Layers of Web Development

Frontend Web Development: This type of Web Development helps transform information and presented data into a graphical user interface using CSS, HTML, and JavaScript so that users can simply interact with the provided interface. It is concerned with the portion of the website that users can see and understand.

Backend Web Development: The part of every web page that users don't or can't see is known as the backend. It is the website's foundation. It is not visible to users, but it is responsible for the website's functionality. It helps developers to store and organize data, as well as ensure that anything accessible on the frontend or client-side works properly.

The backend section of the website communicates with the frontend section of the website by sending and receiving data that is shown on the website in real time. When users enter some data, fill out forms, or purchase something, the browser sends that request to the backend (the server-side) which, in turn, sends back the data as frontend code for the web page to comprehend, interpret, and make it visible for you.

Database technology: Database technology is also used on websites. The database stores all of the files and content that are required for a website to work, making it easy to retrieve, organize, update, and save them. The database runs on a server, and most websites employ a relational database management system (RDBMS) [6].

Web Development Tools Used

WordPress:

Figure 3.3: WordPress Logo

WordPress is an open-source website creation platform or on a more technical level a content management system (CMS) written in PHP that uses a MySQL database [7]. It is the most widely used content management. A content management system (CMS) provides users with an easy-to-use interface for adding and editing website content from the text to the visual elements. WordPress is used by millions of company owners, authors, and publishers every day to manage their online presence [8]. As being an Open-source software hundreds of developers and users collaborate and contribute to the software to make it better. The spirit of open-source implies continuous development, openness, and unrestricted use for all [7].

WordPress plugins can be used to expand the core WordPress software. WordPress plugins are small pieces of software that can be installed on a website to enhance its functionality (such as e-commerce, SEO, backups, contact forms and more).

WordPress security is updated on a regular basis to ensure maximum security. There are a range of backup options and security plugins that keeps website secure in addition to the core software updates [8].

PHP:

Figure 3.4: PHP Logo

PHP is an open source server side scripting language, which is used to develop Static websites or Dynamic websites or Web applications. PHP stands for Hypertext Pre-processor. PHP code may be embedded in HTML or used in conjunction with a variety of web template systems, content management systems, and frameworks. A PHP file can also include HTML tags and client-side scripts like JavaScript.

PHP is supported by default on most web hosting sites. PHP has in built support for working hand in hand with MySQL and can also work with other database management systems such as Postgres, Oracle, MS SQL Server, ODBC etc [9]. PHP can be used on all major operating systems, including Linux, Microsoft Windows, macOS, RISC OS, and probably others [10].

Javascript:

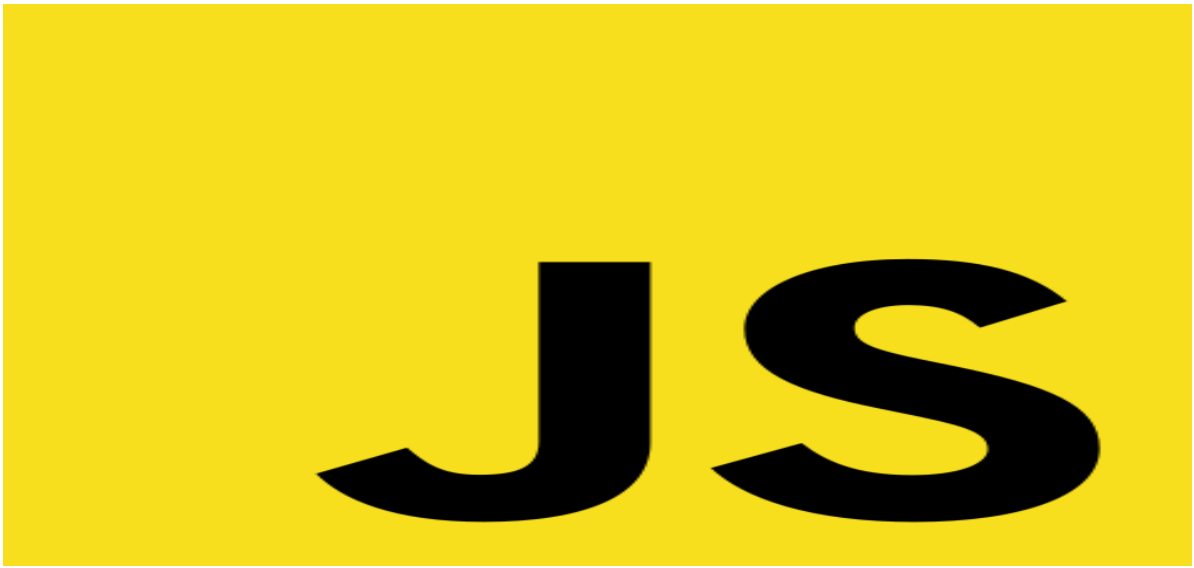

Figure 3.5: Javascript Logo

JavaScript is a text-based programming language used both on the client-side and server-side. Integrating JavaScript enhances user experience of the web page by transforming it from a static page into an interactive one. To say, JavaScript adds behavior to web pages. For developing web and mobile applications, developers may use a variety of JavaScript frameworks. JavaScript frameworks are sets of JavaScript code libraries which provide pre-written code for common programming features and tasks for developers. Aside from websites and applications, developers can use JavaScript to create simple web servers and Node.js to construct back-end infrastructure [11].

HTML5:

Figure 3.6: HTML5 Logo

HTML (Hypertext Markup Language) is a markup language used to create documents that can be viewed in a web browser. When used in combination with other web technologies like CSS and JavaScript, it makes the huge majority of content seen on websites. HTML is used for a wide range of purposes on the internet, from developing complex websites with email and calendar features to basic course websites [12] and HTML5 is the latest version of Hypertext Markup Language.

Bootstrap:

Figure 3.7: Bootstrap Logo

Bootstrap is a free and open-source CSS framework focused at responsive, mobile-first front-end web development. It includes design templates for typography, shapes, buttons, navigation, and other interface elements that are based on CSS and JavaScript [13].

JQuery:

Figure 3.8: jQuery Logo

JQuery is a JavaScript library that is lightweight, light, and fast. It's a cross-platform and works with a variety of browsers. It ties a lot of popular tasks that involve a lot of lines of JavaScript code to accomplish, and ties them in a way so that it can be called with a single line of code whenever needed. It can also be used to simplify a number of more difficult aspects of JavaScript, such as AJAX calls and DOM manipulation [14].

Chapter 4: Project Management

Work breakdown Structure

In project management, a work breakdown structure (WBS) is a tool for completing a complex, multi-step project. It's a strategy for breaking down big projects into smaller chunks and completing them more quickly and effectively. The aim of a work breakdown structure is to make a large project more manageable. Breaking it down into manageable parts allows multiple team members to work on it at the same time, resulting in higher team productivity and simpler project management [15]. Below is the WBS of "SERVIQ!"

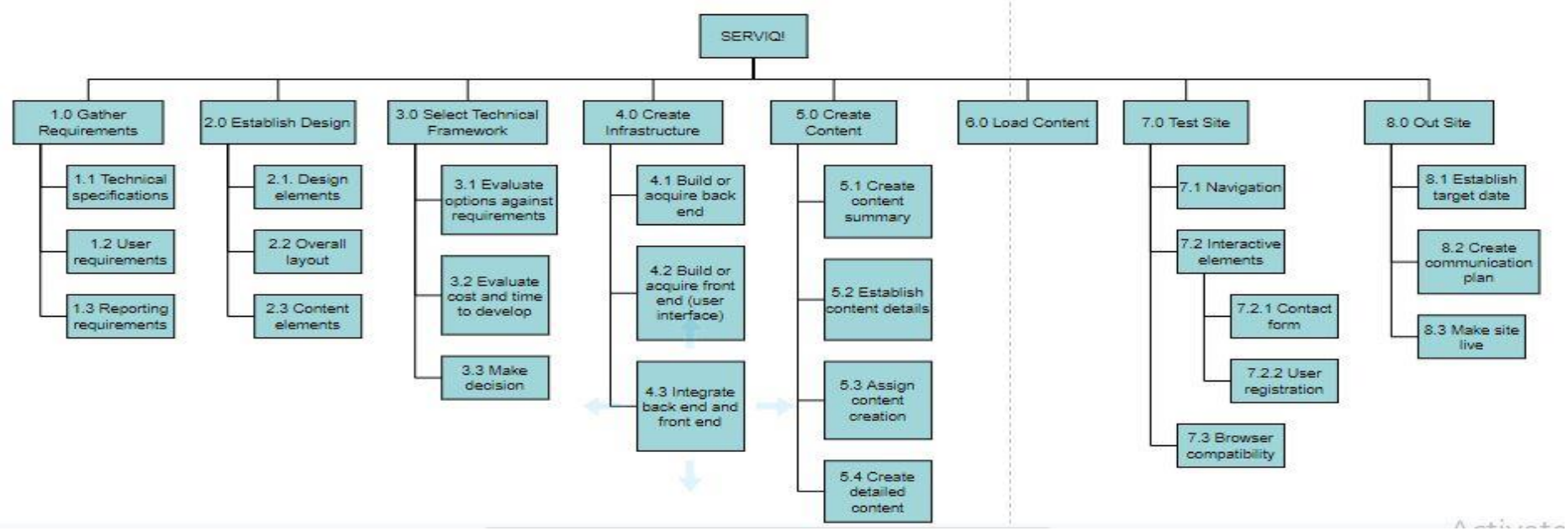

Figure 4.1: Work breakdown Structure of "SERVIQ!"

Gantt chart

A Gantt chart is a project management tool that can help with the planning and scheduling of projects of all sizes, but it's especially useful for simplifying complex projects. Timelines and tasks from project management are converted into a horizontal bar chart that displays start and end times, as well as dependencies, scheduling, and deadlines, as well as how much of the job is done each stage and who is the task owner. When there is a broad team with many people involved, this will help keep projects on track.

As it's in a bar chart format it is possible to check on progress with a quick glance:

- a visual display of the whole project,
- timelines and deadlines of all tasks,
- relationships and dependencies between the various activities,
- project phases

Gantt chart integration in project management software gives managers insight into team workloads as well as current and future availability, allowing for more precise scheduling [16]. Below is the produced Gant chart for “SERVIQ!”

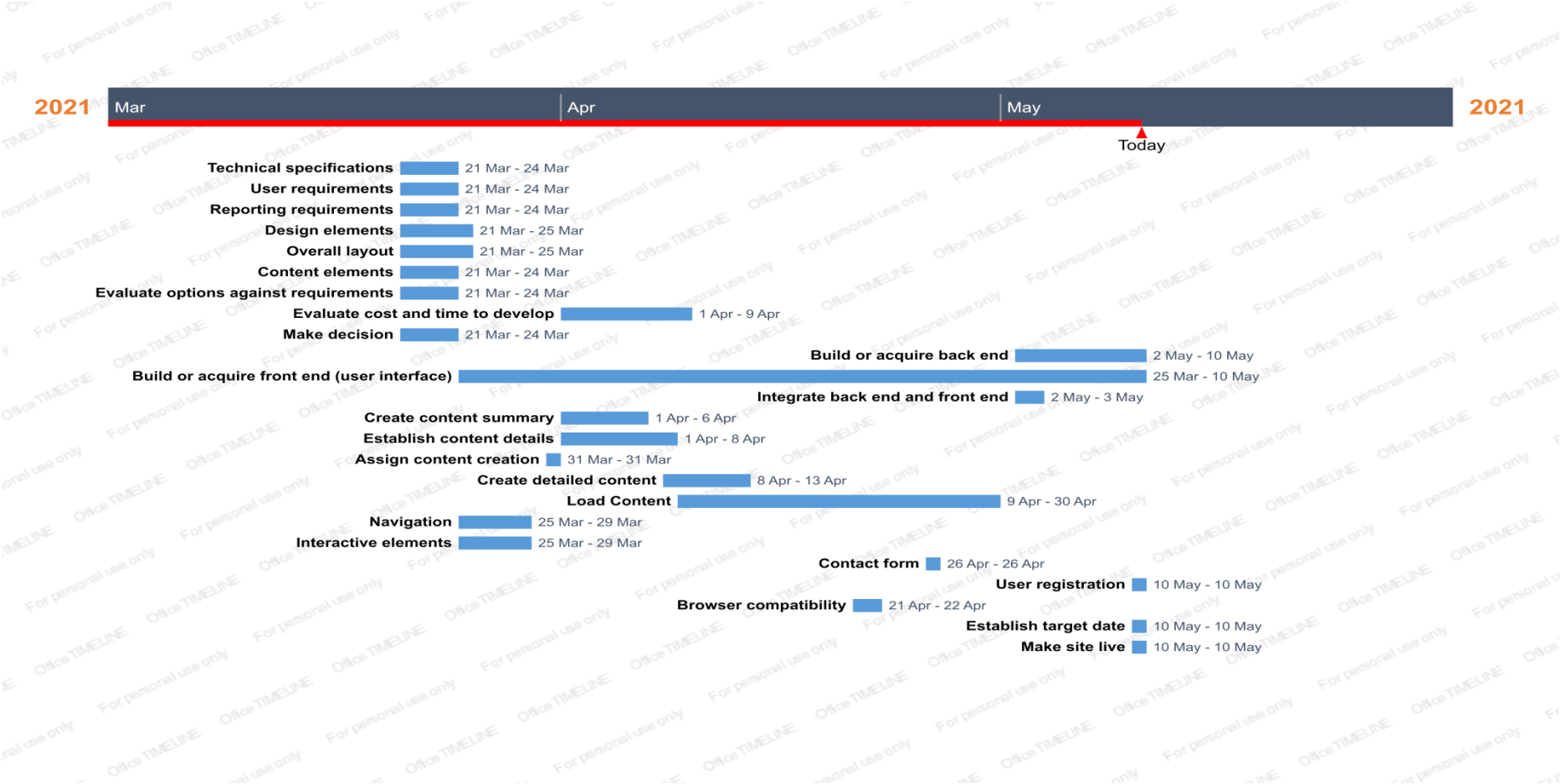

Figure 4.2 : Gantt Chart of "SERVIQ!"

Chapter 5: Project Body

Description of the Project

It is a website developed in Wordpress. The is built for an HR Business Process Outsourcing (HR-BPO) firm in Bangladesh called SERVIQ Bangladesh Limited. Here the user will be able to browse content of the website, gaining all the necessary information regarding the company. There is a way for the user to directly communicating with the company representatives through this website. For people who are looking for opportunity to work for SERVIQ Bangladesh Limited can browse the career section for jobs and can also apply for job through this website by just filling a application form. User can also view the blog posts posted by the company to have an idea of the company.

Systems Analysis

Systems analysis is the process of an individual (s) studying a system in order to evaluate, model, and choose a logical alternative for an information system. Projects involving systems analysis are conducted for three reasons: problems, opportunities, and directives. Systems analysts, sponsors, and users are among those participating. The systems development life cycle can be used to explain the process of creating systems. A methodology refers to the tasks, processes, and tools employed by the systems development life cycle. The methodologies are divided into three categories: traditional, information engineering, and object-oriented. CASE tools are computer-assisted software applications that support certain methodology [17].

Six Element Analysis

SYSTEM ROLES

Process	Human	Non computing hardware	Computing Hardware	Software	Database	Communication & Network
Job apply process	User- Fill application form then submit	N/A	Functional mobile devices, computers	Any version of web browser or browsing app	MySQL	Internet
Contact Process	User- Fill contact form then submit	N/A	Functional mobile devices, computers	Any version of web browser or browsing app	MySQL	Internet
View website content	User- Browse contact	N/A	Functional mobile devices, computers	Any version of web browser or browsing app	MySQL	Internet

Table 5.1: Six Elements Analysis of "SERVIQ!"

Feasibility Analysis

A feasibility analysis, as the name implies, is used to establish the viability of a concept, such as ensuring that a project is legally, technically, and economically feasible. It tells us whether a project is worthwhile—in some situations, a project may be impossible to complete. There are a variety of reasons for this, including the need for too many resources, which not only stops those resources from performing other duties, but also may cost more than the company would earn back by taking on a project that isn't lucrative.

A well-designed study should include information such as a description of the product or service, accounting statements, details of operations and management, marketing research and policies, financial data, legal requirements, and tax obligations, as well as a historical background of the business or project. Technical development and project implementation are usually preceded by such research [18].

Types of Feasibility Study:

- **Technical Feasibility:** The technological resources accessible to the organization are the subject of this examination. It aids companies in determining whether technical resources are adequate for the job and whether the technical team is capable of turning concepts into operational systems. The proposed system's hardware, software, and other technical needs are also evaluated for technical viability.

  "SERVIQ!" is built using HTML5, Bootstrap, PHP and Javascript. These are the technologies that are widely used in current industry, and everyone participating in the development of this project knew how to work with at least one of them. As a result, the project can be deemed technically feasible.

- **Operational Feasibility:** This assessment entails conducting research to determine whether — and to what extent — the project can meet the organization's needs. Operational feasibility studies also look at how a project plan meets the requirements identified during the system development requirements analysis phase.

"SERVIQ!" the website is very easy going, and user with little familiarity of the internet can easily navigate through the website. So, the project can be determined as Operationally Feasible.

- **Economic Feasibility:** This evaluation usually includes a cost-benefit analysis of the project, which aids businesses in determining the project's viability, cost, and benefits before allocating financial resources. It also functions as an impartial project assessment and boosts project credibility by assisting decision-makers in determining the proposed project's positive economic advantages to the business.

  For the development of "SERVIQ!", the cost mainly are one time investment like domain purchase, web hosting, website content development other than post development maintenance. Since the cost of these services had to be paid onetime only, it can be easily covered from the estimated revenue from client services. Thus, in conclusion, it can be said that the project is Economically Feasible.

Problem Solution Analysis

Problem: In this pandemic with continuous lockdown and travelling restrictions it has become difficult and hectic for an individual to visit physically to an office. There are problems that have been observed and analyzed, they are:

- **Time consuming:** Visiting the office of the company requires a lot of time use and for little information it very time consuming and unnecessary of visiting the office.
- **Bodily discomfort:** Travelling to the office of the company requires physical movement of the body, and if the client is elderly or a sick person it becomes very difficult to travel.
- **Costly:** Travelling to the office of the company physically adds travel fare. If the travelling becomes frequent it becomes a burden for the client to maintain the cost.
- **Information lacking:** Sometimes visiting the office and talking with one the representatives of the company physically, may lead to miss information due to human error.

- **Lack of accessibility:** The office hours of the company is around 8 hours and if the client needs to confirm information in emergency after or before the office hours it won't be possible.

Solutions: The problems that have been analyzed can be solved by developing of "SERVIQ!" by:

- **Solution to Time consuming:** With access to internet in seconds the website visitor can contact company representatives through the Contact page or by browsing the website can get information.
- **Solution to Bodily discomfort:** No need to travel physically to gain information. Anyone from their current location can contact company representatives.
- **Solution to Cost:** As their no travelling so no travel fare needed.
- **Solution to Information lacking:** Mostly all the necessary information about the company and their services are available in the website.
- **Solution to Lack of accessibility:** As the website can be accessed through internet it is accessible 24/7.

System Design

The process of establishing system elements such as modules, architecture, components and their interfaces, and data for a system based on specified requirements is known as systems design. It is the process of identifying, creating, and designing systems that meet a company's or organization's specific objectives and expectations. A systemic approach is essential for a well-functioning and coherent system. To take into consideration all of the system's connected variables, a bottom-up or top-down strategy is required. A designer employs modeling languages to describe information and knowledge in a system structure that is determined by a set of consistent rules and definitions. Graphical or textual modeling languages can be used to create the designs. Unified Modelling Language (UML), Flowchart, Business Process Modelling Notation (BPMN), Systems Modelling Language are some examples of graphical modelling languages [19].

Entity Relationship Diagram (ERD)

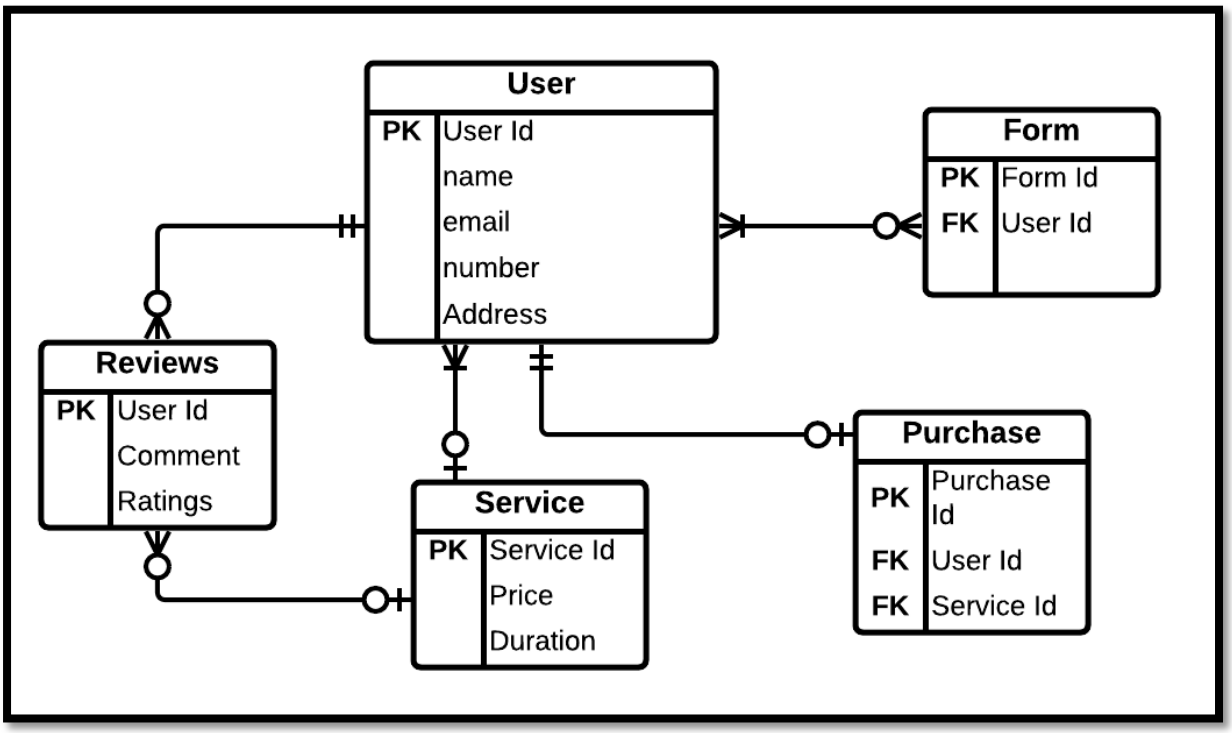

Figure 5.1 : Entity Relationship Diagram of "SERVIQ!"

Use Case Diagram

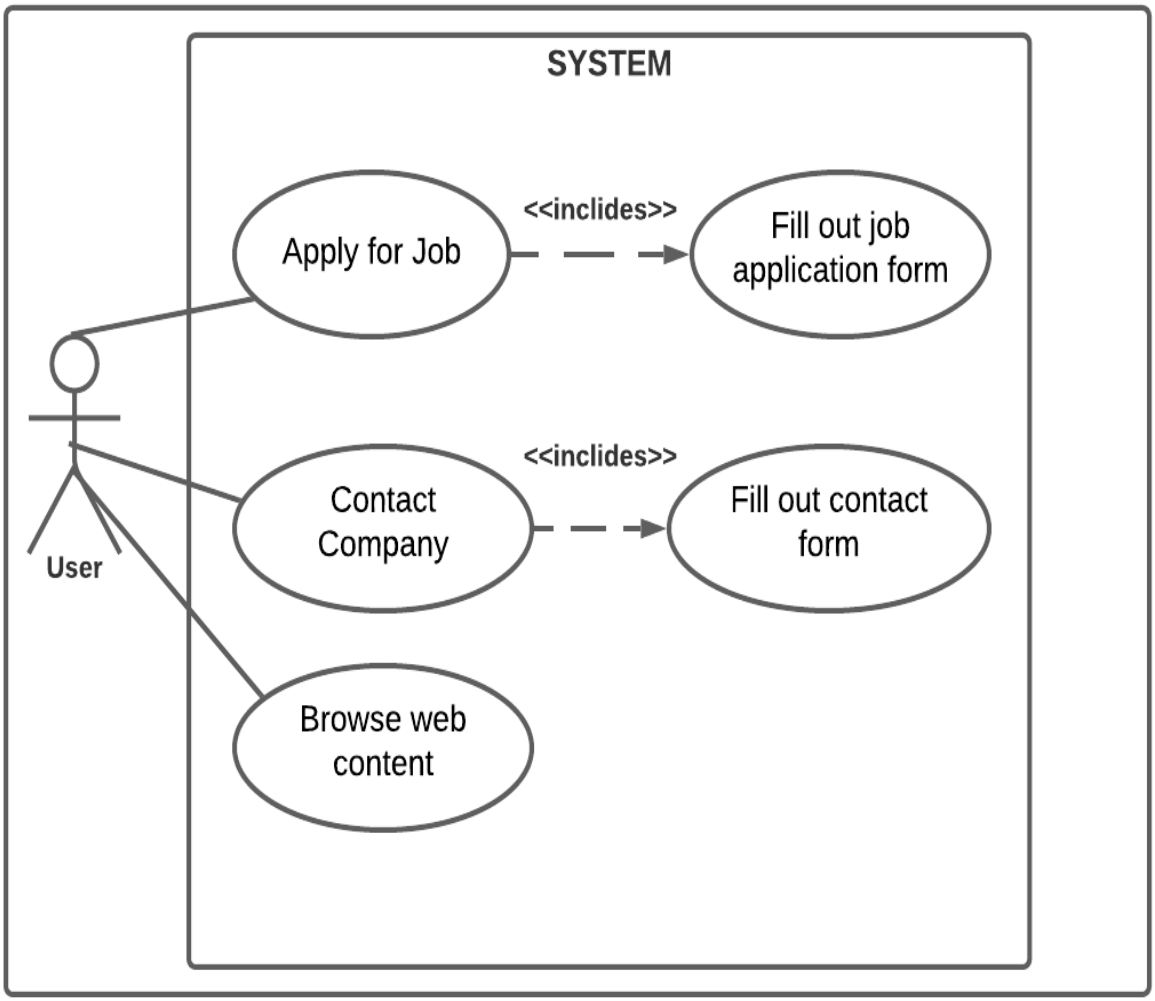

Figure 5.2: Use Case Diagram of "SERVIQ!"

Rich Picture

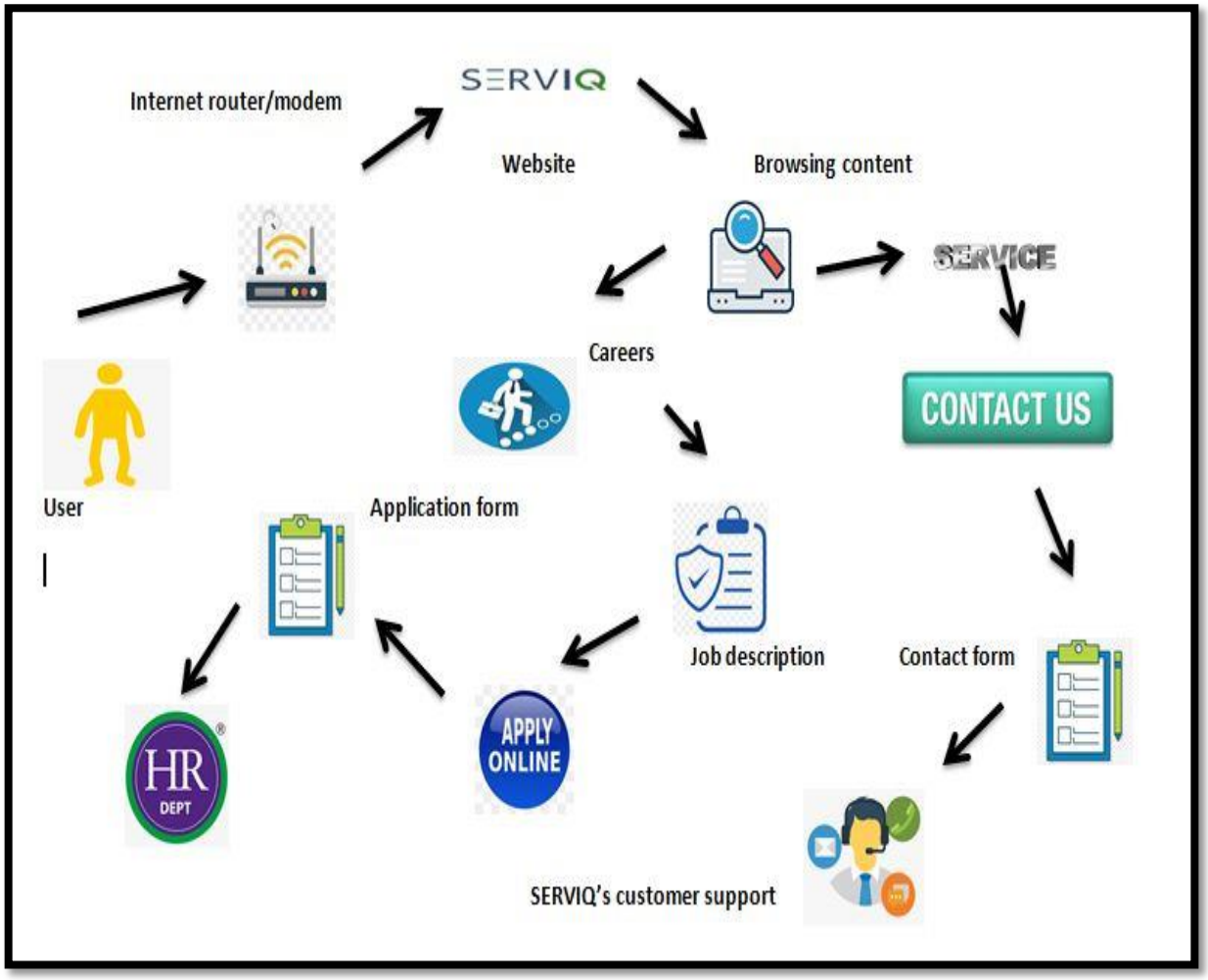

Figure 5.3: Rich Picture for "SERVIQ!"

Business Process Model and Notation (BPMN) 2.0

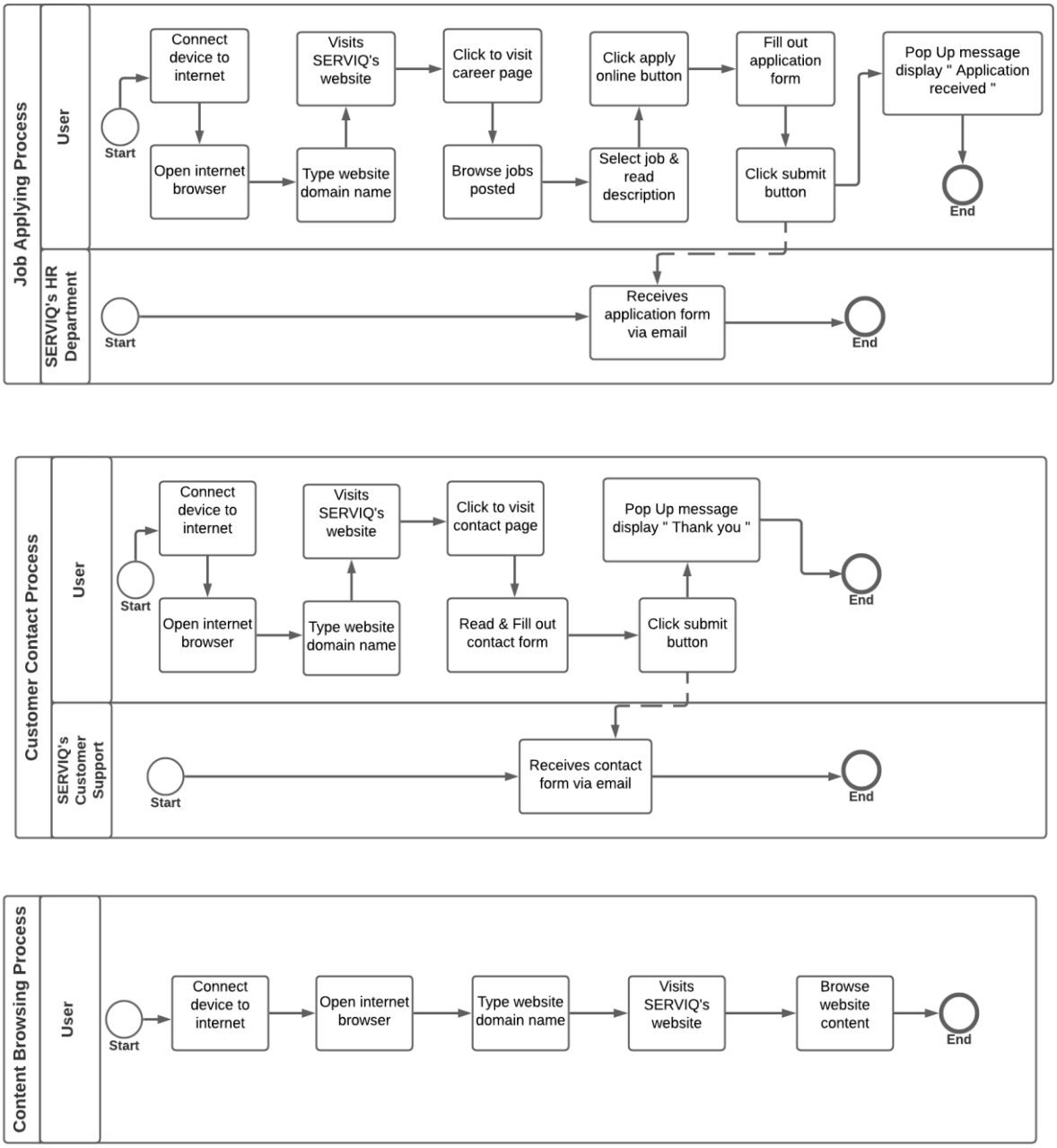

Figure 5.4 : BPMN for Users playing a game in "SERVIQ!"

Functional Requirements

A Functional Requirement (FR) is a statement that describes the service that the software must provide. It refers to a software system or a component of one. A function is nothing more than the inputs, behavior, and outputs of a software system. A calculation, data manipulation, business procedure, user interaction, or any other unique functionality that defines what function a system is likely to execute can all be considered [20]. The inputs, processes and output are discussed below:

Name of the Function: View web pages		
Input: Click on href link.	**Process**: Browser sends request to server	**Output:** Display web page.
Pre-Condition: Must be connected to internet.		
Post-Condition: User will be able view all webpages.		

Table 5.2: Functional requirements to display webpage

Name of the Function: Send email when user fills contact form		
Input: Fill user's contact information	**Process**: Information stored in database, fetched by server to be delivered	**Output:** Email sent to company address.
Pre-Condition: Must have company email address.		
Post-Condition: User will be able to contact company.		

Table 5.3: Functional requirements of sending contact email

Name of the Function: Send email when user apply for job		
Input: Click Apply for Job	**Process**: Information stored in database, fetched by server to be delivered	**Output:** Email sent to company address.
Pre-Condition: Must have company email address.		
Post-Condition: User will be able to apply for jobs.		

Table 5.4: Functional requirements of sending job email

Name of the Function: Posting job in website		
Input: Provide username and Password	**Process**: Username and password verification	**Output:** Job posted in website
Pre-Condition: User should have proper access to the system.		
Post-Condition: User will be able to post jobs in website.		

Table 5.5: Functional requirements of sending job email

Non-Functional Requirements

Non-Functional Requirement (NFR) is a software system's quality attribute. They assess the software system on the basis of its responsiveness, usability, security, portability, and other non-functional criteria that are crucial to its success. Non-functional requirements that aren't met can lead to systems that don't meet user needs. Non-functional Requirements allows you to impose constraints or restrictions on the design of the system across the various agile backlogs [21].

Non-Functional Requirements:

1. Each request should be processed within 10 seconds.

2. Emails should be sent with a latency of no greater than 12 hours from such an activity.

3. The site should load in 3 seconds when the number of simultaneous users is > 10000

4. The System should be capable of handling the XYZ number of users ensuring seamless performance.

5. The layout shall allow users to reach their website content from any page within 3 clicks.

6. The System shall be easy to use by all users.

Chapter 6: Results

This chapter contains screenshots few notable pages of the Website so it can be seen about how the actual website looks like:

Homepage: In this homepage the user will be able visit all the necessary web pages from here and a brief description of everything in the website is provided.

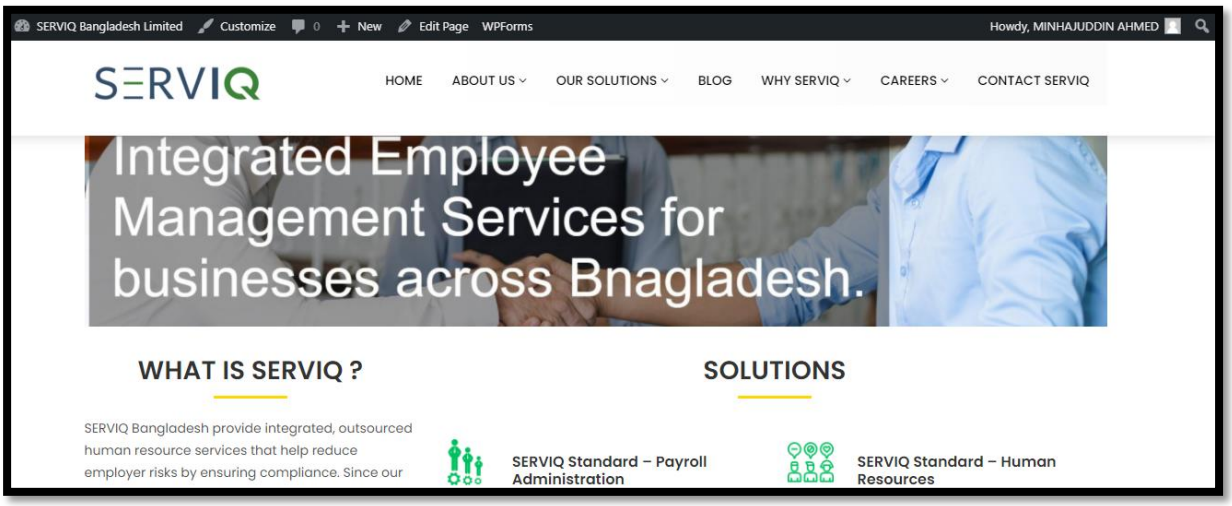

Figure 6.1: View of Homepage

View Blogs: In this page the user will be able to see all the blog posts of the company.

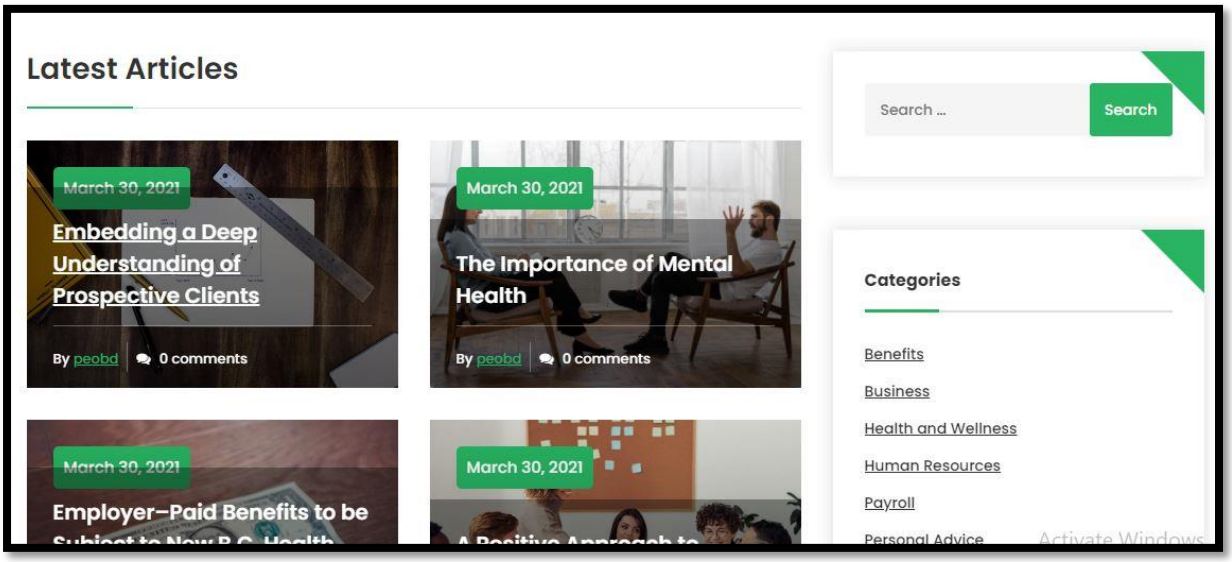

Figure 6.2 : View of Homepage

View Services : Here in this page the user will see all the services and the type of services provided by the company.

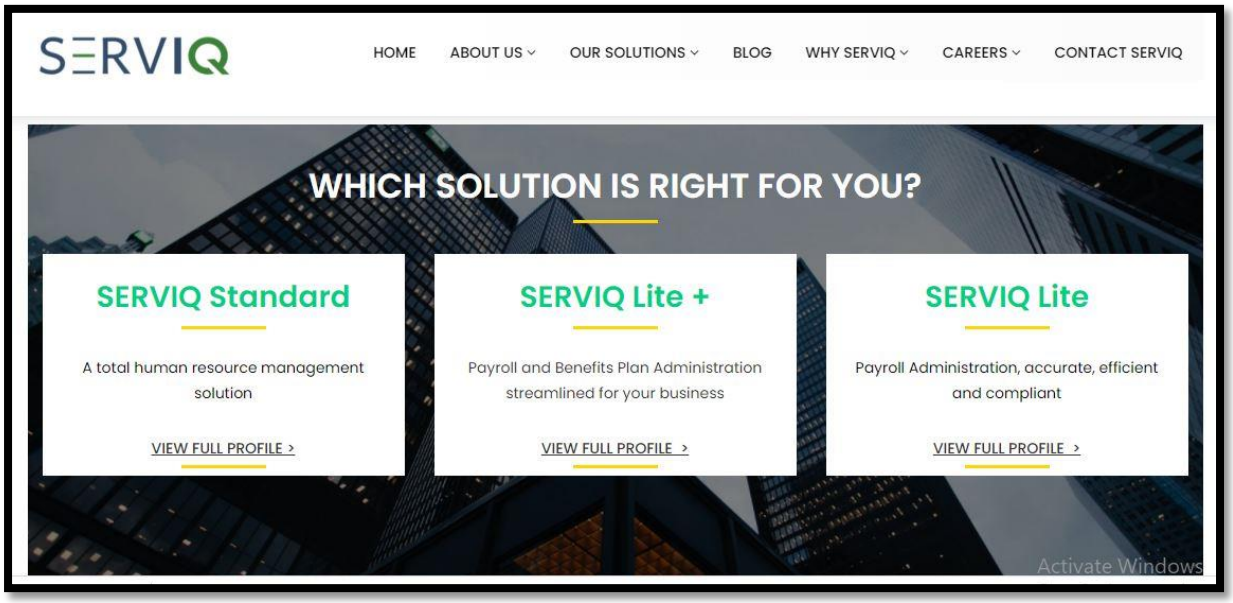

Figure 6.3: View of Solution page

Frequently Asked Questions: User see all the common questions asked by other users.

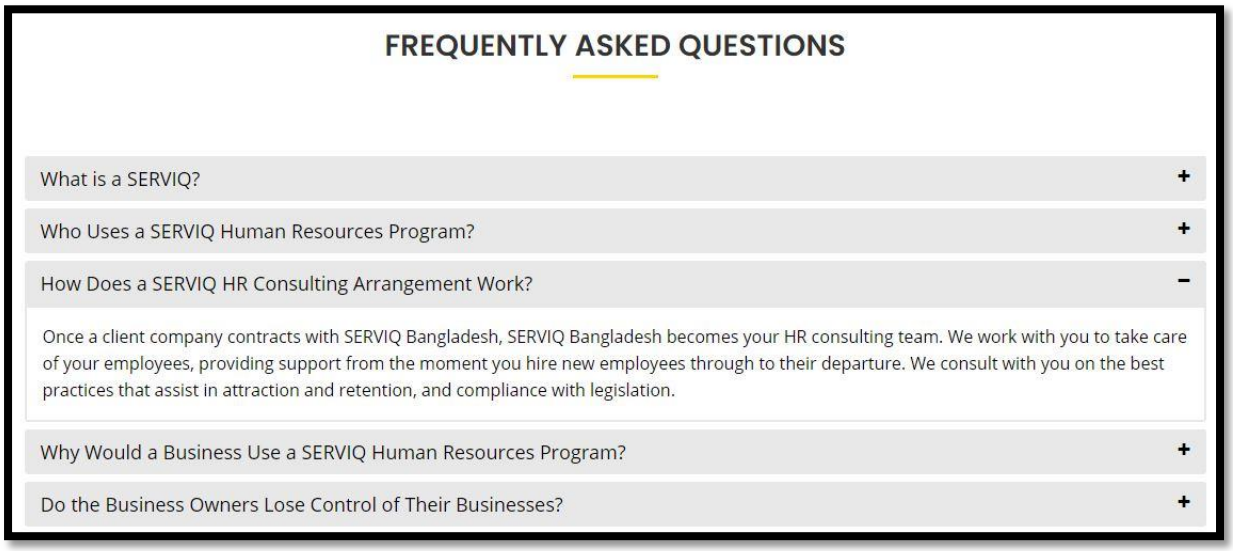

Figure 6.4 : View of F.A.Q page

View Contact page: The user will be able to contact the company and see the location of the office.

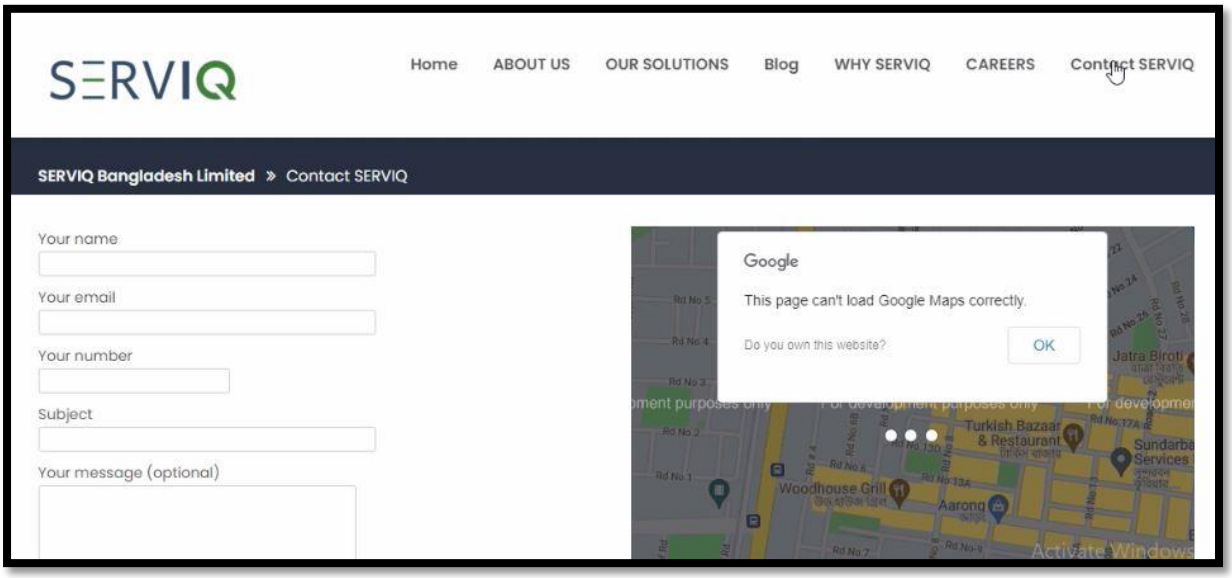

Figure 6.5: View of Contact page

Find Job Page: In this page users can apply for jobs posted by the admin.

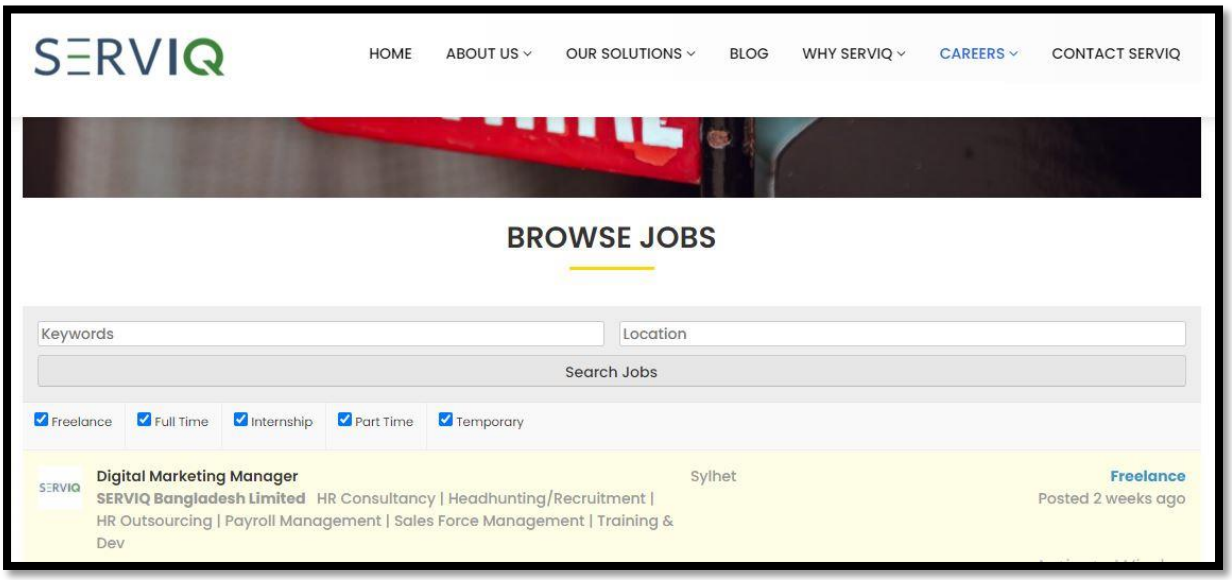

Figure 6.6 : View of Find Jobs page

Our Team: Here informations of the top management of the company shall be displayed.

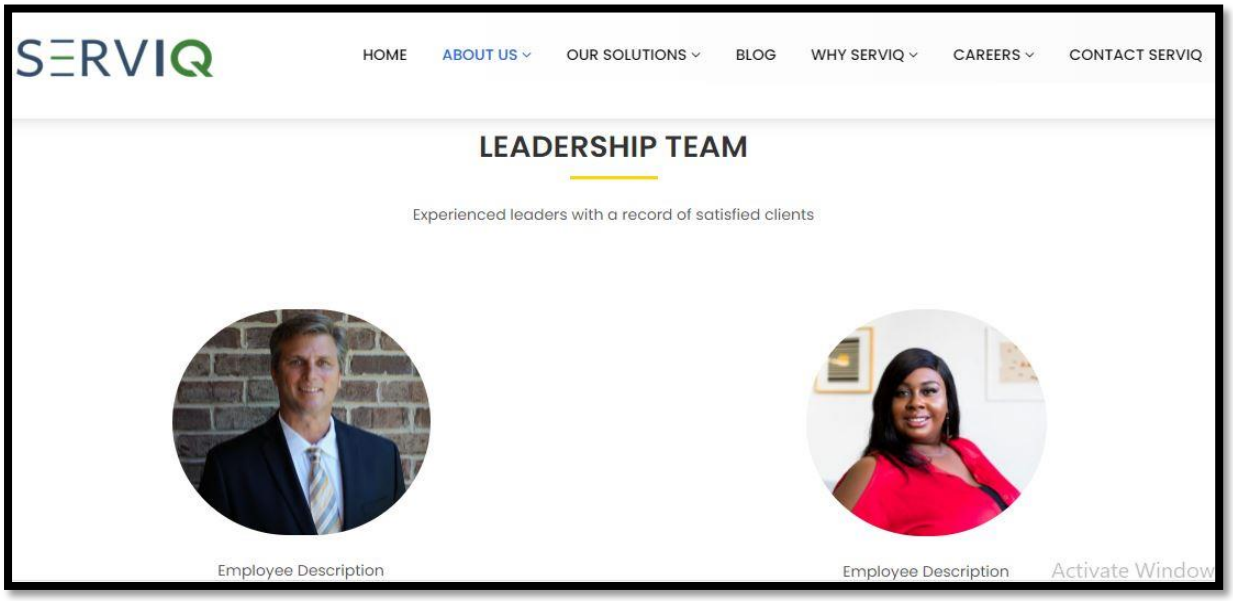

Figure 6.7: View of Our Team page

Chapter 7: Engineering problem analysis

Sustainability of the Product

Producing a high-quality product is important, especially if the intension is to attract more people to use the software. As a result, constant maintenance and updating is required for the sustainability of the software [22]. This has become more important so that users do not face any problem accessing the software any time they want. Therefore, constant monitoring is needed of the different parts of the software to check if they are working properly.

This software can be sustainable in three main categories:

- **Organizational Sustainability:**
  Organization needs to maintain a team after the software release to monitor the software and troubleshoot the problems that users will face until the lifetime of the software. The website "SERVIQ Bangladesh Limited" after launched will be maintained by a team whose responsibility will be to add updates on the projects the companies is working or have completed working. They may also add more information about themselves or more promotions advertisements so that they can promote their company.
- **Community Sustainability:**
  Community sustainability refers to how many users are accessing this website. This includes their review of the software as well. E.g., whether they can navigate the software well and find relevant information quickly and accurately. Elsewise, further modification of the software will be required to provide a better service.
- **Financial Sustainability:**
  Even after creating a software, there are additional cost that needs to be provided to maintain it. Especially, the website "SERVIQ Bangladesh Limited" will sever, database, third-party APIs, as well as a team to maintain the software. This cost can also be generated by providing online advertisements within the website which will generate revenue and cut the costs of maintenance.

Social and Environmental Effects and Analysis

The purpose of SERVIQ Bangladesh Limited was to create a website so that more people know about the work this company does. The main purpose is to create connection between users and the company so that they can do business more smoothly than before.

Moreover, the website promotes social events as well as effects pollution can have on the environment. Yearly, they have picnics and online social events where people can join and know more about the company. Furthermore, they promote the user of green energy for any product they use.

Ethics and Ethical issues

Nowadays, many people are concerned about the safety of their data and sometimes do not like to provide data since they feel their information may be hacked and be used in harmful activity. Taking all these into consideration, every ethical and code of conduct is followed.

These include collecting any relevant information about users so that company can contact them for future products and promotion. There is a strict policy that is implemented to prevent any third-party to access data. Data storage security is also implemented and will be maintained by the head of tech team so that no data leak occurs. The advertisements that will be running within the website will also be clean and will filter out any such ad that may contain violence, nudity, injury, or disturbance, etc. Furthermore, no discrimination policy is also implemented so there is no biasness towards any particular race, gender, religion, colour, national, etc.

Chapter 8: Future Work and Conclusion

Conclusion

This internship has been a fantastic and fruitful experience. I may safely say that my time at SERVIQ Bangladesh Limited has taught me a great deal. Needless to say, the technical aspects of the work I've done aren't perfect and, given enough time, could be enhanced. As someone with no prior experience of real world project development. In any case, I believe the time I spent researching and learning about it was well worth it, and it helped me find an acceptable solution for building a web service. Time management and self-motivation are two of the most important lessons I've experienced.

Future Work

This project, "SERVIQ!" is still in its early stages of growth, with several more features planned for the near future. Here are a few examples:

- Adding Sign Up page
- Adding Login page
- Adding live chat bot
- Adding Testimonials of users
- Adding Search Box
- Adding Background Videos
- Adding Newsletter Subscription

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