7th Bangladesh Conference on Industrial Engineering and Operations Management
December 21-22, 2024
Publisher: IEOM Society International, USA DOI: 10.46254/BA07.20240092
Published: December 21, 2024

Business Proposal for an E-Accommodation Platform in Bangladesh: A Market Analysis and Opportunities

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Abstract

In Bangladesh, the accommodation problem is one of the burning problems and calls for an immediate solution. Middle class, lower middle class, and students are the main victims of this issue. Through our proposed business model, these issues can be addressed properly. We want to run a business that will solve the problem of tenant or consumer accommodation. Our entire system will be accessed online where all tenant and owner information will be entered. The proposed business model revolves around the development of affordable and sustainable housing solutions, catering to the diverse needs of the Bangladeshi population. Our business model is inclusive of B2C, business-to-consumer model. The model emphasizes collaboration with local communities and stakeholders, leveraging technology for efficient project management.

Keywords:

Online Learning Platform; Courses, Co-Curricular Activities, Skill Sharing, Revenue Projection.

1. Introduction

A thorough problem definition and root cause analysis were used in this chapter to pinpoint the issue. A complete industry study and a competition analysis were carried out to further comprehend the industry and its difficulties. Finally, a SWOT analysis was performed to determine our plan's strengths and weaknesses.

1.1 Problem Statement:

When someone relocates to a new city, their biggest challenge is figuring out how to stay there. The various issues that come with living in different cities cause worry that never goes away. primarily low-wage workers and students, who cannot find a suitable home or place because of inadequate information. If they discover numerous issues, such as unsanitary rooms, high rent, bad service, and poor environmental conditions, it is really concerning. Even after spending enough money, individuals frequently have to live distant from their places of employment and in uninhabitable homes or messes because they lack the necessary knowledge.(Koca et al. 2021) In many situations, whether stress-related or time-related, all the benefits and drawbacks of the mess or house must be accepted later, whether intentionally or unknowingly, and the mess or house is only rented because of inadequate information. Every year, a large number of deserving students depart from their families to attend various institutions in various places, raising concerns among parents about the whereabouts of their children.(Jung et al., 2021) At the same time, homeowners or mess also deal with

several issues. Since there is rarely any mess or a house on the side of the road, especially in a suitable location, the majority of the seats are frequently left empty. Even though the owners of the home or mess display a variety of banners and boards in front of the house or mess for the campaign, the campaign frequently fails because the house or mess is not in the right location. Many people frequently have to rent a home or a mess because they are unable to locate a tenant, which leads to a number of issues. When it comes to collecting rent from tenants, owners frequently face embarrassment. Extra people often have to be hired to inspect when raising money, mess or rent a house. That is the reason for the extra cost to the owners.

1.2 Root Cause Analysis:

Figure

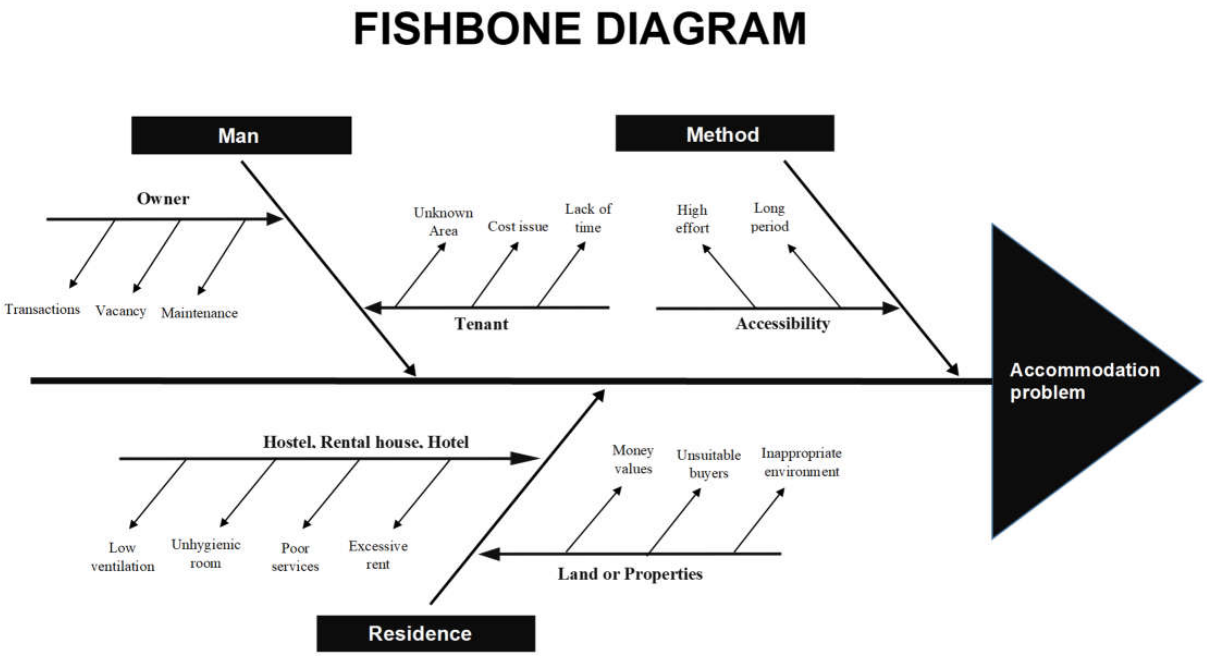

Figure 1**.** Root cause analysis

In Figure. 1, in the context of analyzing problems related to issues with accommodation in Bangladesh, we can use this tool to identify and understand the root causes of problems related to "Man," "Methods," and "Residence of Accommodation."

1.3 Industry Analysis:

Market Size and Growth: One of the main economic areas is hotels and professionally run lodging. Direct reservations for these lodgings can be made via the provider's website, a tour operator, a travel agency, an online travel agency (OTA), or by contacting the customer support line. Well-known retailers include Booking.com, Trivago, and Hotels.com. Every trip that users have scheduled from the specified region, regardless of departure or arrival, is included in the booking volume. Users are the representatives of every hotel guest. Travel both domestically and abroad is covered. Websites such as Airbnb offer vacation rentals, private room and house rentals, and more. (Jung et al., 2021)

In 2023, the Bangladeshi hotel industry is expected to generate US$0.97 billion in revenue. Revenue is anticipated to rise at an average yearly rate of 8.28% (CAGR 2023-2027), with a forecasted market volume of US$1.34 billion by 2027. By 2027, 11.95 million users are projected to be present in the hotel sector. The expected user penetration is 5.2% in 2023 and 6.6% in 2027. It is anticipated that the average revenue per user (ARPU) will be US$107.80. (Bdtask, 2024)

The accommodation options in Bangladesh typically included the following:

Hotels: Bangladesh has a significant number of hotels, ranging from budget accommodations to luxury hotels, primarily concentrated in major cities like Dhaka, Chittagong, and Cox's Bazar.

Guesthouses: Guesthouses and bed-and-breakfast establishments are prevalent, particularly in tourist destinations and smaller towns. These provide a more affordable and homely option for travelers.

Resorts: Bangladesh boasts several resorts, especially in coastal areas like Cox's Bazar and the Sundarbans region, offering unique accommodation experiences.
Vacation Rentals: The concept of vacation rentals and holiday homes has gained popularity, allowing travelers to stay in private properties offered by individuals or companies.
Homestays: In recent years, there has been a growing trend of tourists opting for homestays, providing an opportunity for them to experience local culture and hospitality.

Online Penetration:
As the number of tourists visiting Bangladesh each year rises, the country's hotel industry has grown. In recent years, the hotel industry has grown to be a significant contributor to the national economy. The industry's three main issues are an inefficient system, a lack of competent workers, and insufficient facilities.The adoption of modern technology has the ability to totally change the hotel industry in Bangladesh by empowering the sector to overcome these obstacles and move forward towards a more effective and efficient approach.

The market for online travel and hotel reservations was valued at $432 billion in 2020,(Koca et al. 2021) and it is projected to grow to $833 billion by 2025. (Prothom Blog 2024) Unfortunately, there are numerous technological problems in Bangladesh's hospitality industry. Bangladesh's hotel services face challenges due to inadequate internet infrastructure, outdated operating procedures, and a lack of qualified IT staff. Small hotels face a competitive disadvantage due to high costs for technological solutions. The hotel industry is also vulnerable to cyber threats, causing data breaches, financial losses, and reputational damage. (Bdtask 2024)

Yet, with the correct strategies and resources in place, the hotel industry in Bangladesh can overcome these obstacles and fully utilize the advantages of technology to improve the guest experience and promote expansion. The governmental and commercial sectors can collaborate to develop Bangladesh's internet infrastructure. These could include lowering the cost of internet use, increasing 4G coverage, and improving connection to the internet. Hotels will be able to improve the whole guest experience and provide smooth internet services like online booking and payments. (Al-Masud 2017)

Competitor Landscape: Identifying and analyzing major competitors in the online accommodation sector in Bangladesh. This includes both local and international platforms. Understand their market share, unique selling points, and strategies.
Customer Behavior: Examining the behavior and preferences of Bangladeshi travelers when it comes to accommodation bookings. Understand factors influencing their choices, such as price sensitivity, location preferences, and amenities.
Regulatory Environment: Studying relevant regulations and policies related to the accommodation and online travel industry in Bangladesh. Understand any licensing requirements or restrictions that may apply to the e-accommodation business.
Market Trends: Identifying emerging trends in the accommodation and travel industry in Bangladesh. This may include the rise of eco-tourism, experiential stays, or the impact of COVID-19 on travel behavior.
Target Market Segmentation: Defining the target market for the e-accommodation platform in Bangladesh. Consider factors like demographics, travel purposes (business, leisure, etc.), and geographic locations.
Local Cultural Considerations: Take into account any cultural nuances or preferences that may influence accommodation choices in Bangladesh. Tailor the platform's offerings to cater to the local market.
Pricing and Revenue Models: Analyzing existing pricing and revenue models used by competitors in the market. Determine the most suitable pricing strategy for the e-accommodation platform in Bangladesh.
Marketing and Distribution Channels: Exploring effective marketing and distribution channels to reach the target audience. Consider digital marketing, partnerships, and collaborations with local travel agents.
We will learn a lot about the prospects and difficulties of establishing an e-accommodation business in Bangladesh by doing a thorough industry analysis.

1.4 Customer Analysis:
Customer Analysis:
Job Holders:
Accommodation requirements: People with jobs seek out comfortable and convenient accommodations, especially those who travel frequently for work or who have moved to new areas in pursuit of career opportunities. They may prefer accommodations that provide easy access to transit or are near their place of business.
Business-friendly amenities: Many job seekers need lodging with features like high-speed internet, a dedicated office, and conference rooms for meetings.
Extended Stays: Depending on their position's requirements, some employees may require long-term housing or serviced apartments with flexible lease durations.
Safety and Security: Employers place a high value on security and safety when choosing lodging, particularly if they are traveling alone or staying in remote locations.

Admission Candidates:
Temporary Accommodations: Admission hopefuls sometimes look for short-term lodging for a few days or weeks when traveling to several locations for university entrance examinations, interviews, or admission procedures.
Proximity to educational institutions: Admission candidates prefer lodging close to the universities or educational institutions they are applying to because they are typically visiting for academic-related purposes.
Affordable Options: Admission hopefuls may have limited funds and select inexpensive housing options with fundamental amenities for a brief visit.
Supportive Environment: Candidates may favor lodgings that offer a friendly and stress-free atmosphere during the admissions process.
Assistance with Local Information: Admission candidates may be unfamiliar with the area, so accommodations that offer assistance and information about nearby services, public transportation, and educational institutions may be appreciated.

Students:
Budget-Friendly Options: Offering economical lodging options is crucial because students frequently have limited financial resources. Think of offering shared lodging, dorms, or reasonably priced individual rooms.
Proximity to educational institutions: To appeal to the student population, target lodgings close to important institutions and colleges in Bangladesh. When selecting housing, students' decision-making process heavily considers location.
Security and safety: To reassure both students and their parents that the accommodation is a secure living space, emphasize safety and security measures.
Tech-Savvy Solutions: To attract tech-savvy student clients who favor simple and convenient booking processes, implement user-friendly online booking platforms and mobile apps.
Inclusive Amenities: Provide services that cater to the needs of the students, such as access to public transit, study spaces, common areas, and laundry facilities.

Tourists: Travelers from Bangladesh who visit their nation for pleasure, business, or personal reasons are referred to as domestic tourists. They can be looking for lodging in various cities or well-known tourist areas in Bangladesh. Travelers from other nations come to Bangladesh on vacation, on business, or to experience the local culture.
Business Professionals: Business travellers, those attending conferences, meetings, or company events, often prefer accommodations near significant corporate sites, serviced apartments, or long-term rentals for extended stays.
Group travelers: Group travelers include families, tour groups, and friends that are planning a trip together and are seeking lodging options that can house several people.

1.5 Comparative Analysis:
The strength and weaknesses of the competitors:
BDProperty:
On the website BDProperty, users may get Bangladeshi real estate services. Users can search for homes for sale or rent, evaluate features and prices, and get in touch with the agents or owners.
Strengths:

1. It includes a sizable database of available properties from all around Bangladesh, comprising various kinds of assets like apartments, plots, workplaces, and retail spaces.
2. Its user-friendly design enables customers to focus their search by region, type, size, price, and other factors.
3. It also has other services like blogs, developers' plots, and property management.
4. With more than 400,000 Facebook fans, it has a sizable social media following.

Weaknesses:

1. Some users may find it difficult to access because there is no mobile app for iOS devices.
2. Users may be subject to fraud or scams because it doesn't verify or guarantee any of the properties featured on its website.
3. The lack of client feedback or ratings for the properties or agents may undermine the service's reputation and ability to be trusted.

PBazaar:
An online resource for Bangladeshi real estate is called PBazaar. It enables users to look for, purchase, sell, or rent homes across the nation. The following are some of PBazaar's benefits and drawbacks:
Strengths:

1. It may be accessed and used more easily by consumers thanks to a mobile app for Android smartphones.
2. There is a vast variety of real estate there, including residential, commercial, industrial, and agricultural assets.
3. Users can refine their search by location, price, size, type, and other criteria using the interface's straightforward and user-friendly design.
4. It features a loyalty program that offers discounts and points in exchange for customers using its services.

Weaknesses:

1. Its accessibility to some potential clients may be hampered by the lack of an iOS mobile app.
2. Its website does not have a system in place to verify the listings for properties or agents, which puts users at risk of fraud or swindling.
3. Its lack of a customer review or rating system for the homes or agents may jeopardize the reliability and credibility of its offerings.
4. It lacks a blog or news section with information or advice for buyers, sellers, or tenants.

Booking.com:

One of the top online travel sites in the world, Booking.com serves millions of clients by providing a variety of lodging options and travel services. It does, however, have strengths and flaws that affect its performance and competition, just like any other firm. Here are a few examples:

Strengths:

1. With over 28 million listings in more than 220 countries and territories, Booking.com offers a wide range of lodging options. It provides a range of accommodations, including hotels, hostels, apartments, villas, and even tree houses.
2. Due to its reputation for offering services that are dependable, practical, and economical, Booking.com has a strong brand identity and a devoted following of customers.
3. Customers can quickly search for, compare, and reserve the rooms they want thanks to Booking.com's user-friendly and cutting-edge website and mobile app. Additionally, it provides services like reservations for restaurants and cars, as well as reward programs and travel insurance.
4. A global network of partners and affiliates helps Booking.com reach a larger audience and increase traffic and income.

Weaknesses:

1. Other online travel agencies like Expedia, Airbnb, Agoda, and Trivago fiercely rival Booking.com. To draw clients, these rivals can provide cheaper rates, better offers, or more interesting experiences. The amount of commission-based revenue that Booking.com receives varies depending on the supply and demand for lodging. Additionally, it must make substantial commission payments to its associates and partners, which could lower its profit margin.
2. In some markets, where it may be accused of unfair practices like price-fixing, tax avoidance, or contract infringement, Booking.com may face legal and regulatory issues.
3. Negative reviews, complaints, or controversies involving Booking.com's partners or services could harm the company's reputation.

1.6 SWOT Analysis:

A SWOT Analysis is a technique for evaluating these four aspects of our business. SWOT stands for Strengths, Weaknesses, Opportunities, and Threats. We can use SWOT Analysis to make the most of what we've got and maximize the value of our platform.

Figure 2. SWOT analysis

1.7 Objectives

Corporate Objectives:

1. Market Penetration: Making the e-accommodation site a major player in the target market by getting a certain percentage of the market within a certain amount of time.
2. Acquiring Customers: Getting a certain number of active users on the platform within the first year of operation and planning ways to get more users over time.
3. Customer Satisfaction and Retention: Keeping a high level of customer happiness, as shown by positive reviews and a high rate of repeat bookings.
4. Geographic Expansion: Making plans to expand into specific new areas or regions to diversify the consumer base and expand the platform's reach.
5. Technology and Innovation: Regularly improving the platform's user interface, search capabilities, and recommendation systems will improve user experience and keep it ahead of the competition.

Marketing Objectives:

1. Increasing Customer Base: Using a variety of marketing channels, including as social media, email marketing, influencer alliances, and referral programs, to draw in new users to the platform.
2. Content Marketing Strategy: Creating and putting into action a content marketing strategy that uses blog posts and videos to draw in and keep the attention of potential customers.
3. Online Reviews and Reputation: Promoting good customer feedback and properly managing online reputation to win over the trust and credibility of prospective clients.
4. Mobile App Promotion: Increasing app downloads and encouraging more easy reservations for consumers by promoting the mobile app.
5. Improving Customer Engagement: Creating a strong customer engagement plan that includes personalized suggestions, loyalty programs, and feedback tools to drive involvement with the platform.
6. Measuring Marketing ROI: Establishing key performance indicators (KPIs) to track marketing initiatives' success and ensure a favorable return on investment.

2. Literature Review

The Digital Platform Economy in Bangladesh presents opportunities for employment generation and financial inclusion but also challenges such as lack of access to technology, inadequate digital skills, payment difficulties, and insufficient regulatory frameworks. The report suggests policy changes to boost market-relevant skills, financial tools, investment in

infrastructure, and creating a national digital platform economy development plan.(Digital Platform Economy in Bangladesh: Opportunities and Challenges, n.d.) (Al-Masud 2017) A marketing research study on Daraz Bangladesh reveals a significant trust deficit among Bangladeshi consumers in online shopping. Factors such as product intangibility and fear of online fraud reduce consumer engagement. Solutions include enhancing consumer trust through better service quality, implementing cash-on-delivery (COD) options, and organizing promotional events like Black Friday sales.(Tareque Aziz, n.d.)

We evaluate Hotel Link Solutions' digital marketing strategy for hotels in Bangladesh, focusing on search engine optimization (SEO), social media marketing, and content creation. The findings suggest that hotels in emerging markets, including Bangladesh, are lagging in leveraging digital marketing, but effective use of digital tools can significantly enhance online booking and customer engagement.(Islam & Sakib, n.d.) A literature review examines factors influencing hotel booking intentions, focusing on both online and offline satisfaction aspects in the hospitality sector from 2000 to 2023. Key variables identified include system quality, information quality, service quality, and perceived values. The review focuses on the growing importance of online customer satisfaction and the need for hotels to enhance their digital presence and service quality.(Ahmad & Gandhi 2023) (Ahmmed, n.d.)

Eastern Housing Limited (EHL), the oldest and biggest real estate firm in Bangladesh, has seen heightened competition and a reduction in market share, now possessing around 20%. The corporation encounters obstacles like elevated land prices, variable building expenses, and an increasing array of rivals. To reclaim market leadership, EHL must modify its tactics, confront external threats, and improve its offers and customer interactions. The organization intends to enhance its market position in the future.(Ahmed et al. 2017) The paper scrutinizes the scholarly focus on peer-to-peer (P2P) accommodation platforms, with a particular emphasis on Airbnb. It highlights the dominance of Airbnb in research and identifies gaps in understanding other P2P platforms. The study argues for a broader understanding of P2P accommodations' impacts on the tourism sector and the collaborative economy. It calls for more research on niche, non-profit platforms to understand their roles in the tourism landscape better.(Medina-Hernandez et al. 2020) (Al-Masud, 2017) (Ahmmed, n.d.)

The research uses an expanded Technology Acceptance Model (TAM) to analyze the repurchase intentions of 450 Airbnb users. Findings indicate that network externalities substantially impact trust and interaction, thereby influencing perceived ease of use and usefulness. Trust augments perceived utility, although simplicity of use does not directly affect repurchase intention. The results guide enhancing the design and administration of sharing economy platforms.(Jung et al., 2021; Koca et al., 2021) The hotel market snapshot in Dhaka provides a comprehensive analysis of the city's growth rates and the introduction of internationally branded hotels.(Statista, 2024) This research investigates the function of social media platforms in the tourism industry as well as their potential to improve consumer interaction. (Statista, 2024)In addition to this, it covers the proliferation of e-commerce enterprises in Bangladesh, focusing on the various business models and the influence they have on the market.(Bdtask, 2024) Additionally, the article offers insightful information on the leading e-commerce websites in Bangladesh, focusing on the services they provide and the market presence they have.(Prothom Blog 2024)

3.Methods

MARKETING STRATEGY

This section included our idea and plan, which highlighted the creative idea that informed our services, and our Business Model which described the tactics that would ensure long-term success and growth.

3.1 Our idea & strategy:

3.1.1 Our idea:

We want to design an online platform through which students, city intruders, employees, and tourists can find their desired residences to stay. Hotels, messes, hostels, rental homes, and rest houses will be included in our service.

At our platform, consumers will be able to enjoy residential benefits through proper monitoring and verification according to their needs and capabilities.

Owners will be able to register their mess, rental home, hotel and provide all the information related to their accommodation through our platform

In our service, we will manage & update the data of the residences and tenants.

Our platform will facilitate online transactions (through bKash, Nogod, Dbbl, Visa card, Credit card etc.) for both the tenants & owners which will ultimately reduce their time and effort.

Our platform will also provide promotional services & advertisement of catering, land sale etc.

3.1.2 Our strategy:

Phase-1: Launch & Promotion state

This phase will last up to 6 months. Our services will be limited to Rajshahi and Dhaka region in phase-1.

- For hotel, mess, flat, building, land owner:

1. Data management will be free for this phase. Database should be updated (vacant seat describing with its entire condition) and for the first time the database should be built by themselves or through our agents.
2. Owners can give advertisement to rent a residence or hotel or to sale a building, a flat, a land, or a property paying a little amount.
3. Minimum registration fees.
4. Should be agreed to give a Certain amount off for the consumers at first month.

- For tenants:
  1. No registration fees.
  2. First month has special off if pay through our online platform
  3. No fees to enjoy the advertisement of land, vacant room or property
  4. Payment should be done through our platform which is collaborated with SSLCOMMERZ.
  5. Special offers (like recharge offer or cash back offer while pay monthly payment) who refer our platform to others.

Phase-2 Promotion & growth phase:
This phase will last up to next 12 months. Our services will be expanded to the divisional regions (Chottogram, Sylhet, Rajshahi, Dhaka, Dinajpur, Khulna, Barishal, Cumilla, Mymensingh).

- For hotel, mess, flat, building, land owner:
  1. Minimum registration fees.
  2. Data management will be charged for this phase. A small percentage of rental fees should be paid for those who have accommodated through our platform.
  3. Owners can give advertisement to rent a residence or hotel or to sale a building, a flat, a land, or a property paying a little amount.
- For tenants:
  1. Registration fees free
  2. No fees to enjoy the advertisement of land, vacant room or property.
  3. Payment should be done through our platform which is collaborated with online payment services.
  4. Special offers (like recharge offer or cash back offer while pay monthly payment) who refer our platform to others.
  5.

Phase-3 Growth and Optimal phase:
This phase will last up to until new changes and challenges came. Our services will be expanded to all over Bangladesh.

- For hotel, mess, flat, building, land owner:
  1. Minimum registration fees.
  2. Should be agreed to give a Certain amount off for the consumers at first month.
  3. Data management will be charged for this phase. A small percentage of rental fees should be paid for those who have accommodated through our platform.
  4. Owners can give advertisement to rent a residence or hotel or to sale a building, a flat, a land, or a property paying a little amount.
- For tenants:
  1. Minimum registration fee.
  2. First month has special off if pay through our online platform
  3. No fees to enjoy the advertisement of land, vacant room or property.
  4. Payment should be done through our platform which is collaborated with online payment services.
  5. Special offers (like recharge offer or cash back offer while pay monthly payment) who refer our platform to others.

[NB: We will re-execute from Phase- 1 when we shift or start our business in a new location.]

3.2 Our Business Model:
Our business model is a B2C E-commerce. A business website, in the B2C paradigm, is a location where all transactions between an organization and a customer take place directly. Our business model supports the transaction and access between owner and tenant of business-to-consumer model (B2C) where we act as the medium of the whole process through database management, website design as well as communication between owner and tenant.

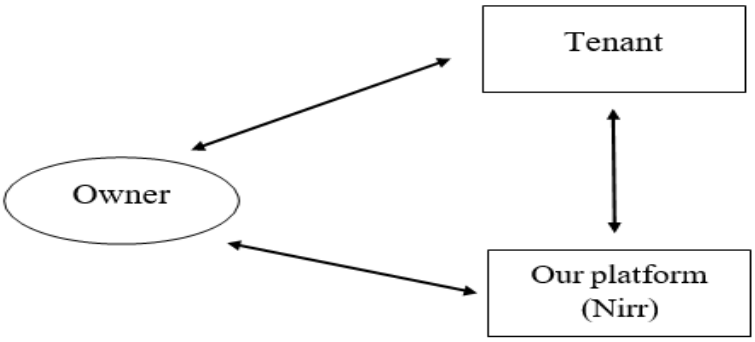

Figure 3. Business model

3.3 Marketing program

In this part, the essential "Marketing Mix" was discussed, wherein product, price, promotion, and place were blended in a manner that met our business goals and spoke to our target audience. In this chapter, the key factors that contributed to our platform reaching new heights and giving us a competitive edge in the market were examined.

Marketing Mix The 4Ps:

Product (Service):

Nirr is an online platform connecting landlords and tenants in Bangladesh, offering verified, monitored accommodations for middle and lower middle class, students, and other users, ensuring informed choices about their accommodation needs. In addition, the platform supports online transactions, reducing the time and effort required by both tenants and owners. It also provides promotional services and advertisement for catering, land sale etc.

Price:

Nirr employs a pricing strategy that takes into account both the owners and tenants. For the owners, there are minimum registration fees, and a small percentage of rental fees are charged for those accommodations rented through the platform. In the initial launch phase, data management is free, but it becomes chargeable in later phases. Advertisement services also come at a small fee.For tenants, registration is free in the initial phases. There are also special discounts for the first month's rent if payments are made through Nirr's online platform.

Place (Distribution): Nirr's service distribution will be online, available initially in Rajshahi region. As the company grows, the services will be expanded to other divisional regions such as Chittagong, Sylhet, Dinajpur, Khulna, Barishal, Cumilla, and Mymensingh, ultimately aiming for a nationwide presence.

Promotion:

Nirr's promotional strategy comprises online promotions and physical promotions. The online promotion strategy might include social media marketing, search engine optimization, and email marketing. In addition, there are special offers for users who refer the platform to others.

Physical promotion can include banners, billboards, flyers and networking events. Nirr will also offer promotional discounts and special offers to attract more landlords and tenants to use the platform.

Additional 3Ps:

The additional 3Ps in the extended marketing mix are people, processes, and physical evidence. These are particularly relevant to service-based businesses like Nirr.

People:

Nirr's success relies on its team, including website and app management, customer service, data management, and promotions, who understand the needs and expectations of property owners and potential tenants, as well as the target market of students, middle class, and lower middle class.

Processes:

Nirr's service processes, including tenant search, accommodation listing, booking, payment, and customer support, are crucial for customer satisfaction. These processes should be user-friendly, efficient, and reliable, while also addressing customer feedback and improving service based on it.

Physical Evidence:

Physical evidence includes tangible aspects like website design, user experience, pictures, descriptions, and communication materials. It includes branding, platform functionality, and overall brand presentation. Ensuring high-quality and consistent elements helps Nirr build trust and credibility with its users.

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3.4. Business Implementation Plan

Design and Development:

The Model Implementation Timeframe was described in this section, and a well-designed Gantt chart was used to illustrate it. This crucial portion led us through the process of putting our business strategies into practice step-by-step, creating an efficient and well-coordinated implementation process.

Model Implementation Timeframe:

This frame in table 01 shows us an overall timeframe to run our business within 3 months and it also shows specifically what & when to start and its expected duration.

Table 1. Implementation Timeframe

No.	Task Name	Start Date	Duration
1	Planning and dealing	1-Aug	5
2	Website Design	3-Aug	60
3	Database & Backend Development	1-Sep	55
4	App, Domain, Server Issue	15-Sep	40
5	SSL Deal Application	25-Sep	5
6	Office Rent	1-Oct	2
7	Government Registration	1-Oct	5
8	Training First Round	3-Oct	2
9	Online Promotion	5-Oct	27
10	Training Second Round	7-Oct	3
11	Physical Promotion	10-Oct	20
12	Training Third Round	25-Oct	2

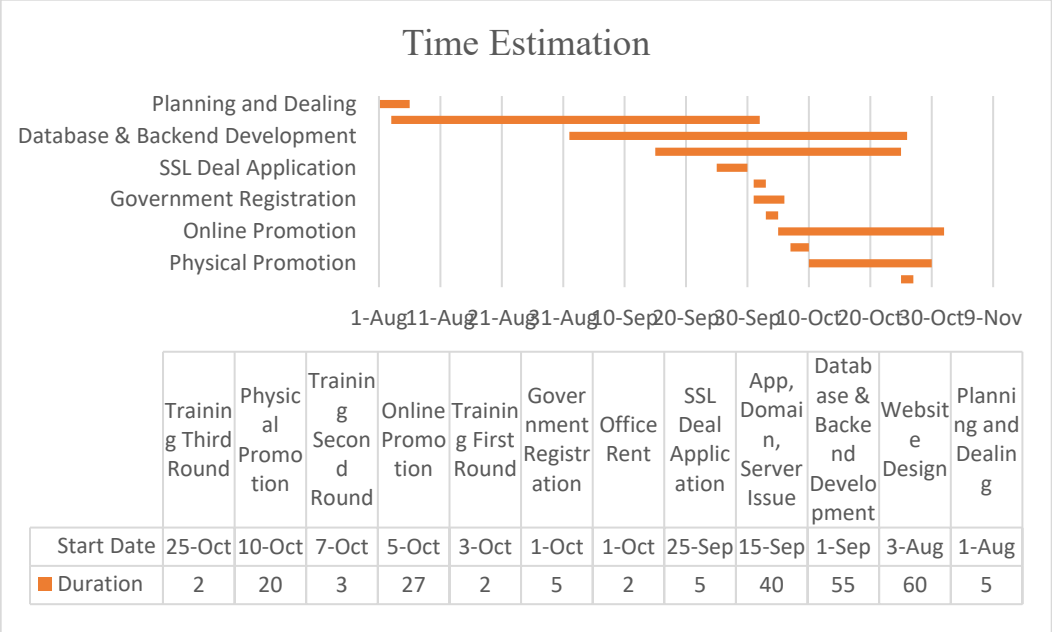
In Figure 4, a Gantt chart was used to represent the timeframe our business model.

4. Data Collection and Performance Analysis

This part examined the important factors of our company's financial health and general success. From Profit Loss Analysis, Cash Flow and sales Force Evaluation, vital metrics were rigorously analyzed to make sure our company stayed on pace to meet its objectives.

4.1 Monitoring and Campaigns:

We will use various metrics to assess the effectiveness of our ad campaigns, including website and app downloads and user engagement. We will also address customer feedback to improve satisfaction and generate new customers. We will conduct surveys to understand customer preferences and expectations, allowing us to make necessary improvements to our services. Customer feedback is vital for our strategy, enabling us to tailor offerings, assess brand recognition, and enhance brand positioning, ultimately fostering stronger relationships with our target audience.



	Training Third Round	Physical Promotion	Training Second Round	Online Promotion	Training First Round	Government Registration	Office Rent	SSL Deal Application	App, Domain, Server Issue	Database & Backend Development	Website Design	Planning and Dealing
Start Date	25-Oct	10-Oct	7-Oct	5-Oct	3-Oct	1-Oct	1-Oct	25-Sep	15-Sep	1-Sep	3-Aug	1-Aug
Duration	2	20	3	27	2	5	2	5	40	55	60	5

Figure 4. Gantt chart of time estimation

4.2 **Profit and Loss Analysis**:

4.2.1 **Cash Flow and Cash Balance:**

Net cash flow for an e-accommodation business in Bangladesh represents the cash generated or used by the core operating activities of the business. This includes income from accommodation bookings and any expenses related to running the online platform and providing accommodation services.

Cash Inflows for E-Accommodation:

Revenue from accommodation bookings made through the e-platform. Any additional income from services, such as cleaning fees or booking fees. Investment income or financing from investors, if applicable.

Cash Outflows for E-Accommodation:

Payments to accommodation providers (property owners or hotels) for the rooms or properties booked through the platform. Operating expenses, including website maintenance, marketing costs, and customer support. Taxes and regulatory fees related to e-commerce or accommodation services. To calculate the net cash flow for a specific period, such as a month or a quarter, follow this formula:

Net Cash Flow = Cash Inflows - Cash Outflows

Cash Balance for E-Accommodation in Bangladesh:

In Table 2,, the cash balance for an e-accommodation business represents the amount of cash and cash equivalents the company has on hand at a specific point in time. It includes actual cash as well as highly liquid assets that can be readily converted to cash.

The cash balance at the end of the period is calculated as follows:

Cash Balance (End of Period) = Cash Balance (Beginning of Period) + Net Cash Flow

Beginning Cash Balance: This is the cash balance at the start of the reporting period, usually taken from the previous period's ending cash balance.

Net Cash Flow: This represents the cash generated or used by the e-accommodation business during the period. Here, the ending cash balance is 706140 BDT.

Table 2. Calculation of Net Cash Flow and Cash Balance

	Cash Inflow	Cash Outflow	Net cash flow	Cash balance
M1	10000	411260	(401260)	(401260)
M2	0	89260	(89260)	(490520)
M3	0	89260	(89260)	(579780)
M4	0	89260	(89260)	(669040)
M5	0	89260	(89260)	(758300)
M6	0	89260	(89260)	(847560)
M7	400000	89260	310740	(536820)
M8	400000	89260	310740	(226080)
M9	400000	89260	310740	84660
M10	400000	89260	310740	395400
M11	400000	89260	310740	706140

Figure 5 shows a projected cash flow statement for an e-accommodation business in Bangladesh involves estimating the expected cash inflows and outflows over a specific period, typically on a monthly or quarterly basis. This statement helps you assess the business's future cash position and plan for any potential financial needs or challenges.

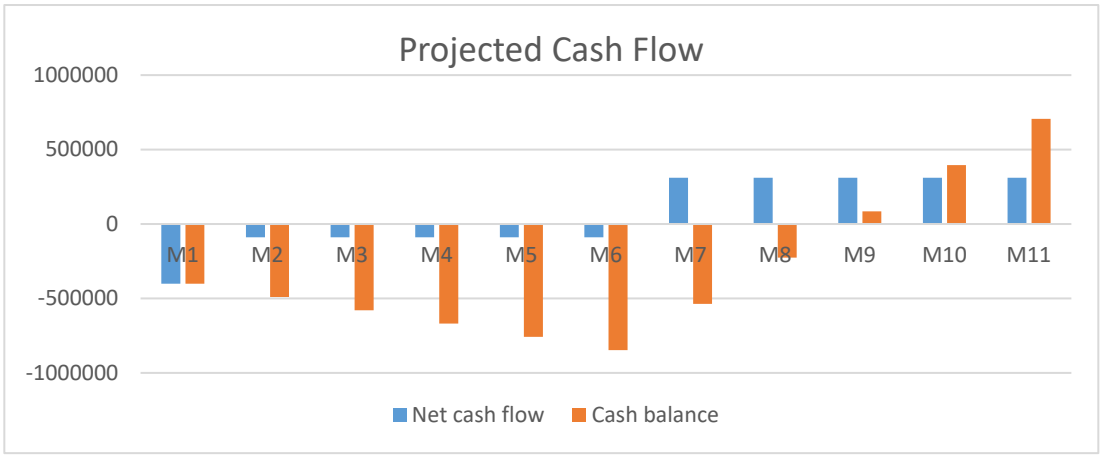


Figure 5. Projected Cash Flow

4.3 **Seasonality:**

Seasonality significantly impacts businesses, causing unexpected sales increases and decreases. It affects business cycles, job demand, and educational institutions, affecting business models and relocation during December-January.

.

4.4 **Meeting Schedule:**

Schedule for meeting to review and track progress of marketing activities will be on First Sunday of every month. Time-based checkpoints for reassessing strategies, for considering adding new ones or for reassessing budgets will be held on interval of every 3 months.

4.5 **Sales Force Evaluation:**

Evaluating the sales force of a flat, mess, land rental company involves assessing the performance and effectiveness of the sales team in generating revenue and achieving business goals. Here are some key steps and metrics to consider when evaluating the sales force:

1**. Define Clear Objectives**: Start by setting specific and measurable sales objectives for the sales team. These objectives could include revenue targets, customer acquisition goals, occupancy rates for flats and mess, or land rental contracts signed within a certain period.

Sales Performance Metrics: Identify relevant key performance indicators (KPIs) to measure the sales team's performance. Some common metrics include:

- Monthly/Quarterly/Annual Sales Revenue: Evaluate the actual sales revenue against the set targets.
- Customer Acquisition Rate: Measure the number of new customers acquired within a specific period.
- Conversion Rate: Assess the percentage of leads that are converted into actual customers.
- Average Deal Size: Analyze the average value of contracts or deals closed by the sales team.
- Sales Cycle Length: Determine the time it takes for a lead to convert into a paying customer.

3. **Sales Pipeline Analysis**: Review the sales pipeline to understand the number of leads at each stage and identify potential bottlenecks or opportunities for improvement.
4. **Customer Feedback**: Collect feedback from customers who have availed flats, mess, or land rental services to understand their satisfaction levels and identify areas for improvement.
5. **Sales Training and Development**: Assess the sales team's training needs and invest in their professional development to enhance their skills and knowledge.
6. **Sales Tools and Technology**: Evaluate the effectiveness of the sales tools and technology used by the sales team. Ensure they have access to the right tools, CRM systems, and resources to optimize their performance.
7. **Team Morale and Motivation**: Consider the overall morale and motivation of the sales team. Engaged and motivated salespeople tend to perform better.
8. **Competitor Analysis**: Conduct a competitive analysis to understand how the company's sales team compares with competitors in the market.
9. **Sales Process Evaluation**: Analyze the sales process from lead generation to closure to identify potential areas of improvement and streamline the workflow.
10**. Alignment with Marketing**: Ensure that the sales and marketing teams are aligned and working together effectively to generate leads and convert them into customers.
11. **Customer Retention**: Evaluate the sales team's efforts in retaining existing customers and driving repeat business.
The evaluation process should be ongoing and not just a one-time event. Regularly monitoring the sales team's performance and making data-driven decisions will help improve overall sales effectiveness and drive business growth.

5. Results and Discussions

5.1 Numerical Results

Costs Analysis:

Costs are classified into fixed and variable costs, crucial for cost accounting and financial analysis. Table 3.onsists of fixed costs like mobile application design and website design, while Table 4, includes variable costs like maintenance and office supplies, totaling 322000 taka and 89260 takas respectively.

Table 3. Fixed Cost

No.	Fixed Cost	Quantity	Cost(tk)
1	Mobile Application design	1	50000
2	Website Ui-Ux design	1	50000
3	Play store subscription	1	2000
4	Database design and Back End developing cost	1	120000
	Promotion	N/A	100000
	Total		322000

Table 4. (a)Variable Cost

No	Variable cost		Cost(tk)/month
1	Office	1	10000
2	Collaborate with google map	N/A	600
3	Agents full time	4	40000
4	Agent’s part time	3	15000
5	Software, App & database maintenance	1	5000
6	Domain, Hosting/server cost	1	8000
7	Promotion	N/A	10000
8	Apple store subscription	1	660
	Total		89260

Income Estimation:

The hostel owners need to register their business to use our platform. And whenever there is any new registration, registration fees will be counted as the income. Additionally, monthly fees will be charged. The hotel, flat, land owners

can also advertise their business through our platform and an amount will be charged for this promotional activity. Income per month was shown in Table 4 a&b.

Table 4. (b) Income from our Plan

No	Name	Field	Income
i)	Hostel	Registration	10000
		Monthly fee (first 6 month off)	400000
ii)	Advertisement (Hotel, land, flat, building)	advertisement fee per month	20000
		Hotel booking charge per month	2000

Table 5 shows all the parameters related to income calculation. It includes No of mess, hostel, tenant and database charge.

Table 5. Parameters for income calculation

No of mess cover	100
No of hotel cover	50
No of tenant per mess	100
Rent per seat per person	2000
Database Charge	2%

Internal Rate of Return (IRR):

The internal rate of return (IRR) is the discount rate that makes the net present value (NPV) of a project zero.

NPV = $c_0 + \frac{C_1}{(1+irr)} + \frac{C_2}{(1+irr)^2} + \cdots + \frac{C_n}{(1+irr)^n} = 0$

The discount rate, r value for Bangladeshi accommodation business is not a fixed or universal number, but rather depends on various factors such as the riskiness of the project, the opportunity cost of capital, the inflation rate, the expected return on investment, and the market conditions1. Therefore, different businesses may have different discount rates for their projects or investments. [4]

One way to estimate the discount rate for a Bangladeshi accommodation business is to use the weighted average cost of capital (WACC) formula, which is: [5]

$$\text{WACC} = \frac{E\cdot}{E+D} \times R_E + \frac{D\cdot}{E+D} \times R_D \times (1 - T)$$

E= Market value of equity

D= Market value of debt

R_E= Cost of equity

R_D= Cost of debt

T= Corporate tax rate

let us assume that a Bangladeshi accommodation business has the following data: [6]

- Market value of equity: 100 million BDT
- Market value of debt: 50 million BDT
- Interest rate on debt: 10%
- Risk-free rate: 5%
- Beta coefficient: 1.2
- Expected return on market portfolio: 12%
- Corporate tax rate: 25%

Using these data, we can calculate the WACC as follows:

WACC=0.113
Therefore, the WACC or the discount rate for this Bangladeshi accommodation business is 11.3%.

Table 6. Month-wise cash flow

Month	Cash flow
1	-401260
2	-89260
3	-89260
4	-89260
5	-89260
6	-89260
7	310740
8	310740
9	310740
10	310740
11	310740

The internal rate of return (IRR) is the discount rate that makes the net present value (NPV) of a project zero1. It is the expected compound annual rate of return that will be earned on a project or investment2. You can calculate the IRR using the following formula: [4]

$$\text{NPV} = c_0 + \frac{C_1}{(1+r)} + \frac{C_2}{(1+r)^2} + \cdots + \frac{C_n}{(1+r)^n}$$

Here, r= 11.3%

$$\text{NPV} = (-401260) + \frac{(-89260)}{(1+0.113)} + \frac{(-89260)}{(1+0.113)^2} + \frac{(-89260)}{(1+0.113)^3} + \frac{(-89260)}{(1+0.113)^4} + \frac{(-89260)}{(1+0.113)^5} + \frac{310740}{(1+0.113)^6} + \frac{310740}{(1+0.113)^7} + \frac{310740}{(1+0.113)^8} + \frac{310740}{(1+0.113)^9} + \frac{310740}{(1+0.113)^{10}}$$

$$= -61304.16 \text{ tk}$$

The internal rate of return (IRR) was computed in Excel (Fig) using the formula: IRR (values), where 'values' represent the cash flows from month 1 to month 11. By using this the formula in the below format, we get
= IRR (Month 1: Month 11) IRR = 10%

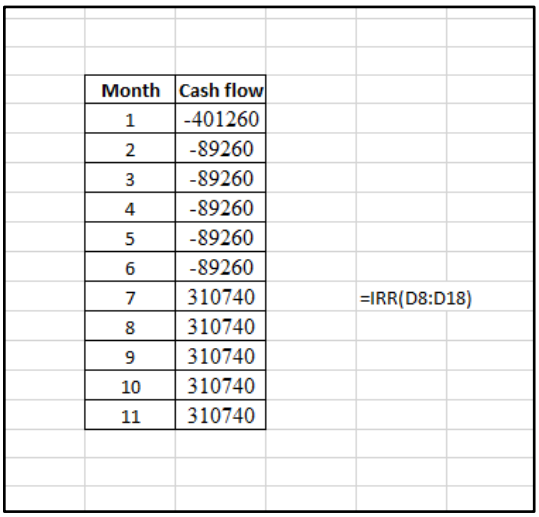


Figure 6. Excel tab of IRR calculation

So, it means that for 10% discount rate the net present value will be zero.

Payback period:
The payback period is a financial metric that measures how long it takes for an investment to recover its initial cost. It is calculated by dividing the initial investment by the annual cash flow generated by the project. The payback period can help investors compare different projects and decide which one is more profitable or less risky.

Payback Period = Initial Investment ÷ Cash Flow Per Year
From Table 6.,
Initial Investment = 401260 tk
Cash Flow Per Year = 706140 tk.
So, Payback Period = $\frac{401260}{706140}$ = 0.582 year or 6.98 month.

5.2 Graphical Result

Break Even Analysis:
It predicts how many units of a product must be sold or some cases how many months it takes to cover the fixed and the variable costs of production. The break- even point is the probability of a production where total revenues equal to total expenses. Our analysis shows that it will take 8.7 month ≈ 9 month to reach our break-even point. This point was shown in Figure 07

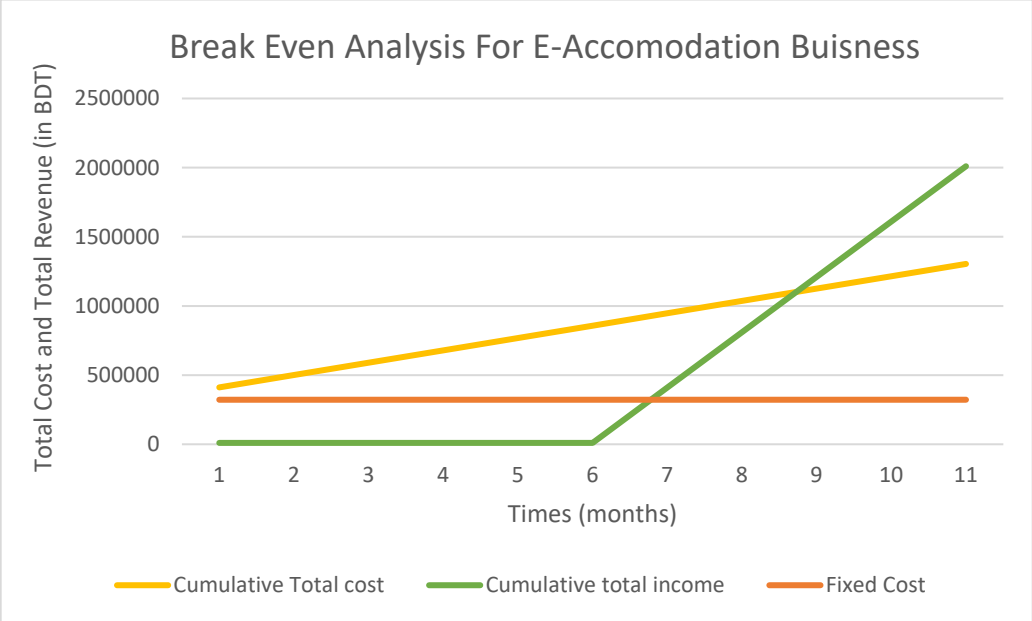


Figure 7. Break Even Analysis

5.3 Proposed Improvements

Contingency plan
A contingency plan for launching a new business is a proactive strategy that outlines the steps that should be taken if a critical unexpected event occurs that could affect the stability, profitability, or reputation of the business. This plan is designed to minimize risk and ensure business continuity. The main focusing plan of contingency plan for our proposed business model are:

1. Technological Breakdown
2. Regulatory Hurdles
3. Market Competition
4. Low User Adoption
5. Inadequate Capital
6. Public Relations Crisis
7. Non-compliant Owners/Tenants
8. Pandemic or other Unforeseen Circumstances

Symptoms of Failure:
Technological Breakdown: Frequent server downtime, slow website/application response, frequent data loss, or compromised security.
Regulatory Hurdles: Increased legal disputes, fines, or penalties from regulatory authorities.
Market Competition: A sudden drop in user base, decrease in new user registrations, or increased negative feedback.
Low User Adoption: Lower than projected user registrations, lack of active users, or low brand recognition.
Inadequate Capital: Unable to meet operational costs, failure to pay debts or salaries on time.
Public Relations Crisis: Negative press, social media outrage, or loss of users.
Non-compliant Owners/Tenants: Increase in disputes reported, negative reviews relating to owners/tenants.
Pandemic or other Unforeseen Circumstances: Sudden drop in usage or negative financial trends.

Alternative Strategies
Technological Breakdown: Have a secondary server host or a cloud-based system in place, ensure data redundancy, invest in reliable and robust security systems.
Regulatory Hurdles: Regularly review and adapt business practices according to the changes in regulations and laws.
Market Competition: Constantly innovate the service, improve user experience, and offer incentives or additional services to retain users.
Low User Adoption: Implement effective marketing strategies, partnerships, and referral programs.
Inadequate Capital: Seek additional investors, apply for business loans, or start a crowdfunding campaign.
Public Relations Crisis: Have a strong PR team and crisis management plan ready, emphasize transparency and constant communication.
Non-compliant Owners/Tenants: Strict policy enforcement, background checks for owners and tenants, efficient dispute resolution system.
Pandemic or other Unforeseen Circumstances: Pivot to long-term rentals, offer virtual tours, facilitate online property transactions.

Potential Problems and Solutions
Timeline for Implementing Alternative Strategies:
Phase 1: Within 3 months of launch—address technological breakdown by establishing secondary servers and data redundancy.
Phase 2: By 6 months—integrate robust security systems and regularly update.
Phase 3: Conduct quarterly risk assessments and fine-tune strategies based on outcomes.

Quantified Risks:
Technological Breakdown: Estimated financial loss from a one-day downtime is 50,000 BDT. Mitigation measures include a 2% additional cost for secondary server deployment (estimated at 100,000 BDT annually).
Data Breach: Estimated impact—reputational damage and recovery costs of 200,000 BDT.
Cost Estimates for Mitigation:
Secondary Servers: 120,000 BDT per year.
Data Redundancy Mechanisms: 60,000 BDT per year.
Robust Security Systems: Initial setup—200,000 BDT; annual maintenance—50,000 BDT.

WEBSITE
A demo website was developed for property owners and tenants, requiring registration for accessing services. The homepage features login options, a search bar, navigation, and a contact section. A flowchart and screenshots help users understand the website's interface.

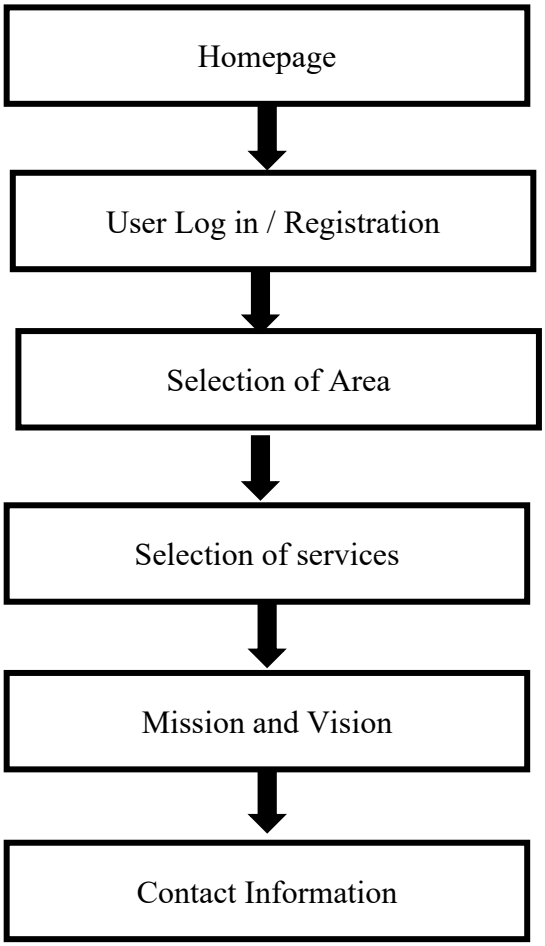


Figure 8. Flowchart of website

Screenshots of our website's interfaces:

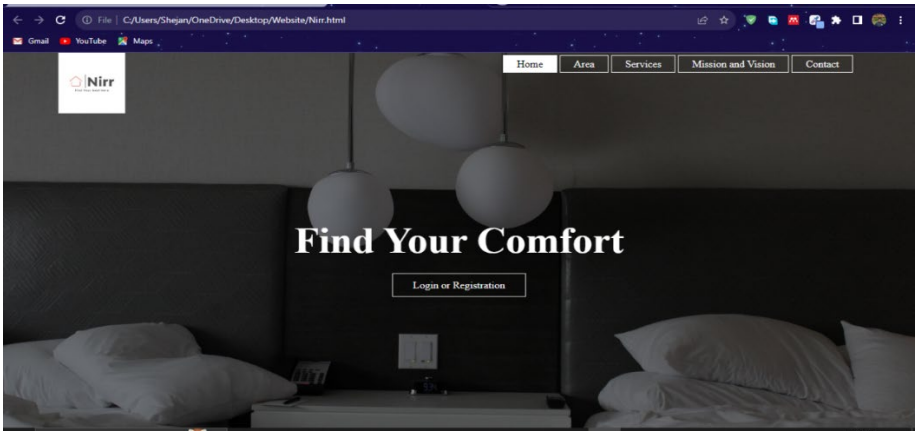


Figure 9. Homepage (Highlights the search bar, login, and navigation)

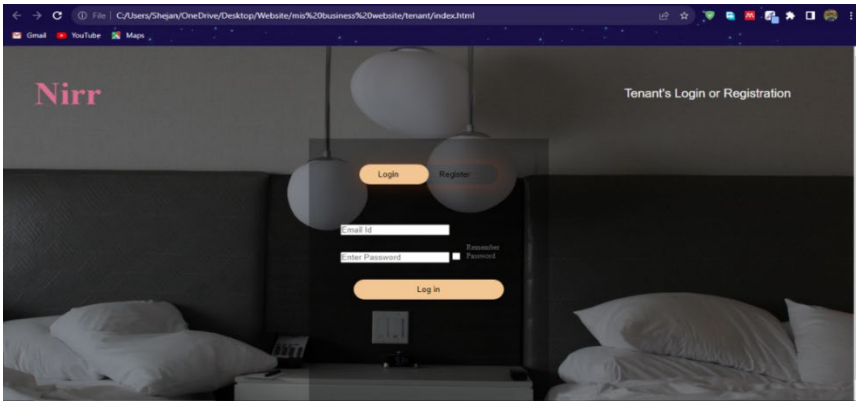


Figure 10. Tenant log in / registration page (Explains steps for account creation and verification.)

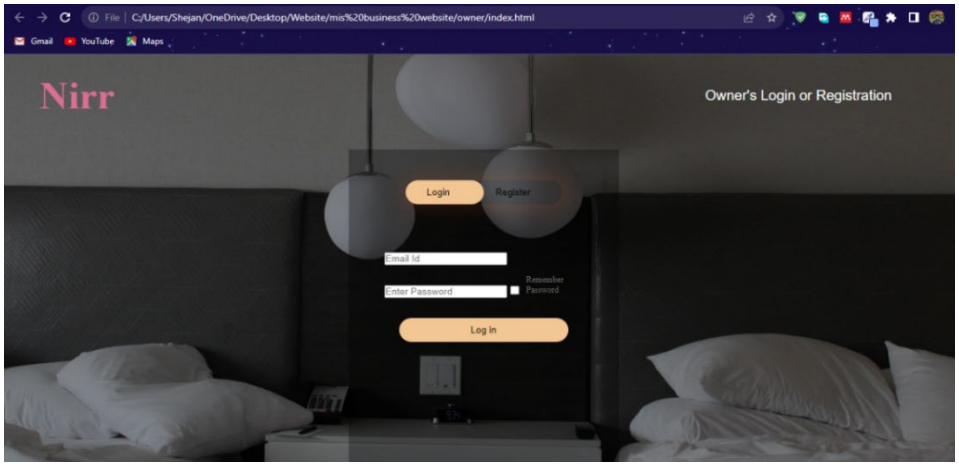


Figure11. Owner log in / registration page (Details property registration and dashboard usage.)

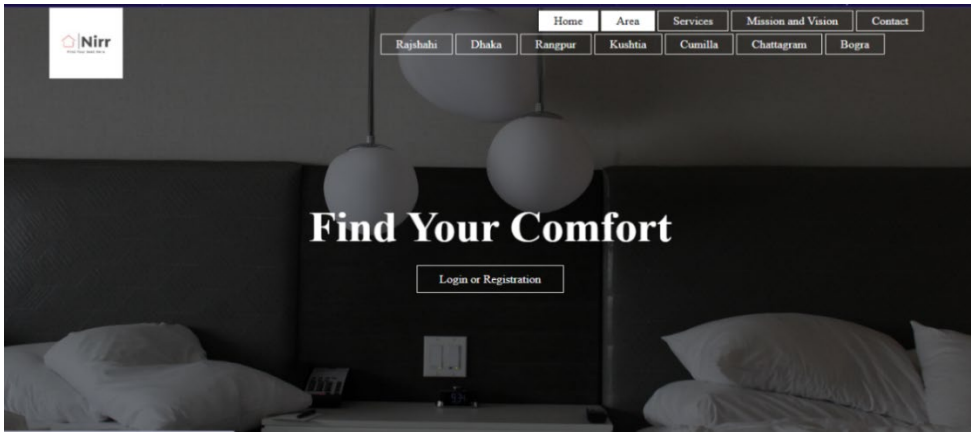


Figure 12. Selection of Area (Explains filtering by location and service type.)

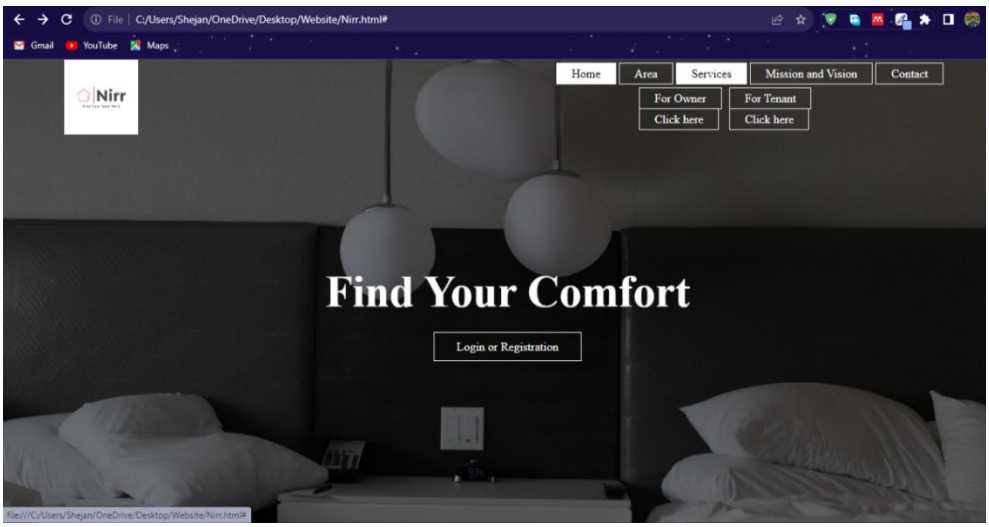


Figure 13. Selection of Services (Emphasizes organizational goals and commitments.)

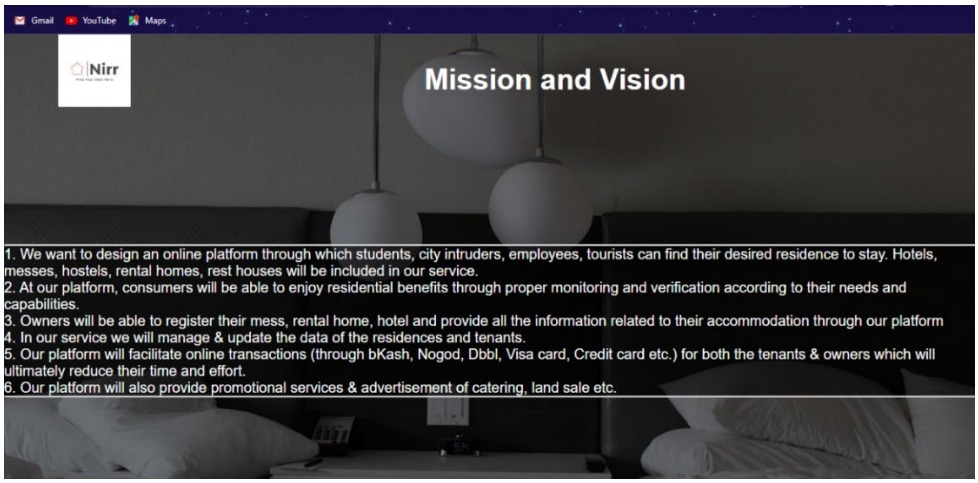


Figure 14. Mission and Vision

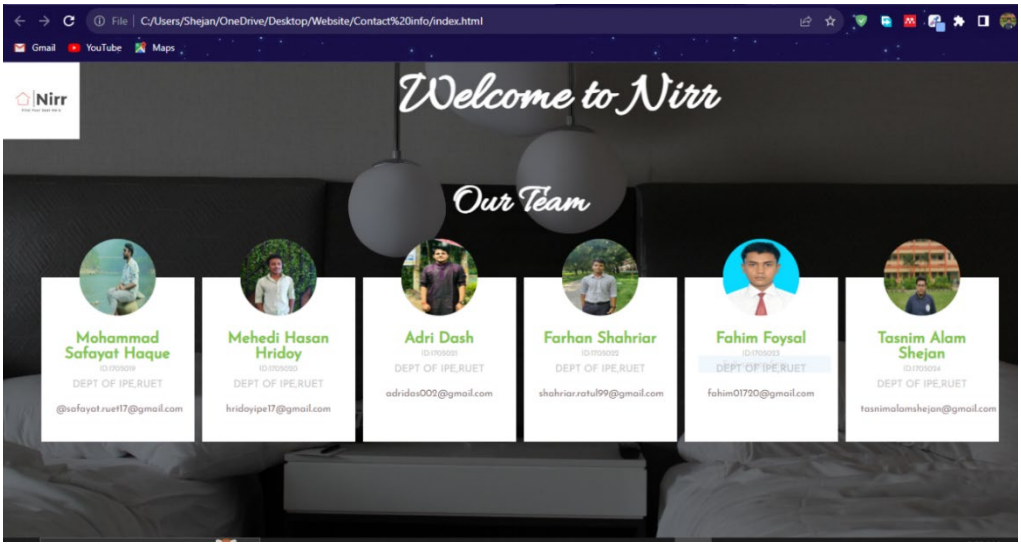


Figure 15. Contact information page (Provides customer support options and response times)

6. Conclusion

Our platform aims to revolutionize the e-commerce sector by leveraging its robust capabilities to effectively cater to market demands. Its primary characteristics include significant future market development potential, supported by dependable cash flow, and its capacity to enable smooth online transactions. The cost structure enhances operating efficiency and competitive pricing, attracting a wider consumer base. The platform includes a revised database that monitors inventory, consumer preferences, and market trends in real-time, facilitating data-driven decision-making and tailored customer experiences. Time efficiency is a significant advantage, as optimized operations diminish waiting periods, accelerate order fulfillment, and elevate client happiness. By implementing strategic actions and responding to market needs, our platform has the capacity to establish a new standard in e-commerce and function as a paradigm for improved digital commerce that surpasses geographical boundaries. Our integration of advanced technology, streamlined business processes, and customer-focused initiatives will initiate a new phase of e-commerce, providing a scalable and sustainable solution capable of adapting to the swiftly evolving market environment.

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Biography

Adri Dash, a Bangladeshi Industrial and Production Engineer, is a lecturer at the Bangladesh Army University of Science and Technology (BAUST) in Saidpur. He holds a Bachelor of Science in Industrial & Production Engineering from Rajshahi University of Engineering & Technology (RUET) and has expertise in supply chain management, quality control, lean manufacturing, sustainability, and automation. Adri has held teaching and research positions at the National Institute of Textile Engineering and Research (NITER) and the Bangladesh Industrial Technical Assistance Centre (BITAC). His research focuses on innovative applications in supply chain management and sustainable manufacturing, with notable publications on multi-objective job-shop scheduling and supply chain resilience in Bangladeshi industries. His project portfolio includes designing safety and automation devices like automatic hand sanitizers and gas leakage detectors. Adri has been an active member of professional and academic societies, earning awards like Student of the Year and multiple scholarships.

Hrittik Mural has made notable contributions to industrial and system engineering through various projects and research. His work includes analyzing casting defects in gas burners using the Taguchi method, and he is preparing a review paper on advancements in wearable sensor technologies. He successfully integrated Six Sigma with Total Quality Management (TQM) to improve quality and reduce waste in the beverage industry, and utilized Multi-Criteria Decision-Making (MCDM) techniques to address supply chain disruptions in the steel and rolling industries in Bangladesh. His undergraduate thesis focused on real-time Bangla sign language detection using Long Short-Term Memory (LSTM) networks, achieving 96% accuracy. Mural has also designed and fabricated several innovative systems, including a pulley-

based horizontal belt grinding machine, a contactless air conveyor, a smart door lock using RFID technology, and an automatic car washing system with IoT integration. He holds a certification as a Supply Chain Analyst from ISCEA. Mural graduated with a BSc in Mechatronics and Industrial Engineering from Chittagong University of Engineering and Technology (CUET). He currently serves as a Lecturer in Industrial Production Engineering at BAUST.

Tasnim Alam Shejan, a recent graduate of Rajshahi University of Engineering & Technology (RUET), has a Bachelor of Science in Industrial & Production Engineering (IPE) and a strong interest in operations research, supply chain and quality management, project management, and automation.

Mehedi Hasan Hridoy, a recent graduate from Rajshahi University of Engineering & Technology, holds a Bachelor of Science degree in Industrial & Production Engineering. He specializes in supply chain management, production planning, and quality control, with a focus on optimization techniques and data analysis for improving manufacturing processes.

Farhan Shariar, a graduate of Rajshahi University of Engineering & Technology, specializes in Industrial & Production Engineering, focusing on process improvement, lean manufacturing, and quality assurance. He has expertise in statistical analysis, process simulation, and project management, and aims to apply his knowledge in real-world industrial environments for performance improvement.

Fahim Foysal, a graduate of Rajshahi University of Engineering & Technology, specializes in Industrial & Production Engineering, focusing on supply chain management, operations research, and production optimization. He is skilled in identifying process inefficiencies and implementing data-driven solutions to improve supply chain performance.

Md. Safayat Hoque, a RUET graduate with a Bachelor of Science in Industrial & Production Engineering, specializes in quality management, project management, and supply chain optimization. With experience in analyzing production workflows and implementing quality control measures, he is passionate about optimizing industrial operations and promoting sustainable practices.

Md. Firoz Kabir is an Assistant Professor and Head of the Department of Industrial and Production Engineering (IPE) at BAUST, Saidpur. He holds a BSc and MSc in IPE from RUET and is pursuing a Ph.D. in the same field. With academic experience since 2017, he has served in teaching and administrative roles, including Program Coordinator and Department Head. His research focuses on optimization, manufacturing processes, natural fiber-reinforced composites, and solid waste management, with notable publications in respected journals. He is a professional member of IEOM Society International and contributes to the Center for Engineering, Research, and Revision Services (CERRS Ltd.), enhancing academic and industrial applications in his field.

Rajowone Shariar, an undergraduate student in the Department of Industrial and Production Engineering at BAUST, is dedicated to academic excellence and practical applications, continuously seeking opportunities for learning and growth in the field.