

**A WEB BASED EMERGENCY HOUSEHOLD SERVICE PLATFORM
BY**

**Ahmad Totonji
ID: 191-15-12310**

**Piyush Kanti Sutradhar
ID: 191-15-12776**

**Md. Shamim Hossen
ID: 191-15-12545**

This Report Presented in Partial Fulfillment of the Requirements for the
Degree of Bachelor of Science in Computer Science and Engineering

Supervised By

Dr. Fizar Ahmed
Associate Professor
Department of CSE
Daffodil International University

Co-Supervised By

Dr. Sheak Rashed Haider Noori
Professor & Associate Head
Department of CSE
Daffodil International University



**DAFFODIL INTERNATIONAL UNIVERSITY
DHAKA, BANGLADES**

JANUARY 2023

APPROVAL


This Project titled “A WEB BASED EMERGENCY HOUSEHOLD SERVICE PLATFORM”, submitted by Ahmad Totonji ID: 191-15-12310, Piyush Kanti Sutradhar ID: 191-15-12776 and Md. Shamim Hossen ID: 191-15-12545 to the Department of Computer Science and Engineering, Daffodil International University has been accepted as satisfactory for the partial fulfilment of the requirements for the degree of B.Sc. in Computer Science and Engineering and approved as to its style and contents. The presentation has been held on 25 January 2023

BOARD OF EXAMINERS

Chairman

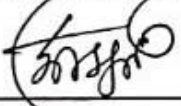
Dr. Touhid Bhuiyan
Professor and Head
Department of Computer Science and Engineering
Faculty of Science & Information Technology
Daffodil International University

Internal Examiner




Dr. Md. Monzur Morshed
Professor
Department of Computer Science and Engineering
Faculty of Science & Information Technology
Daffodil International University

Internal Examiner



Dewan Maimun Raza
Senior Lecturer
Department of Computer Science and Engineering
Faculty of Science & Information Technology
Daffodil International University

External Examiner



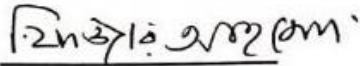
25.1.2023

Dr. Ahmed Wasif Reza
Associate Professor
Department of Computer Science and Engineering
East West University

DECLARATION

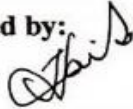
We hereby declare that this project has been done by us under the supervision of **Dr. Fizar Ahmed, Associate Professor, Department of CSE Daffodil International University**. We also declare that neither this project nor any part of this project has been submitted elsewhere for award of any degree or diploma.

Supervised by:



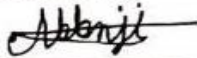
Dr. Fizar Ahmed
Associate Professor
Department of CSE
Daffodil International University

Co-Supervised by:

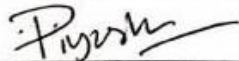


Dr. Sheak Rashed Haider Noori
Professor & Associate Head
Department of CSE
Daffodil International University

Submitted by:



Ahmad Totonji
ID: -191-15-12310
Department of CSE
Daffodil International University



Piyush Kanti Sutradhar
ID: -191-15-12776
Department of CSE
Daffodil International University



Md. Shamim Hossen
ID: -191-15-12545
Department of CSE
Daffodil International University

ACKNOWLEDGEMENT

First we express our heartiest thanks and gratefulness to almighty God for His divine blessing makes it possible to complete the final year project successfully.

We are really grateful and wish our profound indebtedness to **Supervisor Dr. Fizar Ahmed, Associate Professor**, Department of CSE Daffodil International University, Dhaka. Deep Knowledge & keen interest of our supervisor in the field of “*Web Development*” to carry out this project. His endless patience, scholarly guidance, continual encouragement, constant and energetic supervision, constructive criticism, valuable advice, reading many inferior drafts and correcting them at all stages have made it possible to complete this project.

We would like to express our heartiest gratitude to **Professor Dr. Touhid Bhuiyan, Head**, Department of CSE, for his kind help to finish our project and also to other faculty members and the staff of CSE department of Daffodil International University.

We would like to thank our entire course mate in Daffodil International University, who took part in this discussion while completing the course work.

Finally, we must acknowledge with due respect the constant support and patience of our parents.

ABSTRACT

This is an age of Technology and no one can deny this fact. In this 4IR era people's lives have changed significantly because of modern technologies. Now-a-days things have become possible which we could never think of before such as flying in the sky, communicating from one corner of the world to another, treatment of cancer etc. Many works which could only be done manually have become easier and automatic because of modern engineering. This situation is blessed in many ways and also unsanctified. We have to keep in mind that we should control technologies and machines not to be controlled by it. We tried to find out the problem people can face during their day to day life and we figure that the need of a household worker is vital in the case of the society of Bangladesh. To eradicate this demand, we tried to implement a platform which will give household workers as per requirement of our clients. We tried our best to implement a user-friendly web based service providing a platform for the general people in need of their emergency.

TABLE OF CONTENTS

CONTENTS	PAGE
Approval	i
Board of examiners	i
Declaration	ii
Acknowledgements	iii
Abstract	iv
CHAPTER	
CHAPTER 1: Introduction	1-3
1.1 Introduction	1
1.2 Motivation	2
1.3 Objectives	2
1.4 Expected Outcomes	2
1.5 Report Layout	3
CHAPTER 2: Background	4-5
2.1 Preliminaries/Terminologies	4
2.2 Related Works	4
2.3 Comparative Analysis	4
2.4 Scope of the Problem	5
2.5 Challenges	5
CHAPTER 3: Requirement Specification	6-10
3.1 Business Process Modeling	6-7
3.2 Requirement Collection and Analysis	8-9
3.3 Use Case Description	9
3.4 Logical Data Model	10
CHAPTER 4: Design Specification	11-24
4.1 Front-end Design	11-21
4.2 Back-end Design	22-23
4.3 Interaction Design and User Experience (UX)	23
4.4 Implementation Requirements	23-24
CHAPTER 5: Implementation and Testing	25-31
5.1 Implementation of Database	25-29
5.2 Test Results and Reports	30-31
CHAPTER 6: Impact on Society, Environment and Sustainability	32-33
6.1 Impact on Society	32
6.2 Impact on Environment	32

6.3 Ethical Aspects	32-33
6.4 Sustainability Plan	33
CHAPTER 7: Conclusion and Future Scope	34
7.1 Discussion and Conclusion	34
7.2 Scope for Further Developments	34
REFERENCES	35

LIST OF FIGURES

FIGURES	PAGE NO
Figure 3.1 Flow chart	7
Figure 3.2 Logical Data Model	10
Figure 4.1 Login page	12
Figure 4.2 Sign In page	13
Figure 4.3 Shows home page	14
Figure 4.4 Shows services page	15
Figure 4.5 Selecting worker	16
Figure 4.6 Service data	17
Figure 4.7 payment system	18
Figure 4.8 Confirmation page	18
Figure 4.9 Join Us page	19
Figure 4.10 contact us page	20
Figure 4.11 React JS	21
Figure 4.12 Frontend code and image	21
Figure 4.13 Backend code	23
Figure 5.1 MongoDB cluster database	26
Figure 5.2 Users data from services	27
Figure 5.3 Users database form join us sector	28
Figure 5.4 Workers payment database	29

LIST OF TABLES

TABLES	PAGE NO
Table 5.2: Different Tests	30-31

CHAPTER 1

INTRODUCTION

1.1 Introduction

This report is done on a work related to web based application for finding workers for helping out on people's household emergencies. This platform named as AvailBox is dedicated to serve people in time of their need of a worker for the household chores. As the name says it's a platform which will always be by your side means available whenever various jobs need to be done.

Also through our platform we will hire workers who are interested to join our community as a worker. By doing this we are reducing the unemployment problem of Bangladesh as well.

We implemented this platform with the help of modern technology in this field of web developing. it is ensured that the work will give the privilege among the people when they have access to the internet and smart devices such as smartphones and computers. from our list of workers anyone can easily find the suitable one as they require and with an easy payment system one can pay bills throughout our portal without any hassle.

1.2 Motivation

Finding any kind of worker in a native place or in a new place is difficult. Trust issues are also a big matter. Sometimes workers cannot be found for a particular job. Through this website any kind of worker can be found like maid, nurse, governess, driver, cook, babysitter, laborer, carpenter, builder, painter, electrician, plumber, night guard in any place whoever wants for a job. It is a huge platform for any kind of service anyone needs. It will save time, unnecessary money, and be trustworthy.

And another opportunity is anyone can join this platform as those workers to earn extra money for livelihood. A person can join as a part timer or a full timer. Through this platform one can get help and one can earn too which will make a huge solution for our country. One is that any person or family will find the right worker for the job and unemployment will decrease in our country.

1.3 Objectives

We are creating and developing a platform where people can get help and find help when needed most. Our objectives are vast with proper reasons. Some important ones are reducing unemployment by joining our AvailBox company. Many people in our country are not finding jobs and work. Even there is not much platform for our large number of people. Our company is giving a job sector for our Bangladeshi people. We have a large number of people but they are not becoming manpower. Through our platform we can create a place where people can make use of skills and show the qualification of their work. Our world is becoming more and more modern. So do our women too. Through our services corporate women will get a helping hand.

Nowadays people don't trust any organization or this kind of platform even when a person hires a worker they always look around them for any kind of suspicious activities. This headache will disappear. We ensure the highest priority of our customers. there will be no trust issue.

We believe there is nothing greater than helping. We want to give A to Z worker service to every class of people with proper care.

1.4 Expected Outcomes

We keep this in mind that our platform is totally service based, with this mindset we prepare for the wellbeing of our client and our outcome. We expect that our clients will be very satisfied and beneficial to have a dedicated platform to reduce hassle finding desirable workers. Also we expect that this product can change the lives of many unemployed people who can get independent by increasing their income and as well as support their family in need. As we grow our business this platform will be well known throughout the country and there will be no need to find workers in an old fashioned way which is very troublesome.

1.5 Report Layout

The development website's entire overview and all the relevant details are provided gradually. People are asked what they want and where they desire in a survey. We act in a way that the public desires.

CHAPTER 2

BACKGROUND

2.1 Terminologies

Now we need different types of workers for almost every household work. We hire an unknown worker's maximum time without any verified source. It is a time consuming and troublesome task. We are constantly facing problems in hiring workers without any kind of authentication. Such issues often lead to misunderstanding between workers and service holders. On the other hand, there is the problem of quality of work. Since our platform will have experienced workers, these problems can be easily avoided. It is with this purpose in mind that we have designed this platform.

2.2 Related Works

There are several task platforms for household service providers. Nowadays we have many platforms that provide different services. For example, sheba.xyz [1], hello task[7] etc. Plumber, Carpenter, Printer, Security Guard these services will be provided by our platform which are not provided by Sheba.xyz or Hello task. We have to use more than one platform for household services as they are provided separately. Which is a troublesome and time consuming matter. Our application, a web based household service, will provide all these services through this platform. So that the user can take all household services through this single platform. They will not need to use different platforms for different tasks.

2.3 Comparative Analysis

We have developed our project for using as a completely web-based benefit to fulfill the system according to smart level. For developing this project, we have researched this type of household service web-based application. Household service systems have been published in a variety of forms, but our project will be easier to use. In our country we don't have this type of service providing platform. If we provide better service for our customer and employee, then our application will be a famous platform in our country. The main purpose of this project is to hire workers and solve the problems of worker recruitment.

And so that every person can get all services related to household services through this platform. We hope our platform will have a positive impact on our users.

2.4 Scope of the Problem

Main goal of our project is to solve the complexities of hiring workers and employment of employees. Some workers may not have an idea for using our web application, but we will try our best to design a user- friendly application.

2.5 Challenges

Challenges teach us how to grow so we take challenges seriously. While we were gathering ideas and knowledge to make a platform which will truly be helpful for people we faced many issues. Is this really the one we expect it to be? Is there any other platform that is giving the same service for the people? How popular are they? What will be the costs and assets of our services etc.? With that many challenges in mind we tried our best to implement such a tool which can be beneficial not just one way but in many ways. One platform, Many performances.

During our way in developing we faced challenges like choosing modern technologies, Storing data in a secured way and real time performance etc.

CHAPTER 3

REQUIREMENT SPECIFICATION

3.1 Business Process Modeling

The website is basically for three kinds of people. two of them are users. One who wants to work with us as a worker and another one who wants to hire a worker. The people who want to work with us simply go to our website and there the first page is the HOME page where all the instructions are available. The person just has to click on a button JOIN US and a form will appear, where the person has to fill in all the details which are necessary like figure: 3.1

The other user who wants to hire a worker first he/she can choose what kind of worker he/she needs from the service page. he/she can pick the worker and sign in to our website or in the beginning he/she can sign in first. With the simple info of the user he/she can pick the worker and then how many workers all the price details will appear in the pickup page then submit the money button. After that a payment system that he likes to submit all the further process and all the working process is done. He/she can visit our site for any source of information. There is an about us page to find the information about us and the working object. A contact us page where anyone can connect with us, sent any problem or want to know any information about the website or about the company or any other query.

Application Flow Diagram: Any user can visit the page. They can access it the home page, about us page, contact us page without signing up or log in. the user has to sign in or login for getting the service section and to apply for the post though join us page. Home page as all access to other pages like the diagram.

All process is store in the mongo dB cloud like the way in the diagram. MongoDB have 3 cluster and added another for new reason, application where all the consumer wants a job, hire is the cluster for hiring data, order have details of the data and services have our service data.

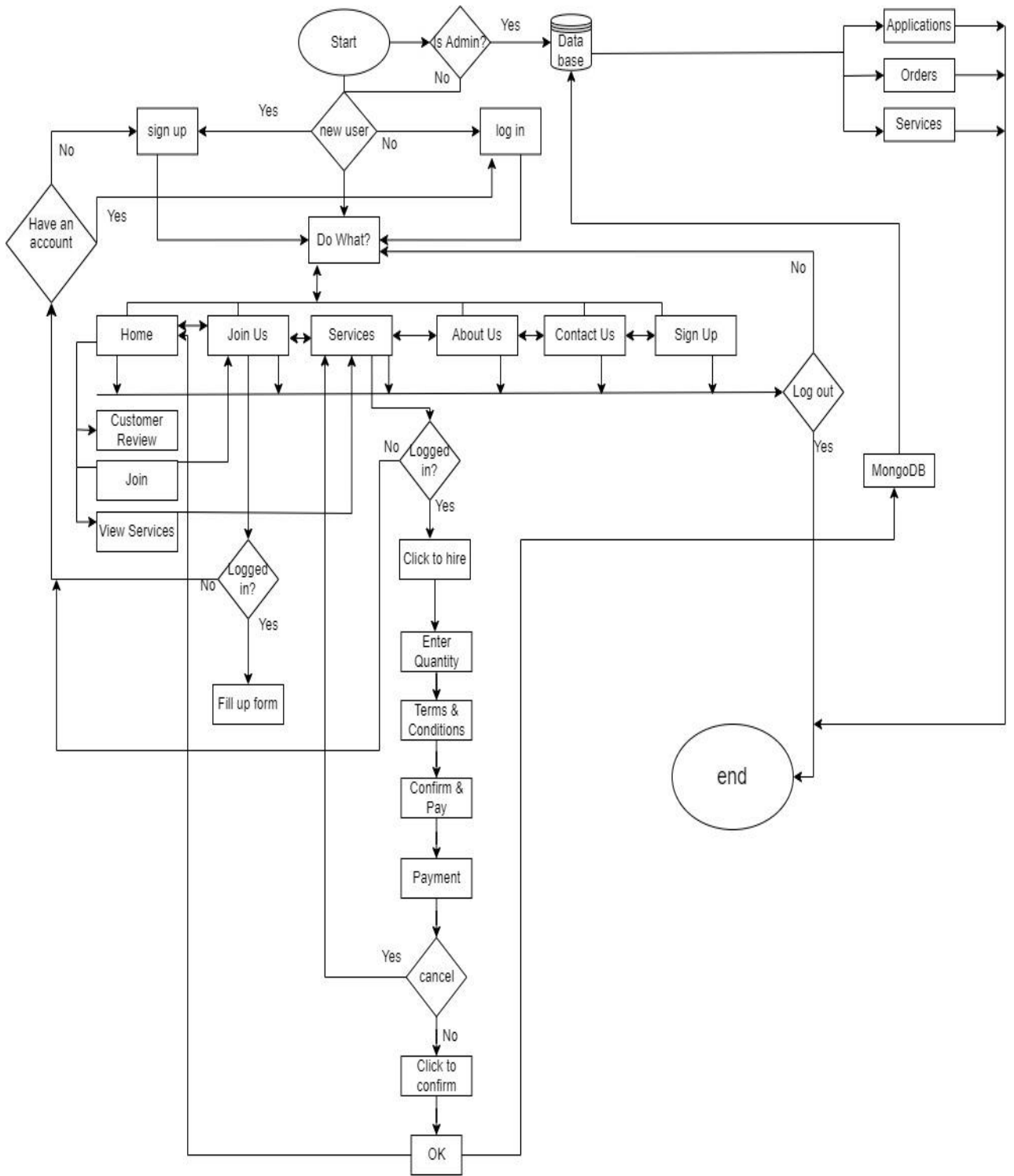


Figure 3.1 Flow chart

3.2 Requirement Collection and Analysis

Every project has some requirement by which the user measures their benefits for using this product. From this perspective as a customer and as administrator we tried to understand what are the requirements and how it can be fulfilled.

At first we gathered requirements by researching real problems in the community by which we come to the facts of who, how and when the problem can be solved. We let the client articulate their needs clearly, and as the business analyst we gathered them in the manner desired by the client. We did a survey on how much work we can provide and how much support we can give to our clients.

3.2.1. Sign in requirement: Client will require a safe authentication system thus a strong error free sign up and sign in phase has been designed with safety handled backend coding.

i) From the client side: People can have access to the platform by opening an account via their google account with a strong 6-character password or more information such as name, address, email etc.

ii) If they already have an account they just need to log in with the email ID and password, additionally a function is there in case of someone forgetting their password it can be recovered.

iii) From the administrator side: Our administrator panel will also be using this dedicated panel to log in the admin side. For this they also need to log in by their ID and ensure proper authentication.

3.2.2. Requirement of services: After logging in the user will try to find their desired services and for this they will find a dedicated button on the navigation bar which is entitled as ‘Services’. By clicking on this button several related services will show up and can be chosen smartly.

3.2.3. Help requirement: In this section users will be able to find out the easy and simple approach to use this platform. Every detail has been thoroughly explained in this section.

This section will be very helpful for the people who are using a maid service platform for the first time.

3.2.4. Contact requirement: In the navigation panel contact section has been added to make spontaneous communication with clients to admin or customer care to ensure helpful activity.

3.3.5. Easy Payment requirement: Users always try to find an easy simple way to pay after getting the job done. For this reason, we have plans to implement an automated transaction process for paying bills. We have different payment systems like Nagad, Bkash, Different debit and credit cards and the flexibility of cash after the job is done. Thanks to SSLCOMMERZ for using the demo.

3.3 Use Case Description

Users can visit the website but when a person wants to hire a worker he/she has to sign in. The other users who want to work as a worker just have to go to the join us form and complete the necessary information.

- ❖ After completing the sign up process users can easily hire workers from the service sector.
- ❖ After successfully signing in one can have access to the service section
- ❖ choosing the service one will be redirected to the checkout process.
- ❖ The service requirement will be stored to the database handled by us.
- ❖ At the point of successfully done payment data and transaction will happen.

3.4 Logical Data Model

The logical data model establishes the structure of data elements and the relationships. All process are easy coded materials. String for the names which are used for the website to understand better, there are no calculation through those but have a hosting number to connect the path. Integer have used for any kind of number also float for functional activities. Double are also for same thing but they user for up to six digits. All this are

computer language programming coded instruments. To calculation and connect one age to another and show the final result every pages and path has declared through this process. User, join us, hire us, order and services have connected through this particular path.

Diagram:

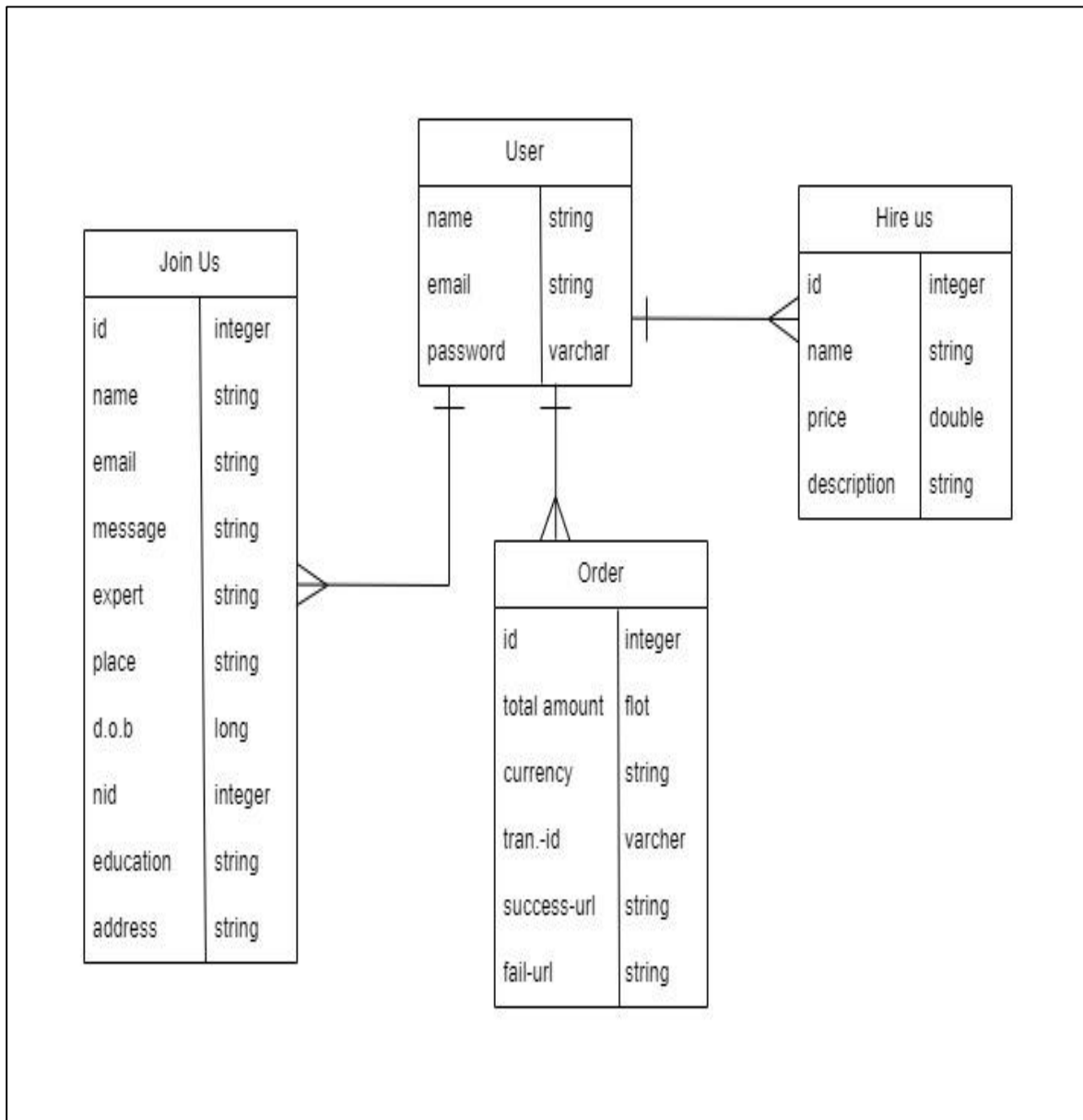


Figure 3.2 Logical Data Model

CHAPTER 4

DESIGN SPECIFICATION

4.1 Front-end Design

MERN full stack web development is the concept which we follow. MERN stands for MongoDB, Express JS, React JS, Node JS.

Technology used: React JS, CSS, Tailwind. Framework, Library.

4.1.1 React JS: The implementation of basic user interface and UI/UX design made with the help of react js and necessary framework.

4.1.2 CSS: Few CSS was done for styling where necessary integrated with react js.

4.1.3 Tailwind: An utility-first CSS framework that makes design handier.

4.1.4 Framework: Several JavaScript frameworks to maintain the connection between interfaces have been used.

Login page and Sign in page: To get the service or join to our company user have to sign in to our website or if user have any account they can log in to the website.



Figure 4.1 Login page



Figure 4.2 Sign In page

Home page- Static data and Dynamic data is used in the home page.

Figure 4.3 Shows home page

Services page dynamic data:

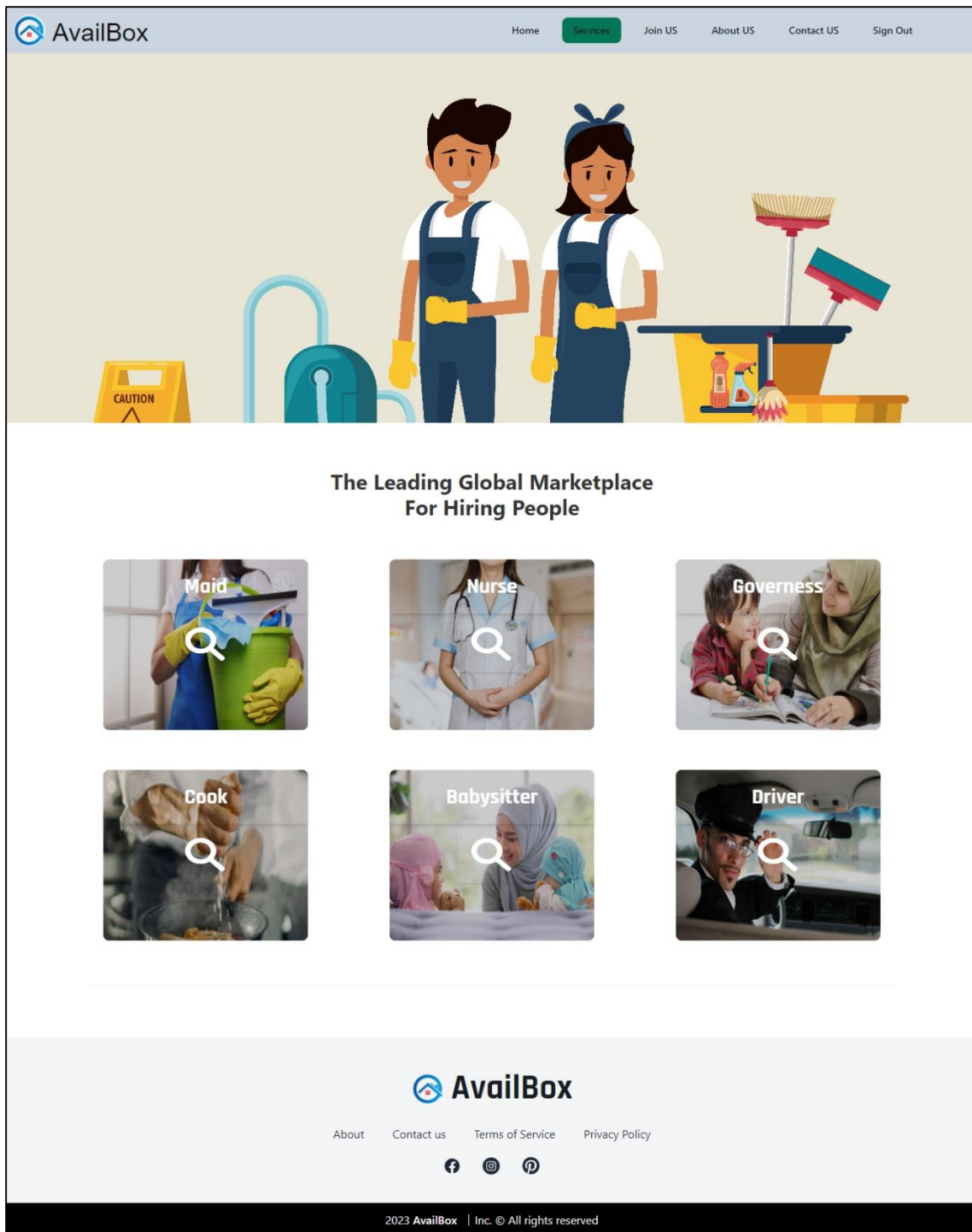


Figure 4.4 Shows services page

Service page when pick up a worker:


The screenshot displays the AvailBox service page with three worker profiles. The top navigation bar includes Home, Services, Join US, About US, Contact US, and Sign In. The AvailBox logo is in the top left. The worker profiles are as follows:


Worker Name	ID	Experience	Rating	Phone	Expense Breakdown	Action
Nishi Dikha	N0001	3 Years of Experiences	★★★★☆	+8001774XXXX04	Per Hour: \$5 Per Day: \$42 Per Month: \$1100	CLICK TO HIRE
Rifat Mishu	N0002	5 Years of Experiences	★★★★★	+8001774XXXX04	Per Hour: \$7 Per Day: \$55 Per Month: \$1450	CLICK TO HIRE
Jui Tasnim	N0003	2 Years of Experiences	★★★★☆	+8001774XXXX04	Per Hour: \$4 Per Day: \$30 Per Month: \$800	CLICK TO HIRE

The bottom of the page features the AvailBox logo, navigation links (About, Contact us, Terms of Service, Privacy Policy), social media icons (Facebook, Instagram, Pinterest), and a footer with the text: 2023 AvailBox | Inc. © All rights reserved.

Figure 4.5 Selecting worker

Services data accepted

Home Services Join US About US Contact US Sign Out



Jui Tasnim

\$ 4/Hour
\$ 30/Day
\$ 800/Month

Selete a Scheme ▼ Total: \$ 0

Checkout

Shipping


Personal Information

User Name	Email
Ahmad Totonji	totonjin@gmail.com
Service Name	Service Price
Jui Tasnim	0
Contact Number	Address
Enter Your Contact Number	Enter Your Address




You have to pay **50%** or you can pay the full Payment.

I have read and accepted [Terms & Conditions](#)

CONFIRM AND PAY



About Contact us Terms of Service Privacy Policy

2023 AvailBox | Inc. © All rights reserved

Figure 4.6 Service data

API payment system SSLCOMMERZ:

OTP Page

Do not press browser back or forward button while you are in payment page

Payment Summary	
Please review the following detail for this transaction:	
Amount:	8000.00
Currency:	BDT
Invoice number:	22123120074201JUMI2Sonpf8Lh
Description:	Products

Enter Card Information

Your entered card information could not be corrupted or become known to the third party, as all transmitted data is encrypted by the SSL protocol.

OTP:

Note

1. For VISA and MC, look at the back side of your Card to find 3-digit CVV2/ CVC2. For AMEX, look at the upper right corner of the front side of your Card to find 4-digit CSC.
2. The cardholder's name should be entered just as it's written on the card.

Verified by VISA | AMERICAN EXPRESS SafeKey | MasterCard SecureCode

SSLCOMMERZ TESTBOX GATEWAY (NO CARD INFORMATION WILL BE SAVED AND DUMMY)

Figure 4.7 payment system

Confirmation:

AvailBox Home Services Join US About US Contact US Sign Out

Payment Successful.
Confirm your Order

Enjoy your order
Jui Tashim
Nurse

Please Confirm Your Payment for Success to Book Your Services!

AvailBox

About Contact us Terms of Service Privacy Policy

2023 AvailBox | Inc. © All rights reserved

Figure 4.8 Confirmation page

Join Us page people who want to work with us:

The image shows a screenshot of the AvailBox website's 'Join Us' page. At the top, the AvailBox logo is on the left, and navigation links for Home, Services, Join US (highlighted in green), About US, Contact US, and Sign Out are on the right. The main content area features a large illustration of two people in profile. A white modal form titled 'Fill Out For Apply as Worker' is overlaid on the right side. The form includes a sub-header, a brief description, and several input fields: two dropdown menus for 'Select Your Expert in' and 'Select Your Place', followed by text boxes for 'Your Name', 'Email address', 'Enter Your Phone', 'mm/dd/yyyy' (with a calendar icon), 'Enter Your NID No.', 'Enter Your Last Edu. Qualification', and 'Enter Your Address'. A blue 'APPLY FOR JOIN' button is at the bottom of the form. On the left side of the page, there is a blue and white graphic with the text 'INVITATION We are hiring', 'APPLY NOW', and 'WE WANT YOU!'. The footer contains the AvailBox logo, links for About, Contact us, Terms of Service, and Privacy Policy, social media icons for Facebook, Instagram, and Pinterest, and a copyright notice: '2022 AvailBox | Inc. © All rights reserved'.

AvailBox

Home Services **Join US** About US Contact US Sign Out

Fill Out For Apply as Worker

Fill-in the contact form and get immediate assistance from our educational consultant.

Select Your Expert in

Select Your Place

Your Name

Email address

Enter Your Phone

mm/dd/yyyy

Enter Your NID No.

Enter Your Last Edu. Qualification

Enter Your Address

APPLY FOR JOIN

INVITATION
We are hiring

APPLY NOW

WE WANT YOU!

JOIN US

AvailBox

About Contact us Terms of Service Privacy Policy

Facebook Instagram Pinterest

2022 AvailBox | Inc. © All rights reserved

Figure 4.9 Join Us page

Contacts Us page where user can find our contact and information of location:

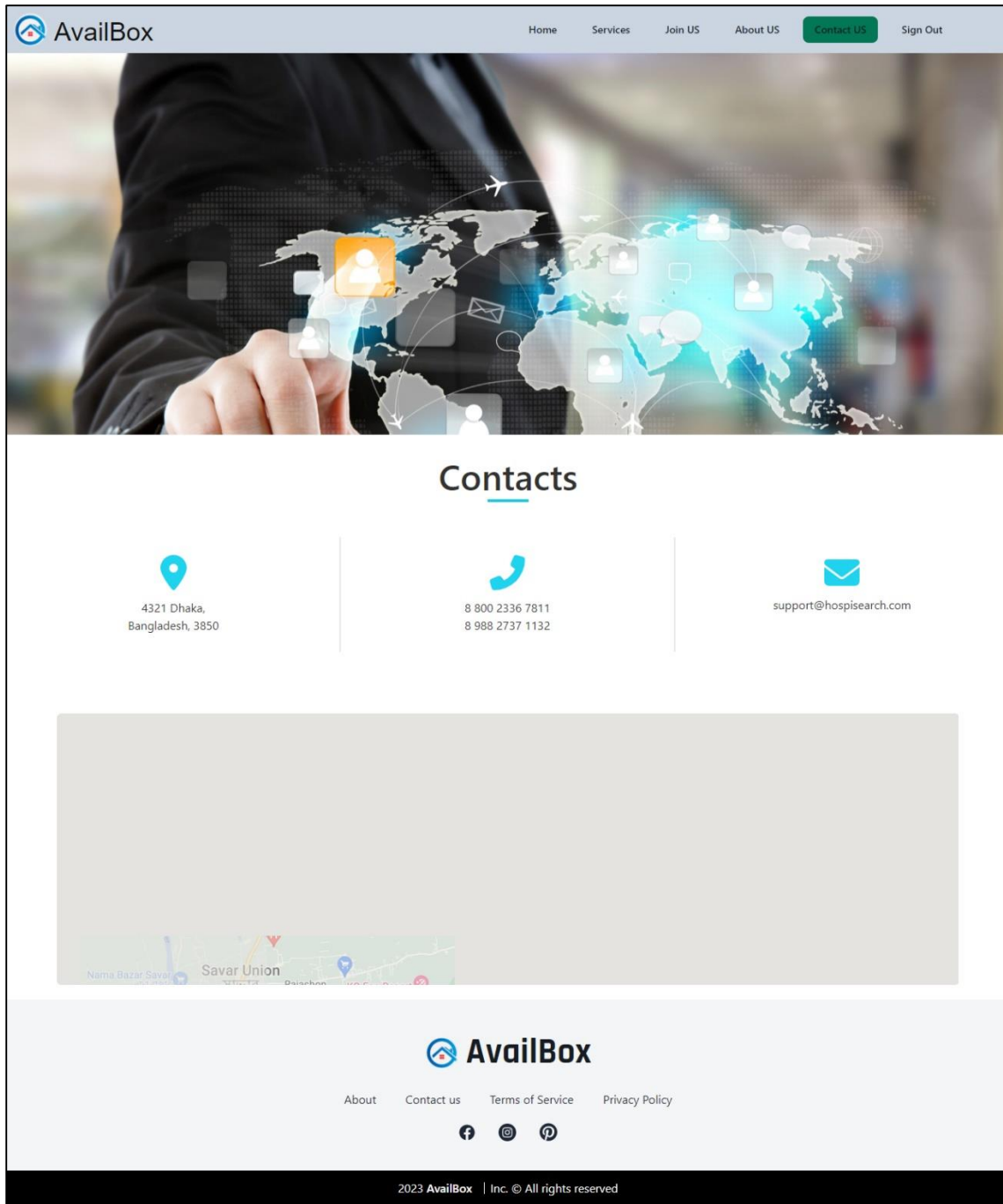
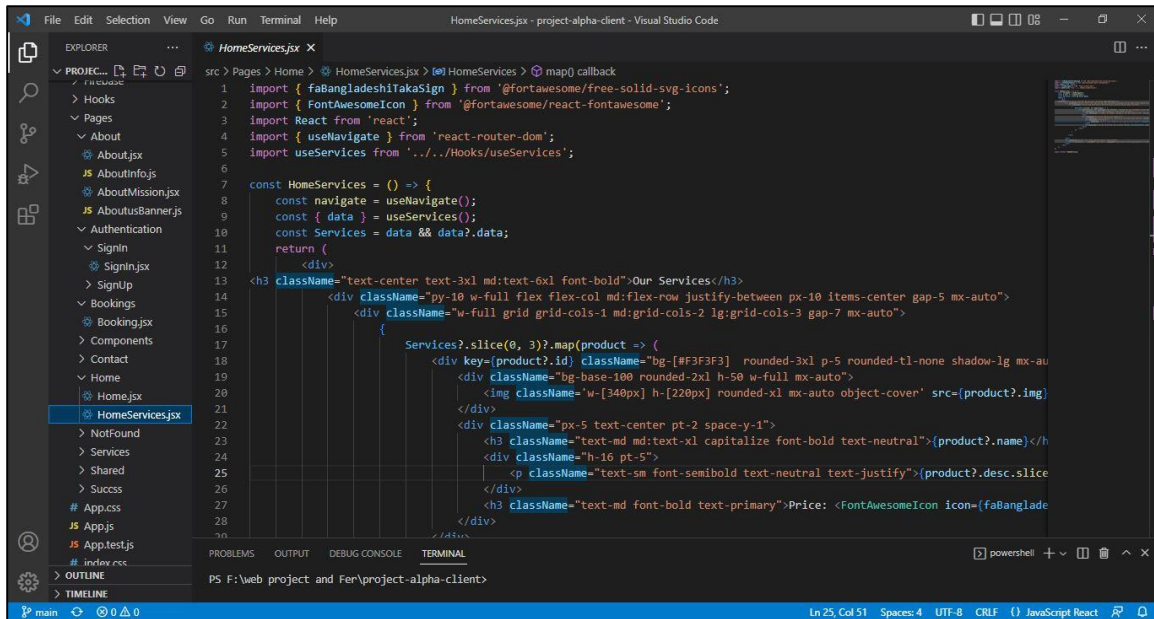


Figure 4.10 contact us page

Frontend react JS code:



```
1 import { faBangladeshiTakaSign } from '@fortawesome/free-solid-svg-icons';
2 import { FontAwesomeIcon } from '@fortawesome/react-fontawesome';
3 import React from 'react';
4 import { useNavigate } from 'react-router-dom';
5 import useServices from '../Hooks/useServices';
6
7 const HomeServices = () => {
8   const navigate = useNavigate();
9   const { data } = useServices();
10  const Services = data && data?.data;
11  return (
12    <div>
13      <h3 className="text-center text-3xl md:text-6xl font-bold">Our Services</h3>
14      <div className="py-10 w-full flex flex-col md:flex-row justify-between px-10 items-center gap-5 mx-auto">
15        <div className="w-full grid grid-cols-1 md:grid-cols-2 lg:grid-cols-3 gap-7 mx-auto">
16          {
17            Services?.slice(0, 3)?.map(product => {
18              <div key={product?.id} className="bg-[#F3F3F3] rounded-3xl p-5 rounded-tl-none shadow-lg mx-auto">
19                <div className="bg-base-100 rounded-2xl h-50 w-full mx-auto">
20                  <img className="w-[340px] h-[220px] rounded-xl mx-auto object-cover" src={product?.img} />
21                </div>
22                <div className="px-5 text-center pt-2 space-y-1">
23                  <h3 className="text-md md:text-xl capitalize font-bold text-neutral">{product?.name}</h3>
24                  <div className="h-16 pt-5">
25                    <p className="text-sm font-sembold text-neutral text-justify">{product?.desc.slice(0, 100)}</p>
26                  </div>
27                  <h3 className="text-md font-bold text-primary">Price: <FontAwesomeIcon icon={faBanglade
```

Figure 4.11 React JS

Frontend react JS and CSS modification with library:

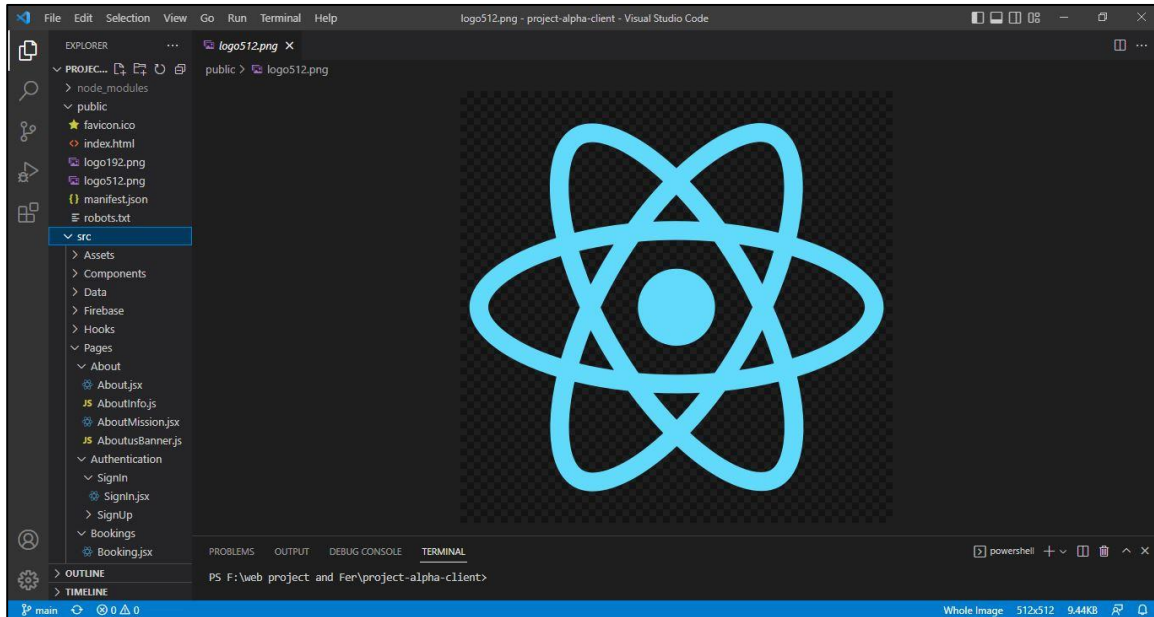


Figure 4.12 Frontend code and image

4.2 Back-end Design

MERN full stack web development is the concept which we follow. MERN stands for MongoDB, Express, React, Node.

Technology used: JavaScript, React JS, Node JS, Express JS.

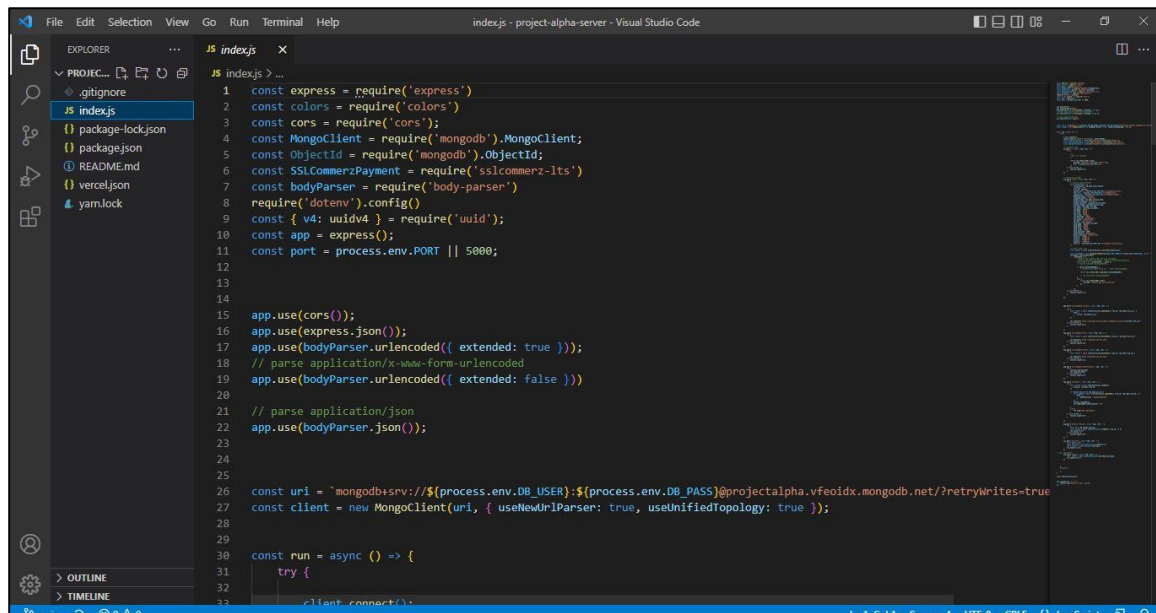
4.2.1 JSON: For fetching dynamic data we made a connection with our database in MongoDB. Data is parsed through JSON data. JSON is a compact format for transmitting data in the key-value fashion.

4.2.2 Node JS: For running web applications outside of client's browser we used node JS framework from the core JavaScript's. For serving the dynamic content of our web page we used node js as it handles the task and returns a response to the client and waits for the next request while processing. Our web application has a lot of dynamic content which will be served without any issues by the help of this. Use case:

- i) To dynamically handle data in the service section.
- ii) To store form data in the database and give the status message.
- iii) To take the client to the payment section after choosing a worker. this payment interface has been done with the help of node.js

4.2.3 Express JS: Express js is generally a framework of node js. to help manage server and rout it has been used. As ours is a hybrid web application express js is very much ideal.

Backend Code:



```
1 const express = require('express')
2 const colors = require('colors')
3 const cors = require('cors');
4 const MongoClient = require('mongodb').MongoClient;
5 const ObjectId = require('mongodb').ObjectId;
6 const SSLCommerzPayment = require('sslcommerz-lts')
7 const bodyParser = require('body-parser')
8 require('dotenv').config()
9 const { v4: uuidv4 } = require('uuid');
10 const app = express();
11 const port = process.env.PORT || 5000;
12
13
14
15 app.use(cors());
16 app.use(express.json());
17 app.use(bodyParser.urlencoded({ extended: true }));
18 // parse application/x-www-form-urlencoded
19 app.use(bodyParser.urlencoded({ extended: false }));
20
21 // parse application/json
22 app.use(bodyParser.json());
23
24
25
26 const uri = `mongodb+srv://${process.env.DB_USER}:${process.env.DB_PASS}@projectalpha.vfeoidx.mongodb.net/?retryWrites=true
27 const client = new MongoClient(uri, { useNewUrlParser: true, useUnifiedTopology: true });
28
29
30 const run = async () => {
31   try {
32     client.connect();
```

Figure 4.13 Backend code

4.3 Interaction Design and User Experience (UX)

User experience is very handy as we go through a thoroughly updated user experience design **UX/UI**. Interaction comes with simplicity so that our customers do not feel complexity. Using react js we kept our interaction design elegant. We have five subpages under the main home page. In the home page there is i) Slider ii) Welcome message iii) some mentions of services iii) Button to get to services iv) Developer team overview v) Services information in numbers vi) customer's statement and review. The subpages are also well decorated section wise.

4.4 Implementation Requirements:

- ❖ Frontend developed through react JS
- ❖ Backend developed through node JS
- ❖ Data is getting through API
- ❖ database used mongo DB
- ❖ payment system SSLCOMMERZ

Payment System SSLCOMMERZ:

Frontend, backend development is already shared in the previous sectors. Database information will be provided further in this report (in chapter: 5).

The concept payment system SSLCOMMERZ. The website is not fully constructed to take place in search engines with a domain name and a legal host. When we will put that then we will use the paid version. Now we are using the demo version of the payment system SSLCOMMERZ. SSLCOMMERZ is the largest payment gateway aggregator in Bangladesh and a pioneer in the FinTech industry since 2010. SSLCOMMERZ is an end-to-end payment solution for your business with extensive coverage, seamless integration, and support for multiple channels. Any kind of Bangladeshi payment can be processed through our website. Few are available in the demo version. We will implement all the trusted payment methods in the future step by step.

CHAPTER 5

IMPLEMENTATION AND TESTING

5.1 Implementation of Database:

- Stored client side data in MongoDB : Clients who want to hire workers will fill up a form. The data will be stored in a dedicated MongoDB server. Also Static data regarding worker information come through API JSON format from the database.
- Stored joining applications in MongoDB: When some want to join us they need to fill up the form located in the join us section. After filling this the data will be directed to our admin side database, checking this we will be acknowledged about our recruitment.
- Stored user authentication data in Firebase: User's signing up information will be stored in the dedicated firebase system. This will give validity to the clients to sign up or sign in from different devices.
- MongoDB have 512M free space for use. Any more than have to buy for that.
- Ever cluster is 16M to store data
- Our site has 4 cluster in use for application, hire, order and services.

MongoDB database figures:

The home page of mongodb database where a cluster is created with the functionality of json, express js, node js. And the API system of payment method.

User applying data in the website and through coding process it is coming to the mongodb clouds patching the json file and then went back to the website to show in the screen. How much data take space those are in colored in mongodb to help the admin how much space have left. Admin can delete the data to clear space or edit to make any change. Also an email goes to the user for hiring information through mongodb cloud.

The screenshot displays the MongoDB Atlas 'Database Deployments' page for 'Project Alpha'. The interface features a sidebar with navigation options like 'DEPLOYMENT', 'Database', 'Data Lake', 'SERVICES', and 'SECURITY'. The main content area shows a search bar, a 'Create' button, and a dashboard for 'ProjectAlpha' with buttons for 'Connect', 'View Monitoring', and 'Browse Collections'. Performance metrics are displayed as line charts for Read (R: 0.04), Write (W: 0), Connections (4.0), In (18.0 B/s), and Out (0.0 B/s) over the last 6 hours. A 'Data Size' of 118.0 KB is also shown. An 'Upgrade' button is present for a production recommendation. Below the charts is a table of deployment details.

VERSION	REGION	CLUSTER TIER	TYPE	BACKUPS	LINKED APP SERVICES	ATLAS SEARCH
5.0.14	AWS / Mumbai (ap-south-1)	M0 Sandbox (General)	Replica Set - 3 nodes	Inactive	Unable to load application data	Create Index

System Status: All Good
 ©2022 MongoDB, Inc. Status Terms Privacy Atlas Blog Contact Sales

Figure 5.1 MongoDB cluster database

Database where the user's requirement hiring workers, user's payment data, users name, email and how many workers they want:

The screenshot displays the MongoDB Atlas web interface. The top navigation bar includes the Atlas logo, user profile 'Ahmad's Or...', 'Access Manager', and 'Billing'. The main header shows 'Project 0' and 'Data Services'. The left sidebar contains navigation options like 'DEPLOYMENT', 'Database', 'Data Lake', 'SERVICES', 'SECURITY', and 'Goto'. The main content area is titled 'ProjectAlpha' and shows 'Databases: 1' and 'Collections: 3'. The 'Collections' tab is active, displaying 'AvailBox.Applications' with storage and document statistics. A search filter is applied: `{ field: 'value' }`. The query results show one document with the following fields:

```
{
  "_id": ObjectId("63afb8b6f968f3ceaee9445"),
  "name": "MD. NAHID",
  "email": "moazzenhossainnahid@gmail.com",
  "message": "91927962955",
  "expert": "Electrician",
  "place": "Kayllanpur",
  "dateofbirth": "2022-12-28",
  "nid": "87184440715",
  "edu": "BBA",
  "address": "Kapasias-1738, Gazipur"
}
```

System Status: All Good
©2022 MongoDB, Inc. Status Terms Privacy Atlas Blog Contact Sales

Figure 5.2 Users data from services

Database of the persons who wanted to work for us. Filling up the form and the data store in mongoDB database:

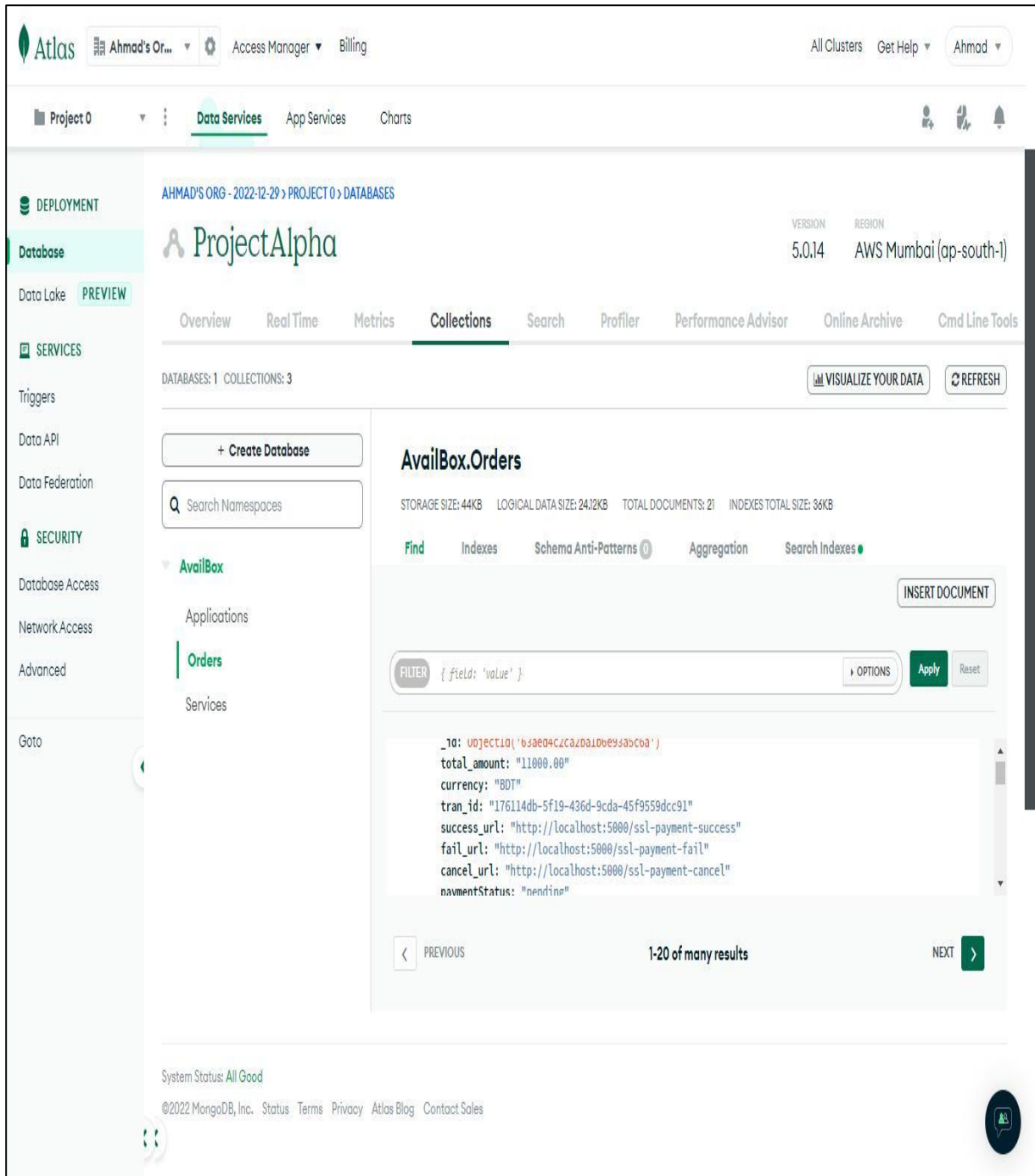


Figure 5.3 Users database form join us sector

Dynamic database for the service page which are the data of workers cost and names:

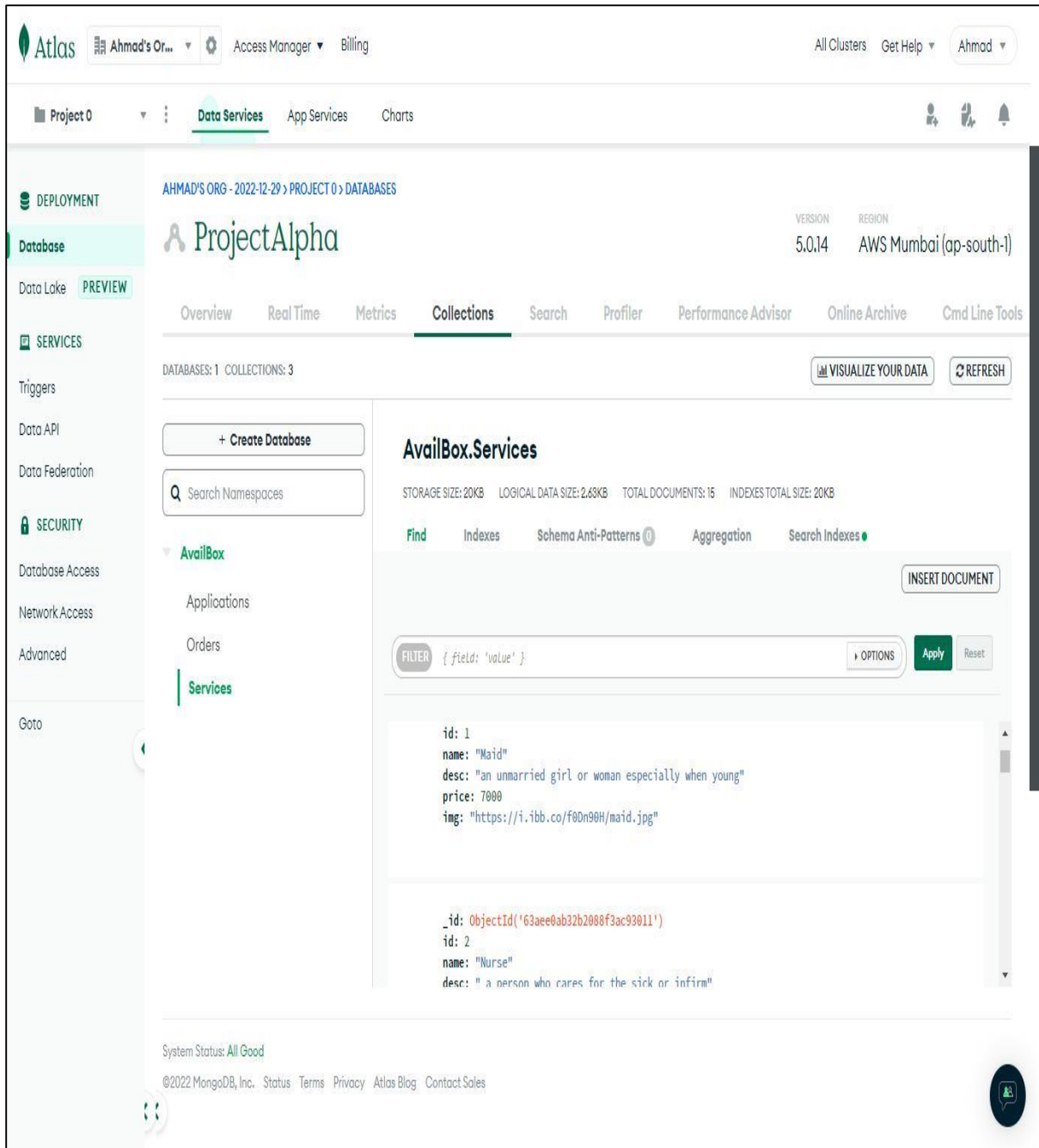


Figure 5.4 Workers payment database

5.2 Test Results and Reports

A product can be tested to see if it complies with the standards and to make sure there are no flaws. A variety of checks have been put in place to make sure everything is working properly. Below is a collection of the outcomes of many test cases.

Table 5.2: Different Tests

Test Case	Test Input	Expected Outcome	Actual Outcome	Result	Action
Open website	Home icon	By default set to the home page where slider and welcome message is viewable	As expected.	Pass	Tested on 11.12.2022
Try to navigate to other subsection without sign up	Click navigation bar buttons	Should navigate properly	As Expected	Pass	Tested on 17.12.2022
Try to select service without authentication	Click to select service	Should redirect to sign up page	As Expected	Pass	Tested on 17.12.2022

Test Case	Test Input	Expected Outcome	Actual Outcome	Result	Action
Authenticate without setting up account	Sign in without signing up.	should toggle up and warn to set up an account first.	As Expected	Pass	Tested on 21.12.2022
Service selection and payment	Selection of service then proceed to payment	Should work and get to the payment gateway	As Expected	Pass	Tested on 21.12.2022
Data stores in the DB	Can be seen real time data in database	Database should fill as client's request	As expected	Pass	Tested on 31.12.2022
Sign out	Click on sign out option	Should sign out of the site and return to home.	As expected	Pass	Tested on 01.01.2023

CHAPTER 6

IMPACT ON SOCIETY, ENVIRONMENT AND SUSTAINABILITY

6.1 Impact on Society

For a long time, we have been seeing our society facing too many problems to hire an employee. Many times fraud employees take money from the owner but don't do enough work for this payment. Many times they take the money and do not do their work. But over time, that is likely to change. We are currently living in the digital age. Now almost everyone is aware of the internet and smartphones. So this application will be a landmark step for us to keep pace with the times. With the help of this application, people will be more useful in using the internet. To solve this problem, we design this platform. By using this platform our society will benefit from hiring employees. Using this web-based application we will reduce fraud problems. Every employee will be verified by their personal information such as NID information. And payment systems will be over this platform. That's why fraud employees do not stay on this platform. So this app will be a landmark step for us to keep pace with the times.

6.2 Impact on Environment

We can say that our web-based application is completely eco-friendly. Unless anyone takes the advantage of using this platform. On the other hand, lowering the consumption of paper is one of the reasons we created this software. We are all aware of how damaging to the environment the ongoing logging of trees for paper is. Additionally, we are aware that money may harbor dangerous pathogens. That is potentially fatal to people. The user can experience the digital currency system by utilizing this app. because using our software will somewhat minimize the use of paper.

6.3 Ethical Aspects

Considering the ethical aspect of this application there will be nothing to worry. Because this web application will store all of the data in the database for every transaction. Since there will be a smart way of the transaction throughout the system, so no one can cheat this system. The person who works as much as the work will get paid for the amount of work.

This system will provide high security for transactions. As system owners, we don't have any greedy mindset. We will always try to have the best ethical attitude for our workers and service holders. This application will always maintain the transparency of transactions.

6.4 Sustainability Plan

We know technology is always changing. To maintain this criterion, we develop our application with the latest technology and framework. We will always update this website and include new technology. If any major update arises and this update conflicts with our code and is not sustainable for this technology, then we will adjust our application by developing with an update. If any company tries to buy our application and wants to customize it to their requirement, they can do it.

Firstly, we will launch our application in our country's market and in the future, we will try to launch outside the country.

CHAPTER 7

CONCLUSION AND FUTURE SCOPE

7.1 Discussion and Conclusion

In the end it is to be acknowledged that human suffering will be lessened by this system for sure. Whenever a problem arises we make inventions to solve it and this idea is also generated after seeing people's problem. In this work we tried to reduce hassle which can save both time and money. Also keeping the unemployment problem of the country in mind we have established job opportunities. The work is not a very accurate or completed phase now but it will grow if people can adapt to it and get familiar with using technology to minimize their effort.

7.2 Scope for Further Developments

A lot of new features remain to be developed in the future. We look forward to making a dedicated admin server and interface with the existing mode. A very important feature is the Blood Bank integration. This particular feature will be effective in time of need for blood for the patient. Blood can be donated to our wellbeing center which will be identified by the token and group wise. After getting requests through our application we can easily manage to provide blood thus saving lives.

References

- [1] Learn about ResearchGate, available at <<<
[https://www.researchgate.net/publication/348035130_An_architecture_of_a_web_based_application_on_emergency_s](https://www.researchgate.net/publication/348035130_An_architecture_of_a_web_based_application_on_emergency_services)
ervices;, *last accessed on 22-11-2022 at 02:00 PM.*
- [2] Learn about MongoDB, available at <<< <https://www.mongodb.com/mern-stack>;;, *last accessed on 01-12-2022 at 07:00 PM.*
- [3] Learn about SSLCOMMERZ, available at <<< <https://sslcommerz.com/>;;, *last accessed on 11-12-2022 at 10:00 AM.*
- [4] Chitumalla, Pavan Kumar, et al. "Emergency response applications: Dynamic plume modeling and real-time routing." IEEE Internet Computing 12.1 (2008): 38-44;;, *last accessed on 13-12-2022 at 12:00 AM.*
- [5] Learn about ResearchGate, available at <<<
[https://www.researchgate.net/publication/265874991_Using_JSON_for_Data_Exchanging_in_Web_Service_Applicati](https://www.researchgate.net/publication/265874991_Using_JSON_for_Data_Exchanging_in_Web_Service_Applications)
ons;, *last accessed on 23-012-2022 at 02:00 AM.*
- [1] Learn about Sheba XYZ, available at <<< <https://www.sheba.xyz/category-groups>;;, *last accessed on 30-012-2022 at 08:00 PM.*
- [7] Learn about Hello Task, available at <<< <https://hellotask.app/>;;, *last accessed on 30-012-2022 at 08:00 PM.*

A WEB BASED EMERGENCY HOUSEHOLD SERVICE PLATFORM

ORIGINALITY REPORT



PRIMARY SOURCES

1	dspace.daffodilvarsity.edu.bd:8080 Internet Source	10%
2	Submitted to Daffodil International University Student Paper	5%
3	Submitted to University of Liberal Arts Bangladesh Student Paper	1%
4	Submitted to St. Petersburg High School Student Paper	1%
5	www.sslcommerz.com Internet Source	1%
6	Submitted to American Public University System Student Paper	<1%
7	Submitted to University of Stirling Student Paper	<1%
8	Submitted to Alliance University Student Paper	<1%
9	Submitted to Nottingham Trent University	

Student Paper

<1 %

10

newhopebc-sac.org
Internet Source

<1 %

Exclude quotes Off

Exclude matches Off

Exclude bibliography Off