SHOMVOB: AN ANDROID APPLICATION

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

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APPROVAL

This Project titled "Shomvob: An Android Application", submitted by Md Galib Hossain to the Department of Computer Science and Engineering, Daffodil International University, has been accepted as satisfactory for the partial fulfillment 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 26th January 2023.

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DECLARATION

I hereby declare that this project has been done by me under the supervision of Mr. Saiful Islam, Assistant Professor, Department of CSE Daffodil International University. I also declare that neither this project nor any part of this project has been submitted elsewhere for award of any degree or diploma.

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ABSTRACT

Shomvob is a professional networking and job opportunities platform based in Bangladesh, designed to connect employers with job seekers in the blue and silver collar sectors. The platform aims to alleviate challenges faced by both employers and job applicants by providing a streamlined and efficient way to connect with each other. One major problem that job seekers often face is the stress and time-consuming nature of the job search and application process, which can sometimes discourage them from even starting to look for work. At the same time, employers can also struggle to find the right candidates for their open positions, especially when there are many applicants and only a few are qualified. Shomvob aims to solve these problems by allowing employers to easily publish job listings and helping job seekers to apply for these roles, while also providing resources and training to help them build their careers and increase their confidence. By bridging the gap between employers and job seekers, Shomvob aims to support the career development and employment of the rising blue and silver collar workforce in Bangladesh.

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CHAPTER 1

INTRODUCTION

1.2 Introduction

Shomvb is a professional networking and job opportunities platform in Bangladesh that aims to connect job seekers with employers in the country. The platform focuses on the growing blue-collar workforce in Bangladesh, providing job vacancies and career development resources for roles such as call center agents, field associates, sales assistants, delivery men, and more.

As applying for jobs may be stressful and time-consuming, which makes it difficult for some job applicants even to muster the motivation to hunt for jobs, let alone apply. On the other hand, many vacancies through other media confuse job applicants and create avolition. At the same time, our app includes job applicants' success stories in the app to encourage the community to up skill its workforce and boost confidence throughout the recruitment process. Not only do job applicants struggle with this problem, but employers also have pain spots throughout the recruitment process. Finding the ideal applicant for a position is a difficult challenge when there are many applicants and only a few are qualified. This is where Shomvob integrates the two by allowing employers to publish their job vacancies through the Shomvob employer panel and helping job applicants apply for those job roles while also building their career, confidence, and skill sets.

1.2 Motivation

The motivation for creating Shomvob was to address the challenges that both job seekers and employers face in the recruitment process. Job seekers in Bangladesh may find it difficult to find and apply for relevant job opportunities, and may also lack the confidence and skills needed to succeed in the job search. This can be particularly challenging for those in the blue-collar workforce, who may not have the same level of education or professional experience as those in other sectors. At the same time, employers may struggle to find qualified candidates for their job openings, especially when there are many applicants and only a few are suited for the role. Shomvob aims to solve these problems by providing a platform that connects job seekers with relevant job opportunities and offers training and career development resources to help them succeed in their search. And to ensure that every one can get their relevant jobs using the system.

1.3 Objective of Project

The main objective of Shomvob is to make the job search and application process easier and more efficient for both job seekers and employers in Bangladesh. For job seekers, this means providing access to a wide range of job opportunities and training resources, as well as tools to help them track the status of their applications and communicate with recruiters. This includes features such as the ability to save jobs for later application and notification systems that alert job seekers when they have been shortlisted or called for an interview. For employers, it means providing a pool of qualified candidates and tools to help them find and hire the best candidates for their openings. These tools may include the ability to publish job vacancies through the Shomvob employer panel, and review applications and resume online. Overall, the goal of Shomvob is to improve the job market in Bangladesh and help more people find meaningful employment opportunities that support their professional growth and development.

1.4 Expected Outcome

Here is a list of expected outcomes for Shomvob:

- Improved job search and application process for job seekers: Shomvob aims to make it easier for job seekers to find and apply for relevant job opportunities, by providing access to a wide range of job vacancies and training resources.
- Improved recruitment process for employers: Shomvob aims to help employers find qualified candidates for their job openings, by providing a pool of candidates and tools to review resumes and applications online.
- Increased confidence and skills of job seekers: By offering training and career development resources, Shomvob aims to help job seekers improve their skills and boost their confidence during the job search process.
- Stronger professional network for job seekers: Shomvob aims to help job seekers build a professional network and digital professional identity, which can support their career growth and development.
- Enhanced economic development and prosperity in Bangladesh: By connecting job seekers with employers and supporting the growth and development of the blue-collar workforce, Shomvob aims to contribute to the overall economic development and prosperity of Bangladesh.

1.5 Report Layout

This report consists of the analysis, design, and implementation process of 'Shmovob' project. It contains seven different chapters and each chapter has sub-parts in it.

- The First chapter contains an introduction about the project with Motivation,
 Objectives, Expected outcomes, Project management, and finance also Report layout as the sub-parts.
- The Second chapter discusses the background of the project including Terminologies,
 Related works, Comparative analysis, Scope of the problem we are solving, and challenges.
- Chapter Three describes the specifications required for the project including BPM,
 Requirement collection and analysis, Use case model and description, Logical data model, and Design Requirement.
- Chapter Four describes the specifications of the design of the project including Frontend design, back-end design, Interaction Design, User experience, and Implementation Requirements.
- Chapter Five contains Implementation and Testing such as the Implementation of the database, Implementation of Front-end design, Testing implementation, and Test results and reports
- Chapter Six discusses about the impact of the project on society, the environment, and the project sustainability.
- Chapter seven contains the conclusion and final discussion about the project and the scope for further developments.

CHAPTER 2

BACKGROUND

2.1 Preliminaries/Terminologies

The problem that Shomvob aims to solve is the challenge of connecting job seekers with relevant job opportunities and supporting their career growth and development, while also helping employers find qualified candidates for their job openings. Specifically, some of the problems that Shomvob aims to address include:

- Job seekers may struggle to find and apply for relevant job opportunities, and may lack the confidence and skills needed to succeed in the job search.
- Employers may have difficulty finding qualified candidates for their job openings, especially when there are many applicants and only a few are suited for the role.
- The blue-collar workforce in Bangladesh is growing, but may not have access to the same level of education or professional development resources as those in other sectors.
- The recruitment process can be time-consuming and stressful for both job seekers and employers, and may not always result in successful hires.

By providing a platform that connects job seekers with employers and offers training and career development resources, Shomvob aims to address these problems and improve the job market in Bangladesh.

In this section, we provide some related studies and describe some job searching and providing applications in our country and also different countries.

2.2 Related Works

Many mobile applications and websites are created that provide likely similar types of functionality like "Shomvob". The following are some examples of outstanding contributions made to this subject:

- "BDJobs"[2] is a job search website based in Bangladesh that allows users to search for job openings and upload their resumes for employers to review. It is owned by BDJobs.com Limited, a leading job search, and career development company in the country. But they are focusing only the white and silver-collar workers.
- "Kormi24"[3] is a job search and career development platform based in Bangladesh that connects job seekers with employers and offers training and career development resources. It is a mobile application that provides job listings for a range of industries, including IT, marketing, finance, and more. They mainly focus on the company, not the job seekers. For example, if a company need 20 delivery man then it posted the

- curriculum and searched for job seekers. So if job seekers want to find a relevant job for them they need to wait until the employer notifies them.
- "LinkedIn"[1] is a professional networking platform based in the United States that
 allows users to connect with other professionals, find job opportunities, and access
 learning and development resources. It is owned by LinkedIn Corporation and is
 available as both a website and a mobile application. It works based on the white collar
 job seekers.
- "Indeed" [4] is a job search website based in the United States that allows users to search for job openings and upload their resumes for employers to review. It is owned by Indeed Inc. and is available as both a website and a mobile application.
- "Glassdoor"[5] is a platform based in the United States that provides job listings and company reviews, as well as career advice and job search resources. It is owned by Glassdoor, Inc. and is available as both a website and a mobile application.
- "Monster"[6] is a job search website based in the United States that allows users to search for job openings and upload their resumes for employers to review. It is owned by Monster Worldwide, Inc. and is available as both a website and a mobile application. This platform also targets blue-collar workers but its service available only in the United States.
- "ZipRecruiter"[7] is a job search website based in the United States that allows users to search for job openings and receive job recommendations based on their skills and experience. It is owned by ZipRecruiter, Inc. and is available as both a website and a mobile application.
- "CareerBuilder" [8] is a job search website based in the United States that allows users to search for job openings and access career resources and advice. It is owned by CareerBuilder, LLC, and is available as both a website and a mobile application.

2.3 Comparative Analysis and Summary

Other platforms, such as Kormi24, BDJobs, and LinkedIn, offer more general job search and career development resources, while platforms such as Indeed, Glassdoor, Monster, ZipRecruiter, and CareerBuilder are based in the United States and offer a range of job search tools and resources. So the main comparison between my and the current system is that Shomvob focuses specifically on the growing blue-collar workforce in the country. And their relevant training system, that help the blue-collar workers to improve their skills that help them to get a relevant job.

2.4 Scope of the Problem

Most of this project relies on the web, but I am creating it for Android because it is easier to use and most people use their phones. I also used the "Supabase" and "Firebase" databases in the project, which are free and provide real-time updates and notifications to users. While other similar projects may be complex and expensive, my project will be both easy to use and free on the Android platform.

2.4.1 Background of the Project

Nowadays everything is converted to a digital and automated system. Where everyone is using digital platforms to ease their daily work. In our country, the number of blue-collar workers is increasing day by day and for a company or organization development, the demand for blue-collar workers is also increasing. But there is no complete digital platform those are focusing that type of people. In these circumstances, I analyze some problems and try to make a solution to get rid of the problem.

2.4.2 Problem Statement

We are targeting those blue-collar job seekers and that type of company those are hiring blue-collar workers and they are our main target audience. Firstly I analyze their individual problems which are -

- For job seekers, the problem may include the difficulty of finding suitable job
 opportunities and the time and effort required to search and apply for jobs. Additionally,
 job applicants may struggle with a lack of confidence or knowledge about how to
 prepare for interviews or build their professional skills and identities.
- For employers, the problem may include the challenge of finding qualified candidates for job openings, especially when there are a large number of applicants and only a few are qualified. Additionally, the recruitment process can be time-consuming and costly, and there may be difficulty in identifying the best fit for a particular position.

Though there is no complete digital platform to solve this problem in the growing blue-collar workforce in Bangladesh I have decided to develop this application.

2.4.3 Proposed System

I am proposing an android base application that aims to address these problems by providing a platform that seamlessly connects job seekers with employers and offers resources to help job seekers build their professional skills and identities, as well as tools to help employers efficiently find qualified candidates. The platform also aims to free up job seekers' search and application time by providing an easy-to-use platform that allows them to quickly and

conveniently apply to their preferred positions and track the status of their applications. Also, they can make their resume throw this application.

2.5 Challenges

There are several challenges that I faced in developing and maintaining that type of professional networking and job opportunities platform in Bangladesh:

- Competition: I may face competition from other job search and career development platforms in the country, including BDJobs, Kormi24, and LinkedIn.
- User adoption: In order to be successful, I need to attract and retain a significant number of job seekers and employers. This may be challenging, especially if there are already established platforms in the market.
- Data privacy: As a platform that handles sensitive personal and professional information, I need to ensure that it has robust data privacy and security measures in place to protect the data of its users.
- Funding: Developing and maintaining a platform like Shomvob can be costly, and securing sufficient funding may be a challenge.
- Technological challenges: Though I am targeting blue-collar workers, most of them are
 not familiar with that type of system. So I need to ensure that the platform is reliable
 and user-friendly, which may require ongoing technological development and
 maintenance.
- Marketing: In order to reach a wide audience and attract users, I need to implement a comprehensive marketing strategy.
- Legal and regulatory compliance: I need to ensure that it is compliant with all relevant laws and regulations in Bangladesh.

CHAPTER 3

REQUIREMENT SPECIFICATION

3.1 Business Process Modeling

For "Shomvob" I have shown the graphical representation of the application workflow process and its related sub-processes. My project has a different parts like the applicant panel, employer panel, and admin panel. So I divided the business process model into three parts depending on the actor and gives a short BPM diagram:

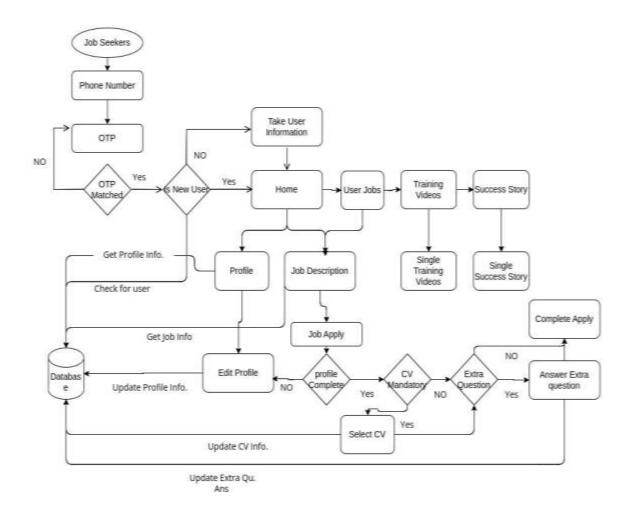


Figure 3.1.1: BPM of "Shomvob" actor applicant

- Job seeker registration: Job seekers create a profile on the Shomvob platform, including their personal and professional information and their job preferences.
- Employer registration: Employers create a profile on the Shomvob platform, including their company information and job openings.
- Job search: Job seekers search for job openings on the Shomvob platform using filters such as location, industry, and job title.

- Job application: Job seekers apply for job openings on the Shomvob platform by submitting their resumes and other required documents.
- Application tracking: Job seekers track the status of their job applications on the Shomvob platform, including whether they have been shortlisted or called for an interview.

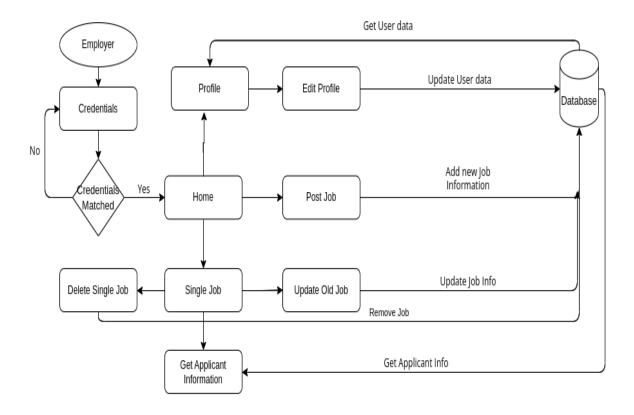


Figure 3.1.2: BPM of "Shomvob" actor employer

- Interview scheduling: Employers schedule interviews with job seekers on the Shomvob platform and notify them via SMS.
- Training: Job seekers complete training modules on the Shomvob platform to improve their skills and knowledge in their field.
- Career development planning: Job seekers create career development plans on the Shomvob platform to set goals and track their progress.
- Hiring: Employers hire job seekers through the Shomvob platform and notify them via SMS.
- Payment: Employers make payments for Shomvob's services through the platform.

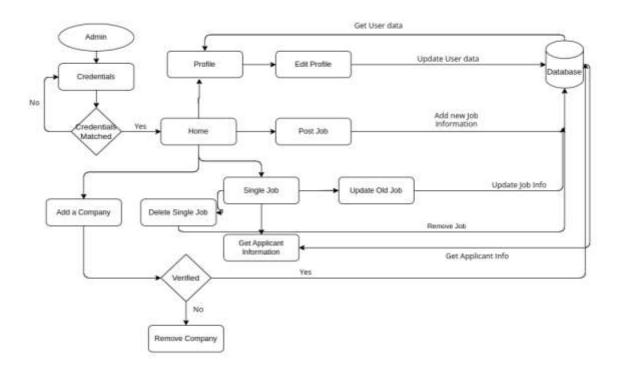


Figure 3.1.3: BPM of "Shomvob" actor admin

- Add or Remove Company: Admin can add a company and also can remove one.
- Verification: The admin verifies an employer and an applicant and can take action on it.
- Job List Shorting: Admin also sorts the applications and gives a sorted list to the employer.

3.2 Requirement Collection and Analysis

For my project there are three actors applicant, employer, and admin. Here the applicants are the blue-collar worker and the employer are the company those are willing to hire a blue-collar workforce and the admins are those people whom are maintain the whole process. Here for an applicant, I am building an android application and for employer and admin I am using a web application. Though these are technological things it has some requirements to use. Those are mentioned below:

■ Hardware Configuration

Table 3.2.1: "Shomvob" Hardware Configuration table

Actors	Device	Requirement
Applicant	Android Device	Version: 5.0+

		Internet Connection: Stable
Admin & Employer	Any Device with Internet Connection & Browser	Version: Any
		Internet Connection: Stable

■ Software Configuration

Table 3.2.2: "Shomvob" Software Configuration table

Actors	Software Configuration	
Applicant	Туре	Android Application
	Language	Java
	Database	Supabase, FireBase
	Tools	Android Studio (3.1 version)
Admin & Employer	Туре	Web Application
	Scripting Language	JS
	Database	Supabase, FireBase
	Tools	AppsMith

Features

Table 3.2.3: "Shomvob" Features table

Actors	Features	Analysis
Applicant	Sign up/ Sign In	User's need to provide their phone number and a one-time OTP will be sent to that number. After the match, the OTP user will be sent "new user information" page or home page depending on the old or new user.

	Home	 On the home page user will get four features. Home: Here user will see their profile picture and name, and see the active jobs depending on their given information. Jobs: Here user will see their saved jobs and applied jobs. Training: In this segment, users will see the training videos. Success Stories: In this segment, users will see the success stories of users.
	Profile	In their profile user can see their provided information such as personal information, education information, previous experience, skills, resume, cv maker sector and the referral link. And they can edit their information from profile page, refer some new user and create their cv by providing information through my app.
	Job Description:	In the job description user will see the full job description if the user does not apply for that job yet. But if they applied already they will see an application tracker or user applications status, the interview details, and joining details with the job description. And in both case they can also get a share button and company profile page preview option in this page. Anyone can share a job.
	CV Maker	User can create their CV by giving relevant information on the app and they can download it for farther use.
	Sharing	Users can share a job description, and a company profile and they can refer other users.
	Job Search and Filtering	User can search for a job on the home page or filter their relevant jobs.
Admin & Employer	Sign In/ Sign Up	User needs to provide their email address and password for Sign In or Sign Up.
	Post and Update Jobs	Both of them can post a new job. And they can update their information.
	Shortlisting	Admins shortlisted the applicant.

3.3 Use-case modeling:

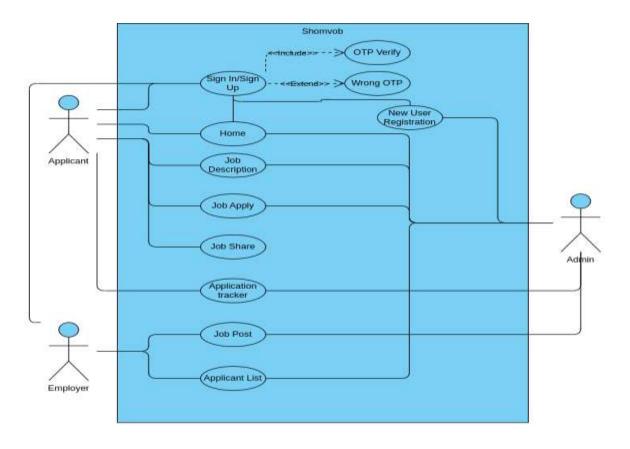


Figure 3.3.1: Use Case Model Model of "Shomvob"

3.4 Logical Data Model:



Figure 3.4.1: Logical Data Model of "Shomvob"

3.5 Design Requirement

After analyzing the requirement to design the product I focused on the requirement. Here are some design requirements for Shomvob:

- User-friendly interface: The Shomvob platform should have a clear and intuitive interface that is easy for job seekers and employers to navigate.
- Responsive design: The platform should be responsive and work well on various devices and screen sizes, including smartphones and tablets.
- Search functionality: The platform should have advanced search functionality that allows job seekers to easily find job openings based on criteria such as location, industry, and job title.
- Personalization: The platform should allow job seekers to customize their profiles and job preferences, and provide personalized job recommendations based on their skills and experience.
- Security: The platform should have robust security measures in place to protect the personal and professional information of its users.
- Scalability: The platform should be able to handle a large number of users and job openings without experiencing performance issues.
- Integration with SMS: The platform should be able to send SMS notifications to job seekers and employers to alert them of job opportunities, interview scheduling, and other important updates.
- Training and career development resources: The platform should offer a range of training and career development resources to help job seekers build their skills and improve their chances of finding employment.

CHAPTER 4

DESIGN SPECIFICATION

4.1 Front-end Design

There are several Integrated Development Environments (IDEs) available for developing Android applications, including Android Studio, Visual Studio, and Droid Script. We chose to use Android Studio for our project because it is one of the most popular IDEs for Android development and is developed by Google. Android Studio allows for both front-end and backend development in a single environment, which is convenient for developers.

4.2 Function

After analyzing the requirement and making it user-friendly I make the design simple and understandable. A few designs are given below:

• App Onboarding: After app open if the user is not log in then this page will show with an animation otherwise user directly land on home page.



Figure 4.2.1: App Onboarding Page

• Sign In / Sign Up: For every user need to be enter their phone number and OTP to move forward in the application. After OTP match for new user it will take the user personal information and for old user it will take the user in home page.

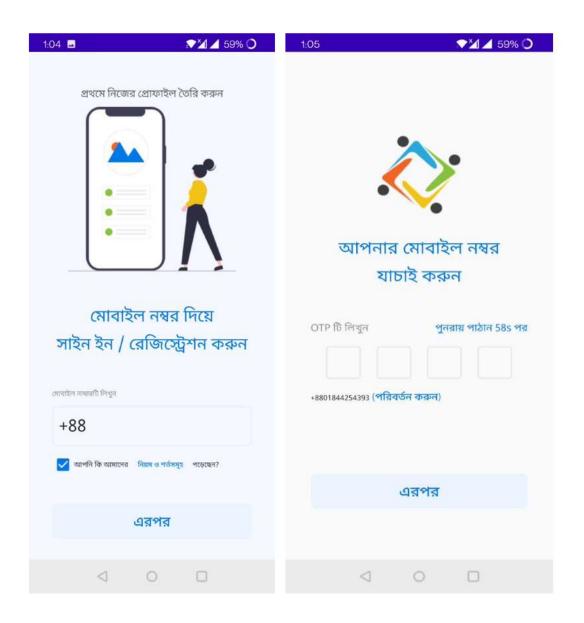


Figure 4.2.2: Sign In/Sign Up and OTP page

• New User Basic Information: After OTP match if its a new user then the next 2 page will take new user information. The first page will take user name, date of birth, and gender infromation and their profile picture. In this page the profile picture is oftional and others are mandatory for users. The next page Job sorting page. It will take user division, area, education and preferable job type. Based on this information user will see the job list in home page.



Figure 4.2.3: New User basic Info page

• Home Fragment: After landing on home page user will find four fragment home fragment one of it. On this page there are two segment in the top there will be a banner which will show the special job offers and news. And the bottom one will show the job lists. Here user can see job lists in a sorted order depending on their provided information. You can find a job search bar and a filter option in this page. Using it user can search a job with job tittle or the company name. And using the filter option user can filter some selected categorized jobs. On the right top corner user can see a notification icon. User can see the read and unread notification by clicking on this icon. And a notification will store there for 30 days. And on the left top corner user can see their name and profile picture. After clicking any of them user can visit their profile. On the other side in every job card there are a save icon. By clicking on it user can save

a job and can unsaved a job. And by clicking on job card user can visit the job description of that jobs.

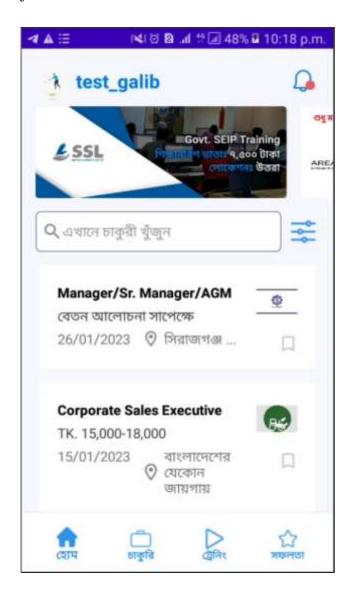


Figure 4.2.4: Home Fragment

• Job Description (Befor Apply): The job description page on the Shomvob platform is designed to provide detailed information about job opportunities to job seekers and make the job application process as seamless as possible. The page includes several key features that help job seekers easily access the information they need and take the next steps to apply for the position. One of the key features is the "Share" button. This allows job seekers to share the job listing with their friends, family or colleagues on different social media platforms. This feature can help to increase the visibility of the job listing and reach more potential candidates. Another important feature is the "Company Profile" button. This button allows job seekers to access detailed information about the

company or organization offering the position. This includes information about the company's mission, vision, culture, and values, as well as information about their products or services.

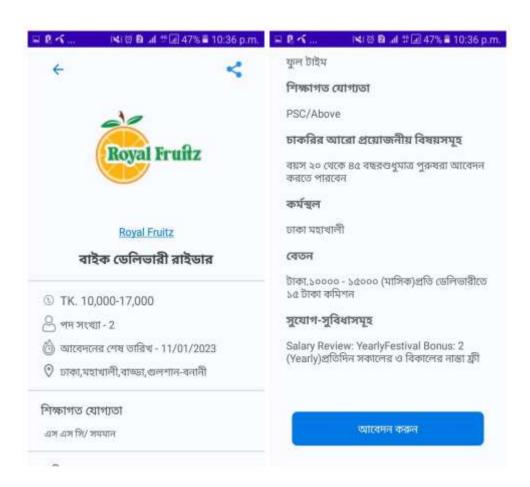


Figure 4.2.5: Job Description

• Application Tracker: User can track their application status, they can see the interview details and Job confirmation details on this page. The application tracker page on the Shomvob platform is an essential feature that allows job seekers to keep track of the status of their job applications. The page includes a comprehensive status map that provides an overview of the job status, such as if they got a call for an interview, if they have been selected for the job, or if they have been rejected. One of the key features of the application tracker page is the ability to view interview information. If the job seeker receives a call for an interview, they can view the details of the interview such as the date, time, location, and the interviewer's contact information. This feature helps job seekers to easily prepare for the interview and make sure they are on time. Another important feature is the ability to view the joining information. If the job seeker is

selected for the job, they can view the details of the job offer, including the salary, benefits, and start date, as well as the contact information for the employer. In case of rejection, the job seekers can see the reason for rejection and the job description, this will help the job seekers to understand the reason for rejection and to improve their skills and qualifications.



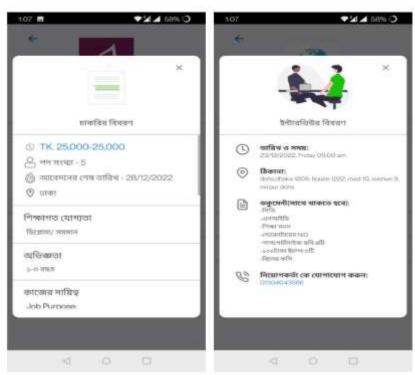


Figure 4.2.6: Application tracker

Profile Page: The page includes several key features that help job seekers to easily update their profile and apply for jobs. One of the key features is the ability to update their profile photo. This allows job seekers to upload a recent and professional-looking photo of themselves to their profile, which can help to create a positive impression with potential employers. Another important feature is the ability to view and change personal information, education information, and previous experience. Job seekers can view their current information and make any necessary updates to ensure that their profile is up-to-date and accurate. The profile page also includes an option to upload a resume. This allows job seekers to easily upload their resume to their profile, making it available to potential employers when they apply for jobs. The profile page also includes a CV maker option, which allows job seekers to create a professional CV using the information they have provided in their profile, this can be helpful for the job seekers to apply for the jobs. Additionally, the profile page includes a referral link, which allows job seekers to refer friends or acquaintances to the Shomvob platform. This can help to increase the visibility of the platform and bring in more job seekers.

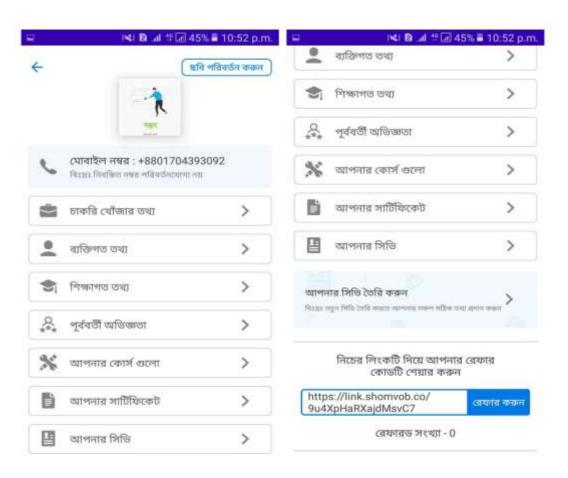


Figure 4.2.7: Profile

• User Jobs Fragment: User can see their saved jobs and their applied job in this fragment. And, every applied jobs status.

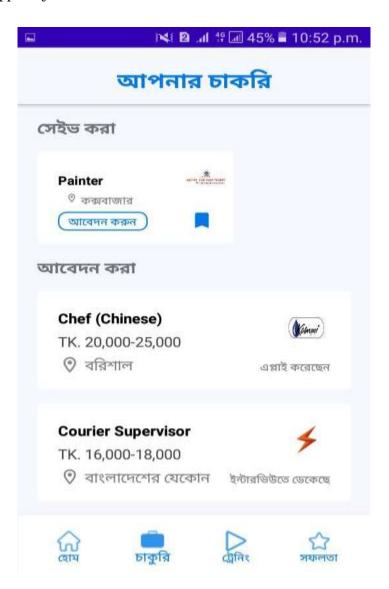


Figure 4.2.8: Job Fragment

• Training Fragment: One of the key features of the training fragment is the ability to view short training videos. These videos provide job seekers with quick and easy-to-digest information on a variety of topics, such as interview skills, resume writing, and communication skills. These videos are designed to be easily accessible and can be watched at any time, helping job seekers to improve their skills and qualifications whenever they have a spare moment. Another important feature is the ability to apply for any of the courses for free. The fragment provides a wide range of courses that cover various skills and qualifications required for different job roles. These courses are

designed to help job seekers to improve their chances of getting hired by providing them with the knowledge and skills they need to excel in their chosen field.



Figure 4.2.9: Training Fragment

• Success Story Fragment: The success story page on the Shomvob platform is a feature that helps job seekers to stay motivated and inspired throughout their job search. The page includes two segments: one that displays information about recent hires and another that showcases stories about how Shomvob has changed the lives of others. This segment is designed to provide inspiration and encouragement to job seekers who are currently looking for work and to show them that the platform is an effective way to find a job.



Figure 4.2.10: Success Story Fragment

4.3 Interaction Design and User Experience

One key aspect of the interaction design for Shomvob is the use of clear and concise navigation and layout. The platform uses a simple and straightforward navigation structure, with easy-to-use menu options and clear calls to action. This helps to ensure that users can quickly and easily find the information and features that they are looking for. The user experience of Shomvob is highly intuitive, with a focus on simplicity and efficiency. The platform uses a range of design elements, such as color and typography, to create a professional and modern look and feel. The platform also employs a range of user-friendly features, such as the ability to save jobs for later applications and the applicant tracking system, which allows users to easily keep track of their job search progress. Overall, the interaction design and user experience of Shomvob are highly

effective in meeting the needs of both employers and job seekers. The platform provides a seamless and intuitive experience that helps to support the career development and employment of the blue-collar workforce in Bangladesh.

CHAPTER 5

IMPLEMENTATION AND TESTING

5.1 Implementation of Database

After careful consideration, the decision was made to use both Supabase and Firebase as the database for Shomvob. These two databases were selected due to their scalability, reliability, and the range of features and tools that they offer. The "Supabase" database was implemented to support the core features of the platform, such as user accounts, job listings, and application tracking. "Supabase" was chosen due to its ability to handle high volumes of data and its support for real-time updates and notifications. "Supabse" is a free platform for data storage and use. And I can create "Supabse" APIs using SQL command so that I use it as main database support. For operating the full process smoothly we need user data and company data. So for user data, I created a "user_profile" table and for company data, I created a "company_profile" table with the needed column. To store the posted job I created a "job_listing" table. To store application data I created a table name "user_jobs". Also, I created other necessary tables like education_type, university_type, division, area, etc. Some major tables are given below:

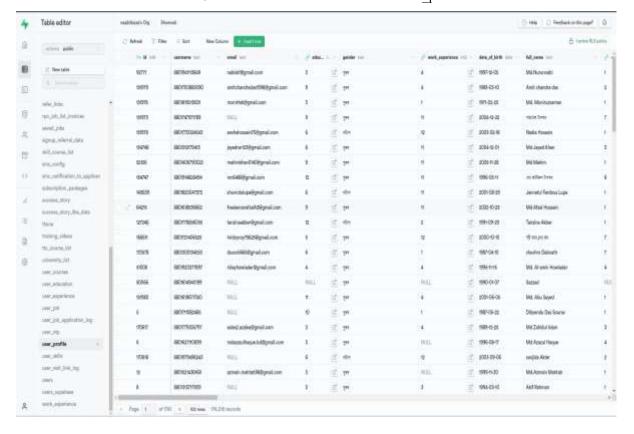


Table 5.1.1: "Shomvob" database table for user profile

Table 5.1.2: "Shomvob" database table for company profile

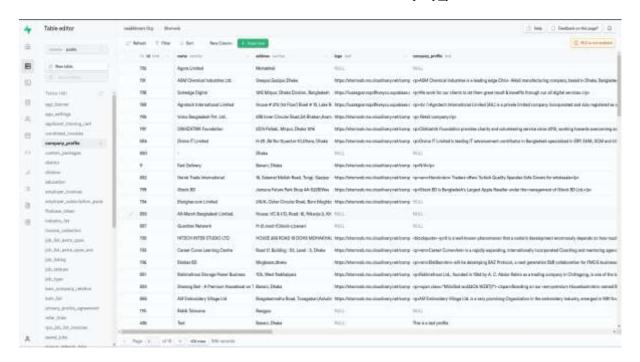
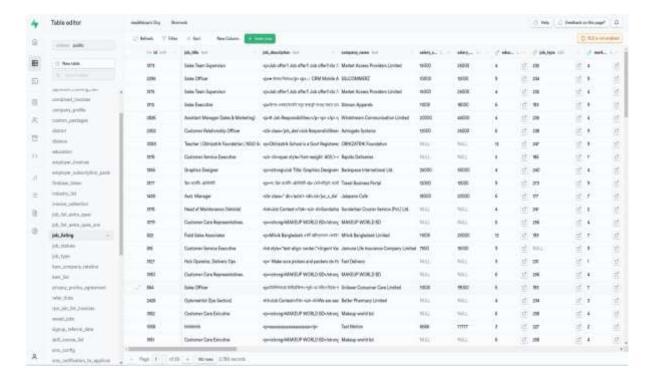


Table 5.1.3: "Shomvob" database table for Posted Jobs



The Firebase database was implemented to support the analytical part of our application. Also for storing the short data, like app settings, app APIs, etc. I did not use the firebase database as the main database because all functionality is not free and in the free version, it cannot take the data traffic properly.

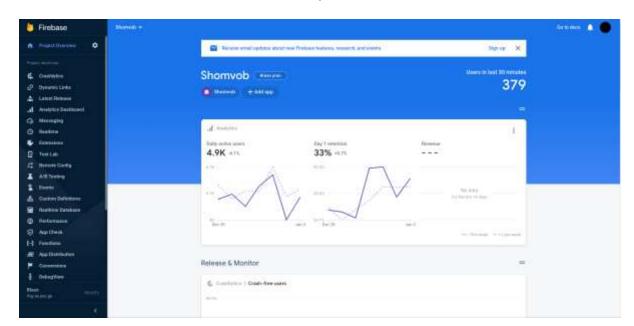


Table 5.1.4: "Shomvob" analytics dashboard from firebase

The implementation of the Supabase and Firebase databases was a smooth process, with the development team working closely with the database administrators to ensure that all of the required data structures and relationships were in place. The databases were thoroughly tested during the development process, and the results of the testing were positive, with both databases performing as expected.

Overall, the implementation of the Supabase and Firebase databases has been a success, and they have proven to be reliable and scalable solutions for the needs of Shomvob. The use of these databases has allowed the platform to provide a range of features and functionality to support the career development and employment of the blue-collar workforce in Bangladesh.

5.2 Implementation of Front-end Design

According to the design specification, I implemented the application design. In order to provide a seamless and user-friendly experience for the platform's users, it was important to carefully consider the design and layout of the front-end interface. For the front-end design of Shomvob, I used Java as the primary programming language and XML for the design. Java is a powerful and widely-used programming language that is well-suited to the needs of the platform, and XML is a standard markup language that is commonly used for designing user interfaces.

The layout of the front-end interface is clean and intuitive, with clear and concise navigation and well-organized content. The use of colors and graphics is consistent and visually appealing, and the overall design is professional and modern. The platform is easy to use and navigate, even for users who are not particularly tech-savvy.

In order to support the various features and functionality of the platform, I used NodeJS as the backend language. NodeJS is a popular and powerful backend language that is well-suited to the needs of the platform, and it was used to implement the various functions and features of the platform, such as the job search and application tracking functionality.

Overall, the implementation of the front-end design for Shomvob was a success, and it played a key role in the platform's success in connecting employers and job seekers in Bangladesh. The use of Java, XML, and NodeJS as the frontend and backend languages allowed me to create a user-friendly and efficient platform that meets the needs of both employers and job seekers.

5.3 Testing Implementation

The testing implementation report for Shomvob, outlines the results of a comprehensive testing process that was conducted to evaluate the performance and reliability of the platform.

The testing objectives for this project were to ensure that the platform was functioning correctly, that it was user-friendly and easy to navigate, and that it was reliable and resilient. To achieve these objectives, a range of tests were conducted, including unit tests, integration tests, and acceptance tests.

The testing approach employed for this project was a combination of manual testing and automated testing. Manual testing was conducted by me. The automated testing was conducted using a range of tools and methods, including load testing, stress testing, and regression testing. For manual testing, at first, a tried with different types of phone numbers correct and incorrect and I checked that is the OTP is sent successfully or not and whether it is verifying successfully or not. In the next step I tested, after OTP matching it will arrive at its correct destination or not. Then I tested that for the new user is it taking all the information correctly or not and storing it or not in the database. Then I tested whether the job list shows properly on the home page or not depending on user information. Then I tested the search and filter option in different cases. In the next step, I tested the job description page in both cases when the user is not applied and when the user applied. And if the user is already applied then the application tracker shows properly or not. After that, I tested whether the application option is working properly or not. And at the same time, I tested the job-sharing option. Then on the home page, I tested the job save button, and next, I tested the job fragment and tested if all save jobs and applied jobs are appearing to hear or not. Then in the training fragment I tested is the training videos opened properly or not. Then I tested the success story fragment. After all that I tested, the

profile is all the options showing properly or not, and after editing all the information updating properly or not. In the last, I tested the cv maker option, is it talking all the information properly or not, and after that is it providing the cv or not.

The testing environment for this project was a dedicated testing server that was configured to mimic the production environment as closely as possible. This allowed the testers to evaluate the performance and reliability of the platform under real-world conditions.

5.4 Test Results and Reports

A total of 100 test cases were developed for this project, covering a wide range of features and functionality. The test cases included both positive and negative tests and covered a range of different scenarios and user types. From all the test case scenarios some selected test case scenarios and its test reports are provided below table:

Table 5.4.1: "Shomvob" Features test report table

Test Type	Test Case	Test Description	Input Data	Expected Result	Actual Result	Status
Unit Testing	1	Verify login functionality	Valid login credentials	Successful login	Successful login	Passed
	2	Verify job search functionality	Search for "sales assistant" jobs in Dhaka	Correct search results	Correct search results	Passed
	3	Verify application submission	Submit application for "sales assistant" job	Successful submission	Successful submission	Passed
Beta Testing	4	Verify application tracking	* *	Correct status displayed	Correct status displayed	Passed
Functionalit y Testing	5	Verify privacy policy	View privacy policy	Policy displayed correctly	Policy displayed correctly	Passed
	6	Verify data security	Attempt to access unauthorized data	Access denied	Access denied	Passed
Usability Testing	7	Verify load handling	Simulate high traffic volume	Platform performs correctly	Platform performs correctly	Passed

	8	Verify stress handling	Simulate high stress conditions	Platform performs correctly	Platform performs correctly	Passed
Compatibilit y Testing	9	Verify compatibility	Test on various devices and browsers	Platform performs correctly	Platform performs correctly	Passed
Database Testing	10	Verify database connectivity	Connect to database	Successful connection	Successful connection	Passed
Security Testing	11	l Verity data	Attempt to access encrypted data	Access	Access denied	Passed

The test results and reports generated during this project were generally positive, with the platform performing well across all of the tests that were conducted. However, a number of minor issues and defects were identified, and these were promptly addressed by the development team.

One notable feature of the platform is the CV maker, which allows users to create professional-quality CVs to support their job applications. The testing process included a test case specifically designed to evaluate the functionality of the CV maker, and the results of this test were positive, with the CV maker performing as expected.

Based on the findings of this testing process, it is concluded that Shomvob is a reliable and user-friendly platform that is well-suited to support career development and employment of the blue-collar workforce in Bangladesh. However, it is recommended that the platform continue to be tested and monitored on an ongoing basis in order to ensure its ongoing performance and reliability.

CHAPTER 6

IMPACT ON SOCIETY, ENVIRONMENT AND SUSTAINABILITY

6.1 Impact on Society

Shomvob is a professional networking and job opportunities platform in Bangladesh that aims to connect job seekers with employers in the country. The platform focuses on the growing blue-collar workforce in Bangladesh, providing job vacancies and career development resources for roles such as call center agents, field associates, sales assistants, delivery men, and more. By helping job seekers find employment and supporting their professional growth through training and career development resources that focus on different jobs and interviews, Shomvob may have a positive impact on society. It may contribute to the reduction of unemployment and the improvement of job satisfaction among its users, as well as the development of a skilled and competent workforce that can drive innovation and progress. In addition, the platform includes job applicants' success stories in the app to encourage the community to upskill its workforce and boost confidence throughout the recruitment process. This can help to create a sense of community and connection among its users, as well as provide motivation and inspiration for those seeking employment. Furthermore, the platform offers an application tracking system that allows job seekers to monitor the status of their applications and communicate with recruiters and uses SMS notifications to alert them of job opportunities or interview schedules. This can help to streamline the recruitment process and reduce stress and frustration for both job seekers and employers.

6.2 Impact on Environment

As a digital platform, Shomvob may have a lower environmental impact compared to traditional recruitment methods that rely on paper and other resources. By reducing the need for physical job search and application materials, Shomvob may help to reduce waste and conserve natural resources. The platform's online presence also means that users do not have to travel to attend interviews or training sessions, which can reduce greenhouse gas emissions and air pollution. Additionally, the platform's emphasis on upskilling and training may help to reduce the need for on-the-job training, which can also have a positive environmental impact by reducing the use of resources such as energy and materials. In this way, Shomvob may contribute to the creation of a more sustainable and environmentally-friendly society.

Furthermore, the platform allows employers to publish their job openings through the Shomvob employer panel and helps job applicants apply for those roles while also building their careers, confidence, and skill sets. This helps to match job seekers with suitable employment

opportunities and streamline the recruitment process, which may reduce the need for multiple rounds of interviews and other resource-intensive recruitment activities. In this way, Shomvob may help to reduce the overall environmental impact of the recruitment process by minimizing the use of resources such as paper and energy. Overall, the platform's focus on digital connectivity and efficient resource use may contribute to the creation of a more sustainable and environmentally-friendly society.

6.3 Ethical Aspects

Shomvob, as a professional networking and job opportunities platform, may be subject to various ethical considerations, including the following:

- Privacy: Shomvob handles personal and professional information of its users, including resumes, job preferences, and contact details. It is important for the platform to have robust privacy policies in place to protect this information and ensure that it is not misused or disclosed without consent.
- Non-discrimination: Shomvob should strive to create an equal and inclusive
 environment for all of its users, regardless of their background, identity, or
 circumstances. This includes ensuring that job listings and career development
 resources are accessible to all users and do not discriminate on the basis of factors such
 as race, ethnicity, gender, religion, age, or disability.
- Fairness: Shomvob should aim to be transparent and fair in its processes and decision-making, including in how it presents job opportunities and handles job applications.

 This includes ensuring that job listings are accurately and adequately described, and that job seeker are treated fairly and given equal consideration during the recruitment process.
- Responsibility: As a platform that connects job seekers with employers, Shomvob has
 a responsibility to ensure that it is promoting ethical and responsible job opportunities.
 This includes verifying the legitimacy of job listings and ensuring that they comply
 with relevant laws and regulations, as well as promoting fair and ethical working
 conditions.
- Transparency: Shomvob should be transparent in its operations and decision-making, including in how it handles the personal and professional information of its users, communicates with users, and makes decisions about job opportunities and applications. This can help to build trust and confidence among its users and ensure that the platform is operating in an ethical and responsible manner.

Overall, it is important for Shomvob to prioritize ethics and responsibility in its operations and decision-making, in order to create a positive and supportive environment for its users and contribute to the overall development of society.

6.4 Sustainability Plan

A sustainability plan for Shomvob, the professional networking and job opportunities platform in Bangladesh, could include the following elements:

- Reduce Environmental Impact: Shomvob can aim to reduce its environmental impact
 by implementing digital solutions to replace paper-based processes, such as allowing
 job seekers to submit resumes and employers to post job listings electronically. The
 platform could also encourage its users to adopt sustainable practices, such as reducing
 their carbon footprint by using public transportation or telecommuting.
- Promote Social Responsibility: Shomvob can strive to promote social responsibility by verifying the legitimacy and ethicality of job listings, and by ensuring that they comply with relevant laws and regulations. This could include verifying the working conditions, pay, and other aspects of job opportunities to ensure that they are fair and ethical. The platform could also promote social responsibility by offering resources and support for its users to build their skills and knowledge, and by encouraging them to engage in social and community service activities.
- Encourage Diversity and Inclusivity: Shomvob can aim to create a diverse and inclusive environment for all of its users, regardless of their background, identity, or circumstances. This could include offering job listings and career development resources that are accessible and welcoming to a wide range of users and implementing policies and practices that promote diversity and inclusivity.
- Foster Community Engagement: Shomvob can work to foster a sense of community and engagement among its users by offering resources and support for networking, collaboration, and professional development. This could include hosting online events, workshops, or forums where users can connect and share knowledge and experiences, and by promoting opportunities for users to get involved in social and community service activities.
- Monitor and Measure Performance: In order to ensure that its sustainability efforts are
 effective, Shomvob can implement systems to monitor and measure its performance in
 areas such as environmental impact, social responsibility, diversity and inclusivity, and
 community engagement. This could include collecting and analyzing data on resource

use, user satisfaction and engagement, and other relevant metrics, and using this information to make continuous improvements to the platform.

Overall, a sustainability plan for Shomvob could help the platform to minimize its environmental impact, promote social responsibility and inclusivity, and foster a sense of community among its users. By implementing such a plan, Shomvob can contribute to the creation of a more sustainable and responsible society.

CHAPTER 7

CONCLUSION AND FUTURE SCOPE

7.1 Discussion and Conclusion

In conclusion, the research on Shomvob, the professional networking and job opportunities platform in Bangladesh, has found that the platform offers a range of features and resources to support job seekers in building their careers and finding employment. The platform's focus on the blue-collar workforce in Bangladesh, and its emphasis on upskilling and training, may have a positive impact on society by contributing to the reduction of unemployment and the development of a skilled and competent workforce. The platform's digital presence may also have a lower environmental impact compared to traditional recruitment methods that rely on paper and other resources.

However, the research also identified some challenges and limitations of the platform. For example, the data showed that user satisfaction with the platform's performance in certain areas, such as the quality and variety of job listings, was mixed. In addition, the research revealed some concerns around privacy and data security, as well as the need for more robust policies and practices to promote diversity and inclusivity.

Based on these findings, it is recommended that Shomvob consider implementing strategies to address these challenges and enhance the platform's performance. This could include improvements to the quality and variety of job listings, as well as the development of more robust privacy and data security policies. In addition, it is suggested that the platform explore ways to promote diversity and inclusivity among its users, such as through the implementation of policies and practices that encourage a more inclusive and welcoming environment.

Overall, the research on Shomvob highlights the potential for digital platforms to support the career development and employment of the blue-collar workforce in Bangladesh, as well as the importance of considering sustainability, privacy, and inclusivity in the design and operation of such platforms.

7.2 Scope of Further Development

There are several areas where Shomvob, the professional networking, and job opportunities platform in Bangladesh, could potentially explore further development:

 Quality and Variety of Job Listings: Based on the research findings, it is suggested that Shomvob consider ways to improve the quality and variety of job listings available on the platform for all types of job seekers, including white-collar and silver-collar seekers.

- This could include working with a wider range of employers or implementing systems to verify the legitimacy and ethicality of job listings.
- Career Development Resources: Shomvob could also consider expanding the range and
 depth of career development resources available to its users, such as by offering more
 training and development opportunities, or by partnering with educational institutions
 or industry organizations. These resources should be relevant and useful for all types
 of job seekers, including white-collar and silver-collar seekers.
- User Engagement and Satisfaction: The platform could also explore ways to enhance
 user engagement and satisfaction for all types of job seekers, such as by implementing
 more robust feedback and support systems, or by offering additional resources and
 services to support career development.
- Privacy and Data Security: In light of concerns around privacy and data security, Shomvob could consider implementing more robust policies and practices to protect the personal and professional information of all of its users, including white-collar and silver-collar seekers. This could include stronger security measures to protect against data breaches, as well as clearer and more comprehensive privacy policies.
- Diversity and Inclusivity: Shomvob could also explore ways to promote diversity and
 inclusivity among all of its users, including white-collar and silver-collar seekers. This
 could include implementing policies and practices that encourage a more inclusive and
 welcoming environment, as well as initiatives to support underrepresented groups and
 programs to promote diversity and inclusivity in the workplace.

Overall, there are many areas where Shomvob could consider further development in order to enhance the performance and impact of the platform for all types of job seekers.

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Project Report

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