

**PROSPECTS OF E-TOURISM ECOSYSTEM IN BANGLADESH: SERVICES AND
INFRASTRUCTURE**

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This Thesis Presented in Partial Fulfillment of the Requirements for the
Degree of Masters of Science in Computer Science and Engineering

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APPROVAL

This Thesis titled “**Prospects of e-Tourism Ecosystem in Bangladesh: Services and Infrastructure**”, submitted by Mohammad Nazmul Hasan 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 M.Sc. in CSE and approved as to its style and contents. The presentation has been held on October 11, 2012.

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I hereby declare that, this thesis has been done by me under the supervision of **Dr. M. Ismail Jabiullah, Professor and Head, Department of Software Engineering**

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ABSTRACT

e-Tourism is nothing but the use of technology in tourism activities means digitalisation of all the processes in Tourism. It's both an e-Business and e-Commerce approach. The aim is to launch a sustainable e-Tourism infrastructure apposite for the ecosystem of Bangladesh with possible online based services and based on comparison among domestic and foreign ecosystem and statistical analysis on Number of tourists, Earnings, Purpose of visit and Number of Internet users perspective. Here, Proposed Services like packages and prices, tour guideline and plan, tour map, tour essentials list, online booking facility, confirmation feedback, List of tourist places, location with pictures, local agent point address etc and comparative studies come from different e-Tourism website observation, influencing factors and survey on the tourists demand. Data for analysis are collected from Bangladesh Parjatan Corporation, Bangladesh Bank, Bangladesh Bureau of Statistics and Internet. Infrastructure is established based on the environment of Bangladesh, payment method, user friendly system, statistical analysis on number of tourists and earnings perspective and comparative study on the properties of the existing domestic and foreign e-Tourism ecosystem. This survey represents the e-tourism infrastructure in Bangladesh which is efficient for our environment. It clarifies a statistical analysis on the growth and development of tourism sector after switching from manual system to automated system with annual revenue, most visiting places, number of visitors and foreign exchange earnings perspective. It focuses a well organized and balanced infrastructure for the tourism environment of Bangladesh and for the planner to develop tourism industry and to earn more annual revenue. It is handy for tourism agency. It is also helpful to find out its impact on GDP and annual revenue of the government. This survey establishes a map for future improvement, the process of attracting foreign visitors and to highlight the tourism industry of Bangladesh around the world.

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CHAPTER 1

Introduction

1.0 Introduction

No doubt that in modern business world Tourism is the prime and quick expanding industry. It has a crucial influence on economic development of a country. Now-adays Bangladesh is a new tourist destination on the world map. To develop Tourism, Bangladesh has massive potential because of its attractive natural beauty and rich cultural tradition.

At the present time online tourism is a new concept to expand tourism sector so that it can act as a key aspect for the economic growth and to reach in its ambition. Tourism can append significance in the Bangladeshi economy if a sustainable etourism infrastructure for the ecosystem of Bangladesh is implemented with most possible online based services for tourists. An initiative to develop a sustainable and equitable online tourism sector in emerging markets in Bangladesh is needed so that Bangladesh can reach in its goal named „Bangladesh Tourism Vision-2020“.

This Thesis aims to launch a sustainable e-Tourism infrastructure apposite for the ecosystem of Bangladesh with possible online based services and based on comparison among domestic & foreign ecosystem and statistical analysis on Number of tourists, Earnings, Purpose of visit and Number of Internet users perspective. Tourism researchers think that to full fill the above mentioned objective proper role and specific initiative by the government is a must including both private and public cooperation.

1.1 Tourism and e-Tourism

Tourism is usually defined as services for people traveling to and staying outside their usual environment for less than one consecutive year for leisure or for business purposes.

Tourism involves transport, accommodation, restaurants, cultural activities and leisure and could be more effectively viewed and evaluated as a market rather than an industry. On the other hand, by definition “e-tourism is the use of new technologies for activities such as on line booking (hotels, tickets, etc.), portals of tourist destinations that contain

information valuable for travelers, etc. What differentiates “e-tourism” from classical tourism is the large scale savings on traditional activities, such as call centers and information centers.

In other words, e-tourism offers the potential to make information and booking facilities available to large numbers of consumers at a relatively low cost. [1]

According to Buhalis (2003), E-tourism is the digitisation of all the processes and value chains in the tourism, travel, hospitality and catering industries that enable organisations to maximise their efficiency and effectiveness. [2] Fig 1.1 shows a Basic e-Tourism Model.

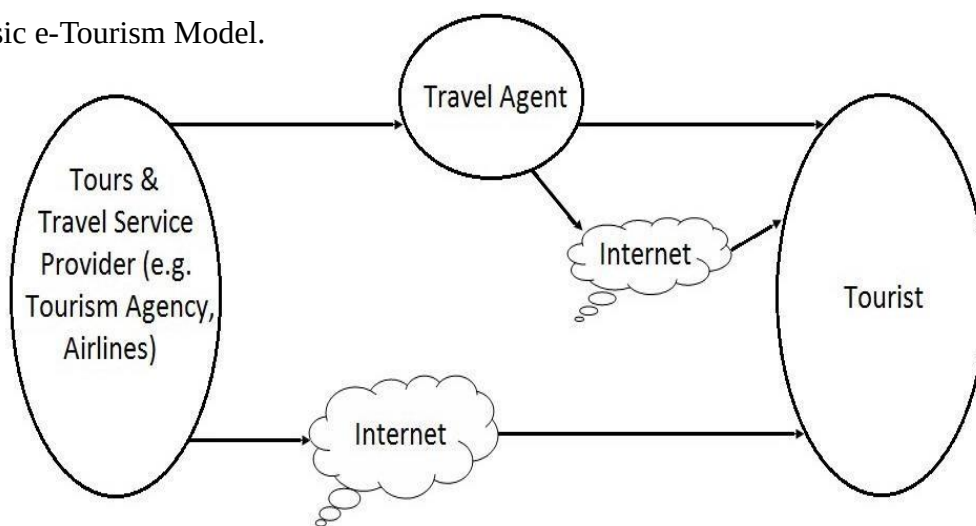


Fig 1.1: Basic e-Tourism Model [3]

1.2 Tourism and ICT

Key factors for applying ICT in tourism

1. IT education and training for policy makers, managers and other players in the industry
2. Integration of various sectors like transport, lodge etc.
3. Technical Infrastructure
4. Human Infrastructure, which includes skilled people, vision and management.
5. Legal Infrastructure
 - a. Regulation of telecommunication providers
 - b. Subsidies for Internet service providers
 - c. Legal framework for online advertisement or official endorsement for online marketing.
6. ICT culture

- a. Create and sustain ICT environment
- b. Maintenance and updation of websites
- c. ICT training for all level of workers
- d. Establish electronic linkages between all related sectors [4]

Analyzing the role of ICT in E-Tourism

In order to analyze the role of ICT in helping the tourism industry confronted to these changes in the economy react, we adopted a framework, illustrated as follows. The first dimension of this framework is the type of actors or partners an enterprise deals with. We distinguish the following actors:

- *Business*: the other businesses or enterprises making transactions with the enterprise.

This issue deals with business-to-business trade

- *Consumer*: the final customer or consumer buying the products or the services of the enterprise. This point mainly addresses the retail commerce
- *State*: the public authorities which often are partners in the trade or commerce processes. This aspect mainly refers to the role of public authorities.

We cross this dimension with a second one which is a 3-step maturity model. This model suggests three kinds of generic activities in trade and commerce which can be supported and improved by ICT:

- *Boundary*: an enterprise can use ICTs to improve its information gathering capability and better interact with its environment by getting and sending information outside its boundaries (in order to target some new trade opportunities more quickly, for example)
- *Relation*: an enterprise can use ICTs to support and improve its cooperative relations when making transactions with its partners (i.e. supplier, customer, consumer, valueadded provider, third-parties)
- *Market*: a group of companies (competitors, buyers and sellers) can use technologies to improve their global efficiency or competitiveness when reaching their markets. [5]

Role of ICT

ICTs are now significant for premeditated management of organizations as they allow:

- Expansion into new markets

- Empowering of employees
 - Lowering of costs
 - Enhancing distribution
- Gates (1999) said that business now conducted at speed of thought
- ICTs great for time poor but cash rich consumers [6] **Increasing Speed of Uptake of Technology**
- 35 years for radio to reach 50 million
- 13 years for television to reach 50 million
- 5 years for internet to reach 50 million
- 1 year for ipods to reach 50 million
- 6 months for facebook to reach 100 million [6] **Problems with Traditional Approach**
- Small operators totally dependent on conditions set by large companies in the supply chain
- Often too small to participate in opportunities
- Pricing and other conditions locked down for up to 2 years
- Very limited ability to access the market directly [6] **Drivers for e-Business in Tourism**
- Economic necessity
- Rapid advancements in technology
 - Reduced cost
 - Ease of access
- Rising consumer expectations
 - Time poor
 - Overcame fears regarding security [6]

History of ICTs in Tourism

- Central Reservation Systems (CRSs)
 - Introduced by airlines in 1960s
 - Hotels then came onboard
 - Dominated the industry

- Airline computer reservations systems emerged to become global distribution systems (GDSs)
 - Incorporated a wide range of services and products for the entire industry
 - Examples included Amadeus, Sabre & Galileo
 - Owners charged commissions and participation fees
- Transaction costs too high for small operators
- Until mid 1990s, over half the world's electronic transactions were in tourism
- Largely airlines
- Destination management systems (DMS) then emerged
 - Information on locally available attractions and products
 - Useful for helping to overcome seasonality problems by spreading and balancing tourism demand
- For many years, industry based on:
 - Traditional supply chain
 - Brochures
 - Free-sale allocation
 - Telex confirmations
- Telex to fax to email
- Access to funds internationally – replace travellers cheques
 - Changed travel behaviour
- As SME dominated, ICT had slower uptake.
- Uptake pushed by consumers [6]

According to Buhalis (2003), “In few other areas of activity are the generation, gathering, processing, application and communication of information as important for day-to-day operations as they are for the travel and tourism industry”. [7]

Benefits of ICTs for Tourism

- Allow small businesses to compete internationally
- Dispose of unwanted inventory
 - Eg: wotif.com and lastminute.com
 - These systems pose problems as well
- Consumer can now package their own product but does require effort hence agents still used. Also someone to blame if there are problems.

- Changed the structure of the industry
 - Many intermediaries have gone or have been swallowed up as part of vertical integration
- Internet great for brand enforcement, enlargement and expansion – Clutter now becoming a problem.
- Can set price in real time to help manage demand
- Sophisticated yield management to maximise profits
 - Initially only airlines
 - Then hotels
 - Now open to smaller operator
- Underpin strategic alliances for airlines
- Sophisticated ICTs allow organisations to predict and target consumer needs
- Differentiate product for different consumer groups
- Foster relationship management & marketing
- Loyalty programs [6]

Issues

- Online pricing compared to other pricing
 - LCCs push online
 - Full service carriers use consolidators and intermediaries to sell their discounted seats to protect the brand
- Bundling product
 - Once the role of intermediaries but now consumers
- Survival of travel agents
 - Commission versus service fee
- Tourist information & tour guiding – Mobile phone technology
- Smart websites and search engines
 - Consumer preferences
- How do we get the various databases to communicate?
- Harmonise Project (EU project in tourism)
 - Allows the reconciliation of different standards and provides the minimum ontology to formally describe the domain of reference.

- It will allow providers and users to communicate, while keeping their proprietary data formats.
- Growth of blogs (Consumer generated content)
- Virtual travel replace real travel [6] **Changes in Tourism Industry**
 - Airlines
 - One of the pioneer sectors investing in ICTs
 - Introduced Computer Reservation Systems (CRS)
 - Other tourism sectors joined the network
 - CRS and Global Distribution Systems (GDS)
 - The role of Travel Agencies
 - Travel Agencies Alternatives:
 - Become online: Expedia
 - To clearly specialize
 - Electronic Travel Auction

In summary, ICTs revolutionize the entire Tourism Industry, Opportunities and Challenges, Changes in one sector force changes in the whole industry. [7]

1.3 Research Query

For this study the research question is **a sustainable e-Tourism infrastructure apposite for the ecosystem of Bangladesh with possible online based services and based on comparison among domestic & foreign ecosystem and statistical analysis on Number of tourists, Earnings, Purpose of visit and Number of Internet user's perspective is needed.**

1.4 Research Background and Objectives

Background

- No doubt that Tourism industry is a key aspect for the economic growth of Bangladesh but still now it does not reach in its ambition.
- Several studies have been conducted to investigate the problems and opportunities of the tourism development of Bangladesh.
- An initiative to develop a sustainable and equitable online tourism sector in emerging markets in Bangladesh is needed.
- Launching a sustainable e-Tourism infrastructure apposite for the ecosystem of Bangladesh with possible online based services and based on comparison among domestic & foreign ecosystem and statistical analysis on Number of tourists, Earnings, Purpose of visit and Number of Internet users perspective.

Objectives

- Launching e-Tourism as a key aspect for the economic growth of developing country like Bangladesh
- Support e-Tourism business in becoming a recognizable sector of the travel and tourism market
- Establish a well organized and sustainable e-Tourism infrastructure for the environment of Bangladesh
- Highlight most possible online based services for tourists
- Represent variation of Number of tourists and earnings in between Tourism and e-Tourism approach by statistical analysis

1.5 Organization of the Research

First, there will be an introduction of theoretical background of present tourism situation and thinking for the future.

Then, the literature review will focus on tourism expanding initiatives, influencing factors behind tourism industry.

The methodology will explain the overall work in a row. The priority of the researcher is to observe different e-Tourism website, influencing factors and survey on the tourists demand. The research tool the most adapted for this research is comparative study and statistical analysis.

After, the research findings are the most important of the research. Indeed, the researcher will analyze all outcomes, reports and feedbacks.

At the end, various recommendations will be given based on primary and secondary researches.

1.6 Limitations

However, this research has some limitations; especially the small sample for survey is not appropriate. Indeed, the information's collected from sources are not up to date. No organized tourism infrastructure for ecosystem also.

The second limitation is the lack of experience to do such kind of research for the ecosystem of Bangladesh.

1.7 Conclusions

In this part, it is explained briefly about the enthusiasms to carry out this research work. Moreover, it's a synopsis of the dissertation part by part. Here, Tourism and eTourism, Role of ICT in Tourism, The research questions, Background, Objectives, Organization of the research etc are illustrated clearly and extensively.

CHAPTER 2

Literature and Work Review

2.0 Introduction

In this chapter, the literature review and work review for this research is illustrated, where the main scheme about tourism development from the papers of national and international researcher are included. It also included the main scheme about tourism development from different existing sites. Here the findings from the above mentioned reviews are also mentioned where comparative study of proposed site to the existing sites and influencing factors behind tourism industry are included.

2.1 Paper Review

- Several studies have been conducted to investigate the problems and opportunities of the tourism development of Bangladesh.
- Ahmed (1986) has criticized in his study that despite all the efforts and measures of the government, the BPC and other private firms, the tourism industry in Bangladesh had not yet taken off, got a solid footing, and been able to give a true sense direction towards its development.
- Pannell Kerr Froster Associate (1998) has mentioned its comprehensive report on the Strategic Master Plan for Tourism in Bangladesh that for the development of infrastructure, national airlines, and overall tourism in the country.
- In another study, Hasan (1992) has described the tourism industry of Bangladesh and analyzed its potential market and marketing strategies.
- Hasan and Chowdhury (1995) have critically analyzed the state of hotel and restaurant services and their role in the development of tourism in Bangladesh.
- Hossain (1999) has considered the tourism as a complete industry like other.
- A current strand of research in e-Tourism is the delivery of content to mobile devices. This is especially important for on-trip assistance of travelers as addressed in (Nielsen 2004).
- Chiu and Leung (2005), for instance, have designed a virtual enterprise of independent tourism service providers as a multi-agent system.
- Nargis Khan (2012) proposed an optimized business model G2B2C for e-Tourism. [8] [9] [10] [11] [12] [13] [14] [15] [16] [17] [18] [19] [20] [21] [22]

2.2 Website Review

Outcomes of e-tourism

- It revolutionises all business processes, the entire value chain as well as the strategic relationships of tourism organisations with all their stakeholders
- It takes advantage of intranets for reorganising internal processes, extranets for developing transactions with trusted partners and the internet for the interacting with all its stakeholders
- E-tourism increasingly determines the competitiveness of the organisation and therefore it is critical for the competitiveness of the industry in the longer term. [6]

e-tourism includes All Business Functions

- E-commerce and E-marketing
- E-finance and E-accounting
- E-HRM
- E-Procurement
- E-Strategy
- E-Planning
- E-Management [6] e-

Tourism – some observations

- Travel and tourism among most important application domains in b2c e-commerce
- But IT already important in the past (CRS/GDS in the 60s)
- Successful use of ICT – example of growth potential of tourism
- Tourism is information based; it is an “information business”
- In Europe 82% of accommodations have Web site, Austria 94% (DG Enterp., EU 2005)
- In Europe in 2004 51% increase in Online bookings (Phocuswright, 2004)
- In the US in 2004 Internet sales represented about 18% of all travel / tourism sales, in Europe about 8% (Marcussen, 2005)

- Fast development – in 6 years from online presence over Transaction support to customer retention (3 system generations)
- Changed information, booking as well as travel behavior Tourism industry sees IT as a strategic issue
- IT industry takes travel & tourism seriously
- Uptake by and emergence of a research community

Journals and numerous conferences

– starting point: *ENTER conference 1994*

- International and several national (research) programs
- Distributed over different areas (computer science, IS, geography, sociology, tourism research)
- And it already starts to be differentiated [23]

Forecasts

- Huge growth
- Increasing transparency and falling prices
- Further IT push – (e.g., mobile applications)
- „Reversed “markets und new market forms
- Flexible cooperations
- Disintermediation
- More democratic structures – relative“advantage for smaller companies [23]

Situation

- B2C rather evolutionary development

- 16 % of all companies sell online, but only 9% of them do more than 5% of turnover
- Web as additional channel / Multichannel management (Eur. e-business report; 04)
- Sectoral differences – Tourism
- Smaller companies lag behind, problem know how and costs
- Tourism: destinations behind – operational and business model? Integrated processes (incl. booking) or aggregated content / linking
- Market: low entrance barriers facilitated new players and their strategic positioning
- “Traditional” players react(ed) with competitive response, branding and multi channel approaches
- Mobile applications – missing business model (focused on telecoms) and unknown „acceptance“ patterns
- Decreasing prices – only partly (Walden et al., 2002)
- Individualization, individual prices and recommendation
- Branding (Amazon)
- Disintermediation and re-intermediation
- Immediate imitation of business models and technology
- e-commerce favors, in tendency, buyers – individualization / personal prices, also online journals (travel blogs) and personal recommendation sites; active in product definition (priceline) from customer focused to customer driven
- New market forms – auctions and comparison shopping
- “Informatization” of entire value chain
- From e-commerce to e-business – Internet based integration of processes – ecommerce transforms industry

- Not only process reengineering, but also network engineering towards smart business networks
- Services become commodities – deconstruction of value chain
- In parallel trend towards concentration – *Winners take it all*

In Europe the top five online travel agencies have approx. 60% of the online travel agency market; in the USA the top five approx. 80%; four out of five Europeans bought by US companies [23]

Web: Evolution of order and disorder

Challenges

- Markets
 - Business models (in networks, e.g., for destinations)
 - Market design – dynamic structures and pricing
- Users
 - Enabling access everywhere anytime
 - Behavior analysis and user modeling (from evaluation to explanation and prediction)
 - Support of tourist decision process
 - On-site companion
- Supply side
 - Support of autonomous networked “nodes”, dynamic network configuration in a heterogeneous and distributed environment
 - Semantics – interoperability
 - Intelligent cooperation

– Destinations as cooperative networks

- General issues

- Increasing complexity: structures, processes and technology

- “Permanent” innovation and development

In summary, E-commerce – e-business transforms industries, Integration of processes and network management, IT a strategic issue in the travel / tourism industry, and this industry is a rich field for applications and research, Integration of research and application as well as industrial innovation, Multidisciplinary major issue. [23]

Future trends for e-Tourism Services

Some key trends and drivers on the way towards ICT-supported tourism services have been pointed out as well as some possible constraints. Developments further ahead into the future with the intention to identify some likely future profiles of the tourism business and service provision up to 2010, even if limited to a very rough outline at this stage, are far from being predictable reliably.

(Gee 1997; WTO 1998, 36 pp.; Werthner and Klein 1999; Jones 1998):

- . Increased popularity and capabilities of the Internet for a wide spectrum of applications for electronic services in tourism, making distribution channels less dependent from traditional CRS/GDS of airlines;

- . Internet and supporting services by further new intermediaries will significantly transform, if not eliminate, the role of traditional travel intermediaries (travel agents working on commissions paid);

- . Direct on-line bookings by customers will make up a significant market share by 2010 with access available to most of the population in industrialized countries;

- . “Virtual tourists” will have an increasing demand for multi-media travel information;

- . Interactive TV and mobile devices will increasingly be used for the distribution of tourism products and services

- . The majority of tourism organizations will also use Intranets;
- . Various types of smart agents supporting both tourism suppliers and customers will emerge;
- . Products and services will reach a much higher level of personalization together with a corresponding demand;
- . The strongly risen share of people over 50s in the industrialized countries will effect a higher demand for e-services related to foreign travel, particularly to long haul destinations and travel for culture purposes as well as eco-tourism;
- . Further growth of “time poor” – “money rich” people will entail a high demand for short time holidays while, on the other hand, all-inclusive holidays will be demanded by a large number of people with needs for complete, unburdened relaxation and release from job pressures;
- . Particular uses of electronic technology will include smart cards for a variety of functions, including the management of destination loyalty schemes (discounts in exchange for customer data and loyalty), bonus schemes for environment-protective behavior, etc.;
- . Internet video telephony will allow customers to take test-drives for a particular destination by pictures from cameras placed at various sites in the holiday locality and transmitted via Internet;
- . Ticketing automation (satellite ticket printers) will be widespread and e-ticketing including mobile phone based forms will make up a major portion of air travel as well as railway travel during the next decade;
- . Efforts to build up central databases of traveler information will be continued for use to get extensive insight into individual preferences and behavioral patterns so that the information can be used for active marketing;
- . Mobile city guides will be widespread and electronic brochures in the form of CDROMs will increasingly replace paper brochures.

- . Tourism providers will more easily and more often form strategic partnerships, offering complementary products.
- . Small and medium sized businesses will be forced to take a more strategic approach on doing business; new mediators on the market will assist in doing so.
- . Tourism regions will increasingly have to employ extensive branding and marketing strategies

For the New Accession States, the future of e-tourism will strongly depend on the availability and affordability of Internet services for a greater portion of the domestic population, the development of the general environment for tourism (including transport infrastructure, general economical situation), the awareness of the tourism services abroad, adoption of new technology and the will of entrepreneurs and local rural people to invest in areas related to tourism. In order to attract critical tourists, the need for sustainable tourism will be recognized. The wider availability of mobile web access at affordable costs will significantly increase Internet service users and entail more personal and intensified marketing of tourism services. As e-tourism services could save both time and money, they will very likely become a popular form of individual tourism. [24]

2.3 Comparative Study with Existing Systems

A comparative study with the existing systems is represented by the following table.

Table 2.1: Comparison Among Existing Systems

e-Tourism Site	Brief Description of Packages & Prices	Tour Guideline/Plans	Online Booking System	Confirmation Feedback System	Tourist Places (List, Location & Pictures)	Tour Map & Tour Essentials	Customer feedback System	Local Agent List & Account	Hit Count System	Discount/Promotion System
bangladeshvision	B	B	A	A	A	B	A	B	A	B
Other Sites	B	C	C	C	B	B	B	C	B	C

A- More Satisfactory
B- Satisfactory
C- Below Satisfactory

Table 2.2: List of Sites for Survey with their business

Survey on the following sites		Business
www.tripbd.com www.tourismbd.com www.mytourismbd.com www.parjatan.gov.bd www.primetourism.net.bd	www.travelonebd.com www.annextravel.com www.tourtobangladesh.com www.parjatanbd.com www.travelbd.com www.stourismbangladesh.com www.greenbangladeshtours.com	Tours and Travels
www.tourismkeari.com www.guidetours.com		

2.4 Factors influencing Tourism and e-Tourism

Influencing factors are classified into two categories

- (a) Indigenous (b) Exogenous

- Indigenous factors includes- Economic Factors, Technological Factors, Political Factors, Demographic Factors, Cultural Factors, Environment and weather etc.
- Exogenous factors includes- Customer behavior, Tour intention etc.
- Economical factors includes- Price and Cost, Money exchange rate, Cost of certain vacations, Economic prosperity can encourage people to take more trips, Good economic time, people have more discretionary income (money left over after paying taxes & basic living expenses), Financial Security, Taxes, economic relation between countries etc.
- Technological factors includes- Service Quality, Convenient Lodging, Adventure, Security, Effective & efficient transportation and accommodation, Safe & Quality food, Shopping facility, more tourist facilities, Developments in information technologies (internet), Read, Reliable and update information, Online payment, enough services in e-Tourism sites etc.
- Political Factors includes- Tourists avoid areas of political unrest, If a region is politically stable it can influence the number of visitors, Reports of terrorism or high crime rates, political relation between countries etc.
- Demographic Factors includes- characteristics & background of a country's population can influence travel patterns, Number of women in work force, Number of single adults, getting married and having children later etc.
- Cultural Factors includes- Ancient culture of a country can draw people like a magnet, People find ancient civilizations fascinating, Socio-cultural relation between countries etc.
- Environment and weather factors includes- Natural Beauty, Weather or climate condition etc.
- Others include- Known Destination, Multi language, amount of leisure time, holidays, government rules and regulations etc.

- Customer Behavior and Tour Intention includes- Age, Gender, Regional Difference, Ethnic and Religious Difference, personality, motivation etc. [25] [26] [27] [28] [29] [30]

2.5 Conclusions

In this part, the tourism development aspects from the papers of national and international researcher and different existing sites are explained broadly. Here comparative study of proposed site to the existing sites and influencing factors behind tourism industry are also described extensively.

CHAPTER 3

Methodology and Objectives

3.0 Introduction

In this chapter, data collection source, method of congregation of online services, statistical analysis, comparative study on different ecosystems, infrastructure design and implementation, major objectives etc for this research is illustrated.

3.1 Data Collection

Data for analysis are collected from Bangladesh Parjatan Corporation, Bangladesh Bank, Bangladesh Bureau of Statistics and Internet.

3.2 Congregation of Online Services

Proposed Online based Services come from different e-Tourism website observation, influencing factors and survey on the tourists demand.

3.3 Statistical Analysis

Statistical analysis in worse, average and best case is done on purpose of visit, number of domestic and foreign tourists, domestic and foreign earnings and internet user's perspective.

3.4 Study on Different Ecosystems

Comparative study on the properties of the existing domestic and foreign e-Tourism ecosystem is done by e-Tourism website observation, paper review, influencing factors and survey on the tourism planning for the upcoming years.

3.5 Infrastructure Design and Implementation

Infrastructure is established based on the environment of Bangladesh, payment method, user friendly system, statistical analysis on number of domestic and foreign tourists and domestic and foreign earnings perspective and comparative study on the properties of the existing domestic and foreign e-Tourism ecosystem. It has most possible online based services as well.

3.6 Objectives

Major Objectives are as follows:

- Support e-Tourism business in becoming a recognizable sector of the travel and tourism market

- Launching e-Tourism as a key aspect for the economic growth and to establish a sustainable e-Tourism infrastructure for the environment of Bangladesh
- Represent variation in Number of tourists and earnings in between Tourism and e-Tourism approach by statistical analysis with Highlighting most possible online based services for tourists

3.7 Conclusions

In this part, data collection source, method of congregation of online services, statistical analysis, comparative study on different ecosystems, Infrastructure Design and Implementation, major objectives etc are explained clearly.

CHAPTER 4

Analysis and Findings

4.0 Introduction

In this chapter, analysis on the collected data from BPC, Bangladesh Bank, Bangladesh Bureau of Statistics and from internet is done. Analysis is done by statistically in worse,

average and best case. There are also some analyses by comparative study among existing systems. There are important findings from the analysis. The impact of internet for the growth of tourism industry is also shown through analysis.

4.1 Review of Last years

Generally there are several purposes of visit among them the followings are notable.

Table 4.1 and Figure 4.1 represent a statistics of 2008, 2009 and 2010. This statistics is collected from Bangladesh Parjatan Corporation (BPC).

Table 4.1: Visitors Arrival by Purpose of Visit [31]

Year	2008	2009	2010
Tourism	128326	122899	112965
%Change		-4.22907283	-8.0830601
Business	112654	111569	141517
%Change		-0.96312603	26.8425817
Office	5983	3895	3754
%Change		-34.8988802	-3.6200257
Study	8617	6475	10376
%Change		-24.8578392	60.2471042
Religion	14123	8983	10030
%Change		-36.3945337	11.655349
Others	197629	13286	24744
%Change		-93.2773024	86.2411561

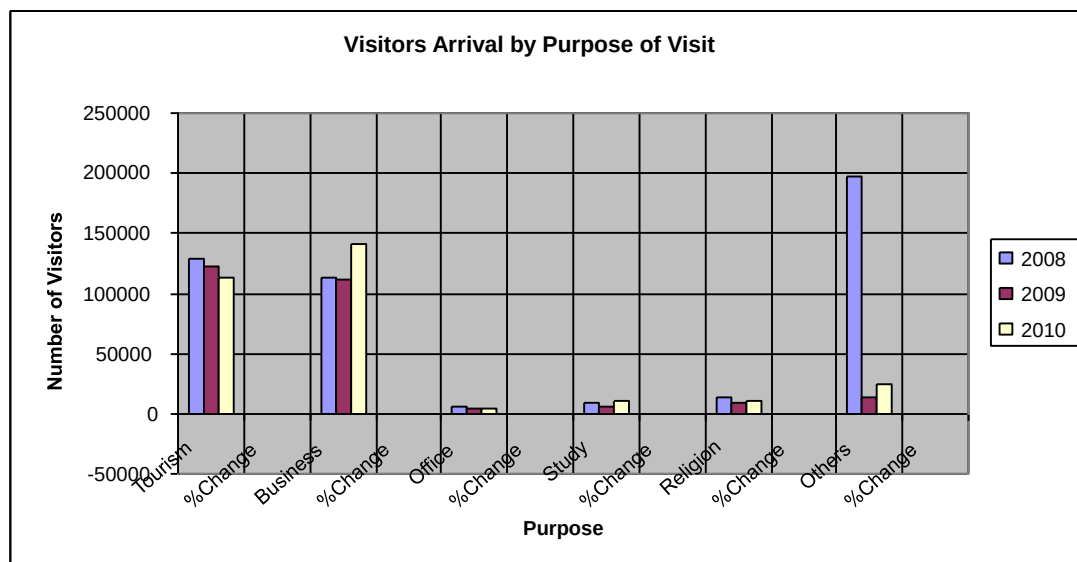


Fig 4.1: Visitors Arrival by Purpose of Visit

Every year foreign visitors arrive in Bangladesh. Table 4.2 and Figure 4.2 represent a statistics of last five years (2006 to 2010). This statistics is collected from Bangladesh Bank.

Table 4.2: Foreign Visitors Arrival by Year (Last 5 years) [32]

Year	No. of Visitors	% Changes
2006	200311	-3.54
2007	289110	44.330566
2008	467332	61.645049
2009	267107	-42.844273
2010	303386	13.582197

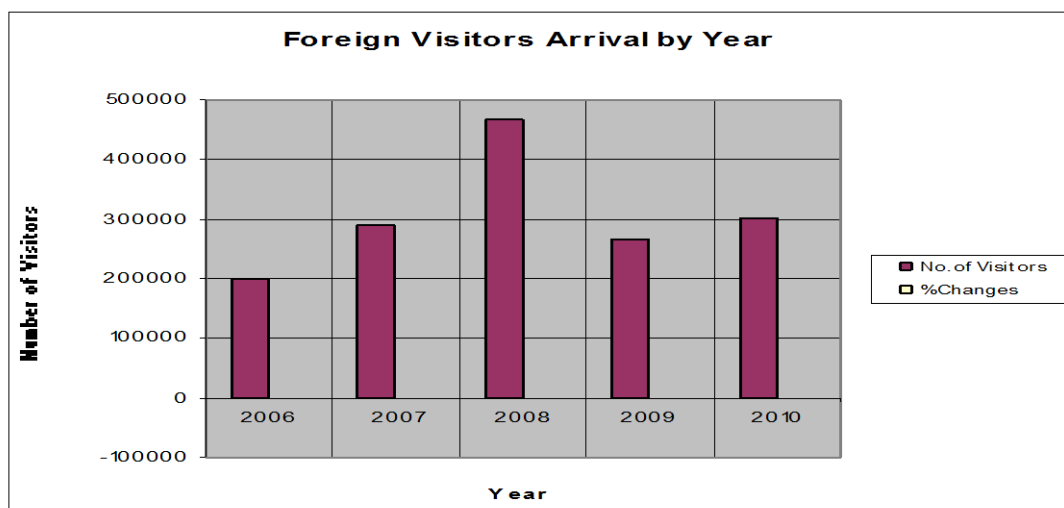


Fig 4.2: Foreign Visitors Arrival by Year (Last 5 years)

Every year Bangladesh earns foreign exchange from tourism and other travels. Table 4.3 and Figure 4.3 represent a statistics of last five years (2007 to 2011). This statistics is collected from Bangladesh Bank. [32]

Table 4.3: Foreign Exchange Earnings from Tourism & Other Travels (Last 5 years)

Year	Foreign Exchange in (Million TK)	% Changes
2007	5265.19	-4.8
2008	6124.52	16.32
2009	5762.24	-5.92
2010	5562.94	-3.46
2011	6239.45	12.16



Fig 4.3: Foreign Exchange Earnings from Tourism & Other Travels (Last 5 years)

4.2 Present and Upcoming Years

A statistical analysis on the foreign visitors arrives in Bangladesh represent that in Average Case 14.63% foreign visitors will increase in the present and upcoming 5 years. Table 4.4 and Figure 4.4 represent a statistics of present and upcoming 5 years (2012 to 2016).

Table 4.4: Foreign Visitors Arrival by Year (Present & Upcoming 5 years)-Average Case

Year	No. of Visitors
2012	348894
2013	401228
2014	461412
2015	530624
2016	610218

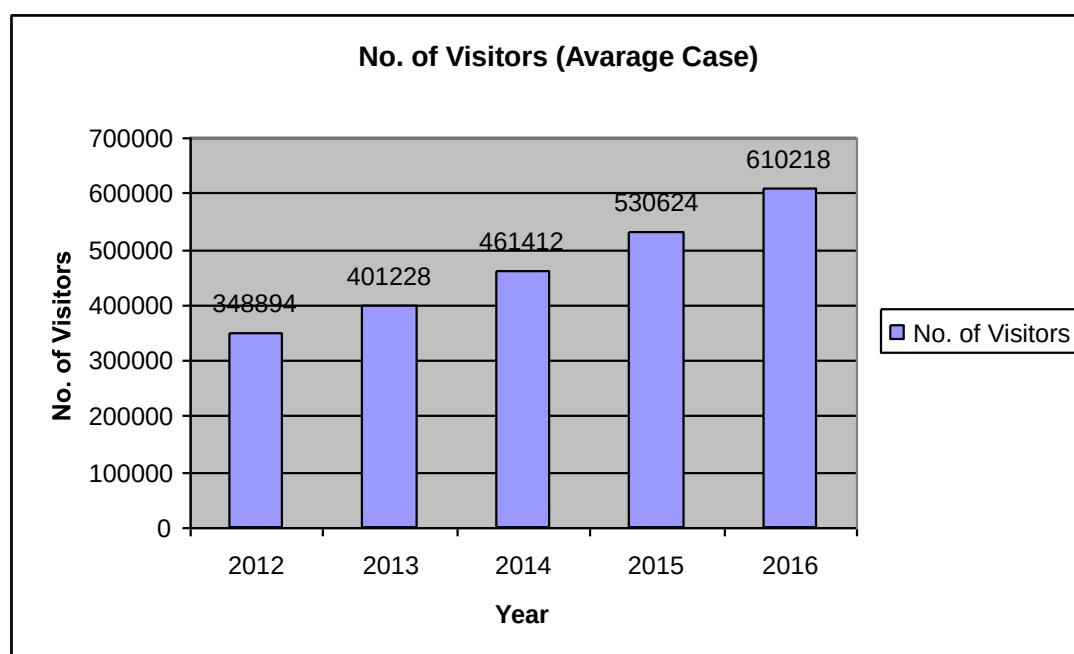


Fig 4.4: Foreign Visitors Arrival by Year (Present & Upcoming 5 years) -Average Case

In Best Case it will increase by 61.65% in the present and upcoming 5 years. Table 4.5 and Figure 4.5 represent a statistics of present and upcoming 5 years (2012 to 2016).

Table 4.5: Foreign Visitors Arrival by Year (Present & Upcoming 5 years)-Best Case

Year	No. of Visitors
2012	491485
2013	796206
2014	1289854
2015	2089564
2016	3385094

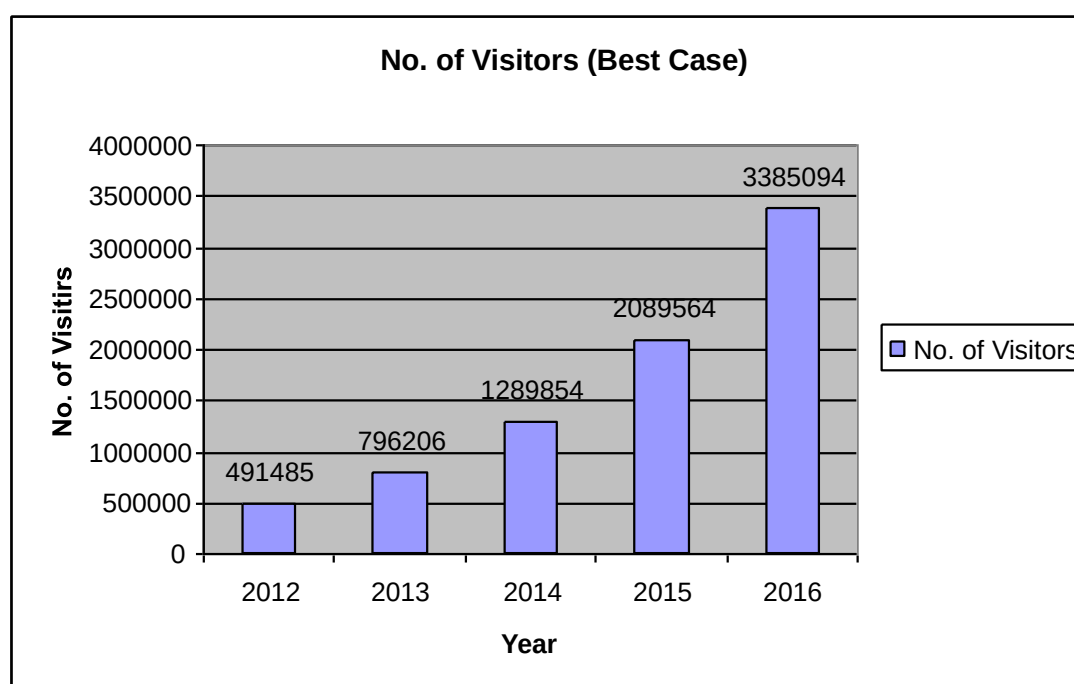


Fig 4.5: Foreign Visitors Arrival by Year (Present & Upcoming 5 years) -Best Case

A statistical analysis on the foreign exchange earnings from tourism and other travels for Bangladesh represent that in Average Case 3% earnings will increase in the present and upcoming 5 years. Table 4.6 and Figure 4.6 represent a statistics of present and upcoming 5 years (2012 to 2016).

Table 4.6: Foreign Exchange Earnings from Tourism & Other Travels (Present & Upcoming 5 years)-Average Case

Year	Foreign Exchange in (Million TK)
2012	6239.45
2013	6426.6335
2014	6619.432505
2015	6818.01548
2016	7022.555945

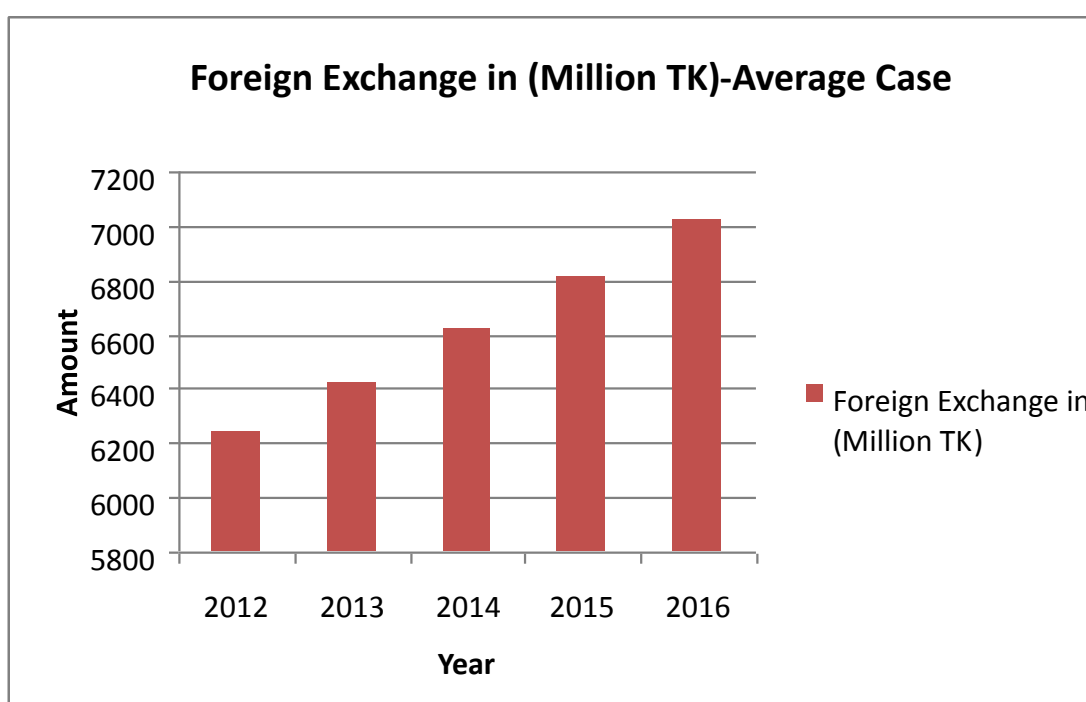


Fig 4.6: Foreign Exchange Earnings from Tourism & Other Travels (Present & Upcoming 5 years)-Average Case

In Best Case it will increase by 16% in the present and upcoming 5 years. Table 4.7 and Figure 4.7 represent a statistics of present and upcoming 5 years (2012 to 2016).

Table 4.7: Foreign Exchange Earnings from Tourism & Other Travels (Present & Upcoming 5 years)-Best Case

Year	Foreign Exchange in (Million TK)
2012	6239.45

2013	7237.762
2014	8395.80392
2015	9739.132547
2016	11297.39375



Fig 4.7: Foreign Exchange Earnings from Tourism & Other Travels (Present & Upcoming 5 years)-Best Case

4.3 Internet Issue

Internet has vital impact on tourism industry. Number of internet users influence number of tourists. A statistics of Percentage of Computer & Internet User in Bangladesh is represented by Table 4.8 and Figure 4.8. This statistics is collected from Bangladesh Bureau of Statistics.

Table 4.8: Percentage of Computer & Internet User in Bangladesh [33]

User	% Computer	% Internet
Class I-V	4.49	4.01
Class VI-IX	21.69	19.97
SSC/HSC	28.11	25.64
Graduate	21.96	17.8
Post Graduate	18.06	24.14
Doctor	1.63	2.74
Engineer	2.67	4.2
Others	1.39	1.51

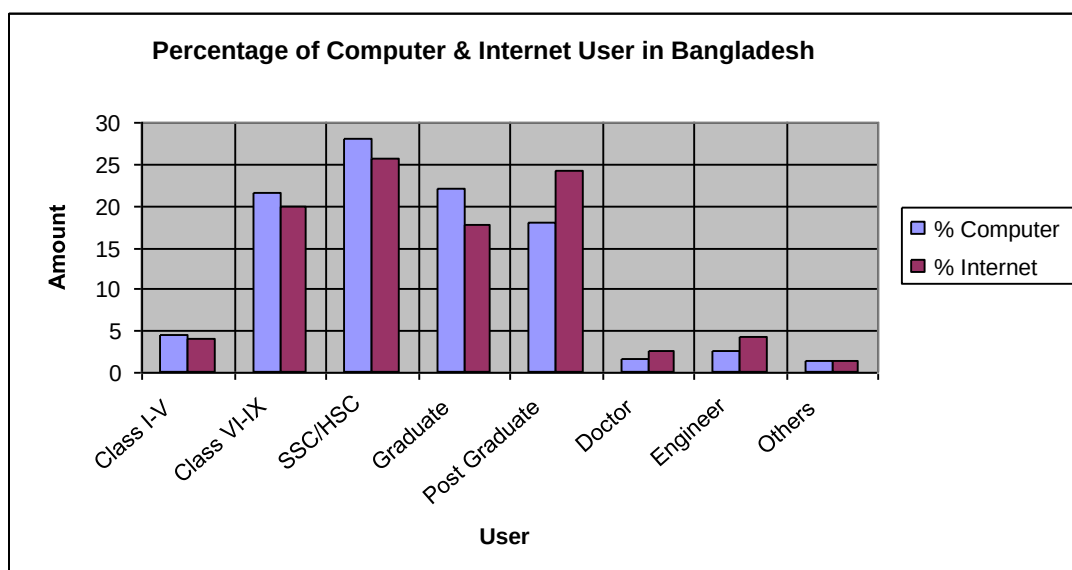


Fig 4.8: Percentage of Computer & Internet User in Bangladesh

Percentage of Internet users in the world impacts on foreign tourists. A statistics of Percentage of Internet users in the world is represented by Table 4.9 and Figure 4.9. This statistics is collected from wikipedia.

Table 4.9: Percentage of Internet users in the world [34]

Africa	13%
America	56%
Arab States	29%
Asia & Pacific	27%
Commonwealth of Independent States	48%

Europe	74%
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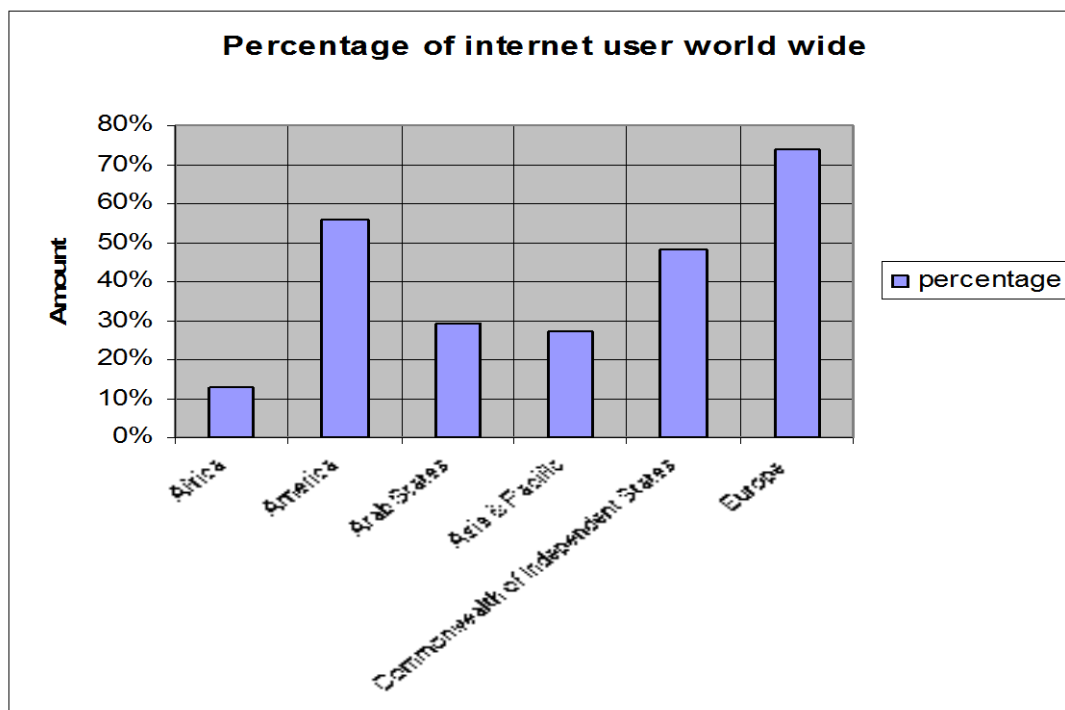


Fig 4.9: Percentage of Internet users in the world

4.4 Impact of Internet Users on Tourism

A statistical analysis on the internet users represent that in Worse Case 13% and in Average Case 41% foreign visitors will increase in the present and upcoming 5 years. Table 4.10 and Figure 4.10 represent a statistics of present and upcoming 5 years (2012 to 2016).

Table 4.10: Foreign Visitors Arrival by Year (Present & Upcoming 5 years)-Worse and Average Case

Year	No. of Visitors	Applying e-Tourism (worse case)	Applying e-Tourism (average case)
------	-----------------	---------------------------------	-----------------------------------

2012	348894	394250	491941
2013	401228	453388	565731
2014	461412	521396	650591
2015	530624	599605	748180
2016	586883	663178	827505

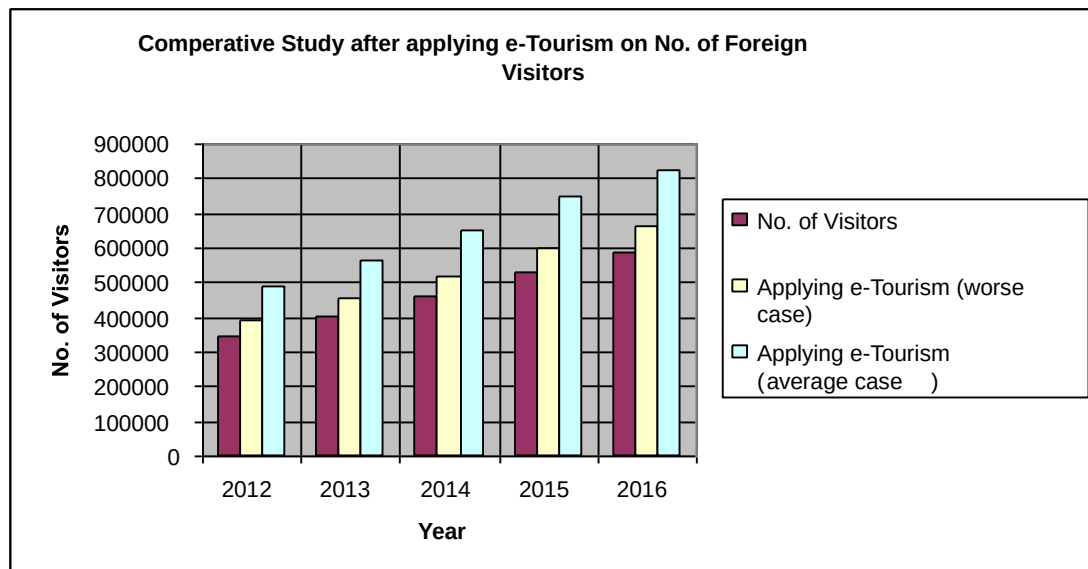


Fig 4.10: Foreign Visitors Arrival by Year (Present & Upcoming 5 years)-Worse and Average Case

Another statistical analysis on the internet users represent that in Worse Case 13% and in Average Case 41% foreign exchange earnings will increase in the present and upcoming 5 years. Table 4.11 and Figure 4.11 represent a statistics of present and upcoming 5 years (2012 to 2016).

Table 4.11: Foreign Exchange Earnings from Tourism & Other Travels (Present & Upcoming 5 years)-Worse and Average Case

Year	Foreign Exchange in (Million TK)	Applying e-Tourism (worse case)	Applying e-Tourism (average case)
------	-------------------------------------	------------------------------------	--------------------------------------

2012	6239.45	7050.5785	8797.6245
2013	6426.6335	7262.095855	9061.553235
2014	6619.432505	7479.958731	9333.399832
2015	6818.01548	7704.357492	9613.401827
2016	7022.555945	7935.488218	9901.803882

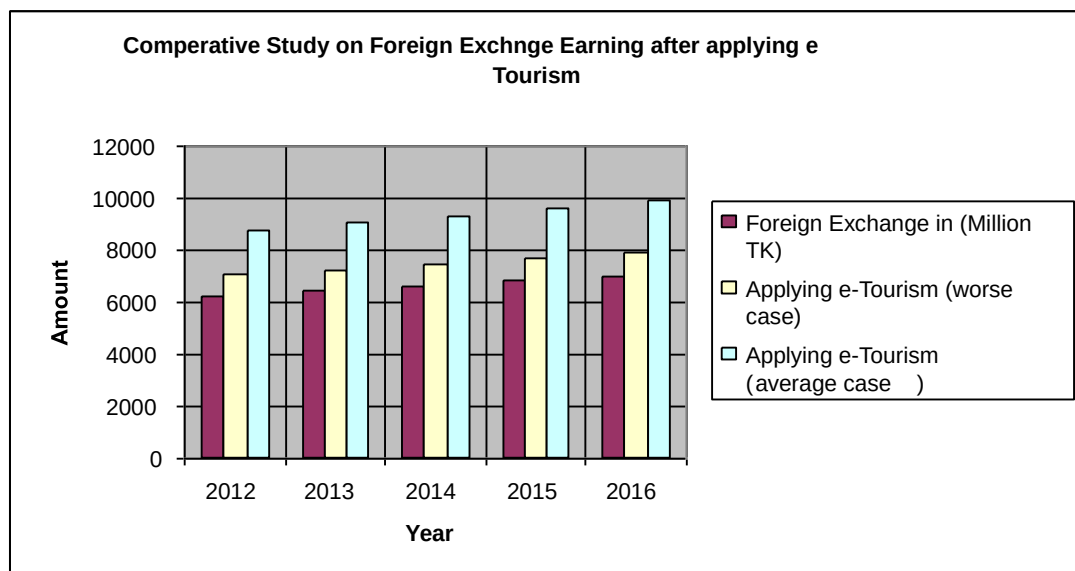


Fig 4.11: Foreign Exchange Earnings from Tourism & Other Travels (Present & Upcoming 5 years)-Worse and Average Case

4.5 Findings

Visitor arrives in different purpose like tourism, business, office, study, religion etc. Changes in different purposes are represented by statistics.

The average percentage of number of foreign visitors of last 5 years was 14.63% and best percentage was 61.65%.

The average percentage of foreign exchange earnings from tourism and other travels of last 5 years was 3% and best percentage was 16%.

Number of internet users in the world which impacts on both the number of foreign visitors and foreign exchange earnings was 13% in worse case and 41% in best case.

At the end it is clear that if number of internet users increase although in a rate of worse case both the number of foreign visitors and foreign exchange earnings will increase significantly from the normal growth rate.

4.6 Comparison Among Different Ecosystems

World: In 2011, there were 983 million international tourist arrivals with a growth of 4.6% as compared to 2010. In 2011, earning was US \$1.03 trillion (€740 billion) corresponding to an increase in real terms of 3.8% from 2010.

Asian countries have lagged behind Europe and the United States, where close to 50 percent of all flight are done over the web.

Tourism industry accounts for 11 % of total global employment according to WTO.

Indonesia: Enhance internet usage for the online marketing strategy within tourism industry.

England: Strategy for modernizing English tourism through e-Business.

Malaysia: Malaysia's tourism website (www.tourism.gov.my) has been described as a model of e-Tourism by United Nations body. It gets 12.3 million hits a month.

India: India has strongest growth rate in Asia in internet users and they are expecting \$2 billion from e-Tourism.

Thailand: Thailand reporting 150,000 hits on its booking website with more than 1,000 confirmed bookings monthly when they started in 2004. (Source: <http://thestar.com.my>)

Combdia: Combdia's website saw 230,000 visits and one of its hotels reports that 70% off its revenue were from online bookings. In 1998, Where Bangladesh received 150,000 tourists, Combdia received 96,000 tourists. In 2006, Bangladesh received 200,000 tourists and Combdia received 2 million tourists. Bangladesh earned \$89 million and Combdia earned \$1 billion. (Source: <http://thestar.com.my>, www.viewson tourism.info)

Vietnam: Vietnam's website attracted 7.5 million users per month. In 2001, domestic tourists were 12.1 million and in 2006, it became 16.7 million, up by 11 %. In 202, foreign tourists were 2.6 million and in 2006, it became 3.8 million. (Source: <http://thestar.com.my>)

Philippine: The Philippine govt. expects tourist arrivals to grow to 10 million by 2016 from 4 million in 2011. Right no, 10 to 15 % of travel bookings are done online. (Source: <http://technology.inquirer.net>)

China: In 2006, China received 129 million foreign and 1.3 billion domestic tourists and revenue amount was 893.5 billion yuan. In 2009, China received 126 million foreign tourists, down by 2.7% and 1.902 billion domestic tourists, up by 11.1 %, the revenue amount was 1.02 trillion, up by 16.4 %. Total revenue income was 1.29 trillion yuan, an increase of 11.3 %.

Srilanka: International tourist arrivals to Srilanka amounted 500,642 in 2003 to 566,202 in 2004 and to 549,308 in 2005. 62.7 % of visitors used internet for collecting travel information and while 36.2 % of visitors used internet for booking their holiday. (Source: SLTB, Annual Statistical Report 2005, Airport Survey 20052006).

Bangladesh: In 2010, 3 lacs foreign tourists came to Bangladesh. The contribution of the earnings from tourism to the country's GDP is less than 1 %. „Tourism Vision-

2020" forecast that tourist arrivals to Bangladesh likely to exceed 1.30 million by 2020, if recommended actions are taken. The target to contribute to the GDP of Bangladesh, at least 4 to 5 % from the tourism industry. (Source: www.bangladeshmonitor.net). [35] to [44]

Table 4.12: Comparison Among Different Ecosystems [45] to [69]

Countries	Number of Foreign Tourist with changes from last year	Foreign exchange earnings from tourism	Influencing factors of tourism	Impact on GDP	Internet Users	Employment	Future Target	World Rank
World	983 million (changes-4.6%)	US\$1.03 trillion (changes-3.8%) US\$2 trillion According to WTTC (Dollar)	Travel and accommodation cost, Tourism Infrastructure, Security	3.0%	41% (avg)	98 million jobs	UNWTO forecast global tourism to grow at 5%-6% between 2010-2020 WTTC forecast annual growth to be 4.2% over the ten years to 2022	-
Bangladesh	0.30 million	BDT 182.5 billion (Taka)	Travel and accommodation cost, Tourism Infrastructure, Security	2.2%	5%	1,329,000 jobs (1.9% of total employment)	Exceed 1.30 million by 2020 & 4 to 5% on GDP WTTC says 6.1% to BDT353.7bn (2.3% of GDP) by 2022	129 according to economy
India	6.29 million	INR 1,689.8 billion (Rupee)	Travel and accommodation cost, Tourism Infrastructure, Security	5.83%	10.2%	24,975,000 jobs (5.0% of total employment)	expected to grow by 7.7% pa to INR 3,805.2bn (1.9% of GDP) by 2022.	(Rank 9 in Asia and the Pacific) 68 according to economy
Nepal	0.8 million (changes-33.33%)	NPR 53.5 billion (Rupee)	Travel and accommodation cost, Tourism Infrastructure, Security	4%	9%	412,500 jobs (3.3% of total employment)	expected to grow by 3.7% pa to NPR\$0.8bn (4.1% of GDP) by 2022	112 according to economy
Srilanka	0.85 million (changes-30.8%)	LKR 219.7billion (Rupee)	Travel and accommodation cost, Tourism Infrastructure, Security	3.4%	15%	236,500 jobs (3.0% of total employment)	2.5 million tourists by 2016 and expected to grow by 5.7% pa to LKR 402.4bn (3.4% of GDP) by 2022	81 according to economy
Thailand	19 million	THB 760.1 billion (Baht)	Travel and accommodation cost, Tourism Infrastructure, Security	7.1%	23.7%	1,833,000 jobs (4.7% of total employment)	expected to grow by 6.3% pa to THB 1,425.1bn (7.8% of GDP) by 2022	(Rank 4 in Asia and the Pacific) 41 according to economy
Malaysia	24.7 million	MYR 57.0 billion (Ringgit)	Travel and accommodation cost, Tourism Infrastructure, Security	6.7%	61.7%	753,500 jobs (6.3% of total employment)	36 million in 2020 and expected to grow by 4.3% pa to MYR90.1bn (6.8% of GDP) by 2022	9 (Rank 2 in Asia and the Pacific)
Indonesia	7.65 million	IDR 220,773.0 billion (Rupiah)	Disasters, Travel and accommodation cost, Tourism Infrastructure, Security	3.0%	22.4%	2,900,000 jobs (2.6% of total employment)	expected to grow by 6.9% pa to IDR463,543.0bn (3.5% of GDP) by 2022	(Rank 8 in Asia and the Pacific) 74 according to economy
China	51 million	CNY 1,173.0 billion (Yuan)	Travel and accommodation cost, Tourism Infrastructure, Security	2.6 %	38.4%	22,081,500 jobs (2.9% of total employment)	expected to grow by 9.2% pa to CNY 3,100.5bn (3.1% of GDP) by 2022	3 (Rank 1 in Asia and the Pacific) 39 according to economy
Vietnam	6 million (changes-19.1%)	VND 107,318.0 billion (Dong)	Travel and accommodation cost, Tourism Infrastructure, Security	3.3%	34.1%	1,832,500 jobs directly in 2011 (3.7% of total employment)	expected to grow by 6.1% pa to VND205,157.0bn (4.1% of GDP) by 2022	80 according to economy
Philippines	3.91 million	PHP 194.7 billion (Peso)	Disasters, Travel and accommodation cost, Tourism Infrastructure, Security	2.0%	33%	778,000 jobs directly in 2011 (2.1% of total employment)	10 million by 2016 and expected to grow by 6.5% pa to PHP400.4bn (2.4% of GDP) by 2022	94 according to economy

Comparison Factors: Better controlled websites, Google cr aze, Mobile Computing, Online Transaction, Comprehensive and appropriate tourism information, Business process for marketing, booking, purchasing of tourism products, appropriate ICT solution, fully interconnected e-business network, bandwidth etc.

4.7 Important and Implemented Factors of Proposed Model

Important and Implemented Factors of Proposed Model is represented by the following table.

Table 4.13: Important and Implemented Factors of Proposed Model

Categories	Important Factors	Implemented Factors
Convenience	Time and cost saving	Agreed to work with e-tourism system
		Easy to use
		Less steps required to get something to work
Facilities	Tour Information	Collecting, viewing and downloading comprehensive destination
	Online Booking	User friendly booking system
		Working with Site design is easy to use
Service-Quality	Customer Feed back	Feed form in the site
	Contact	Contact Details
	Confirmation Feedback	Mail based confirmation
Site Design	Most possible services in the e-tourism sites	Clear interface in use
		Admin and Agent Panel included
E-Security	Ready, reliable and update information	Safe feeling in transactions
	Financial security	Financial Security
		Reducing of occurring mistakes
		No absent or misleading information
		Personal information security

4.8 Conclusions

In this part analysis on the collected data in different cases like worse, average and best case are done successfully. The analysis showed the situation of foreign visitors and earnings in the present and upcoming years. The circumstances of different countries ecosystem is presented by comparative study. Also an observation on the important factors for an ideal e-Tourism system and the implemented factors in the proposed model is represented.

CHAPTER 5

Proposed Infrastructure

5.0 Introduction

In this chapter, a proposed model which is sustainable and as well as equitable for the ecosystem of Bangladesh with possible online based services is represented. Here the task scenario, mode of payment, system structure etc are mentioned in details. The proposed system is also tested by sample input. There are some reports and outcomes from the system which will create relation between analysis and proposed infrastructure.

5.1 Online based Services

Factors are mentioned below.

- Tourist Places (List, Location, Pictures)
- Packages & Prices
- Tour Guideline & Plans
- Tour Map
- Tour Essentials
- Online Booking
- Confirmation Feedback (Mail)
- Customer Feedback
- Local Agent Point (List, Contact Number & Address)
- Discount/Promotion/Special Offer

5.2 e-Tourism Task Scenario

The task scenario of the proposed model is represented by fig 13. There are seven consecutive steps to complete the task.

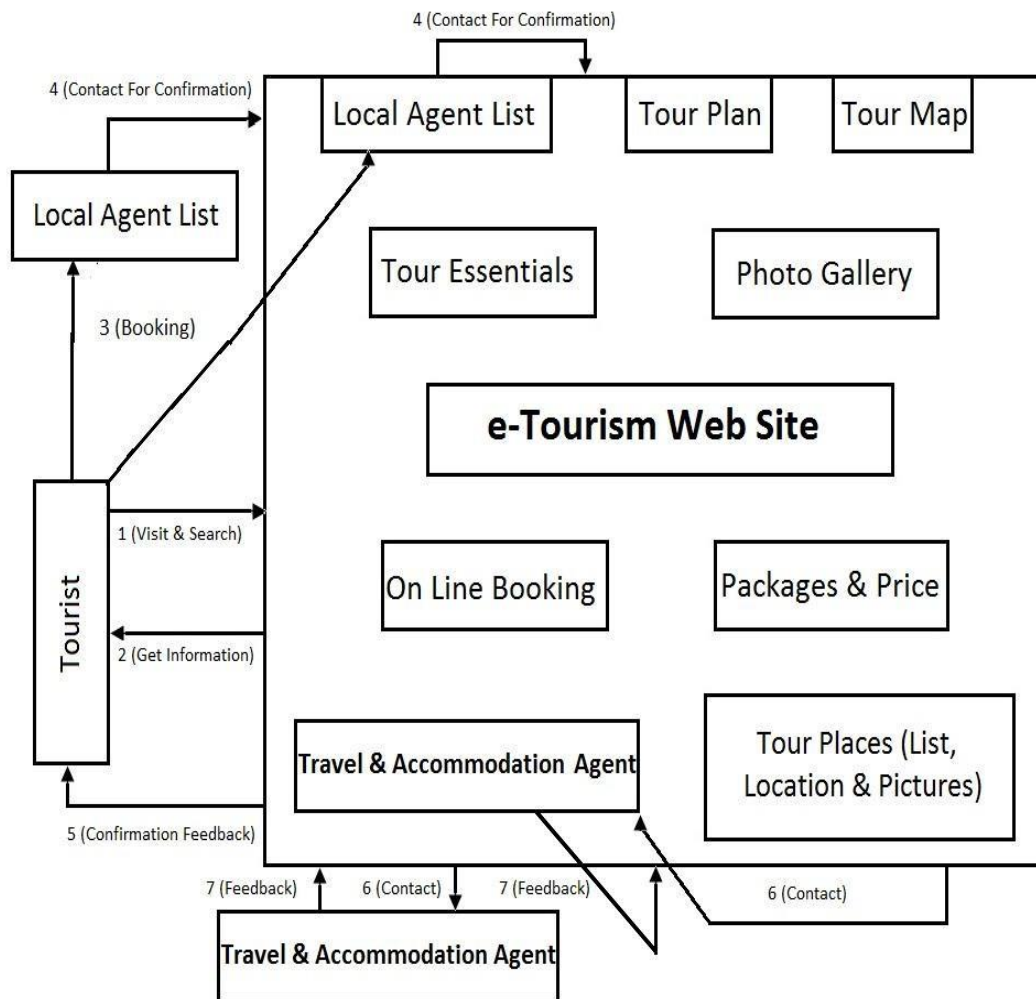


Fig 5.1: e-Tourism Task Scenario

Steps of Proceeding:

Step-1: Tourist will visit in the site for tour packages and tour related information.

Step-2: Tourist will get tour packages with price, tour guideline from the site and also the local agent list from the site.

Step-3: Tourist will contact with the local agent for online booking. Local agent may be of tourism agencies own agent or not.

Step-4: Agent will contact to the tourism agency for approval.

Step-5: After confirmation a confirmation message will go to the tourist e-mail.

Step-6: Tourism agency will contact to the travel and accommodation agent. It can be of their own agent or not.

Step-7: Travel and Accommodation agent will confirm travel and accommodation facility to the tourism agency for the tourist.

5.3 Mode of Payment

The payment method of the proposed model is represented by fig 14. There are five successive steps to complete the payment.

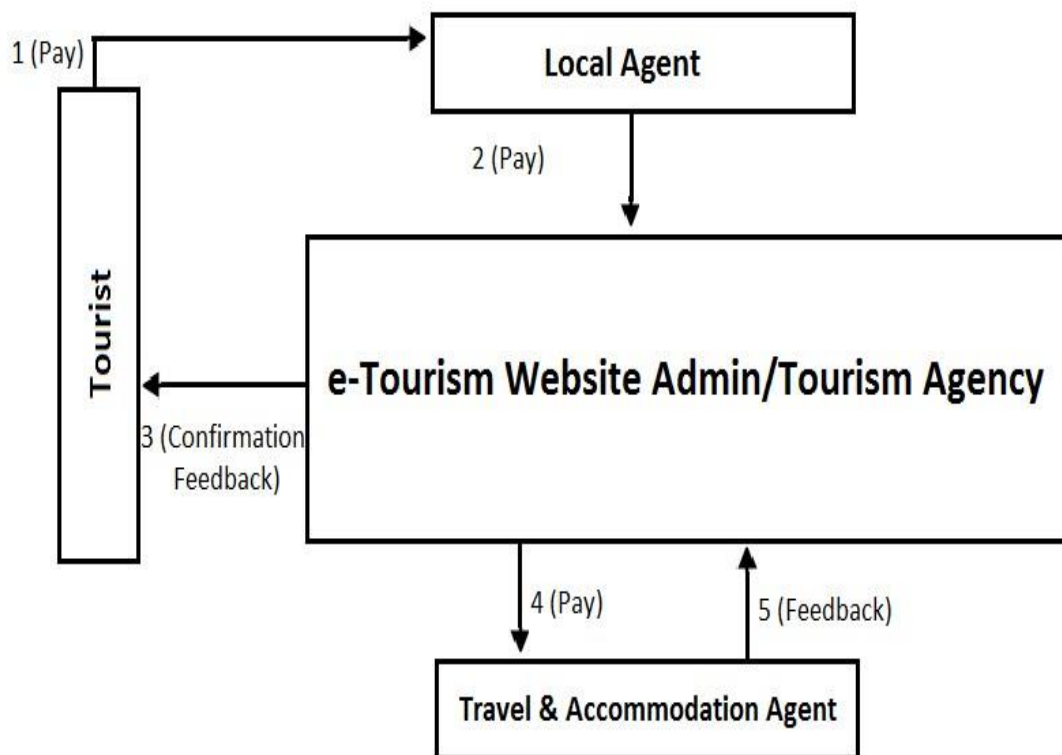


Fig 5.2: Mode of Payment

Steps of Proceeding:

Step-1: Tourist will pay the required payment to the local agent.

Step-2: Local Agent will pay to the tourism agency.

Step-3: After getting the payment tourism agency will confirm the tour by sending a confirmation message to the tourist's e-mail.

Step-4: Travel Agency will pay to the Travel and Accommodation agent for Travel and Accommodation facility.

Step-5: After getting the payment Travel and Accommodation agent will confirm to the tourism agency.

5.4 ERD and DFD

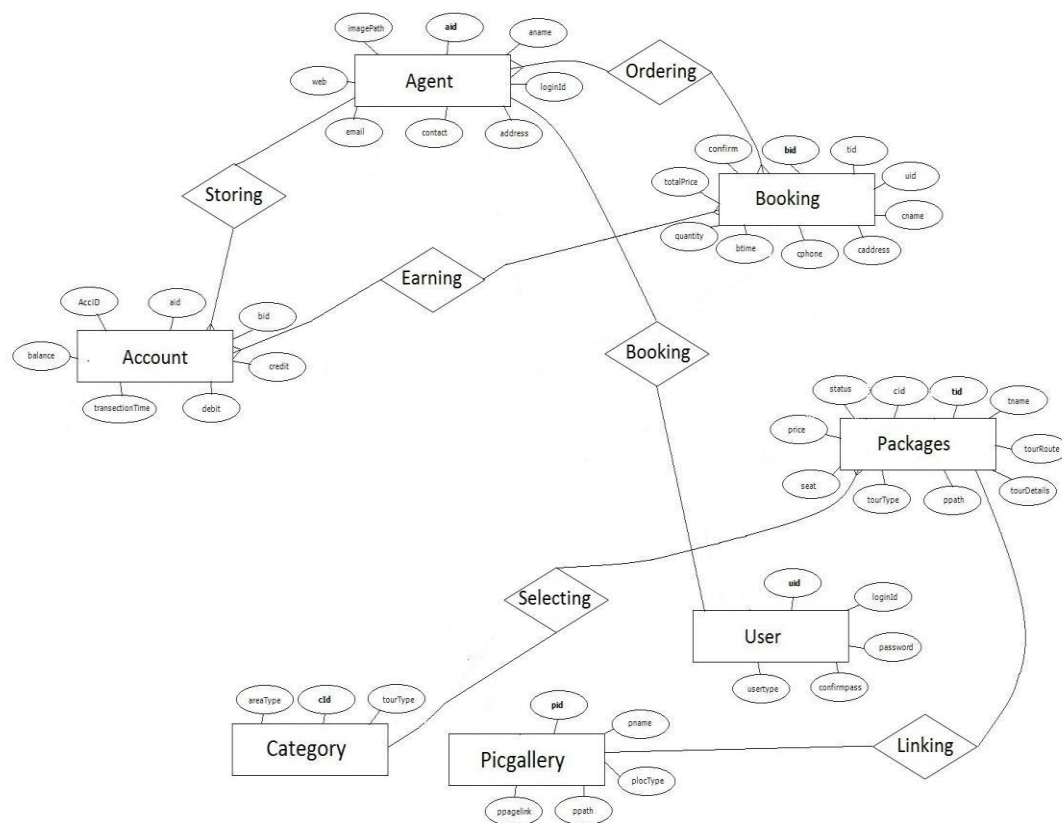


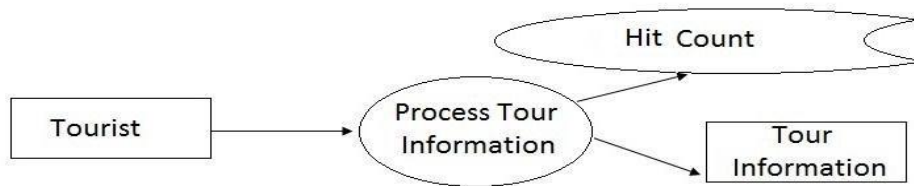
Fig 5.3: ERD of the proposed System

There are many entities in this system among them the following seven are major. They are Agent, Account, Booking, Packages, Picture Gallery, Category and User.

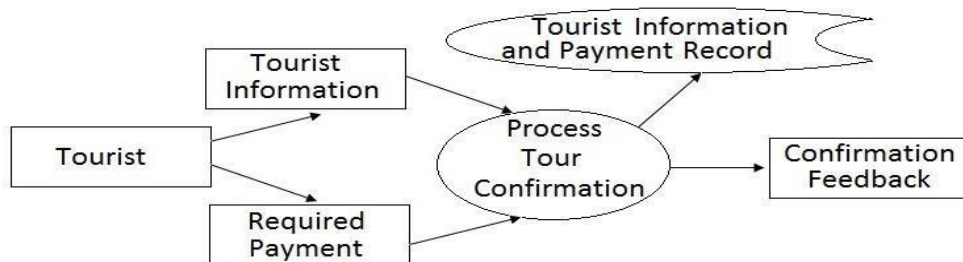
There is one to many relationships from Agent to Account and also from category to packages. There is many to many relationships from Agent to Booking and also from

Booking to Account. There is one to one relationship from Agent to User, Packages to Picture Gallery.

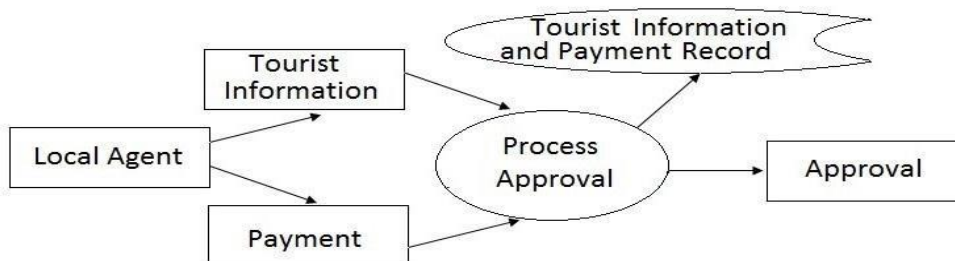
DFD for Tour Information:



DFD for Tour Confirmation:



DFD for Local Agent:



DFD for Travel & Accommodation Confirmation:

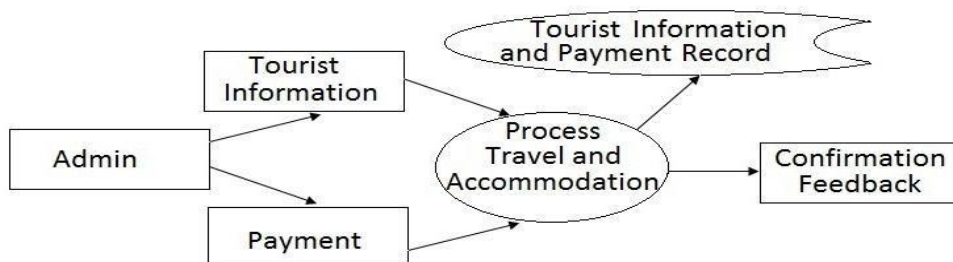


Fig 5.4: DFD of the proposed System

DFD for this system is represented by 4 parts. They are Tour Information, Tour Confirmation, Local Agent and Travel and Accommodation Confirmation.

Part-1: Tourist will get Tour Information after processing of process tour information and Hit Count will store.

Part-2: Tourist will get confirmation feedback after processing tour confirmation with Tourist Information and Required Payment. Tourist Information and Payment Record will store.

Part-3: Local Agent will get approval after processing approval with tourist information and payment. Tourist Information and Payment Record will store.

Part-4: Admin will get confirmation feedback after processing of Travel and Accommodation tourist information and payment. Tourist Information and Payment Record will store.

5.5 Sample Input and Output

Input:

Tourist Information, Required Payment, Agent Information etc.

Output:

Hit Count, Total Bookings, Local Agent Contact Information, Packages and Price details, Tour Plan, Tour Map, Tour Essentials, Special Offer, News and Events, Account details, Customer Feedback, Confirmation Feedback etc.

5.6 Reports

- Number of Visitors in the site (Weekly, Monthly, Yearly) (Hit Count)
- Number of Bookings (Weekly, Monthly, Yearly)
- Local Agent List
- Packages and Price List
- Account Summary

5.7 Conclusions

In this proposed model online possible services, task scenario, mode of payment, ERD and DFD for the proposed system is represented elaborately. There are some inputs for the system like Tourist Information, Payment, Agent Information etc and also some outputs from the system like Hit Count, Total Bookings, Local Agent Contact Information, Packages and Price details, Tour Plan, Tour Map, Tour Essentials, Special Offer, News and Events, Account details, Customer Feedback, Confirmation Feedback etc. Outputs are showed by reports.

CHAPTER 6

Critical Appraisal

6.0 Introduction

In this chapter, Strength of the thesis, Limitations of the thesis, the process of promoting e-Tourism and Challenges to reach in the tourism ambition is described.

Major issues about the above circumstances are also mentioned.

6.1 Strength of the Thesis

- Statistical Analysis on the Visitors Arrival by Purpose of Visit, Number of Foreign Visitors, Foreign Exchange Earnings and Impact of Internet Users on Tourism.
- Most Possible Online Based Services for tourists.
- Sustainable e-Tourism model apposite for the ecosystem of Bangladesh with Important and Implemented factors.
- Comparative study on existing sites and e-Tourism ecosystems of different countries.
- Factors influencing Tourism and e-Tourism industry.

6.2 Limitations

- Analysis on the domestic tourists and earnings of Bangladesh.
- User friendly system.
- Online Based Services.
- Important Factors for an ideal infrastructure and implemented factors in the proposed model.

- Require experiment of proposed model in the ecosystem of Bangladesh.

6.3 Promoting e-Tourism

The processes of promoting e-Tourism are as follows:

- Leaflet, Poster, Banner
- Tourism Fair
- Camping
- Media Advertisement
- Facebook Advertisement
- Website Advertisement
- e-mail Advertisement to the register and collected e-mails
- Mail to your friend/relative option from the tour description
- Tourism related books, magazines, journals, Newsletters etc.

6.4 Challenges

The major challenges regarding e-Tourism in Bangladesh are as follows:

- Long Term Master plan for Tourism industry
- Online Payment Gateway
- Quality of Services with Security
- Proficient Transportation and Accommodation Facility
- Extensive Internet facility all over

- Enhance internet usage for tourism activities
- Private-Public Cooperation
- Proper Monitoring and Maintenance of the tourist spots etc.

6.5 Conclusion

Statistical Analysis on the Visitors Arrival by Purpose of Visit, Number of Foreign Visitors, Foreign Exchange Earnings and Impact of Internet Users, Comparative study on existing sites and e-Tourism ecosystems of different countries, influencing factors are the strength of this thesis. Limitations include Analysis on the domestic tourists and earnings of Bangladesh; require experiment of proposed model in the ecosystem of Bangladesh. Promoting e-Tourism techniques are illustrated briefly. Finally, Challenges to reach in tourism ambition named „Bangladesh Tourism Vision-2020“ are mentioned.

CHAPTER 7

Conclusions and Recommendations

This survey will focus a well organized and balanced infrastructure for the tourism environment of Bangladesh and for the planner to develop tourism industry and to earn more annual revenue. It will also be handy for tourism agency.

The statistical analysis will focus on the situation after switching from manual system, improvement of annual revenue and number of visitors per year in different cases. It will also helpful to find out its impact on GDP and annual revenue of the government. This analysis will also establish a map for future improvement, the process of attracting foreign visitors and to highlight the tourism industry of Bangladesh around the world.

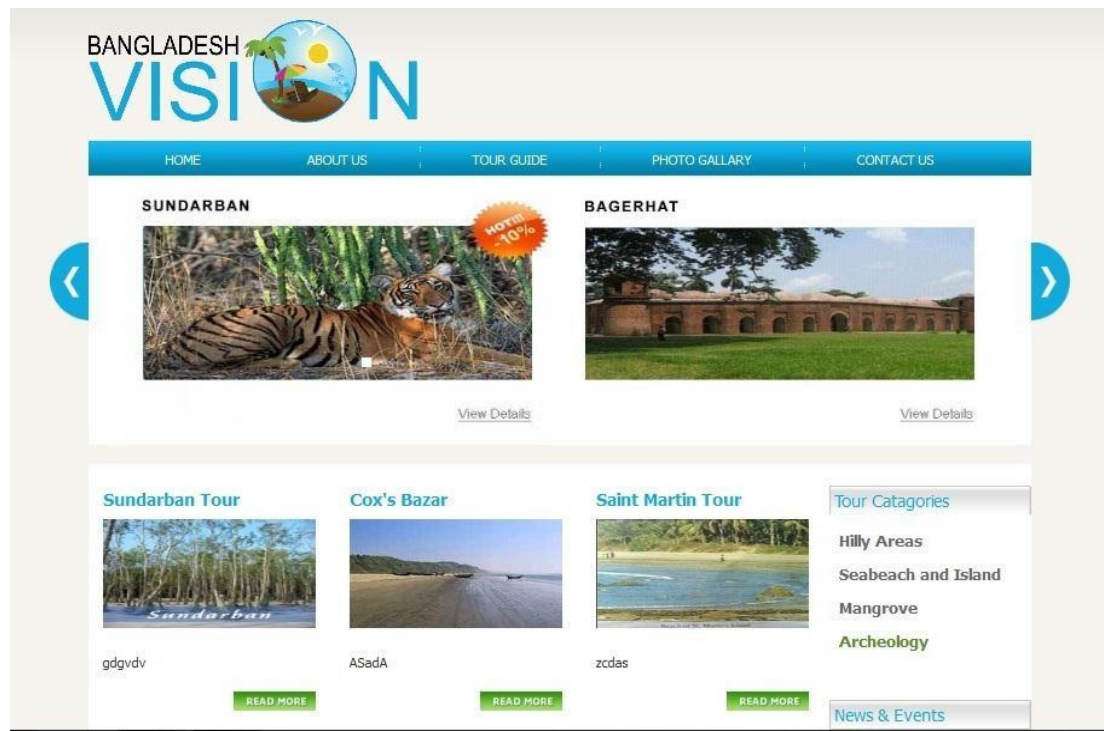
Contribution

- Comparative study on existing systems
- Comparative study on different ecosystems
- Statistical Analysis on Number of Tourists, Foreign Exchange Earnings, Purpose of Visit and Number of Internet Users
- Congregation of most possible online based tourism services
- Proposed e-Tourism Task Scenario
- Proposed Mode of Payment
- Implementation of proposed model by an e-Tourism site **Future Scopes**
- SMS Based Payment and Confirmation system
- Append the system with central Database
- Append with the permitted Online Payment Gateway
- Potential e-Tourism marketing to expand tourism
- Execute as a key aspect to attract foreign tourists and earn more revenues
- All in one site (Booking, Ticketing, Travel, Accommodation, Currency Exchange, Car Rental etc)
- Online reservation system for public users without local agent.
- Establish e-tourism as an advanced initiative of e-commerce.
- Survey on industry feedbacks and benefits

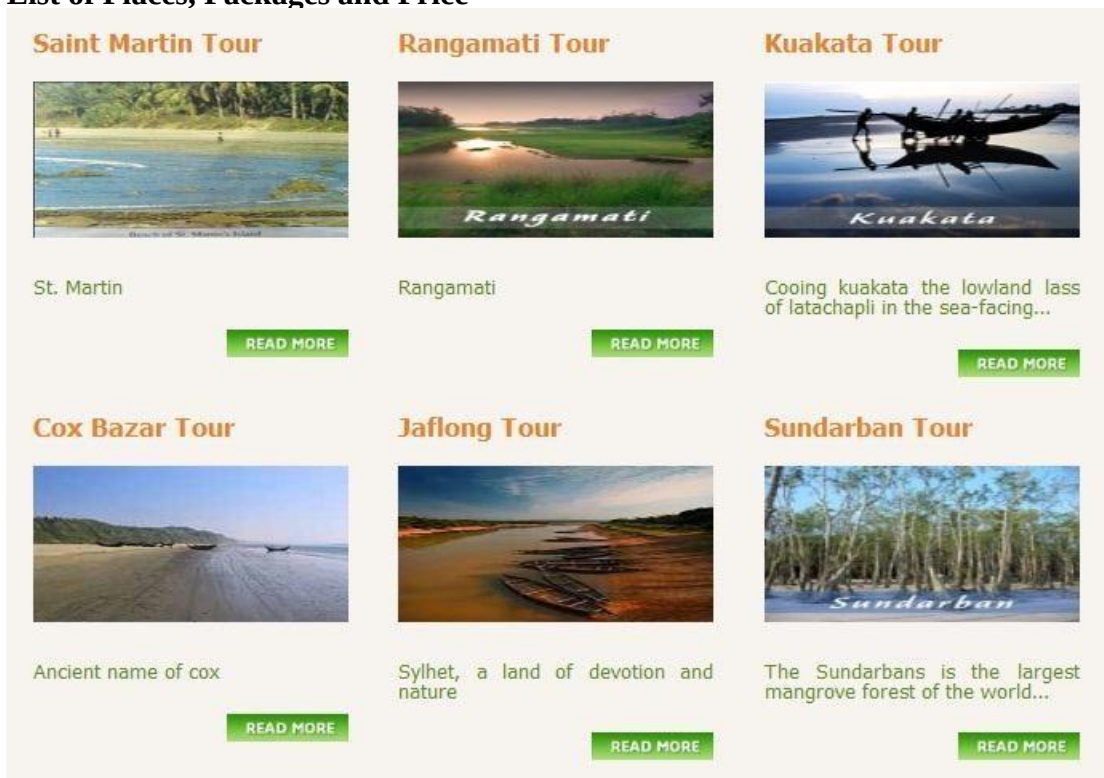
APPENDIX

Snapshots

Home Page of the e-Tourism Site



List of Places, Packages and Price



Admin Panel

Bangladesh Vision

Administration Panel

Welcome : admin

Top Slider Image
Package Picture
Packages
Agent Information
Booking
About Us
Tour Guideline
Photo Gallery
News
Accounts
Change Password
Logout

Welcome to Bangladesh Vision

Administration Panel

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Agent Panel

Bangladesh Vision

Agent Panel

Welcome : masum

Booking
Special Offer
My Accounts
Logout

Welcome to Bangladesh Vision

Agent Panel

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Customer Feedback and Local Agent List

Contact Us

Bangladesh Vision

Purana Paltan, Dhaka-1000, Bangladesh.

Phone :
Fax :
Email :

Name:

Email:

Subject:

Message:

Security Code:

Local Agent Point

Dhaka

Nazmul
Jatrabari, Dhaka
0192222222
nazmulchp@yahoo.com

Chittagong

Karim
Chittagong
01916269827
nazmul@bsdi-bd.org

Sylhet

Rahim
Sylhet
01916269827
nazmul@bsdi-bd.org

Barishal

Jasim
Barishal
01916269827
nazmul@bsdi-bd.org

Khulna

Imam
Khulna
01916269827
nazmul@bsdi-bd.org

Rajshahi

Amin
Rajshahi
01680291990
nazmulchp@yahoo.com

Reports

List of Packages

www.mfnl.com_admin_addPackages.php.pdf - Adobe Reader

File Edit View Document Tools Window Help

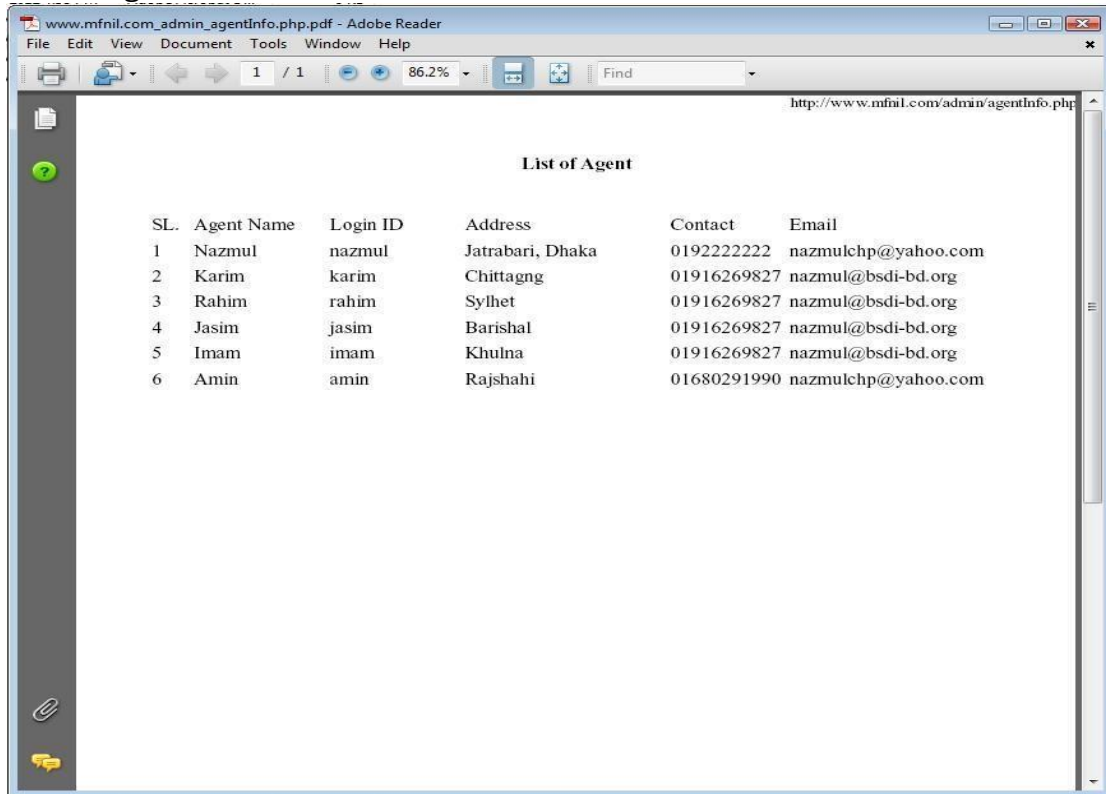
1 / 1 86.2% Find

http://www.mfnl.com/admin/addPackages.php

List of Tour Packages

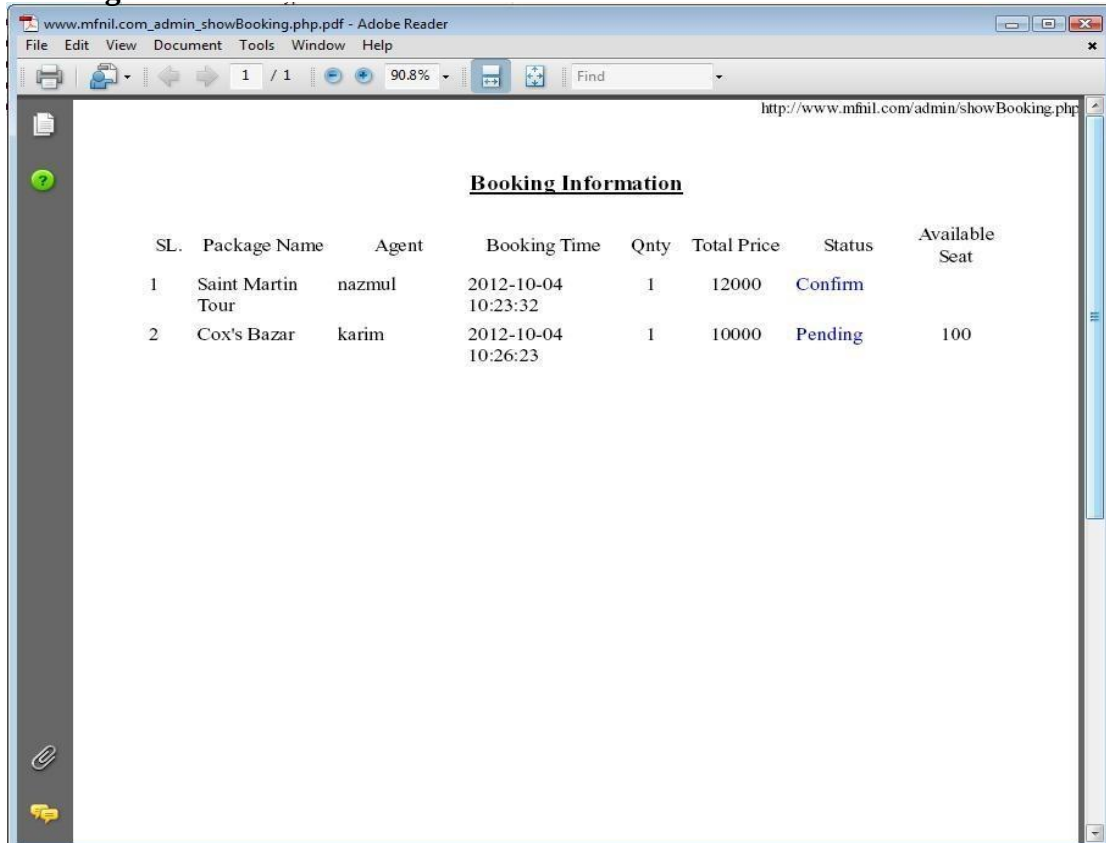
SL.	Tour Name	Tour Route	Duration	Price	Status
1	Saint Martin Tour	Dhaka-Chittagong-Cox Bazar-Saint Martin	4 days 3 night	12000	Active
2	Jaflong Tour	Dhaka-Sylhet-Jaflong	3 days 2 night	6000	Active
3	Kuakata	Dhaka-Barishal-Kuakata	3 days 2 night	10000	Active
4	Sundarban Tour	Dhaka-Khulna-Sundarban	4 days 3 night	12000	Active
5	Rangamati Tour	Dhaka-Chittagong-Rangamati	3 days 2 night	6000	Active
6	Dinajpur Tour	Dhaka-Rangpur-Dinajpur	2 days 1 night	5000	Active
7	Bagerhat Tour	Dhaka-Khulna-Bagerhat	2 days 1 night	5000	Active
8	Paharpur Tour	Dhaka-Bogra-Paharpur	2 days 1 night	5000	Active
9	Cox's Bazar	Dhaka-Chittagong-Cox's Bazar	4 days 3 night	10000	Active

List of Agents



SL.	Agent Name	Login ID	Address	Contact	Email
1	Nazmul	nazmul	Jatrabari, Dhaka	0192222222	nazmulchp@yahoo.com
2	Karim	karim	Chittagng	01916269827	nazmul@bsdi-bd.org
3	Rahim	rahim	Sylhet	01916269827	nazmul@bsdi-bd.org
4	Jasim	jasim	Barishal	01916269827	nazmul@bsdi-bd.org
5	Imam	imam	Khulna	01916269827	nazmul@bsdi-bd.org
6	Amin	amin	Rajshahi	01680291990	nazmulchp@yahoo.com

Booking Information



SL.	Package Name	Agent	Booking Time	Qnty	Total Price	Status	Available Seat
1	Saint Martin Tour	nazmul	2012-10-04 10:23:32	1	12000	Confirm	
2	Cox's Bazar	karim	2012-10-04 10:26:23	1	10000	Pending	100

Agent Account

www.mfnl.com_admin_accounts.php.pdf - Adobe Reader

File Edit View Document Tools Window Help

1 / 1 86.2% Find

http://www.mfnl.com/admin/accounts.php

Agent Accounts

SL.	Account ID	Account Name	Current Balance
1	10	Nazmul	-81,000.00
2	11	Karim	0.00
3	12	Rahim	0.00
4	13	Jasim	0.00
5	14	Imam	0.00
6	15	Amin	0.00

Individual Agent Account

www.mfnl.com_admin_indiAccounts.php_aid=10.pdf - Adobe Reader

File Edit View Document Tools Window Help

1 / 1 88.7% Find

http://www.mfnl.com/admin/indiAccounts.php?aid=10

SL.	Record	Date	Credit	Debit	Balance
1	INV-1	2012-10-02 14:50:05	0.00	0.00	0.00 Tk.
2	INV-2	2012-10-02 14:57:16	0.00	24,000.00	-24,000.00 Tk.
3	PAYMENT-3	2012-10-04 00:17:09	50,000.00	0.00	26,000.00 Tk.
4	INV-4	2012-10-04 00:22:47	0.00	50,000.00	-24,000.00 Tk.
5	INV-10	2012-10-04 12:18:40	0.00	20,000.00	-44,000.00 Tk.
6	INV-11	2012-10-04 16:07:28	0.00	5,000.00	-49,000.00 Tk.
7	INV-12	2012-10-04 16:19:01	0.00	20,000.00	-69,000.00 Tk.
8	INV-13	2012-10-04 16:25:12	0.00	12,000.00	-81,000.00 Tk.

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- [2] www.wttc.org/
- [3] www.e-tourismfrontiers.com/
- [4] <http://etourism.unctad.org/>
- [5] www.ioeti.org/
- [6] www.ifitt.org/
- [7] www.wttc.org/
- [8] www.unwto.org/
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- [10] www.tigweb.org/

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