

BDBIRDS (Bangladeshi Birds)



DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING.
BANGLADESH UNIVERSITY OF BUSINESS AND TECHNOLOGY.
(BUBT)
MIRPUR-2, DHAKA.

April, 2019

BDBIRDS (Bangladeshi Birds)

A project

Submitted to the Department of Computer Science and Engineering

Bangladesh University of Business and Technology (BUBT), Dhaka

in partial fulfillment of requirements

for the full degree

of

BACHELOR OF SCIENCE

IN

COMPUTER SCIENCE AND ENGINEERING.

SUBMITTED BY-

Al-Amin

ID-14153203020

&

Tamanna Halim Shanta

ID-14153203050

&

Md. Firoz Kamal

ID-14153203036

SUPERVISED BY-

Md. Ashraful Islam

Lecturer,

Department of Computer Science and Engineering (CSE)

Bangladesh University of Business and Technology (BUBT)

Mirpur-2, Dhaka-1216, Bangladesh.

ABSTRACT

Electronic commerce, commonly known as e-commerce which consists of the buying and selling of products or services over electronic systems such as the internet and other computer networks. Electronic commerce is rapidly growing as an impressive manifestation of globalization.

This is a web-based e-commerce project which was developed for BDBIRDS (Bangladeshi Birds). In this world of growing technologies everything has been e-commerce web-based computerized. In this situation we are developed e-commerce web-based BDBIRDS (Bangladeshi Birds). We understand the scope of this project is to design and develop a professional e-commerce website for interested in keeping the bird. In this site anyone see the Bangladeshi birds and buy on the online. Otherwise Bangladesh is full of natural gifts. The gifts are: flower, birds, forest, river, climate, fruit, jute, tea, fertile clay etc. All of them, BDBIRDS (Bangladeshi Birds) is our topic.

DECLARATION

We hereby declare that the project entitled Online e-commerce based website “BDBIRDS (Bangladeshi Birds)” submitted in partial fulfillment by us for the degree B.Sc. Engineering in Computer Science and Engineering in the faculty of Computer Science and Engineering of Bangladesh University of Business and Technology (BUBT) under the guidance of our supervision of Md. Ashraful Islam, Lecturer, department of Computer Science and Engineering is our own work and it contains no material which has been accepted for the award to the candidates of any other disciplines expect few references which is taken from various books and authors to enrich our knowledge about the topic of our project.

Al-Amin
ID: 14153203020
Intake: 21
Section: 01

Tamanna Halim Shanta
ID: 14153203050
Intake: 21
Section: 01

Md. Firoz Kamal
ID: 14153203036
Intake: 21
Section: 01

CERTIFICATE

TO WHOM IT MAY CONCERN

That is to certify that Al-Amin, Tamanna Halim Shanta and Md. Firoz Kamal students of B.Sc. in CSE has completed their project work titled “BDBIRDS (Bangladeshi Birds)” satisfactorily in partial fulfillment for the requirements of B.Sc. in Computer Science and Engineering from Bangladesh University of Business and Technology in the year 11 March, 2019.

Project Supervisor

Md. Ashraful Islam

Lecturer,
Department of CSE,
Bangladesh University of Business and Technology (BUBT).
Mirpur-2, Dhaka-1216, Bangladesh

Chairman:

Prof. Dr. M. Ameer Ali

Professor and Chairman

Department of Computer Science and Engineering (CSE)

Bangladesh University of Business and Technology (BUBT)

Mirpur-2, Dhaka-1216, Bangladesh

DEDICATION

Dedicated to our parents for all their love and inspiration.

ACKNOWLEDGEMENT

“Task successful” makes everyone happy. But the happiness will be gold without glitter if we didn’t state the persons who have supported us to make it a success. Success will be crowned to people who made it a reality but the people whose constant guidance and encouragement made it possible will be crowned first on the eve of success.

Praise to Allah, the most magnificent and the most merciful, without whose patronage and blessing this project would not have been successfully completed. He gave us zeal, confidence, power of determination and courage and vanquished all the stumbling hardness that we faced on the way.

We express our gratitude to the help of our supervisor Md. Ashraful Islam, for his constant supervision, guidance and co-operation throughout the project and for giving constant motivation and valuable help through the project work. We also would like to thank to our honorable chairman Prof. Dr. M. Ameer Ali, for his support and giving us support and giving us permission to use the computer lab whenever we needed.

We extend our sincere gratitude to our parents who have encouraged us with their blessings to do this project successfully. Finally we would like to thank to all our friends, all the teaching and non-teaching staff members of the CSE Department, for all the timely help, ideas and encouragement which helped throughout in the completion of project.

With Best Regards

Al-Amin

Tamanna Halim shanta

Md.Firoz Kamal

APPROVAL

This Project Report Submitted by Al-Amin bearing ID No.14153203020, Tamanna Halim Shanta bearing ID No.14153203050 and Md. Firoz Kamal bearing ID No.14153203036 in partial fulfillment of Project/Thesis,CSE-498 B.Sc. in Computer Science and Engineering from Bangladesh University of Business and Technology in the year March, 2019 under the supervision of Md. Ashraful Islam, Lecturer, Department of Computer Science and Engineering has been accepted as satisfactory for the partial fulfillment for the requirements of B.Sc. in Computer Science and Engineering and approved as to its style and contents.

Project Supervisor

Md. Ashraful Islam

Lecturer,

Department of CSE,

Bangladesh University of Business and Technology (BUBT).

Mirpur-2, Dhaka-1216

Chairman

Prof. Dr. M. Ameer Ali

Professor and Chairman

Department of Computer Science and Engineering (CSE)

Bangladesh University of Business and Technology (BUBT)

Mirpur-2, Dhaka-1216, Bangladesh

COPYRIGHT

© Copyright by

Al-Amin (14153203020), Tamanna Halim Shanta (1415302050)

and

Md. Firoz kamal (14153203036)

All Right Reserved

ABBREVIATIONS

Synonyms and Acronyms	Descriptions
RAM	Random Access Memory
HTML	Hypertext Markup Language
CSS	Cascading Style Sheet
AJAX	Asynchronous JavaScript and XML
PHP	Hypertext processor
ER Diagram	Entity Relationship Diagram
DFD	Data Flow Diagram
XML	Extensible Markup Language
DBMS	Database Management System
SDLC	Software Development Life Cycle
GUI	Graphical User Interface
RDBMS	Relational Database Management System
IDE	Integrated Development
CLR	Common Language Runtime

Table of Contents

1: INTRODUCTION	1
1.1 Introduction	1
1.2 Motivation	3
1.3 Objectives	4
1.4 Contribution	5
1.4.1 Financial Services	5
1.4.2 Live Birds Display	5
1.4.3 Contingency Planning	5
1.4.4 Technical	5
1.5 Scope	5
1.5.0.1 For Customer	6
1.6 Organization of Project Report	6
1.6.1 Literature Review	6
1.6.2 System Analysis and Requirement	6
1.6.3 Methodology	7
1.6.4 Project Design	7
1.6.5 Development	7
1.6.6 User Manual	7
1.7 Conclusion	7
2: LITERATURE-REVIEW	8
2.1 Introduction	8
2.2 Intend Audience	8
2.3 Background	8

2.3.1	HTML (Hypertext Markup Language)	8
2.3.2	PHP (Hypertext Preprocessor)	9
2.3.3	CSS (Cascading Style Sheets)	10
2.3.4	Bootstrap	10
2.3.5	Java Script	11
2.3.6	XAMPP	11
2.3.7	JQuery	12
2.3.8	PHPMyAdmin Server	12
2.4	Supporting Literature	13
2.4.1	Purpose	13
2.4.2	Convenience	14
2.4.3	Time Saving	14
2.4.4	www.birdweb.org	14
2.4.5	www.indianbirds.	15
2.4.6	www.allaboutbirds.org	15
2.5	Scope	16
2.6	Project Goal	16
2.6.1	Avoid Stock-Outs	16
2.6.2	Maximize Profit Margins	16
2.6.3	Log-in and Access Restriction	17
2.6.4	Marketing and Customer Relation	17
2.6.5	Notification	17
2.6.6	Strategic Benefits	17
2.6.7	Disadvantage of Online Judge	17
2.7	Contribution	17
2.8	Conclusion	17
3:	SYSTEM ANALYSIS AND REQUIREMENT	18
3.1	Introduction	18
3.2	System analysis	18
3.3	Existing Systems	18

3.4	Information Gathering	19
3.5	Proposed System	19
3.5.1	Additional Features	20
3.5.1.1	Ubiquity	20
3.5.1.2	EMAIL A FRIEND Button	20
3.5.1.3	Quality of Image	21
3.5.1.4	Interactivity	21
3.5.1.5	Personalization	21
3.5.1.6	Information Density	22
3.6	Requirement Analysis	22
3.7	System Analysis	23
3.7.1	System Requirement	23
3.7.1.1	Non Functional Requirement	23
3.7.1.2	Functional Requirement	25
3.8	Feasibility Study	25
3.8.1	Technical Feasibility	26
3.8.2	Operational Feasibility	27
3.8.3	Economic Feasibility	27
3.9	Conclusion	28
4:	METHODOLOGY	29
4.1	Introduction	29
4.2	Methodology	29
4.2.1	B2C (Business-to-Consumer)	30
4.2.1.1	Consumer Shopping Procedure	30
4.2.1.2	Benefits	31
4.2.1.3	Limitations	31
4.3	Analysis	31
4.4	Design	32
4.5	Design Integration	32
4.6	Programming and Database Creation	32

4.7	Payment Gateway Integration	32
4.8	Systems integration	32
4.9	Quality Check	33
4.10	Importing Your Products	33
4.11	Website Hosted on a live web server	33
4.12	Search Engine Optimization	33
4.13	Function model of our website	33
4.13.1	Vendor Registration	33
4.13.2	Customer Registration	34
4.13.3	Admin Registration	34
4.13.4	Login	34
4.14	Developing the Report Generation and Analytically Functionalists	34
4.15	Use of Agile	34
4.15.1	Exploration	35
4.15.2	Planning	36
4.15.3	Iteration to the first release	36
4.15.4	Productionizing	37
4.15.5	Maintenance	37
4.15.6	Track Monitor	37
4.16	Conclusion	37
5:	PROJECT DESIGN	38
5.1	Introduction	38
5.2	Data Flow Diagram	38
5.2.1	DFD Component	39
5.2.2	Types of DFD	40
5.3	Use Case Diagram	40
5.3.0.1	Purpose of Use Case Diagram	42
5.3.1	Admin activities	42
5.3.2	Customer activities	43
5.4	Class Diagram	43

5.4.1	Purpose of Class Diagrams	45
5.5	Activity Diagram	45
5.5.1	Purpose of Activity Diagrams	45
5.6	Database Design	49
5.6.1	Relational DBMS (RDBMS)	49
5.6.2	Features of RDBMS	50
5.6.3	Advantage of RDBMS	51
5.6.4	Disadvantage of RDBMS	51
5.7	Entity Relationship Diagram (ER-Diagram)	51
5.7.1	Entity	52
5.7.2	Weak entity	52
5.7.3	Attribute	52
5.7.4	Multi valued attribute	52
5.7.5	Mapping Cardinality	52
5.7.5.1	One-to-One	53
5.7.5.2	One-to-Many	53
5.7.5.3	Many-to-One	53
5.7.5.4	Many-to-Many	54
5.7.6	ER Diagram of BDBIRDS	54
5.8	Database Design	54
5.8.1	Comparison of Primary Keys to Foreign Keys	55
5.8.2	Primary Key	55
5.8.3	Foreign Key	55
5.8.4	Admin Profile	55
5.8.5	Customer Profile	55
5.8.6	Category Of BDBIRDS	56
5.8.7	Product details Of BDBIRDS	56
5.8.8	Order details Of BDBIRDS	57
5.8.9	Order Quantity details Of BDBIRDS	57
5.8.10	Shipping Address details Of BDBIRDS	58

5.8.11	Customer Review Of BDBIRDS	59
5.9	Waterfall Method	59
5.9.1	Phase I: Requirements	60
5.9.2	Phase II: Analysis	61
5.9.3	Phase III: Design	61
5.9.4	Phase IV: Coding	61
5.9.5	Phase V: Testing	61
5.9.6	Phase VI: Acceptance	61
5.9.6.1	Waterfall Model Advantages	62
5.9.6.2	Waterfall Model Disadvantages	62
5.10	Conclusion	62
6:	IMPLEMENTATION	63
6.1	Introduction	63
6.2	Starting the Implementation cycle	63
6.2.0.1	Planning and Requirement Engineering	64
6.2.0.2	Design and Development	64
6.2.0.3	Testing	64
6.2.0.4	Evaluation	65
6.3	Building a proof of concept	65
6.4	Developing the solution components	65
6.5	Developing the testing tools and tests	66
6.6	Building the solution	66
6.7	Closing the Developing Phase	66
6.8	Conclusion	66
6.9	Front End	66
6.9.1	Front End Of Our BDBDIRDS	67
6.9.2	Home Page	67
6.9.3	About BDBirds Page	68
6.9.4	Customer Registration Page	68
6.9.5	Customer login Page	69

6.9.6	Admin login Page	70
6.9.7	All Birds Page	71
6.9.8	Birds Category Page	71
6.10	Back End	71
6.10.1	Add Admin Page	72
6.10.2	Product page	73
6.10.3	Add Product page	73
6.10.4	Birds Categories page	74
6.10.5	Add Birds Categories page	74
6.11	Implementation and Result Analysis	74
6.12	System Hierarchy	75
6.12.1	Admin Hierarchy	75
6.12.2	Customer Hierarchy	76
7:	USER MANUAL	77
7.1	Introduction	77
7.2	System Requirements	77
7.2.1	Hardware requirements	77
7.2.2	Hardware Requirements	78
7.2.3	Software requirements	78
7.3	User Interfaces	79
8:	CONCLUSION	80
8.0.1	Limitations	80
8.0.2	Future Enhancement	81
9:	Appendix	82
9.1	Xampp server	82
9.2	Sublime Text Format	83
9.3	HTML Format	83
9.4	Adobe Photoshop Format	84
9.5	PHP Format	84
9.6	Bootstrap 4 Format	85
9.7	References	85

List of Figure

Figure 2.3.1: HTML Syntax.....	09
Figure 2.3.2: PHP Syntax.....	10
Figure 2.3.3: CSS Syntax.....	10
Figure 2.4.4: BirdWeb Website.....	14
Figure 2.4.5: Indianbirds Website.....	15
Figure 2.4.5: Allaboutbirds Website.....	16
Figure 3.5.1.1: Ubiquity.....	20
Figure 3.5.1.2: ‘EMAIL A FRIEND’ Button.....	20
Figure 3.5.1.3: Quality of Image.....	21
Figure 3.5.1.4: Interactivity.....	21
Figure 3.5.1.5: Personalization.....	21
Figure 3.5.1.6: Information Density.....	22
Figure 3.7.1.1: Non Functional Requirement.....	24
Figure 4.2.1:- B2C (Business-to-Consumer).....	30
Figure 4.15: The Agile Development Methodology.....	35
Figure 5.2: Data Flow Diagram.....	39
Figure 5.2.1: DFD Component.....	39
Figure 5.2.2.0: Level 0 DFD of BDBIRDS.....	40
Figure 5.2.2.1: Level 1 DFD of BDBIRDS.....	40
Figure 5.3 : Use Case Diagram.....	41
Figure 5.3.1: Admin Use Case Diagrams.....	42
Figure 5.3.2: Customer Use Case Diagrams.....	43
Figure 5.4: Class Diagrams.....	44

Figure 5.5.1.0: Customer Registration Activity Diagram.....	46
Figure 5.5.1.1: Customer Registration Successful Activity Diagram.....	47
Figure 5.5.1.2: Admin Activity Diagram.....	48
Figure 5.5.1.3: Customer Activity Diagram.....	49
Figure 5.6: The General Structure of a Relational Database.....	50
Figure 5.7.5.1: One-to-One.....	53
Figure 5.7.5.2: One-to-Many.....	53
Figure 5.7.5.3: Many-to-One.....	53
Figure 5.7.5.4: Many-to-Many.....	54
Figure 5.7.6: ER diagram of BDBIRDS project.....	54
Figure 5.9: The Sequential Shapes in Waterfall Model.....	60
Figure 6.2: The Implementation Life Cycle of BDBIRDS.....	63
Figure 6.9.2: The Home Page of BDBIRDS.....	67
Figure 6.9.3: The About Page of BDBIRDS.....	68
Figure 3.9.4: Customer Registration Page of BDBIRDS.....	68
Figure 6.9.5: Customer login of BDBIRDS.....	69
Figure 6.9.6: Admin login of BDBIRDS.....	70
Figure 6.9.7: All Birds Page of BDBIRDS.....	71
Figure 6.9.8: Birds Category Page of BDBIRDS.....	71
Figure 6.10.2: Admin Page of BDBIRDS.....	72
Figure 6.10.3: Add Product Page of BDBIRDS.....	73
Figure 6.10.4: Birds Category Page of BDBIRDS.....	73
Figure 6.10.5: Add Birds Category Page of BDBIRDS.....	74
Figure 6.12.1: Admin Hierarchy of BDBIRDS project.....	75
Figure 6.12.2: Customer Hierarchy of BDBIRDS project.....	76

List of Table

Table 5.8.4: Admin Information of BDBIRDS.....	55
Table 5.8.5: Customer Information of BDBIRDS.....	56
Table 5.8.6: Category of BDBIRDS.....	56
Table 5.8.7: BDBIRDS product details.....	57
Table 5.8.8: BDBIRDS order details.....	57
Table 5.8.9: BDBIRDS order quantity details.....	58
Table 5.8.10: BDBIRDS shipping address details.....	58
Table 5.8.11: BDBIRDS Customer Review.....	59

1 INTRODUCTION

1.1 *Introduction*

Since the twentieth century, the role of the e-commerce based website has become highly important though controversial. It is used throughout the world and has become the most popular mode of transport in the more developed countries.

In this world of growing technologies everything has been e-commerce web-based computerized. In this situation we are developed web-based (BDBIRDS) Bangladeshi Birds. We understand the scope of this project is to design and develop a professional e-commerce website for interested in keeping the bird. In this site anyone see the Bangladeshi birds and buy on the online. In this world of growing technologies everything has been e-commerce web-based computerized. In this situation we are developed e-commerce web-based (Bdbirds) Bangladeshi Birds. We understand the scope of this project is to design and develop a professional e-commerce website for interested in keeping the bird. In this site anyone see the Bangladeshi birds and buy on the online.

Bangladesh is full of natural gifts. The gifts are: flower, birds, forest, river, climate, fruit, jute, tea, fertile clay etc. Bangladesh is a land of beauty and a great variety of birds. Birds have added to its beauty more. We sleep at night and rise early in the morning hearing the sweet song of different birds. There are different color, size and habit birds in our country. On their habit and activities they are also classified as teasing birds, tailor birds, singing birds, birds of prey, talking birds, domestic birds, migratory birds, nocturnal birds etc.

Our dear Bangladesh is a beautiful country. It is a land of forests and trees, hills and vales, rivers, marshes and canals, wide open meadows. Bangladesh is a favorite homeland of a great variety of birds. The names of all kinds of birds are not even known to us. It has got a moderate climate neither too hot nor too cold. So this land is a happy abode of different kinds of birds.

Birds have increased she beauty of our country. We sleep at night and ride early in the morning hearing the sweet song of different birds. Besides, it has lots of fruits, fishes, insects, trees, bushes, farests, pikers and marshy rivers.

There are many varieties of birds in Bangladesh. Almost have 607 types birds. They are different in color, size, and habit. Some are white, some are black some are green and some are red. Some are small and some are big. Some are beautiful and some are ugly. Some are wild and some are domestic. Some have a sweet voice and some have a harsh voice. Their food habits are also different.

The biers which are capable of singing are called singing birds. The Doel, the shyama , the koel, the Krakatau, the magpie robin and the cuckoo, the Mayan, the Chandana, the cockatoo and the martin are are the singing birds. The cuckoo is the most popular singing bird in our country. It is called the harbinger of spring. It pours out its sweet notes hiding behind the leaves of trees.

The magpie robin is small but pretty. It sings and raises its tail at the same time. The Doel is our national bird. Its sweet whistle attracts us greatly. People tame them for their sweet voice and they can talk like human beings if they are trained.

The birds which are capable of talking like men are called talking birds. The Moyna, the Shalik, the Shyma, the Chandana and the parrot are talking birds. They can imitate the voice of a man when they are trained. Parrot can imitate the voice of a man. So it is sometimes put in the cage and taught to speak the human language and utter slogan. The Shalik and the many can also be taught to talk like human beings.

There are many game birds in our country. They are famous for their tasty flesh. The partridge, the dove the pigeon, the snipe, the bitter, the heron, the teal, and the pan kauri are most well-known game birds. They are famous for their flesh.

Crows and kites are teasing birds. The crow is a very common bird in Bangladesh. It is very clever. It steals away the food and other small things from our kitchen and from the hands of the little babies. It looks ugly. Yet it is useful. It feeds on dead animals and dirty things. It has a harsh voice. The kite also steals away chickens. Fish and pieces of flesh.

The vulture and the hawk are birds of prey. They live on flesh and fish. These birds have keen eyes and sharp nails. The birds which live in watery place are called water birds. The swana, the duck , the heron, the pankurai are the water birds. There are some birds that build their nests with great skill. We wonder at their work. They are called tailor birds. The swallow, the tuntuni and the babui are tailor birds.

There are some birds that come out at night. They are called night birds. The owl and the bat are of this kind. These birds do not come out in broad daylight. We hear the owl prowl at night. It is harmless. The bat feeds on fruits. It flies at night.

Many birds come from foreign land in our country during autumn and winter. They are also famous for their flesh. They increase the natural beauty of our country for the time being. The pigeon, the hen, the cock and the duck are domestic birds. They provide us with flesh and eggs. Many families in our country make poultry farm and earn a lot of money.

Birds are our natural wealth. They are helpful and use full to us in many always. They do many good to us. Birds eat many dirty things and keep the environment clear. Therefore, we should no kill birds at random and we should take proper care of them.

The birds are very useful to us. Birds are our natural wealth. They are helpful and useful to us in many ways. We should not kill bird at random. We should take proper care of them.

1.2 Motivation

Since the twentieth century, the role of the e-commerce based website has become highly important though controversy. In this world of growing technologies everything has been e-commerce web-based.

Bangladesh is full of natural gifts of Almighty Allah. The gifts are: flowers, birds, forest, river, climate, fruits, jute, tea etc. Bangladesh is a land of beauty and birds have added more to its beauty. But today's to the disappearance of native birds.

The project aims to develop a system is for any type of document but nothing particular. This system is revolutionary to document processing. The uniqueness is being web based and for general-purpose. Being web based makes this system available everywhere through internet. Being general purpose means system can be used for all type of documents and for most organizations

Birds culture needs to be retained. In this situation we have developed web-based project named (BDBIRDS) Bangladeshi Birds. The aim of Online Birds to increase the interaction between admin and customers. Here is some reasons we motivated to develop this project:

- Bangladesh is a small South-Asian country. Its area is 1,47,570 sq/km. , Flowers and Fruits have made our land marvelous and beautiful. have added more to its beauty. Bangladesh has 607 kinds of birds.
- E-commerce is the activity of buying or selling of services online over the Internet.
- Boston Computer Exchange was the world's first e-commerce company in the year 1980.
- Modern electronic commerce typically uses the World Wide Web (WWW).
- Our project is formulated based on e-commerce.
- A website is required for all BDBIRDS.
- A few web-based solutions exists with high price. This attempt is feasible for customer by buying birds.
- Ensuring a quality web-based solution for BDBIRDS.
- The system is to shorten the time of retrieving Birds when required.
- The system is user friendly.

1.3 Objectives

E-commerce has grown tremendously worldwide and also grown in Bangladesh. The impact of this growth is also influencing societies and businesses.

Birds are really a wonderful creation of God. They maintain a balance of healthy environment in nature. They contribute much to add charm and beauty to our country. They are friends to the friendless and source of living to the unemployed. So, we should all be kind to these birds and make our land a happy and sound homeland for them. Our small efforts to preserve the beauty of the birds.

The purpose of this document is to define the requirements of Online shopping system. This supplementary specification lists the requirements that are not rapidly capture” in the use case model. Supplementary specification an” the use case model capture a complete set of requirement of the system.

The BDBIRDS System can be entered using a username and password only register customer. It is accessible either by an administrator or receptionist. Only administrator can add Bird into the database. The Bird can be retrieved easily. The interface is very user-friendly. Include every Bird name, nature and short description. Anyone see the Birds. The objectives of this project are:

1. The following are the Objective of this project :
2. All BDBIRDS are include by category wised .
3. Anyone entering the site can see the available birds.
4. Only registered users can buy the birds through an easy-to-use checkout.
5. Search engine optimized.
6. An integrated blog or articles section for each bird.
7. An integrated blog or articles section of each bird.
8. Multiple payment options (Credit card, PayPal, PO, Terms, etc.)
9. To create an application which is able to give the accurate information of all BDBIRDS.
10. This software helps the new Pets lover to know the fare known BDBIRDS
11. To create an application which is able to give the accurate information of all BDBIRDS.
12. Responsive web design for Mobile, Tablet Desktop.

Admin Control System

1. Admin can add BIRDS, Nature of BDBIRDS, Edit from manage panel, and all information can add or remove.
2. Admin can add fare cost Birds categories wise, control all information and website.

1.4 Contribution

In here our contribution is we analyze the birds recording to the online of our system analysis financial information about birds (Financial Services), bird categories wise details viewing into online for the internet user, Contingency Planning, Technical etc. For discuss about items:

1.4.1 Financial Services

Will be able to budget for asset procurement, depreciate assets over time, and prepare complete tax documents.

1.4.2 Live Birds Display

Birds details viewing into online for the customers before the customers goes to bought a bird.

1.4.3 Contingency Planning

Personnel will be able to develop recovery plans for mainframe and office assets contained within the Car showroom Management System based on the assets relative importance.

1.4.4 Technical

Personnel will be able to resolve problems more quickly with the information contained within the Car showroom Management System, because they will have a listing of the assets contained within a location detail and any support or maintenance activities associated on the asset.

1.5 Scope

The Online BDBIRDS(Bangladeshi Birds) discipline encompasses all system and data network elements from the mainframe through the server level to the PC or end component throughout the enterprise. All mainframe and data network based hardware and software assets must be identified and entered into the Online BDBIRDS (Bangladeshi Birds) Showroom. Any changes to these environments must be reflected in the BDBIRDS (Bangladeshi Birds) showroom Management System. Financial and technical product information must be available through the Online BDBIRDS(Bangladeshi Birds) Showroom, as needed to support the functional responsibilities of personnel within the finance and contracts of management departments.

Following are the scope of the developed systems:

1.5.0.1 For Customer

Online registration: Customer have to register to buy product online.

View Product: Customer can view product according to category, manufacturer and latest product. Select the items to cart, also can delete from cart before final submission, he can also view product details, shipping info and price that means all in invoice.

Shipping Information: Customer have to give the product delivery location.

Payment Method: Customer can select the payment method what is easy for him for payment the cost.

For admin: Category: admin can add category, view, publish, unpublished, edit and delete category.

Manufacturer: admin can add manufacturer, view, publish, unpublished, edit manufacturer and delete manufacturer.

Product: admin can add product, view, publish, unpublished, edit manufacturer and delete product.

Product delivery status: Admin can update sold product status. Benefits from admin view

Following are the benefit from the administrative view

1. Easy to manage the whole system
2. Time consuming and give better services
3. Helps to efficient management of the company
4. Admin can publish or unpublish the category as a result it will not show from customer end for those product category not available, and published the product those available.
5. Same application can be used for different online shopping purpose.

1.6 Organization of Project Report

1.6.1 Literature Review

This chapter were providing the theoretical background which is related to the project development and make reference to existence of other systems. In this chapter we will be discuss software and programming language. The sources are refer from the book, articles, journals and also sources from internet.

1.6.2 System Analysis and Requirement

This project is a combination of desktop based and web based so we have used technologies and programming language for the development. System analysis and design deal with planning the development of information systems through under-standing and specifying in detail what a system should do and how the components of the system should be implemented and work together. System analysts

solve business problems through analyzing the requirements of information systems and designing such systems by applying analysis and design techniques. This course deals with the concepts, skills, methodologies, techniques, tools, and perspectives essential for systems analysts. The practical component of COMP 361 is object oriented and use-case driven, requiring students to go through the steps of system analysis and design to solve a real-life business problem.

1.6.3 Methodology

This chapter will describe methodology and the technique that will be followed by us to develop our application.

1.6.4 Project Design

Software design sits at the technical kernel of the software engineering process and is applied regardless of the development paradigm and area of application.

1.6.5 Development

The primary goal during the Developing Phase is to build the solution components code as well as documentation. Some development work may, however, continue into the Stabilizing Phase in response to testing.

1.6.6 User Manual

This chapter will show the Graphical User Interface (GUI) of the system through screen shots and user guides that how will they operate the application. A complete direction for a user to properly execute the business system solution.

1.7 Conclusion

The project, observation and the analysis has been done to the existing system in order to make sure that the new system will cover all the function that the existing system does not have and to make sure that the new system is much better than the existing one. To develop this project we use PHP 7.1, HTML 5, CSS3, JQuiry, Sublime Tex, Different browser, JavaScript and Database management System used in this project is MySQL.

2 LITERATURE-REVIEW

2.1 Introduction

This chapter were providing the theoretical background which is related to the project development and make reference to existence of other systems. In this chapter we will be discuss software and programming language. The sources are refer from the book, articles, journals and also sources from internet.

2.2 Intend Audience

Our online Birds information view and sale details Management is designed for busi-ness start ups and small or middle business of Birds showroom but they want to grow in a very large scale. We have made a single database for the system so that they do not need to pay a large amount of money for their server. It also shows the sales data so that will be easy for an owner to take proper and perfect decision for business.

2.3 Background

In our developed system we used some Technology. The main goal of this project is to develop smarter customer-trader interaction online. The website will consist of several basic elements:

2.3.1 HTML (Hypertext Markup Language)

HTML is the standard markup language for creating Web pages.

1. HTML stands for Hyper Text Markup Language
2. HTML describes the structure of Web pages using markup
3. HTML elements are the building blocks of HTML pages
4. HTML elements are represented by tags
5. HTML tags label pieces of content such as "heading", "paragraph", "table", and so on
6. Browsers do not display the HTML tags, but use them to render the content of the page

```

<!DOCTYPE html>
<html>
<head>
<title>Page Title</title>
</head>
<body>

<h1>My First Heading</h1>
<p>My first paragraph.</p>

</body>
</html>

```

Figure 2.3.1 : HTML Syntax

Example Explained

1. The DOCTYPE html declaration defines this document to be HTML5
2. The html element is the root element of an HTML page
3. The head element contains meta information about the document
4. The title element specifies a title for the document
5. The body element contains the visible page content
6. The h1 element defines a large heading
7. The p element defines a paragraph

2.3.2 PHP (*Hypertext Preprocessor*)

1. PHP is an acronym for "PHP: Hypertext Preprocessor"
2. PHP is a widely-used, open source scripting language
3. PHP scripts are executed on the server
4. PHP is free to download and use
5. PHP is an amazing and popular language.

It is powerful enough to be at the core of the biggest blogging system on the web (Word Press)
 It is deep enough to run the largest social network (Facebook). It is also easy enough to be a beginner's first server side language!

```

<!DOCTYPE html>
<html>
<body>

<h1>My first PHP page</h1>

<?php
echo "Hello World!";
?>

</body>
</html>

```

Figure 2.3.2: PHP Syntax

2.3.3 CSS (*Cascading Style Sheets*)

1. CSS stands for Cascading Style Sheets
2. CSS describes how HTML elements are to be displayed on screen, paper, or in other media
3. CSS saves a lot of work. It can control the layout of multiple web pages all at once
4. External style sheets are stored in CSS files

CSS is used to define styles for your web pages, including the design, layout and variations in display for different devices and screen sizes.

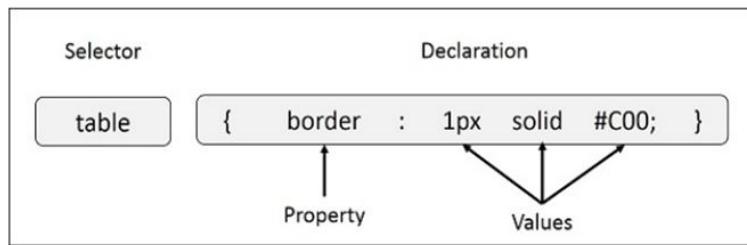


Figure 2.3.3: CSS Syntax

2.3.4 Bootstrap

1. Bootstrap is a free front-end framework for faster and easier web development
2. Bootstrap includes HTML and CSS based design templates for typography, forms, buttons, tables, navigation, modals, image carousels and many other, as well as optional JavaScript plugins.
3. Bootstrap also gives you the ability to easily create responsive designs.

Bootstrap was developed by Mark Otto and Jacob Thornton at Twitter, and released as an open source product in August 2011 on GitHub. In June 2014 Bootstrap was the No.1 project on GitHub.

2.3.5 Java Script

JavaScript is a cross-platform, object-oriented scripting language used to make web pages interactive (exhaling complex animations, clickable buttons, popup menus, etc.). There are also more advanced server side versions of JavaScript such as Node. JS which allow you to add more functionality to a website than simply downloading files (such as real-time collaboration between multiple computers). Inside a host environment (for example, a web browser), JavaScript can be connected to the objects of its environment to provide programmatic control over them.

On the other hand is a scripting language that enables you to create dynamically updating content, control multimedia, animate images, and pretty much everything else .

2.3.6 XAMPP

XAMPP stands for Cross-Platform (X), Apache (A), MySQL (M), PHP (P) and Perl (P). It is a simple, lightweight Apache distribution that makes it extremely easy for developers to create a local web server for testing purposes. Everything you need to set up a web server application (Apache), database (MySQL), and scripting language (PHP) is included in a simple extractable file. XAMPP is also cross-platform, which means it works equally well on Linux, Mac and Windows. Since most actual web server deployments use the same components as XAMPP, it makes transitioning from a local test server to a live server is extremely easy as well. Web development using XAMPP is especially beginner friendly, as this popular PHP and MySQL for beginners course will teach you.

Whats included in XAMPP? XAMPP has four primary components. These are:

1. Apache: Apache is the actual web server application that processes and delivers web content to a computer. Apache is the most popular web server online, powering nearly 54%
2. MySQL: Every web application, howsoever simple or complicated, requires a database for storing collected data. MySQL, which is open source, is the worlds most popular database management system. It powers everything from hobbyist websites to professional platforms like WordPress. You can learn how to master PHP with this free MySQL database for beginners course.
3. PHP: PHP stands for Hypertext Preprocessor. It is a server side scripting language that powers some of the most popular websites in the world, including WordPress and Facebook. It is open source, relatively easy to learn, and works perfectly with MySQL, making it a popular choice for web developers.
4. Perl: Perl is a high-level, dynamic programming language used extensively in network programming, system admin, etc. Although less popular for web development purposes, Perl has a lot of niche applications. Different versions of XAMPP may have additional components such as PhpMyAdmin, OpenSSL, etc. to create full-fledged web servers.

Usage-

Officially, XAMPP's designers intended it for use only as a development tool, to allow website designers and programmers to test their work on their own computers without any access to the Internet. To make this as easy as possible, many important security features are disabled by default. XAMPP has the ability to serve web pages on the World Wide Web. A special tool is provided to password-protect the most important parts of the package. XAMPP also provides support for creating and manipulating databases in MariaDB and SQLite among others. Once XAMPP is installed, it is possible to treat a localhost like a remote host by connecting using an FTP client. Using a program like FileZilla has many advantages when installing a content management system (CMS) like Joomla or WordPress. It is also possible to connect to localhost via FTP with an HTML editor.

2.3.7 *JQuery*

JQuery is a lightweight, "write less, do more", and JavaScript library. The purpose of jQuery is to make it much easier to use JavaScript on your website. jQuery takes a lot of common tasks that require many lines of JavaScript code to accomplish, and wraps them into methods that you can call with a single line of code. jQuery also simplifies a lot of the complicated things from JavaScript, like AJAX calls and DOM manipulation. The jQuery library contains the following features:

1. HTML/DOM manipulation
2. CSS manipulation
3. HTML event methods
4. Effects and animations
5. AJAX
6. Utilities

Why JQuery? There are lots of other JavaScript frameworks out there, but jQuery seems to be the most popular, and also the most extendable. Many of the biggest companies on the Web use jQuery, such as:

1. Google
2. Microsoft
3. IBM
4. Netflix

2.3.8 *PHPMyAdmin Server*

phpMyAdmin is a free software tool written in PHP, intended to handle the administration of MySQL over the Web. phpMyAdmin supports a wide range of operations on MySQL and MariaDB. Frequently used operations (managing databases, tables, columns, relations, indexes, users, permissions, etc) can be performed via the user interface, while you still have the ability to directly execute any SQL statement. phpMyAdmin comes with a wide range of documentation and users are welcome to update our

wiki pages to share ideas and hosts for various operations. The phpMyAdmin team will try to help you if you face any problem; you can use a variety of support channels to get help. phpMyAdmin is also very deeply documented in a book written by one of the developers Mastering phpMyAdmin for Effective MySQL Management, which is available in English and Spanish.

To ease usage to a wide range of people, phpMyAdmin is being translated into 72 languages and supports both LTR and RTL languages. phpMyAdmin is a mature project with a stable and flexible code base; you can find out more about the project and its history and the awards it earned. When the project turned 15, we published a celebration page. The phpMyAdmin project is a member of Software Freedom Conservancy. SFC is a not-for-profit organization that helps promote, improve, develop, and defend Free, Libre, and Open Source Software (FLOSS) projects.

Features-

1. Intuitive web interface
2. Support for most MySQL features:
 - browse and drop databases, tables, views, fields and indexes
 - create, copy, drop, rename and alter databases, tables, fields and indexes
 - maintenance server, databases and tables, with proposals on server configuration
 - execute, edit and bookmark any SQL-statement, even batch-queries
 - manage MySQL user accounts and privileges
 - manage stored procedures and triggers
3. Import data from CSV and SQL
4. Export data to various formats: CSV, SQL, XML, PDF, ISO/IEC 26300 - OpenDocument Text and Spreadsheet, Word, LATEX and others
5. Administering multiple servers
6. Creating graphics of your database layout in various formats
7. Creating complex queries using Query-by-example (QBE)
8. Searching globally in a database or a subset of it item Transforming stored data into any format using a set of predefined functions, like displaying BLOB-data as image or download-link.

2.4 Supporting Literature

2.4.1 Purpose

Shopping has long been considered as a refreshment by many. Shopping in online became a recreational activity of life. The reason of developing web based BDBIRDS (Bangladeshi Birds) system is everyone walking down the street has some difficulties, also some people are so much busy and not able to go out for shopping, some dont like to shop in crowd. There is another reason that its not possible to see all the product of a store, also its hazardous for both the customer and the seller.

The world of software development there lots of improvement in this area and to reduce the complexity of people of life online shopping system development. Online shopping system is a virtual store on Internet where customer can browse the product and select the product of interest. The selected product may be collected in shopping cart. At checkout time the items in the shopping care will be presented as an order. At that time shipping information and payment method have to select to the customer. Finally by confirming the order have to complete the shopping and the product will deliver to customer via currier, post office or by direct agent of company.

2.4.2 Convenience

One of the reasons that people use Web Application so frequently is because it is convenient. In many cases, For example if a new Bird Lover in Dhaka city need information he can get that just visit our site.

2.4.3 Time Saving

Another reason that people use instant web application is to save time. If one customer does not know the information of bird and then he visit our site for get loss her time and suffer pain. Web application was meant to be a time saver for users and it has been just that since its inception. When we quickly need to disseminate information to another individual, we can give it by 1 minute.

2.4.4 www.birdweb.org

BirdWeb is only learning educational website not commercial. It allows you to search for a specific bird by entering its name in the search box, or to look for birds according to their taxonomic grouping. Washington's birds belong to 18 orderslarge groupings of related families and species. To learn about an order and its Washington representatives, select a group from the list on the left or scroll down the page.



Figure 2.4.4: BirdWeb Website

2.4.5 www.indianbirds.org.

It is also learning educational website not commercial Indianbirds is also produced by student known the world birds Published bi-monthly, Indian BIRDS is an invaluable resource for birders and professional ornithologists. Contributors include both professionals and keen amateurs. Content is always abreast of current ideas and thinking, yet written in a clear and simple style that is easy to interpret.

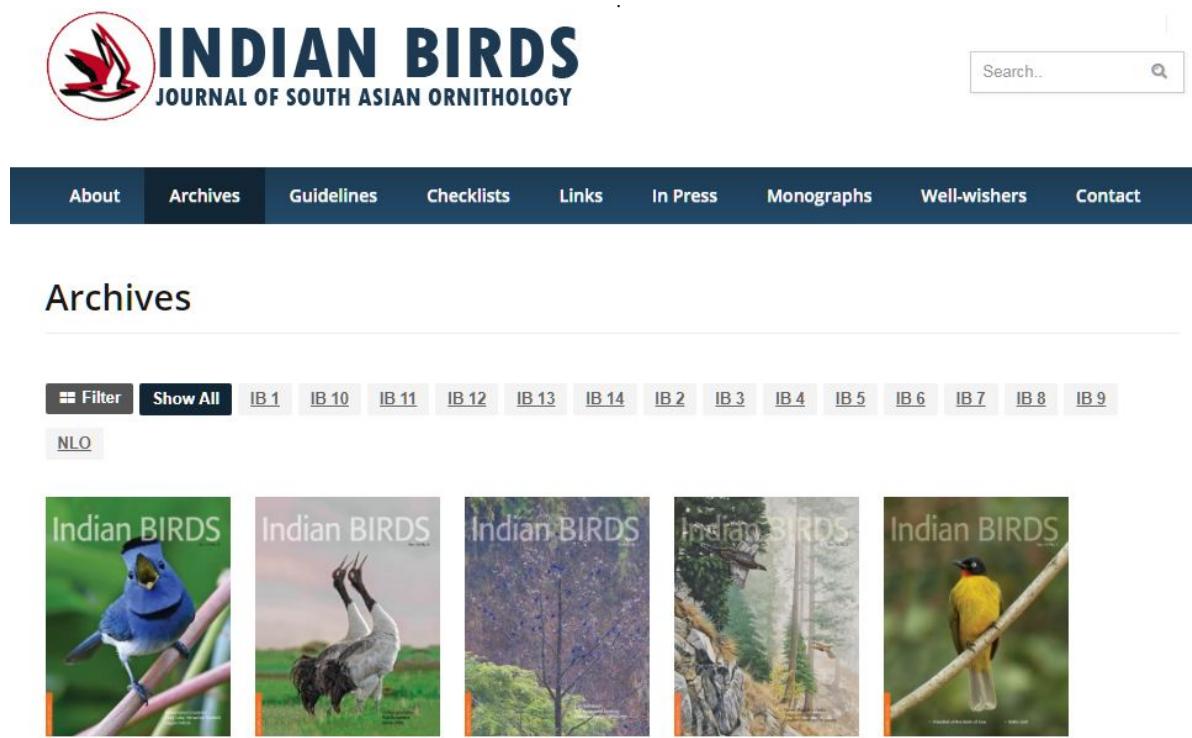


Figure 2.4.5: Indianbirds Website

2.4.6 www.allaboutbirds.org

Dedicated to advancing the understanding and protection of the natural world, such as birds the allaboutbirds.org joins with people from all walks of life to make new scientific discoveries, share insights, and galvanize conservation action. As a unit of Cornell's College of Agriculture and Life Sciences, we bring together world-class science and teaching with the agility and real-world impact of a nonprofit organization. Our work spans disciplines from science to art, engineering to education. Our global community includes you and other supporters, participants, and partners from all walks of life, united by a love for birds and nature and a commitment to help protect our planet.



Figure 2.4.5: Allaboutbirds Website

2.5 Scope

The Online Bangladeshi Birds discipline encompasses all system and data network elements from the mainframe through the server level to the PC or end component throughout the enterprise. All mainframe and data network based hardware and software assets must be identified and entered into the Online Bangladeshi Birds. Any changes to these environments must be reflected in the Online. Financial and technical product information must be available through the Online Bangladeshi Birds, as needed to support the functional responsibilities of personnel within the finance and contracts of management departments.

2.6 Project Goal

2.6.1 Avoid Stock-Outs

Making sure that your customers have access to products when they need or want them is a key service issue in inventory of Bangladeshi Birds show-room control. This system should include a well-outlined replenishment system, where critical level at a store result in swift shipment from manager of Agent distribution center or directly from a vendor. Given the time and effort put into promoting cars to attract customer interest, when customer want Bangladeshi Birds on show-room when they come to buy.

2.6.2 Maximize Profit Margins

Well managed inventory control is often a key in meeting profit margin objectives. Gross profit margin is difference between revenue earned from sales and cost of good sold. Take away fixed costs including salesman, Bangladeshi Birds transaction from abroad and Agent get to Operating margin.

2.6.3 Log-in and Access Restriction

A nominated user can log-in to the application for using further functionality. But there be access restriction due to provide information safety. Owner, manager, salesman etc. are not eligible to access all contents. Only owner can access all these stuffs. Other users are only eligible to access all those stuffs according to their designation.

2.6.4 Marketing and Customer Relation

This section will covered by the Web Application from where consumer find trader for their dream car. By this, business to consumer interaction becomes more flexible and effective for growing the business.

2.6.5 Notification

Owner should notified by system after every important activities like a new car added in inventory or a car sold with his/her desired information.

2.6.6 Strategic Benefits

- Flexible to use.
- Extra employment not required.
- Reducing executional time and cost and boosts tangible and intangible profit.
- Better customer interaction and easy to provide customer support.
- Modern and efficient approach of marketing.

2.6.7 Disadvantage of Online Judge

- System maintenance expenses..
- Need well educated stuffs to use this.
- Risk on business data.

2.7 Contribution

In here our contribution is we studied the theory behind the system. Tried to enrich the user experiences from this type of another systems.

2.8 Conclusion

User has got informative basic information about this project. They understand about our application. How it is and why it is better, we discuss about next chapter.

3 SYSTEM ANALYSIS AND REQUIREMENT

3.1 Introduction

This project is actually a combination of desktop and web based e-commerce so we have used technologies and programming language for the development. System analysis and design deal with planning the development of information systems through understanding and specifying in detail what a system should do and how the components of the system should be implemented and work together. System analysts solve business problems through analyzing the requirements of information systems and designing such systems by applying analysis and design techniques. This course deals with the concepts, skills, methodologies, techniques, tools, and perspectives essential for systems analysts. The practical component of COMP 361 is object oriented and use-case driven, requiring students to go through the steps of system analysis and design to solve a real-life business problem.

3.2 System analysis

This project is actually a combination of desktop and web based e-commerce so we have used technologies and programming language for the development. System analysis and design deal with planning the development of information systems through understanding and specifying in detail what a system should do and how the components of the system should be implemented and work together. System analysts solve business problems through analyzing the requirements of information systems and designing such systems by applying analysis and design techniques. This course deals with the concepts, skills, methodologies, techniques, tools, and perspectives essential for systems analysts. The practical component of COMP 361 is object oriented and use-case driven, requiring students to go through the steps of system analysis and design to solve a real-life business problem.

3.3 Existing Systems

At present, most of the e-commerce based website executing their business without maintaining websites. Those who maintain websites are not appropriate concern about their website and most of their website is lack of information and not supportive to build a better interaction with customers.

Nowadays, there are many e-commerce systems that developed for information purposes including buying and selling. The features in the system are different between one and others. This system is

very useful for buying and selling BDBIRDS. This system is a powerful tool for management of buying operations. In this phase, we have analyzed the existing system and investigated problems associated with it. We understood the limitations of the existing system and got a clear idea of the requirements and need for a new system.

Here we introduce our existing system-

1. A e-commerce information system is a comprehensive software solution that provides various modules that helps our Birds lover people.
2. Our Existing project main aim is to all BDBIRDS are include by category wised, Anyone entering the site can see the available birds, Only registered users can buy the birds through an easy-to-use checkout.
3. We inform to all BDBIRDS are include by category wised name, character and fare cost in Birds lover peoples.

3.4 Information Gathering

Information gathering is the most initial part of a system analysis. To build and effective and efficient system, it is required to learn and understand the system, how it executes and also about related stuffs like human resources etc. There be several methods to gather information.

- Interactive Method, by which analyst fetch information from audiences and end users through interviewing, etc. Actually this method is direct interaction between analyst and end users.
- Unobtrusive Method, by which analyst observe the system and audiences without directly interacting with them.

We followed both of these method to gather information from targeted audiences.

3.5 Proposed System

In our developed system we try to overcome the problem. First we design our site, and then add the feature that is absence in other developed website before. Our system is accessed by Administrator and general customer part.

The administration will do following activities:

1. Centralized database management
2. Maintain information of Birds and Customer
3. Maintain buying and selling cost

The customer will do following activities:

1. Customer buying or selling of services online over the Internet
2. View bird name, fare cost and small description

3. Anyone can view and only registered users are allowed to buy any bird from the site.
4. People who use social media.
5. Targeted for bird lovers.

The activities that can be done by all type of users can be accessed anywhere any time online. The process to gather the software requirements from client, analyze and document them is known as requirement engineering. The goal of requirement engineering is to develop and maintain sophisticated and descriptive System Requirements Specification document. After decided to develop the e-commerce based website we started to collect requirements. The details about requirement analysis and elicitation are discussed in below. Proper planning is arguably the most important aspect of any project. Without a plan projects will exceed deadlines, coders will create redundant code and many projects won even see the light of day. So our goal with this is to help the beginners out there so they dont have to go through what we did as a PHP programmer.

3.5.1 Additional Features

3.5.1.1 Ubiquity



Figure 3.5.1.1: Ubiquity

1. Available everywhere over internet
2. Built into other devices
3. Hidden, but still there

3.5.1.2 EMAIL A FRIEND Button



Figure 3.5.1.2:EMAIL A FRIEND Button

1. Anyone can comment suggest. Our product is available in Social Network
2. Live Chat using Social Network

3.5.1.3 *Quality of Image*



Figure 3.5.1.3: Quality of Image

1. View product image clearly
2. Proven picture ability at HD quality.
3. Image quality is standardized .

3.5.1.4 *Interactivity*



Figure 3.5.1.4: Interactivity

1. Twentieth Century electronic commerce business technology is called interactive, so they allow two-way communication between businesses and consumers.

3.5.1.5 *Personalization*



Figure 3.5.1.5: Personalization

1. It seems like a contradiction that e-commerce has more opportunities for personalization than going to a store and buying an item face-to-face with a click.

3.5.1.6 *Information Density*



Figure 3.5.1.6: Information Density

1. This site of BDBIRDS gives real information .
2. BDBIRDS HD includes all pictures and descriptions of the birds nature.

3.6 Requirement Analysis

In systems engineering and software engineering, requirements analysis encompasses those tasks that go into determining the needs or conditions to meet for a new or altered product or project, taking account of the possibly conflicting requirements of the various stakeholders, analyzing, documenting, validating and managing software or system requirements. Requirements analysis is critical to the success or failure of a systems or software project. The requirements should be documented, actionable, measurable, testable, traceable, related to identified business needs or opportunities, and defined to a level of detail sufficient for system design. Requirement Analysis, also known as Requirement Engineering, is the process of defining user expectations for a new software being built or modified.

In software engineering, it is sometimes referred to loosely by names such as requirements gathering or requirements capturing. Requirements analysis encompasses those tasks that go into determining the needs or conditions to meet for a new or altered product or project, taking account of the possibly conflicting requirements of the various stakeholders, analyzing, documenting, validating and managing software or system requirements.

Requirements analysis is critical to the success of a development project. Requirements must be documented, actionable, measurable, testable, related to identified business needs or opportunities, and defined to a level of detail sufficient for system design. Requirements can be architectural, structural, behavioral, functional, and non-functional

3.7 System Analysis

Systems analysis and design is a step by step process for developing high quality information systems. An information system combines information technology, people, and data to support business requirements. For example, information systems handle daily business transactions, improve company productivity, and help managers make sound decisions. The IT department team includes systems analysts who plan, develop, and maintain information systems . It is process of collecting and interpreting facts, identifying the problems, and decomposition of a system into its components. System analysis is conducted for the purpose of studying a system or its parts in order to identify its objectives. System analysis in software engineering is, therefore, the activities that comprise software engineering as a process in the production of software. It is the software process.

This process has 4 main activities. They are:

1. Software Specification
2. Software Design and Implementation
3. Software Validation
4. Software Evolution.

As we can see, these activities are similar to those within systems analysis and the design of software. Depending on the methodology used, the activities can be arranged differently. They are arranged sequentially, for example, in the well-known Waterfall Model, while in the Incremental Development model they are inter-related [30].In IT, systems analysis can include looking at end-user implementation of a software package or product; looking in-depth at source code to define the methodologies used in building software; or taking feasibility studies and other types of research to support the use and production of a software product, among other things.

Systems analysis professionals are often called upon to look critically at systems, and redesign or recommend changes as necessary. Inside and outside of the business world, systems analysts help to evaluate whether a system is viable or efficient within the context of its overall architecture, and help to uncover the options available to the employing business or other party. Systems analysts are different than systems administrators, who maintain systems day to day, and their roles generally involve a top-level view of a system to determine its overall effectiveness according to its design.

3.7.1 System Requirement

After gathering information and analyzing requirements we specified several requirements. Here those requirements mentioned.

3.7.1.1 Non Functional Requirement

In systems engineering and requirements engineering, a non-functional requirement (NFR) is a requirement that specifies criteria that can be used to judge the operation of a system, rather than specific

behaviors. They are contrasted with functional requirements that define specific behavior or functions. The plan for implementing functional requirements is detailed in the system design. The plan for implementing non-functional requirements is detailed in the system architecture, because they are usually Architecturally Significant Requirements. Broadly, functional requirements define what a system is supposed to do and non-functional requirements define how a system is supposed.

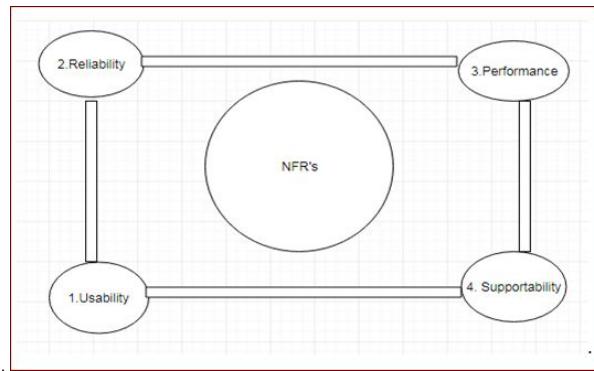


Figure 3.7.1.1: Non Functional Requirement

The non-functional requirements tell you how the system will run or work properly-

- Efficiency : Our application is an action designed to achieve efficiency.
- Reliability : The system should be so reliable to its user and admin that it works for a long time without any problem. Our application should be reliable.
- Usability : Usability which means that how easy the software performs the specific task. In other words, it shows the ability of the software to perform tasks. In usability, the software is used by specific consumers to achieve the specific object with effectiveness, efficiency and satisfaction. Our application should be use-able.
- Implementation: Implementation of the system using JavaScript, bootstrap, HTML and CSS in front end with PHP as back end and it will be used for database connectivity. In addition, MySQL develops the database part. Responsive web designing is used for making the website compatible for any type of screen.
- Supportability: It also known as serviceability, it is the ability to install, configure and monitor the software. It helps in the maintenance of the software by solving the problems and restoring it.
- Integrity of Information: The data contained in the database system must be preserved against malicious or unintentional attacks. Data held must not be redundant.
- Maintainability: Our application must have to be highly maintainable.
- Consistency: Our application have to be consistent.
- Flexibility: Our application should be flexible.
- Re-usability: Application must have to highly reusable.

3.7.1.2 Functional Requirement

Customer Login:

This feature used by the user to become a registered member. When a user login this system admin can easily see the entire registered member.

Register Customer:

To register a new user he needsto provide his name, valid email id and other details. After fill up the input details and he or she submit the details he or she become a registered member. Benefit of Registered Members: To become a registered member user can be informed new bus information service by email.

Admin:

In our developed system it has several admin. First they need to login to access the admin panel.

Manage Customer:

Admin can perform all activity of this system. They can Update, delete, mange Birds informations.

Add Birds:

After login this system admin add Birds from categories page and select the birds type from drop-down menu.

Add Description:

Admin also add bird description.

Add Cost:

Admin also add the accurate fare cost.

- A quick response after performing any action.
- A simplified User Interface design.
- Access control based on infrastructural responsibilities.
- Notify owner every major activities via email.
- User friendliness.

3.8 Feasibility Study

A feasibility study is an analysis of how successfully a project can be completed, accounting for factors that affect it such as economic, technological, legal and scheduling factors. Project managers use feasibility studies to determine potential positive and negative outcomes of a project before investing a considerable amount of time and money into it.

After we identified the problem and the possible solution we took initiative to conduct a few studies on birds lover in order to affirm our problem statements and justify our proposed solution. Our study is divided into three sections:

1. Prove and assess the significance of problem statement.
2. Understand the demand and requirement for proposed solution.
3. Derive and evaluate hypothesis if problem statement is proven to be true.

Now below write various feasibility according our website

- Technical Feasibility
- Operational Feasibility
- Economical Feasibility

3.8.1 Technical Feasibility

Technical feasibility study is the complete study of the project in terms of input, processes, output, fields, programs and procedures. It is a very effective tool for long term planning and trouble shooting. The technical feasibility study should most essentially support the financial information of an organization.

This assessment is based on an outline design of system requirements, to determine whether the company has the technical expertise to handle completion of the project. When writing a feasibility report, the following should be taken to consideration:

- A brief description of the business to assess more possible factors which could affect the study
- The part of the business being examined
- The human and economic factor
- The possible solutions to the problem

At this level, the concern is whether the proposal is both technically and legally feasible (assuming moderate cost). The technical feasibility assessment is focused on gaining an understanding of the present technical resources of the organization and their applicability to the expected needs of the proposed system. It is an evaluation of the hardware and software and how it meets the need of the proposed system [33]. The BDBIRDS is web based and thus can be accessed through any browsers. The solution is since the objectives of the system development are achievable and realistic. The technology to be used is available, this include use of programming language PHP and HTML and MySQL database to develop web based applications.

The technical possibilities of this project are given below:

- Existing stuffs are able to cope up with new system.
- Have enough hardware and software resources to adopt the new system.
- Budget friendly.

3.8.2 Operational Feasibility

Operational feasibility refers to the measure of solving problems with the help of a new proposed system. It helps in taking advantage of the opportunities and fulfills the requirements as identified during the development of the project. It takes care that the management and the users support the project.

Operational feasibility is the measure of how well a proposed system solves the problems, and takes advantage of the opportunities identified during scope definition and how it satisfies the requirements identified in the requirements analysis phase of system development. The operational feasibility assessment focuses on the degree to which the proposed development project fits in with the existing business environment and objectives with regard to development schedule, delivery date, corporate culture and existing business processes.

To ensure success, desired operational outcomes must be imparted during design and development. These include such design-dependent parameters as reliability, maintainability, supportability, usability, reducibility, disposability, sustainability, affordability and others. These parameters are required to be considered at the early stages of design if desired operational behaviors are to be realized. A system design and development requires appropriate and timely application of engineering and management efforts to meet the previously mentioned parameters.

A system may serve its intended purpose most effectively when its technical and operating characteristics are engineered into the design. Therefore, operational feasibility is a critical aspect of systems engineering that needs to be an integral part of the early design phases. The system is operationally feasible as it is very easy for the End users to operate it. It only needs basic information about Windows platform.

The operational possibilities of this project are given below:

- Will optimize business processes.
- Improve transparency.
- No extra employment required..

3.8.3 Economic Feasibility

Economic feasibility analysis is the most commonly used method for determining the efficiency of a new project. It is also known as cost analysis. It helps in identifying profit against investment expected from a project. Cost and time are the most essential factors involved in this field of study.

Economic justification is generally the Bottom Line consideration for most systems. Economic justification includes a broad range of concerns that includes cost benefit analysis. In this we weight the cost and the benefits associated with the candidate system and if it suits the basic purpose of the organization i.e. profit making, the project making to the analysis and design phase.

- The financial and the economic questions during the preliminary investigation are verified to estimate the following:

- The cost to conduct a full system investigation.
- The cost of hardware and software for the class of application being considered.
- The benefits in the form of reduced cost.
- The proposed system will give the minute information, as a result the performance is improved which in turn may be expected to provide increased profits.
- his feasibility checks whether the system can be developed with the available funds. The BD-BIRDS System does not require enormous amount of money to be developed. This can be done economically if planned judiciously, so it is economically feasible. The cost of project depends upon the number of man-hours required
- Budget friendly.
- Will reduce unusual expenses.
- Flexible maintenance.

3.9 Conclusion

The project, observation and the analysis has been done to the existing project in order to make sure that the new project will cover all the function that the existing project does not have and to make sure that the new project is much better than the existing one.

4 METHODOLOGY

4.1 *Introduction*

This chapter will describe methodology and the technique that will be followed by us to develop our application. The methodology is the general research strategy that outlines the way in which research is to be undertaken and, among other things, identifies the methods to be used in it. These methods, described in the methodology, define the means or modes of data collection or, sometimes, how a specific result is to be calculated. Methodology does not define specific methods, even though much attention is given to the nature and kinds of processes to be followed in a particular procedure or to attain an objective.

When proper to a study of methodology, such processes constitute a constructive generic framework, and may therefore be broken down into sub-processes, combined, or their sequence changed.

A paradigm is similar to a methodology in that it is also a constructive frame-work. In theoretical work, the development of paradigms satisfies most or all of the criteria for methodology. An algorithm, like a paradigm, is also a type of constructive framework, meaning that the construction is a logical, rather than a physical, array of connected elements.

Any description of a means of calculation of a specific result is always a description of a method and never a description of a methodology. It is thus important to avoid using methodology as a synonym for method or body of methods. Doing this shifts it away from its true epidemiological meaning and reduces it to being the procedure itself, or the set of tools, or the instruments that should have been its outcome. A methodology is the design process for carrying out research or the development of a procedure and is not in itself an instrument, or method, or procedure for doing things.

4.2 *Methodology*

Methodology is the systematic, theoretical analysis of the methods applied to a field of study. It comprises the theoretical analysis of the body of methods and principles associated with a branch of knowledge. Typically, it encompasses concepts such as paradigm, theoretical model, phases and quantitative or qualitative techniques.

Our BDBIRDS (Bangladeshi Birds) website methodology has evolved of projects across the world, this methodology is mature and proven to be successful.

4.2.1 B2C (Business-to-Consumer)

B2C model works as its name suggest. In this model, the BDBIRDS sells their products, goods or services directly to the consumer online. Here the customer can view products on the website that they want to buy and can order it. After receiving the order details, the company will process the order and then send the products directly to the customer. For example, Amazon, Flipkart etc are this type of e-commerce business model which we are using in our daily life.

We can view our products (birds) on the websites like Amazon, Flipkart and can order it. After receiving the order, the selling company of the products processes it and send it to us. Here a business company is selling their products to the customer with the help of an BDBIRDS website. In B2C model, a business website is a place where all the transactions take place directly between a business organization and a consumer.

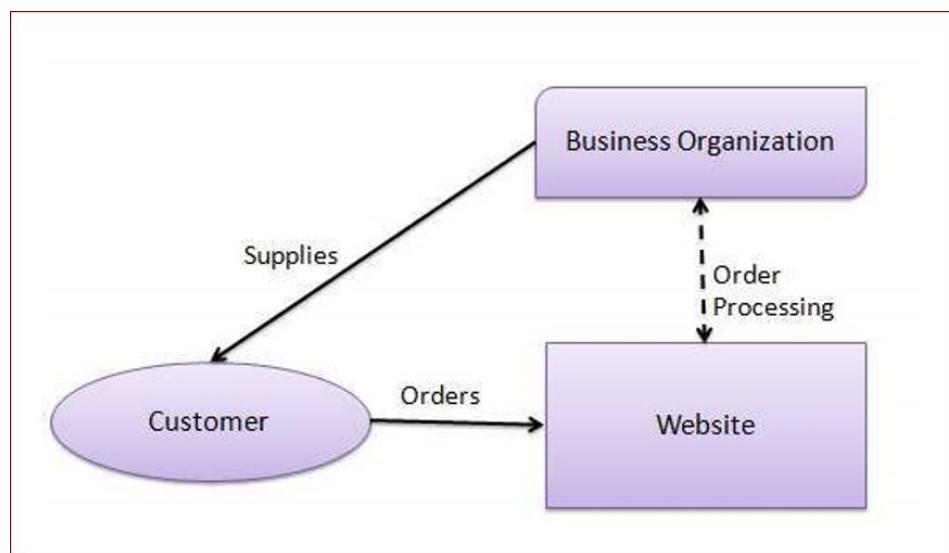


Figure 4.2.1: B2C (Business-to-Consumer)

In the B2C model, a consumer goes to the website, selects a birds categories, orders the birds, and an order sent to the BDBIRDS admin. After receiving the order, goods are dispatched to the customer. Following are the key features of the B2C model

- Heavy advertising required to attract customers.
- High investments in terms of hardware/software.
- Support or good customer care service.

4.2.1.1 Consumer Shopping Procedure

Following are the steps used in B2C e-commerce

A consumer

- searches available items on the website meeting the requirement.
- compares similar items for price, delivery date or any other terms.
- places the order.
- pays the bill.
- receives the delivered item and review/inspect them.
- consults the vendor to get after service support or returns the product if not satisfied with the delivered product.

4.2.1.2 Benefits

In B2C model benefits include our project-

- Lower prices
- Shop 24/7
- Greater searchability
- Shorter delivery times for digital products
- Sharing of information with other consumers
- Improved customer service

4.2.1.3 Limitations

In B2C model limitations include our project-

- Delay in receiving physical products, plus shipping
- In areas without high-speed Internet service, slow download speeds.
- Security and privacy concerns, especially with rise of phishing.
- Inability to touch, feel, or even smell products prior to the purchase.
- Sharing of information with other consumers
- Improved customer service
- Unavailability of micro payments for purchase of small-cost products.

4.3 Analysis

After a thorough study of your specific business needs, our Sales and Marketing team will work together with you to review your business requirements, execute an analysis of your competitors, explore technology options, and then will recommend what will be needed to best fulfill your business needs. This phase presents findings that include recommended features, order flow and guidance on overall site structure.

4.4 Design

Our UI designers review the site analysis document and create storyboards for the complete system starting from the home page, the storyboard pays special attention to product presentation, checkout process and access to support. At this stage you begin to see what your Ecommerce site will look like. This is the best time to suggest changes to the system as this stage can accommodate any and every change needed.

4.5 Design Integration

The final storyboard is now converted to responsive cross device and platform compliant HTML skin depending on the e-commerce platform suggested. This phase is very important as the HTML delivered will dictate how the site works, by ensuring the HTML is fully compliant with web standards we speed up the process and avoid expensive mistakes.

4.6 Programming and Database Creation

In this stage of the project, coding of all the processes is done and the backend database management tools are created. Here is where all the mock-ups are changed into real dynamic database-driven pages. Our programmers follow the guidelines that have been established in all of the previous steps, so their job is now much easier and goes quicker. This is one of the reasons behind our excellent cost-effectiveness and our higher quality.

4.7 Payment Gateway Integration

We can support all major payment gateways, including Secure Trading, ATM Card any bank, Paypal and Paypal Pro, Google Checkout, Authorize.Net and others. We can assist you in setting up your payment gateway account with whichever gateway you choose to use, by using a 256 bit encrypted data channel. To empower you to do both basic and advanced adaptations to your shopping cart.

4.8 Systems integration

Pulse offers automated bookkeeping software and ERP integration that will work well with several other systems, like Sage, Quick books, SAP, and Visual Manufacturing. POS systems are provided to take care of a variety of tasks such as inventory management, invoicing, payroll, and even a few aspects of Customer Relationship Management. Full integration of these systems has an advantage of protecting your system from the errors that usually come from manual data transfer and entries.

4.9 Quality Check

Before we make your site live, our quality assurance engineers will put your system through a meticulous set of rules that includes usability and performance criterion. Final adjustments are made that prepare for a formal QC sign off and then your site is ready for live hosting.

4.10 Importing Your Products

Your products can be seamlessly imported into the E-commerce system whenever needed. This can be done through the admin backend or by emailing us and asking us to set this up during the development stages at no additional cost. Customized imports and data migration from external systems can be handled through the tailored upgrades category.

4.11 Website Hosted on a live web server

Pulse Solutions has good working relations with many PCI compliant web hosting companies, so you can choose the hosting company you want. Following your selection, we will set up your account and upload your website for going live. During this process your domain name will be moved from your registrar.

4.12 Search Engine Optimization

Our highly skilled SEO specialists will make specialized Meta tag rules for your products so you can actively compete against your industry category. You will receive a free listing with Google and Google Products, with Yahoo, and with Bing (which used to be MSN Live). The inbuilt Google submission tools will automate your weekly listing of all your sites products with all important Google Products. A Google analytic account will be set up for you and you will get a weekly email reporting on your sites activity stats.

4.13 Function model of our website

Here we will discuss the all functions and how to manage it and allow vendor and customer to sell and buy through it. When the customer enters the main page of our site, he will see in the right side Page Log in form. If he has registered he can log in his account and can manage his website. But if he has not registered before, he must register first to be allowed to buy and sell through our web site.

4.13.1 Vendor Registration

In this page of Vendor Registration, the vendor fill personal data which contains Full name, User name, password, address, E-mail and another crucial data.

4.13.2 Customer Registration

In the page of Customer Registration, the customer fill personal data which contains Full name, User name, password, address, E-mail and another crucial data.

4.13.3 Admin Registration

In the page of Admin Registration, the admin fill personal data which contains Full name, User name, password, address, E-mail and another crucial data.

4.13.4 Login

In the Home Page, User asked to enter username and password to login, our task to check if the user logged in were admin, customer or vendor. If user name of logged user in customers table so the logged user was customer if not we will check admin table. If password not match we will redirect to error page to show error message (Please Enter Right Password) and from that page user can use back button to return to login form to be able to enter right password.

And if password match customer will be redirect to customer Home Page to see his/her own personal information, and if user enters as admin he/she will be redirect to Admin Page to get all his authorized to manage different aspects in our site (Add or Update any Department). And if user name not found it also redirect To Error Page to show error message (Your User Name Not Found!! Please Enter Right One).

4.14 Developing the Report Generation and Analytically Functionalists

The systems development life cycle (SDLC), also referred to as the application development life-cycle, is a term used in systems engineering, information systems and software engineering to describe a process for planning, creating, testing, and deploying an information system. The systems development life-cycle concept applies to a range of hardware and software configurations, as a system can be composed of hardware only, software only, or a combination of both.

4.15 Use of Agile

The agile approach is a software development approach based on values, principles, and core practices. The four values are communication, simplicity, feedback, and courage. We recommend that systems analysts adopt these values in all projects they undertake, not just when adopting the agile approach. In order to finish a project, adjustments often need to be made in project management. In Chapter 6 we will see that agile methods can ensure successful completion of a project by adjusting the important resources of time, cost, quality, and scope. When these four control variables are properly included in the planning, there is a state of balance between the resources and the activities

needed to complete the project. .

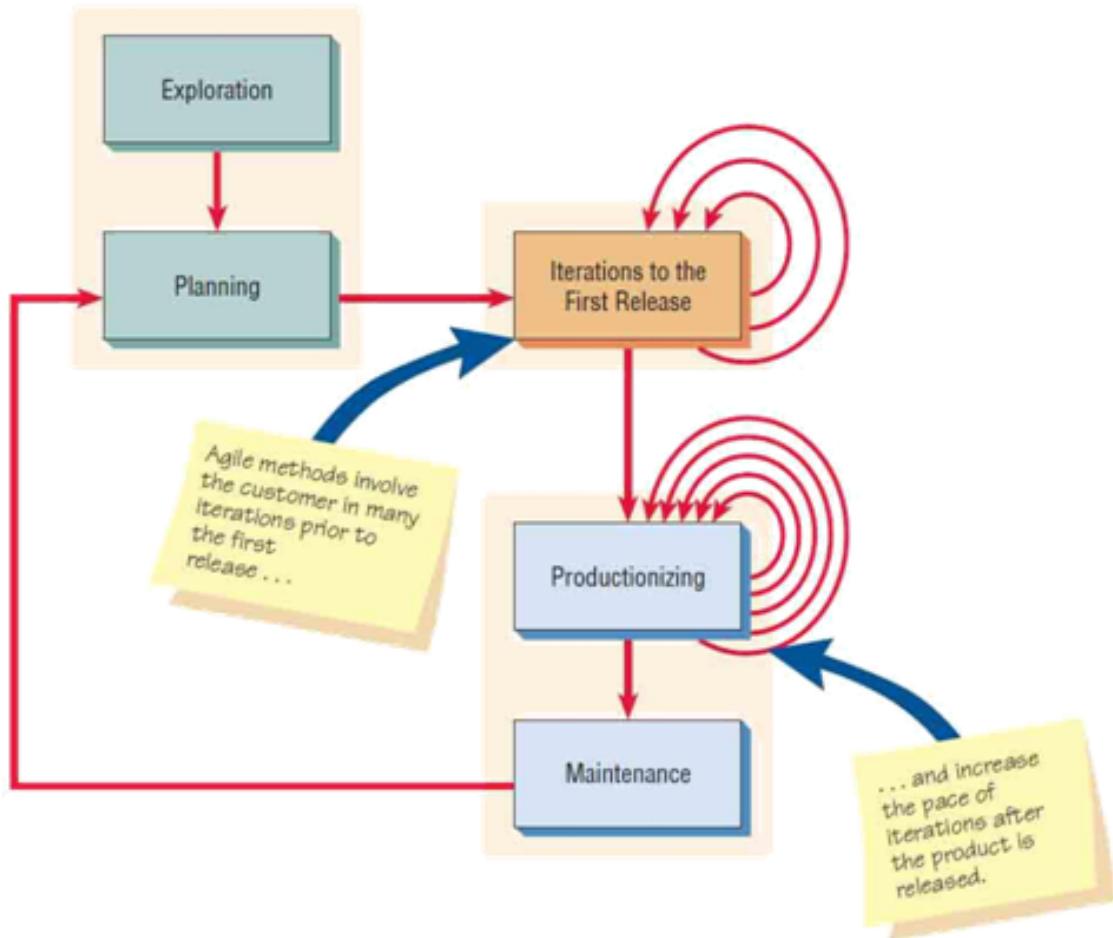


Figure 4.15: The Agile Development Methodology

Taking development practices to the extreme is most noticeable when one pursues practices that are unique to agile development. In Chapter 6 we discuss four core agile practices: short releases, the 40-hour workweek, hosting an onsite customer, and using pair programming. At first glance these practices appear extreme, but as you will see, we can learn some important lessons from incorporating many of the values and practices of the agile approach into systems analysis and design projects.

4.15.1 Exploration

During exploration, you will explore your environment, asserting your conviction that the problem can and should be approached with agile development, assemble the team, and assess team member skills. This stage will take anywhere from a few weeks (if you already know your team members and technology) to a few months (if everything is new). You also will be actively examining potential technologies needed to build the new system. During this stage you should practice estimating the time needed for a variety of tasks. In exploration, customers also are experimenting with writing user

stories. The point is to get the customer to refine a story enough so that you can competently estimate the amount of time it will take to build the solution into the system you are planning. This stage is all about adopting a playful and curious attitude toward the work environment, its problems, technologies, and people.

4.15.2 Planning

The next stage of the agile development process is called planning. In contrast to the first stage, planning may only take a few days to accomplish. In this stage you and your customers agree on a date anywhere from two months to half a year from the current date to deliver solutions to their most pressing business problems (you will be addressing the smallest, most valuable set of stories). If your exploration activities were succinct, this stage should be very short. The entire agile planning process has been characterized using the idea of a planning game as devised by Beck. The planning game spells out rules that can help formulate the agile development teams relationship with their business customers. Although the rules form an idea of how you want each party to act during development, they are not meant as a replacement for a relationship. They are a basis for building and maintaining a relationship.

So, we use the metaphor of a game. To that end we talk in terms of the goal of the game, the strategy to pursue, the pieces to move, and the players involved. The goal of the game is to maximize the value of the system produced by the agile team. In order to figure the value, you have to deduct costs of development, and the time, expense, and uncertainty taken on so that the development project could go forward. The strategy pursued by the agile development team is always one of limiting uncertainty (downplaying risk). To do that they design the simplest solution possible, put the system into production as soon as possible, get feedback from the business customer about what's working, and adapt their design from there. Story cards become the pieces in the planning game that briefly describe the task, provide notes, and provide an area for task tracking.

There are two main players in the planning game: the development team and the business customer. Deciding which business group in particular will be the business customer is not always easy, because the agile process is an unusually demanding role for the customer to play. Customers decide what the development team should tackle first. Their decisions will set priorities and check functionalists throughout the process.

4.15.3 Iteration to the first release

The third stage in the agile development process is composed of iterations to the first release. Typically these are iterations (cycles of testing, feedback, and change) of about three weeks in duration. You will be pushing yourself to sketch out the entire architecture of the system, even though it is just in outline or skeletal form. One goal is to run customer-written functional tests at the end of each iteration.

During the iterations stage you should also question whether the schedule needs to be altered or whether you are tackling too many stories. Make small rituals out of each successful iteration, involving

customers as well as developers. Always celebrate your progress, even if it is small, because this is part of the culture of motivating everyone to work extremely hard on the project.

4.15.4 Productionizing

Several activities occur during this phase. In this phase the feedback cycle speeds up so that rather than receiving feedback for an iteration every three weeks, soft-ware revisions are being turned around in one week. You may institute daily brings so everyone knows what everyone else is doing. The product is released in this phase, but may be improved by adding other features. Getting a system into production is an exciting event. Make time to celebrate with your teammates and mark the occasion. One of the watchwords of the agile approach, with which we heartily agree, is that it is supposed to be fun to develop systems.

4.15.5 Maintenance

Once the system has been released, it needs to be kept running smoothly. New features may be added, riskier customer suggestions may be considered, and team members may be rotated on or off the team. The attitude you take at this point in the developmental process is more conservative than at any other time. You are now in a keeper of the mode rather than the playful one you experienced during exploration.

4.15.6 Track Monitor

Operation and maintenance has been neglected in the past, or been discussed and introduced only after a project was completed. This neglect or delay in applying proper operation and maintenance has adversely affected the credibility of the investments made, the functioning of the services, the well-being of rural populations, and the development of further projects. However, the importance of OM has gained considerable visibility over the past few years, and it appears that policy-makers and project designers are now more conscious of the direct links between improved OM practices and the sustainability of water supply and sanitation services. There is also greater recognition of the need to approach these projects in a comprehensive way, emphasizing not only the design and construction but also post-construction activities .

4.16 Conclusion

The methodology used is the Agile approach because it is the most suitable method for this project. This method has more advantages when compared with other methods. The next chapter covers the design part of this project.

5 PROJECT DESIGN

5.1 *Introduction*

Project design is the process of defining the architecture, modules, interfaces, and data for a system to satisfy specified requirements. Systems design could be seen as the application of systems theory to product development. There is some overlap with the disciplines of systems analysis, systems architecture and systems engineering.

Software design sits at the technical kernel of the software engineering process and is applied regardless of the development paradigm and area of application. Design is the first step in the development phase for any engineered product or system. The designer's goal is to produce a model or representation of an entity that will later be built. Beginning, once system requirement have been specified and analyzed, system design is the first of the three technical activities -design, code and test that is required to build and verify software.

While there are number of software tools to develop and implement the web based online shopping system, I have chosen those are open source, so that it will reduce the developing cost of the project. For designing the project HTML, CSS, Bootstraps, Apache server as web server, PHP for making the system dynamic. MySQL as database server. All of the tools are open source.

5.2 *Data Flow Diagram*

Data flow diagram is graphical representation of flow of data in an information system. It is capable of depicting incoming data flow, outgoing data flow and stored data. The DFD does not mention anything about how data flows through the system. There is a prominent difference between DFD and Flowchart. The flowchart depicts flow of control in program modules. DFDs depict flow of data in the system at various levels. DFD does not contain any control or branch elements.

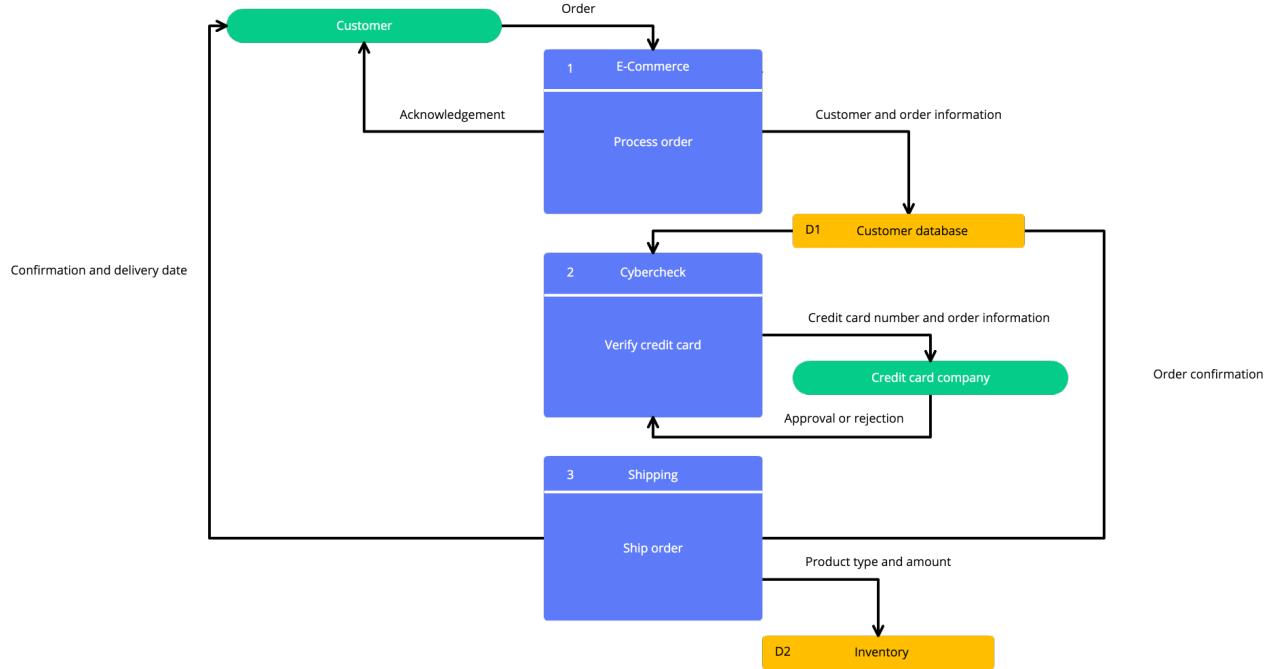


Figure 5.2: Data Flow Diagram

5.2.1 DFD Component

DFD can represent Source, destination, storage and flow of data using the following set of components



Figure 5.2.1: DFD Component

1. **Entities** - Entities are source and destination of information data. Entities are represented by rectangles with their respective names.
2. **Process** - Activities and action taken on the data are represented by Circle or Round-edged rectangles.
3. **Data Storage** - There are two variants of data storage - it can either be represented as a rectangle with absence of both smaller sides or as an open-sided rectangle with only one side missing.
4. **Data Flow** - Movement of data is shown by pointed arrows. Data movement is shown from the base of arrow as its source towards head of the arrow as destination.

5.2.2 Types of DFD

Data Flow Diagrams are either Logical or Physical.

1. Logical DFD:- This type of DFD concentrates on the system process and flow of data in the system. For example in a Banking software system, how data is moved between different entities.
2. Physical DFD:- This type of DFD shows how the data flow is actually implemented in the system. It is more specific and close to the implementation.

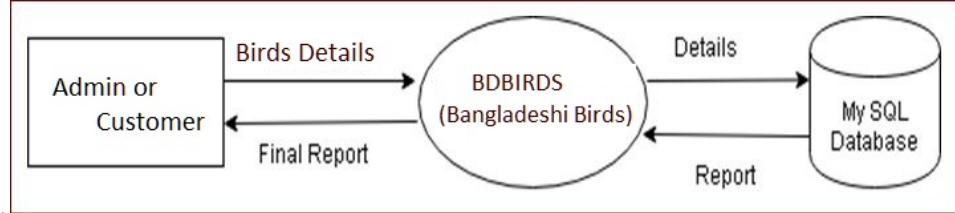


Figure 5.2.2.0: Level 0 DFD of BDBIRDS

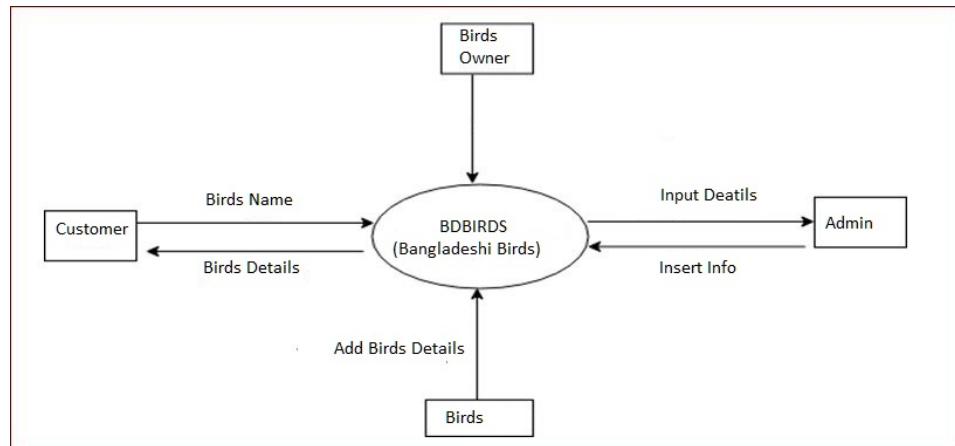


Figure 5.2.2.1: Level 1 DFD of BDBIRDS

Above this two DFD level do two work? DFD level 0 the admin need to login to access the system and if user want to take services he go to the landing page and he want extra information he login. If one customer wants to get information about BDBIRDS after input data server serves the data.

And DFD level 1 includes all details information. It includes Customer, Admin, Birds, and Birds Owner. Admin insert all data about BDBIRDS. From Birds add bird details and. In feature we keep ways where there a admin also adds some data without delete or update permissions.

5.3 Use Case Diagram

A use case diagram at its simplest is a representation of a user's interaction with the system that shows the relationship between the user and the different use cases in which the user is involved. A use case

diagram can identify the different types of users of a system and the different use cases and will often be accompanied by other types of diagrams as well. A use case diagram is a dynamic or behavior diagram in UML.

To model a system, the most important aspect is to capture the dynamic behavior. Dynamic behavior means the behavior of the system when it is running/operating. Only static behavior is not sufficient to model a system rather dynamic behavior is more important than static behavior. In UML, there are five diagrams available to model the dynamic nature and use case diagram is one of them. Now as we have to discuss that the use case diagram is dynamic in nature, there should be some internal or external factors for making the interaction.

These internal and external agents are known as actors. Use case diagrams consists of actors, use cases and their relationships. The diagram is used to model the system/subsystem of an application. A single use case diagram captures a particular functionality of a system. Hence to model the entire system, a number of use case diagrams are used.

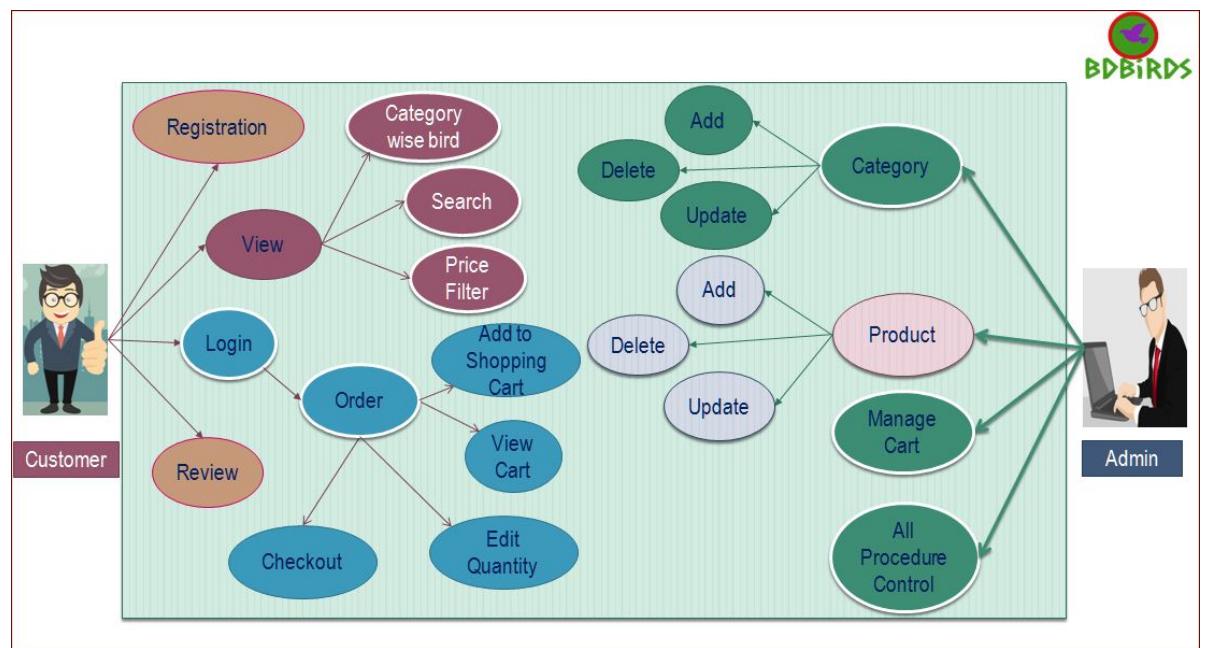


Figure 5.3 : Use Case Diagram

- **Home Page** This is first page of our application. Everybody can see this page without authentication.
- **About Page** This is another page of our application. Anybody can shop information from this portion.
- **Inventory Page** This is another page of our application. Anybody can find shop's inventory information from this portion.
- **Services Page** This is another page of our application. Anybody can explore the contact information of shop.

- **Contact Page** This is another page of our application. Anybody can explore the contact information of shop.
- **Login Page** This is login page. Privileged people get authenticate.
- **Admin Page** This is Admin page. Privileged people get make changes of website content.

5.3.0.1 Purpose of Use Case Diagram

The purpose of use case diagram is to capture the dynamic aspect of a system. However, this definition is too generic to describe the purpose, as other four diagrams (activity, sequence, collaboration, and State chart) also have the same purpose. We will look into some specific purpose, which will distinguish it from other four diagrams. Use case diagrams are used to gather the requirements of a system including internal and external influences.

These requirements are mostly design requirements. Hence, when a system is analyzed to gather its functionalists, use cases are prepared and actors are identified. When the initial task is complete, use case diagrams are modelled to present the outside view. In brief, the purposes of use case diagrams can be said to be as follows-

- Used to gather the requirements of a system.
- Used to get an outside view of a system.
- Identify the external and internal factors influencing the system.
- Show the interaction among the requirements are actors.
- Used to gather the requirements of a system.
- Used to get an outside view of a system.
- Identify the external and internal factors influencing the system.
- Show the interaction among the requirements is actors

So in a brief when we are planning to draw a use case diagram we should have the following items identified.

- Admin Register login and store the Bird Records details in database
- User Register from the login Process.
- Database stores the details and returns acknowledgement.

Here we draw an efficient use case diagram for admin and customer for our developed software.

5.3.1 Admin activities

Admin activities are-

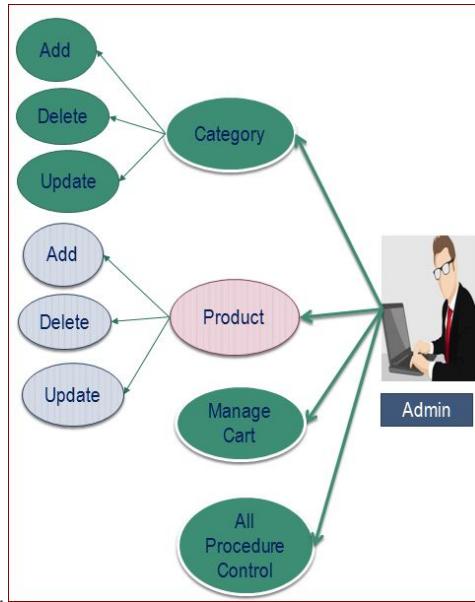


Figure 5.3.1: Admin Use Case Diagrams

5.3.2 Customer activities

Customer activities are-

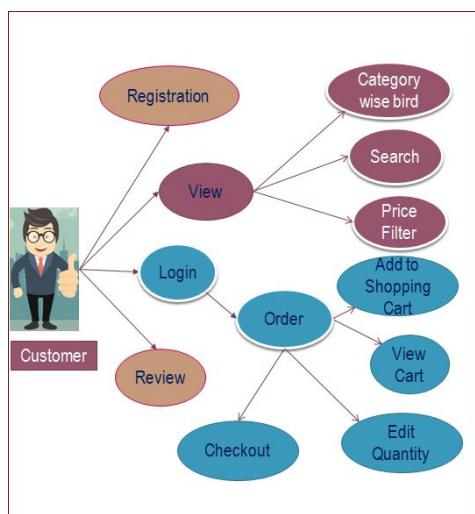


Figure 5.3.2: Customer Use Case Diagrams

5.4 Class Diagram

In software engineering, a class diagram in the Unified Modeling Language (UML) is a type of static structure diagram that describes the structure of a system by showing the system's classes, their attributes, operations (or methods), and the relationships among objects.

The class diagram is the main building block of object-oriented modeling. It is used for general conceptual modeling of the structure of the application, and for detailed modeling translating the models into programming code. Class diagrams can also be used for data modeling. The classes in a class diagram represent both the main elements, interactions in the application, and the classes to be programmed.

In the diagram, classes are represented with boxes that contain three compartments:

- The top compartment contains the name of the class. It is printed in bold and centered, and the first letter is capitalized.
- The middle compartment contains the attributes of the class.
- They are left-aligned and the first letter is lowercase.
- The bottom compartment contains the operations the class can execute. They are also left-aligned and the first letter is lowercase.

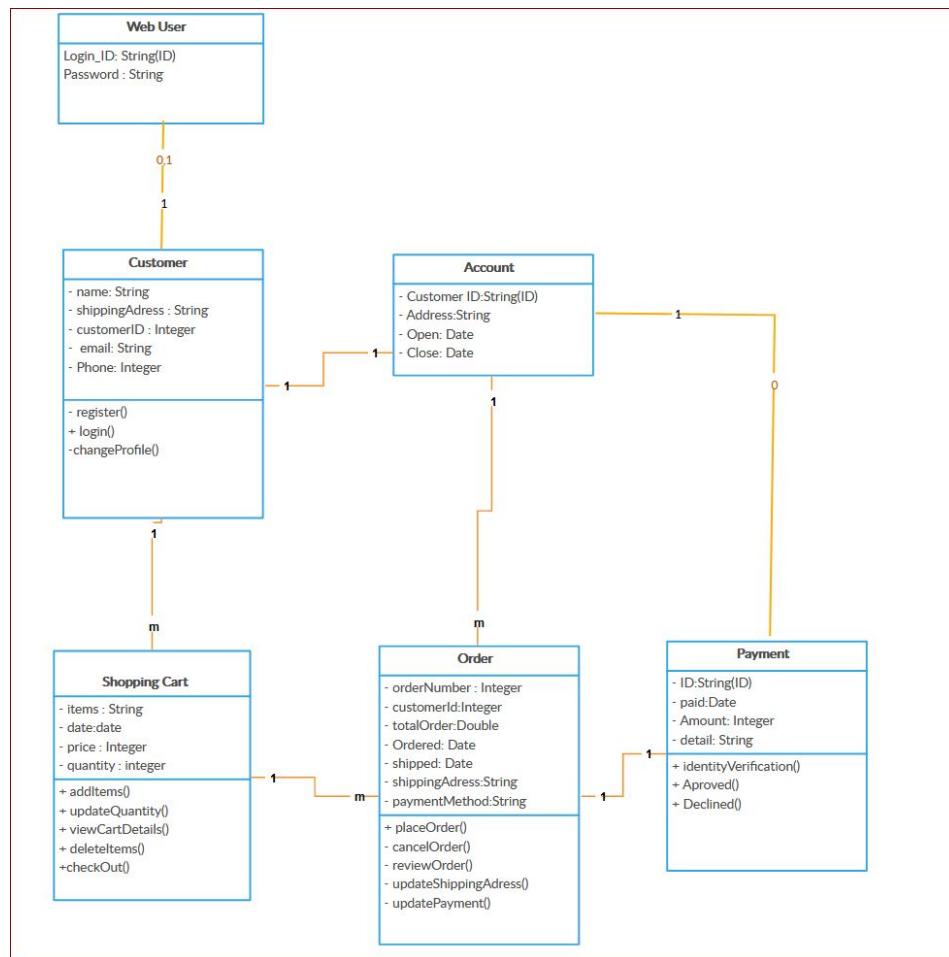


Figure 5.4: Class Diagrams

5.4.1 Purpose of Class Diagrams

Here we provide an example of UML class diagram which shows a domain model for online shopping. The purpose of the diagram is to introduce some common terms, "dictionary" for online shopping - Customer, Web User, Account, Shopping Cart, Product, Order, Payment, etc. and relationships between. It could be used as a common ground between business analysts and software developers. Each customer has unique id and is linked to exactly one account. Account owns shopping cart and orders. Customer could register as a web user to be able to buy items online. Customer is not required to be a web user because purchases could also be made by phone or by ordering from catalogues. Web user has login name which also serves as unique id. Web user could be in several states - new, active, temporary blocked, or banned, and be linked to a shopping cart. Shopping cart belongs to account.

Account owns customer orders. Customer may have no orders. Customer orders are sorted and unique. Each order could refer to several payments, possibly none. Every payment has unique id and is related to exactly one account. Each order has current order status. Both order and shopping cart have line items linked to a specific product. Each line item is related to exactly one product. A product could be associated to many line items or no item at all.

5.5 Activity Diagram

Online E commerce Website web application project provides activity diagrams while in development stage, this article explain about user and admin work flow features with diagrams. Activity diagrams are graphical representations of work-flows of step-wise activities and actions with support for choice, iteration and concurrency.

In the Unified Modeling Language, activity diagrams are intended to model both computational and organizational processes (i.e., workflows), as well as the data flows intersecting with the related activities. Although activity diagrams primarily show the overall flow of control, they can also include elements showing the flow of data between activities through one or more data stores.

5.5.1 Purpose of Activity Diagrams

The below attached User of the shopping cart system activity diagram explains about how login activity of user and admin works, Here user enters user name and password in the login web form and system validates the user details with the database, if the user details are equal to the database details then it can accept the user login form and proceeding to the next level or else it can reject the user login.

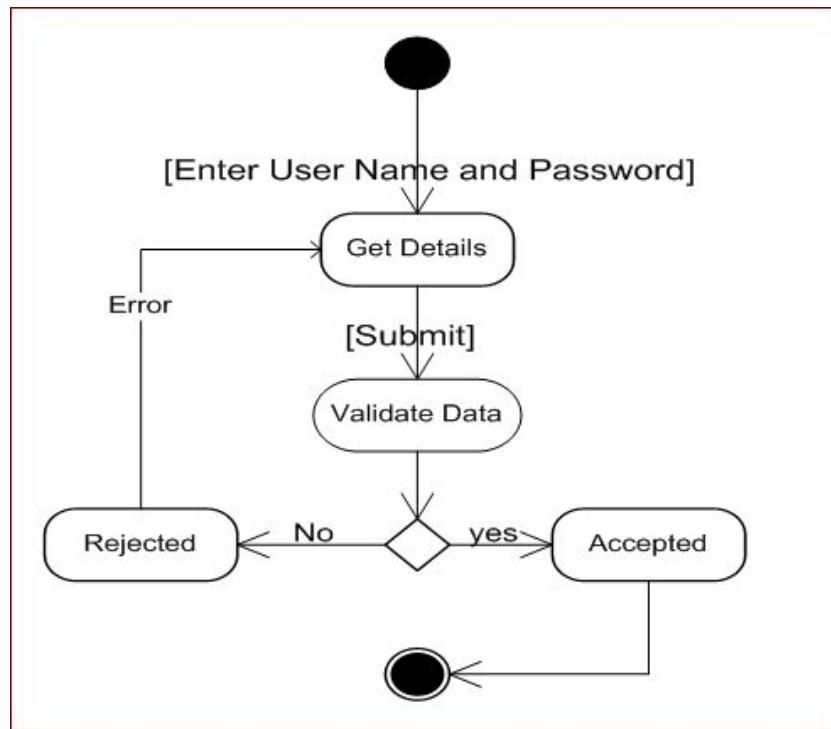


Figure 5.5.1.0: Customer Registration Activity Diagram

The below attached Registration activity diagram for e commerce website is to provide details about how new user or admin registration to the web application works. Here user enters total details like user name, password and personal details then click on the sign in button, where inner code validate the details entered by user, it is basically works with client side scripting language java script and finally accept the user registration process.

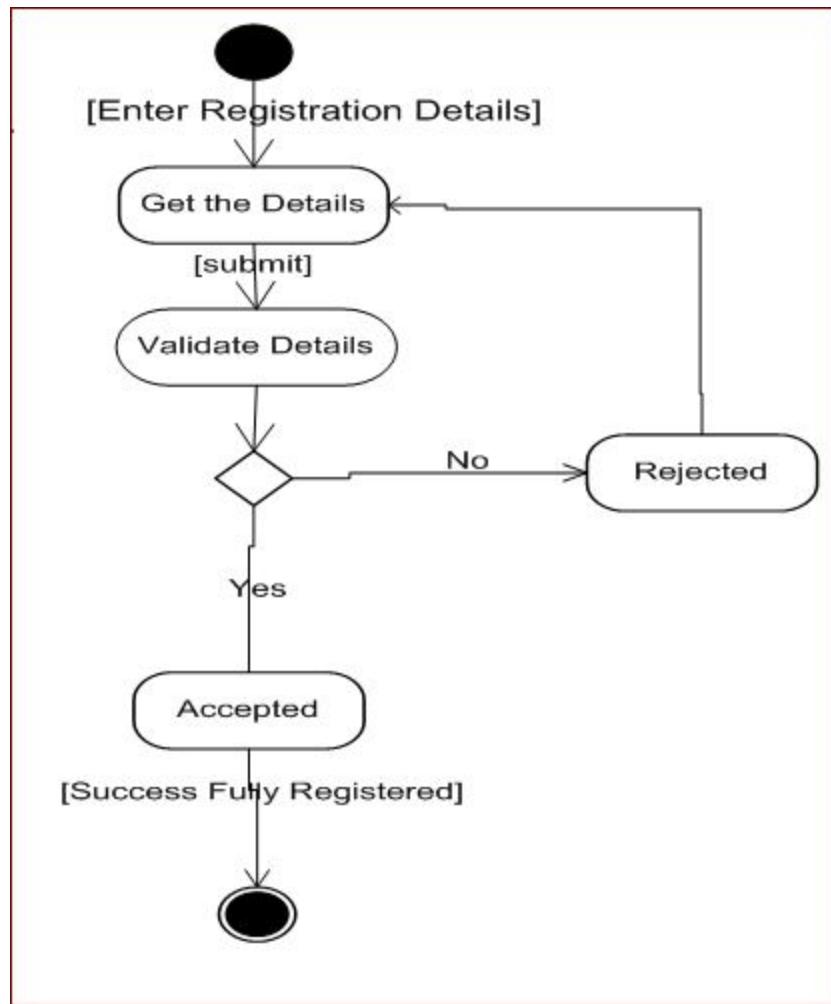


Figure 5.5.1.1: Customer Registration Successful Activity Diagram

The below attached Admin Activity Diagram explains admin username and password validation, managing user orders, manage new product details, data processing methods, accepting money payments, user and group permissions, etc.

Activity Diagram for Admin Side

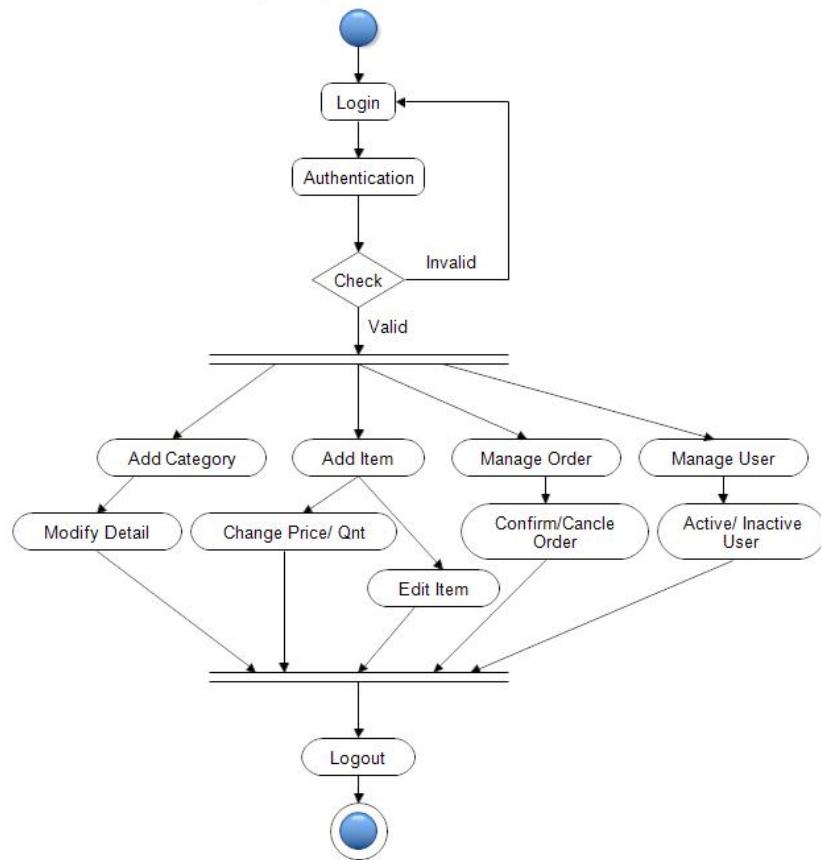


Figure 5.5.1.2: Admin Activity Diagram

The below attached Customer Activity Diagram explains about user product details, ordering products, view products, etc.

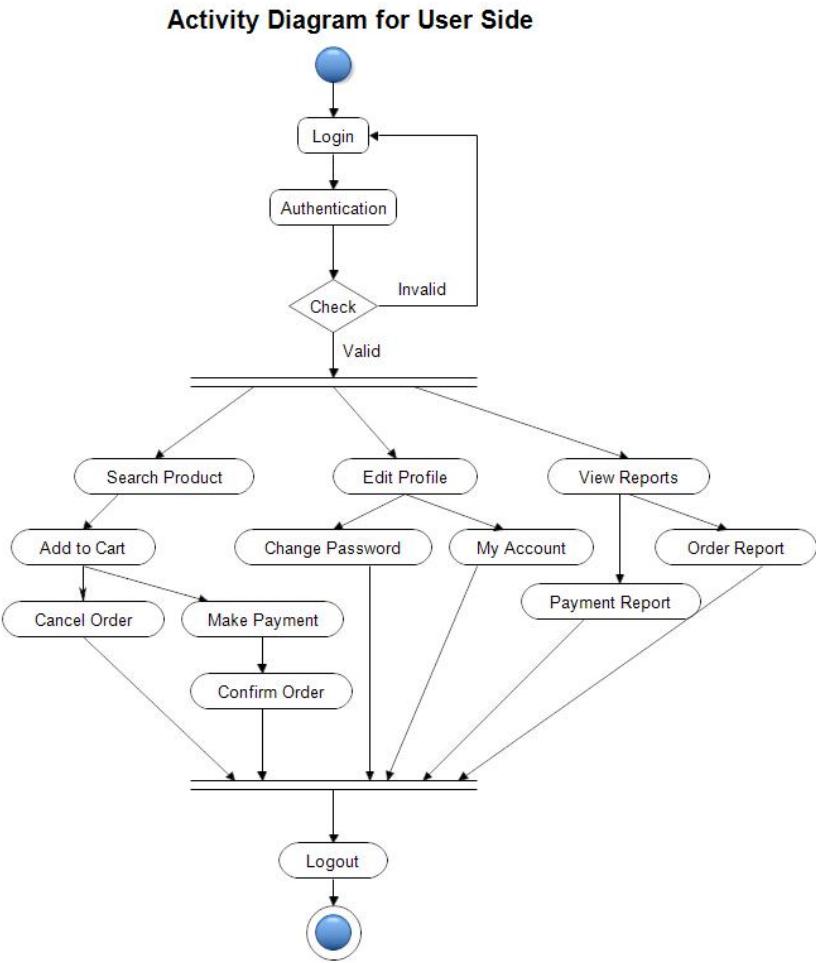


Figure 5.5.1.3: Customer Activity Diagram

5.6 Database Design

In this section of this report , we describe the database design method for the development of Online e-commerce website Bangladeshi Birds.

5.6.1 Relational DBMS (RDBMS)

The RDBMS (Relational Database Management System) is a system complying to the relational model developed by IBM's E F Cod. It allows the user to construct, modify and administer a relational database. Most of the databases that exist today are an extension of this age-old model. The data is structured in database tables, fields and records. The stored data is allowed to be manipulated using relational operators in Relational Database Management System. SQL is used as the data query language in this system.

A relational database management system (RDBMS) is a database management system (DBMS)

based on the relational model invented by Edgar F. Codd at IBM's San Jose Research Laboratory. Most databases in widespread use today are based on his relational database model.

RDBMSs have been a common choice for the storage of information in databases used for financial records, manufacturing and logistical information, personnel data, and other applications since the 1980s. According to DB-Engines, in June 2018, the most widely used systems were Oracle, MySQL (Free software), Microsoft SQL Server, PostgreSQL (Free software), IBM DB2, Microsoft Access, and SQLite (Free software).

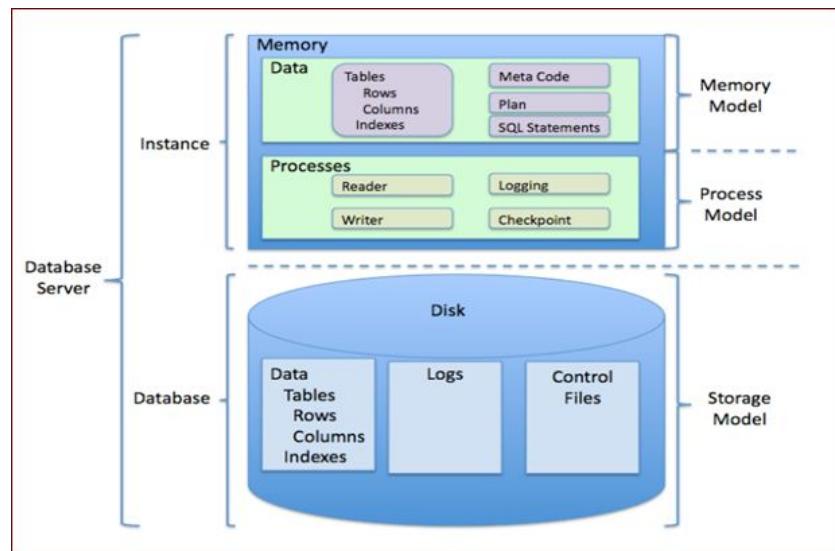


Figure 5.6: The General Structure of a Relational Database

According to research company Gartner, in 2011, the five leading Proprietary software relational database vendors by revenue were Oracle (48.8

5.6.2 Features of RDBMS

The system caters to a wide variety of applications and quite a few of its stand out features enable its worldwide use. The features include:

- First, its number one feature is the ability to store data in tables. The fact that the very storage of data is in a structured form can significantly reduce iteration time.
- Data persists in the form of rows and columns and allows a facility primary key to define unique identification on of rows.
- It creates indexes for quicker data retrieval.
- Allows for various types of data integrity like (i) Entity Integrity; wherein no duplicate rows in a table exist, (ii) Domain Integrity; that enforces valid entries for a given column by filtering the type, the format, or the wide use of values, (iii) Referential Integrity; which disables the deletion of rows that are in use by other records and (iv) User Defined Integrity providing some specific business rules that do not fall into the above three.

- Also allows for the virtual table creation which provides a safe means to store and secure sensitive content.
- Common column implementation and also multi user accessibility is included in the RDBMS features.

5.6.3 Advantage of RDBMS

- Data is stored only once and hence multiple record changes are not required. Also deletion and modification of data becomes simpler and storage efficiency is very high.
- Complex queries can be carried out using the Structure Query Language. Terms like ‘Insert’, ‘Update’, ‘Delete’, ‘Create’ and ‘Drop’ are keywords in SQL that help in accessing a particular data of choice.
- Better security is offered by the creation of tables. Certain tables can be protected by this system. Users can set access barriers to limit access to the available content. It is very useful in companies where a manager can decide which data is provided to the employees and customers. Thus a customized level of data protection can be enabled.
- Provision for future requirements as new data can easily be added and appended to the existing tables and can be made consistent with the previously available content. This is a feature that no flat file database has.

5.6.4 Disadvantage of RDBMS

Relational databases has many advantages but amongst the disadvantages are-

- They tend to be slow and not scalable. If you have more servers you cant always do more work with them.
- They have a fixed schema which is a plus unless this hurts productivity too much.
- Tables dont always map to objects in applications very well.
- They are not secure enough to expose to the internet and need a layers to be added to protect them.
- They are not at storing very large records i.e. 100s of MBs or GBs

5.7 Entity Relationship Diagram (ER-Diagram)

An Entity Relationship Diagram (ERD) is a visual representation of different data using conventions that describe how these data are related to each other. It shows the logical structure or flow of data in a database. Entity-Relationship Diagrams are very important in planning a database structure. They hold the basic concepts of the data exchange between different entities in a database. They are also very important in making logical and efficient databases. ER Diagrams consists of entities and their relationship with each other.

- Weak entity Attribute
- Multi valued attribute
- Derived attribute
- Relationship

5.7.1 Entity

An entity is something that exists as itself, as a subject or as an object, actually or potentially, concretely or abstractly, physically or not. It need not be of material existence. In particular, abstractions and legal fictions are usually regarded as entities. In general, there is also no presumption that an entity is animate, or present. The word is abstract in intention. It may refer, for example, to Bucephalus, the horse of Alexander; to a stone; to a cardinal number; to a language; or to ghosts or other spirits. The word entitative is the adjective form of the noun entity. Something that is entitative is considered in its own right.

5.7.2 Weak entity

A weak entity is an entity that depends on the existence of another entity. In more technical terms it can be defined as an entity that cannot be identified by its own attributes. It uses a foreign key combined with its attributes to form the primary key. An entity like order item is a good example for this. The order item will be meaningless without an order so it depends on the existence of order. It is represented by double rectangle.

5.7.3 Attribute

An attribute is a property, trait, or characteristic of an entity, relationship, or another attribute. An entity can have as many attributes as necessary. Meanwhile, attributes can also have their own specific attributes. Attributes are usually represented in oval shape.

5.7.4 Multi valued attribute

If an attribute can have more than one value it is called a multi valued attribute. It is important to note that this is different to an attribute having its own attributes. For example a teacher entity can have multiple subject values. It is represented by a double ellipse.

5.7.5 Mapping Cardinality

Cardinality refers to the number of entity objects on each side of the relationship. In e-r diagram there are four types of mapping cardinalities. For example: a customer can order products one after another.

5.7.5.1 One-to-One

A one-to-one relationship is the simplest relationship between two beans. One entity bean relates only to one other entity bean. For example: a customer can be kept only in one word/cell at a time.

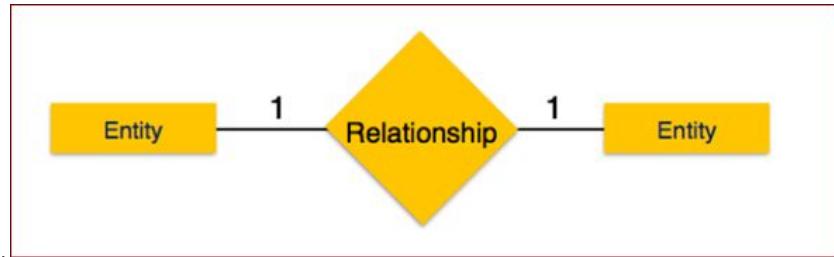


Figure 5.7.5.1: One-to-One

5.7.5.2 One-to-Many

In a one-to-many relationship, one object can reference several instances of another. A one-to-many relationship is a type of cardinality that refers to the relationship between two entities (see also entity(relationship model) A and B in which an element of A may be linked to many elements of B, but a member of B is linked to only one element of A. For instance, think of A as mothers, and B as children. A mother can have several children, but a child can have only one biological mother.

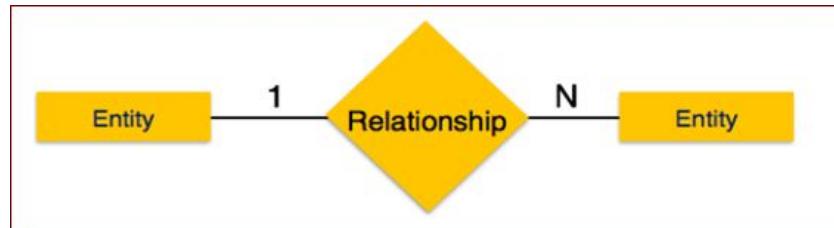


Figure 5.7.5.2: One-to-Many

5.7.5.3 Many-to-One

In a many-to-one relationship, many objects can reference one instance of another. A many-to-one relationship is where one entity (typically a column or set of columns) contains values that refer to another entity (a column or set of columns) that has unique values.

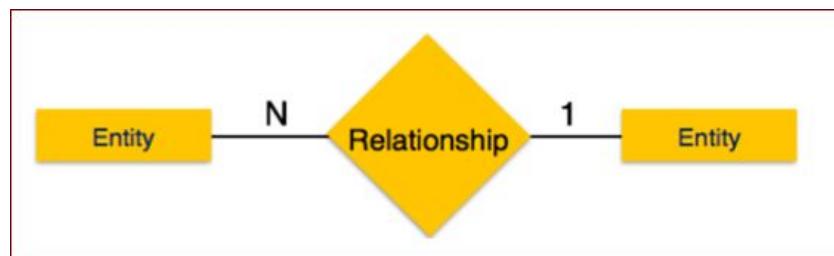


Figure 5.7.5.3: Many-to-One

5.7.5.4 Many-to-Many

A many-to-many relationship is complex. In a many-to-many relationship, many objects can reference many objects. This cardinality is the most difficult to manage. And this is the ER Diagram of the database we used in our project.

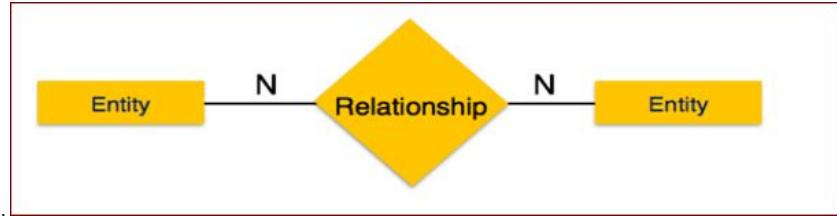


Figure 5.7.5.4: Many-to-Many

5.7.6 ER Diagram of BDBIRDS

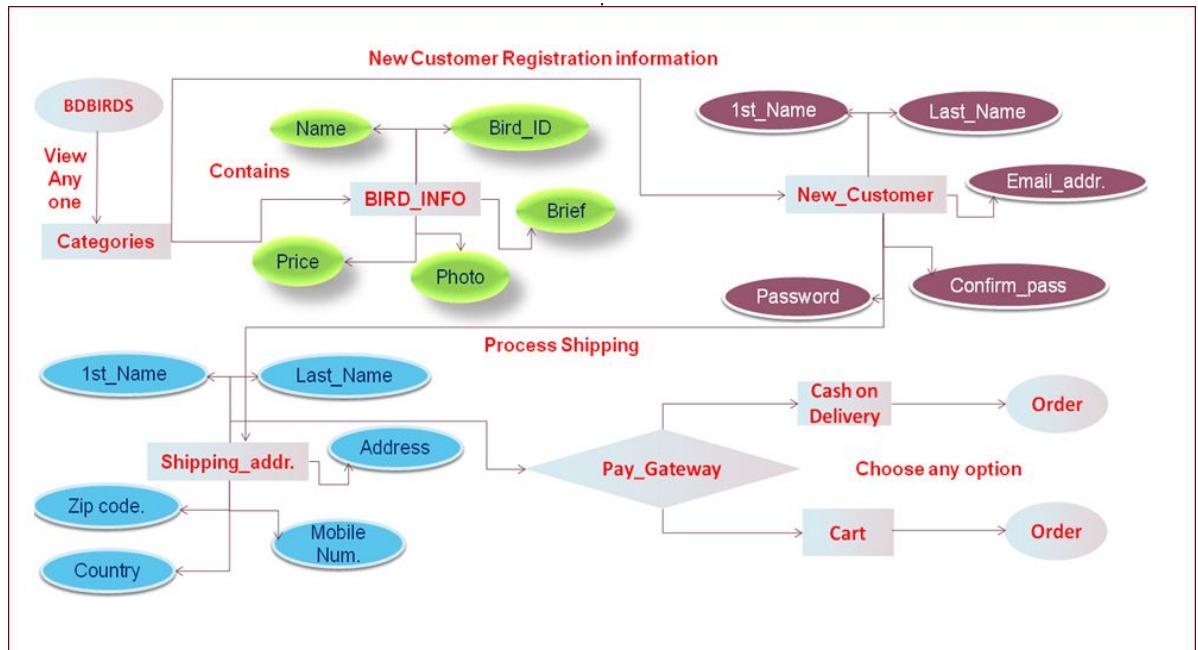


Figure 5.7.6: ER diagram of BDBIRDS project

5.8 Database Design

Database design is the organization of data according to a database model. The designer determines what data must be stored and how the data elements interrelate. With this information, they can begin to fit the data to the database model. Database design involves classifying data and identifying interrelationships. This theoretical representation of the data is called ontology. The ontology is the theory behind the database's design .

5.8.1 Comparison of Primary Keys to Foreign Keys

Databases are the storehouses of data used in the software systems. The data is stored in tables inside the database. Several tables are created for the manipulation of the data for the system. Two essential settings for a database are-

5.8.2 Primary Key

The PRIMARY KEY constraint uniquely identifies each record in a database table. Primary keys must contain UNIQUE values, and cannot contain NULL values. A table can have only one primary key, which may consist of single or multiple fields.

5.8.3 Foreign Key

A Foreign Key is a key used to link two tables together. A Foreign Key is a field (or collection of fields) in one table that refers to the PRIMARY KEY in another table. The table containing the foreign key is called the child table, and the table containing the candidate key is called the referenced or parent table. Summary as Below-

- Primary Key - the field that is unique for all the record occurrences.
- Foreign Key - the field used to set relation between tables.

In this section, the basic structure of the tables composing the database for the project are shown along with information about primary and foreign keys.

5.8.4 Admin Profile

BDBIRDS admin details in Database-



A screenshot of a database table titled "Admin". The table has columns: admin_id, admin_name, admin_email, admin_pass, admin_role, admin_image, admin_status, and admin_create_at. There are three rows of data:

	admin_id	admin_name	admin_email	admin_pass	admin_role	admin_image	admin_status	admin_create_at
<input type="checkbox"/>	2	Al amin	cmealamin@gmail.com	123456	admin		1	2019-01-06 01:47:37
<input type="checkbox"/>	3	Shanta	tamannashanta5@gmail.com	123456	admin		1	2019-01-06 19:10:07
<input type="checkbox"/>	4	firozkamal	firozkamal@gmail.com	123456	admin		1	2019-03-11 09:34:53

Table 5.8.4: Admin Information of BDBIRDS.

5.8.5 Customer Profile

BDBIRDS Customer details in Database-

+ Options

			user_info_id	user_id	first_name	last_name	a
<input type="checkbox"/>	 Edit	 Copy	 Delete	4	4	cme	alamin
<input type="checkbox"/>	 Edit	 Copy	 Delete	5	5	Tamanna	Shanta
<input type="checkbox"/>	 Edit	 Copy	 Delete	6	6	A	B
<input type="checkbox"/>	 Edit	 Copy	 Delete	7	7	sheish	sheikh
<input type="checkbox"/>	 Edit	 Copy	 Delete	8	8	alamin	Sheish
<input type="checkbox"/>	 Edit	 Copy	 Delete	9	9	firoz	kamal
<input type="checkbox"/>	 Edit	 Copy	 Delete	10	10	kamal	hasan

Table 5.8.5: Customer Information of BDBIRDS.

5.8.6 Category Of BDBIRDS

Category Of BDBIRDS details in Database-

+ Options

			cat_id	cat_name	cat_image	
<input type="checkbox"/>	 Edit	 Copy	 Delete	8	Love Bird	05012019162909.jpg
<input type="checkbox"/>	 Edit	 Copy	 Delete	9	Games Birds	05012019162930.jpg
<input type="checkbox"/>	 Edit	 Copy	 Delete	11	Tailors Bird	06012019075337.jpg
<input type="checkbox"/>	 Edit	 Copy	 Delete	12	Song Birds	15022019200525.jpg
<input type="checkbox"/>	 Edit	 Copy	 Delete	14	Teasing Bird	07032019183755.jpg

Table 5.8.6: Category of BDBIRDS.

5.8.7 Product details Of BDBIRDS

BDBIRDS product details in Database-

	Edit	Copy	Delete	product_id	cat_id	product_name	product_code	product_price	product_about	product_ingredients	product_status
<input type="checkbox"/>	Edit	Copy	Delete	14	8	Love	L-2	1000.00	A lovebird is the common name of bird, a small gen...	Available.	1
<input type="checkbox"/>	Edit	Copy	Delete	15	8	Fischer	L5	2000.00	The Fischer's lovebird is a small parrot species o...	Available.	1
<input type="checkbox"/>	Edit	Copy	Delete	16	14	Crow	C-1	200.00	The Crow is a teasing bird. It is a family of small...	Available	1
<input type="checkbox"/>	Edit	Copy	Delete	17	12	Cuckoo	s1	100.00	The cuckoo is the most popular singing bird in our...	Available	1
<input type="checkbox"/>	Edit	Copy	Delete	18	7	Shyama	S2	200.00	White-rumped Shyama Isolated on white background ...	Available	1
<input type="checkbox"/>	Edit	Copy	Delete	19	7	Koel	s3	250.00	Koyal is very famous bird in our country. It is ve...	Available	1
<input type="checkbox"/>	Edit	Copy	Delete	20	7	Mayna	S4	220.00	The Mayna is small but pretty. It sings and raises...	Available	1
<input type="checkbox"/>	Edit	Copy	Delete	21	8	Yellow-Collared	I3	500.00	The yellow-collared lovebird also called masked l...	Available	1
<input type="checkbox"/>	Edit	Copy	Delete	22	8	Hy-Love Bird	I4	800.00	A hybrid lovebird is the result of two species lov...	Available	1
<input type="checkbox"/>	Edit	Copy	Delete	23	9	Partridge	g1	230.00	A partridge is a medium-sized bird in the pheasant...	Available	1
<input type="checkbox"/>	Edit	Copy	Delete	24	9	Dove	g2	450.00	The Dove is small but pretty. It sings and raises...	Available	1
<input type="checkbox"/>	Edit	Copy	Delete	25	9	Snipe	g3	235.00	The snipe is a long-billed marshland dweller, rela...	Available	1
<input type="checkbox"/>	Edit	Copy	Delete	26	9	Wild-turkey	g4	550.00	The Wild Turkey is indigenous to North west and i...	Available	1
<input type="checkbox"/>	Edit	Copy	Delete	27	14	Kite	t2	500.00	The kite is another teasing bird. It is a very c...	Available	1
<input type="checkbox"/>	Edit	Copy	Delete	28	14	Starling	T3	600.00	It Smaller than blackbirds, with a short tail, tri...	Available	1
<input type="checkbox"/>	Edit	Copy	Delete	29	14	Sparrow	t4	100.00	The Sparrow is a teasing bird. Sparrows are a fami...	Available	1
<input type="checkbox"/>	Edit	Copy	Delete	30	11	Shallow	Tailor-1	230.00	The swallows, martins and saw-wings, or Hirundinid...	Available	1

Table 5.8.7: BDBIRDS product details.

5.8.8 Order details Of BDBIRDS

BDBIRDS order details in Database-

	Browse	Structure	SQL	Search	Insert	Export	Import	Privileges	Operations	Tracking	Triggers	
	order_id	order_no	user_id	baker_id	shipping_id	qty	total_price	discount	delivery_charges	payment_type	date	created_date
<input type="checkbox"/>	Edit	Copy	Delete	6	19022593	4	0	0	2	460.00	0.00	Cash on delivery 2019-02-25 2019-02-26 01:47:14
<input type="checkbox"/>	Edit	Copy	Delete	7	190225920	4	0	0	1	230.00	0.00	Cash on delivery 2019-02-25 2019-02-26 01:48:29
<input type="checkbox"/>	Edit	Copy	Delete	8	190225504	4	0	0	2	330.00	0.00	Cash on delivery 2019-02-25 2019-02-26 01:48:53
<input type="checkbox"/>	Edit	Copy	Delete	9	190226612	4	0	0	0	0.00	0.00	Cash on delivery 2019-02-26 2019-02-26 11:43:04
<input type="checkbox"/>	Edit	Copy	Delete	10	190226521	4	0	0	0	0.00	0.00	Cash on delivery 2019-02-26 2019-02-26 11:44:07
<input type="checkbox"/>	Edit	Copy	Delete	11	190226326	4	0	0	3	580.00	58.00	Cash on delivery 2019-02-26 2019-02-26 11:46:02
<input type="checkbox"/>	Edit	Copy	Delete	12	190226590	4	0	0	0	0.00	0.00	Cash on delivery 2019-02-26 2019-02-26 12:06:59
<input type="checkbox"/>	Edit	Copy	Delete	13	190226148	4	0	0	2	330.00	33.00	Cash on delivery 2019-02-26 2019-02-26 14:42:59
<input type="checkbox"/>	Edit	Copy	Delete	14	190227598	8	0	0	2	460.00	46.00	Cash on delivery 2019-02-27 2019-02-28 01:07:54
<input type="checkbox"/>	Edit	Copy	Delete	15	190227740	8	0	0	7	1480.00	148.00	Cash on delivery 2019-02-27 2019-02-28 01:11:28
<input type="checkbox"/>	Edit	Copy	Delete	16	190301200	5	0	0	6	1540.00	154.00	Cash on delivery 2019-03-01 2019-03-01 19:03:48
<input type="checkbox"/>	Edit	Copy	Delete	17	190304870	4	0	0	12	2240.00	224.00	Cash on delivery 2019-03-04 2019-03-04 16:35:03
<input type="checkbox"/>	Edit	Copy	Delete	18	190304408	4	0	0	3	560.00	56.00	Cash on delivery 2019-03-04 2019-03-04 20:02:24
<input type="checkbox"/>	Edit	Copy	Delete	19	190308449	4	0	0	1	550.00	55.00	Cash on delivery 2019-03-08 2019-03-09 00:36:28
<input type="checkbox"/>	Edit	Copy	Delete	20	190308979	4	0	0	1	235.00	23.50	Cash on delivery 2019-03-08 2019-03-09 00:55:25
<input type="checkbox"/>	Edit	Copy	Delete	21	80319813	4	0	0	3	560.00	56.00	Cash on delivery 2019-03-08 2019-03-09 01:33:56
<input type="checkbox"/>	Edit	Copy	Delete	22	90319336	4	0	0	2	330.00	33.00	Cash on delivery 2019-03-09 2019-03-09 12:24:40
<input type="checkbox"/>	Edit	Copy	Delete	23	100319359	9	0	0	15	5690.00	569.00	Cash on delivery 2019-03-10 2019-03-10 20:49:24
<input type="checkbox"/>	Edit	Copy	Delete	24	11031987	10	0	0	3	1260.00	126.00	Cash on delivery 2019-03-11 2019-03-11 09:48:24
<input type="checkbox"/>	Edit	Copy	Delete	25	110319768	5	0	0	9	5100.00	510.00	Cash on delivery 2019-03-11 2019-03-11 11:07:42

Table 5.8.8:BDBIRDS order details.

5.8.9 Order Quantity details Of BDBIRDS

BDBIRDS order quantity details in Database-

		order_product_id	order_id	product_id	date	qty	price	options
<input type="checkbox"/>	 Edit  Copy  Delete	1	1	26	2019-02-18	2	550.00	{"product_id": "26", "cat_id": "9", "product_name": "Wi...}
<input type="checkbox"/>	 Edit  Copy  Delete	2	1	32	2019-02-18	4	230.00	{"product_id": "32", "cat_id": "11", "product_name": "B...}
<input type="checkbox"/>	 Edit  Copy  Delete	3	1	36	2019-02-18	9	250.00	{"product_id": "36", "cat_id": "12", "product_name": "B...}
<input type="checkbox"/>	 Edit  Copy  Delete	4	2	16	2019-02-18	1	200.00	{"product_id": "16", "cat_id": "10", "product_name": "C...}
<input type="checkbox"/>	 Edit  Copy  Delete	5	2	27	2019-02-18	1	200.00	{"product_id": "27", "cat_id": "10", "product_name": "K...}
<input type="checkbox"/>	 Edit  Copy  Delete	6	2	28	2019-02-18	1	230.00	{"product_id": "28", "cat_id": "10", "product_name": "S...}
<input type="checkbox"/>	 Edit  Copy  Delete	7	3	38	2019-02-19	3	230.00	{"product_id": "38", "cat_id": "7", "product_name": "Ro...}
<input type="checkbox"/>	 Edit  Copy  Delete	8	3	37	2019-02-19	5	100.00	{"product_id": "37", "cat_id": "12", "product_name": "B...}
<input type="checkbox"/>	 Edit  Copy  Delete	9	3	22	2019-02-19	3	230.00	{"product_id": "22", "cat_id": "8", "product_name": "Hy...}
<input type="checkbox"/>	 Edit  Copy  Delete	10	3	35	2019-02-19	2	230.00	{"product_id": "35", "cat_id": "12", "product_name": "C...}
<input type="checkbox"/>	 Edit  Copy  Delete	11	4	14	2019-02-19	1	1000.00	{"product_id": "14", "cat_id": "8", "product_name": "Lo...}
<input type="checkbox"/>	 Edit  Copy  Delete	12	5	26	2019-02-25	1	550.00	{"product_id": "26", "cat_id": "9", "product_name": "Wi...}
<input type="checkbox"/>	 Edit  Copy  Delete	13	5	36	2019-02-25	1	250.00	{"product_id": "36", "cat_id": "12", "product_name": "B...}
<input type="checkbox"/>	 Edit  Copy  Delete	14	5	35	2019-02-25	1	230.00	{"product_id": "35", "cat_id": "12", "product_name": "C...}
<input type="checkbox"/>	 Edit  Copy  Delete	15	6	38	2019-02-25	2	230.00	{"product_id": "38", "cat_id": "7", "product_name": "Ro...}
<input type="checkbox"/>	 Edit  Copy  Delete	16	7	22	2019-02-25	1	230.00	{"product_id": "22", "cat_id": "8", "product_name": "Hy...}
<input type="checkbox"/>	 Edit  Copy  Delete	17	8	38	2019-02-25	1	230.00	{"product_id": "38", "cat_id": "7", "product_name": "Ro...}

Table 5.8.9: BDBIRDS order quantity details.

5.8.10 Shipping Address details Of BDBIRDS

BDBIRDS shipping address details in Database-

Global Shipping Data												
	Shipping ID	User ID	Order ID	First Name	Last Name	Address 1	Address 2	Post Code	Phone No	Country	Action	
	1	4	5	qwert	sdfgmn	qwert	qwerfghj	1234	2019	BD		
	2	4	6	cme	alamin	273/A	Dhaka	1207	0	BD		
	3	4	7	wedrfgh		3245	34354	435465	0	AS		
	4	4	8	34t5yrrtytuyte4	54564	34545y676	q2ewq3nwre	4retryu	0	BH		
	5	4	9	cme	alamin	dhaka	magura	1207	0	BD		
	6	4	10	1	df	sdf	sd	1342	0	BD		
	7	4	11	12	132	2434tfds	wewwrt	123	01620744048	BH		
	8	4	12	we	23	23	232	e3	01620744048	AT		
	9	4	13	Ali	Munsur	Magura	Dhaka	1276		BD		
	10	8	14	al	amin	dhaka	1207	1207		BD		
	11	8	15	4	2345t5	dfdghfgjh	wef	1233		BD		
	12	5	16	tamanna	shanta	D-thbnjmkmkfgchgv	fjhertry	1216		BD		
	13	4	17	erty	sdfg	sdfg	sdfgh	1334		BD		
	14	4	18	wderg	df	dfg	hfif	543		BD		
	15	4	19	3aqSWDEFRT	5464	ERT	ERT	46				
	16	4	20	eter	terte	t		5	3456	AD		
	17	4	21	sheish	sheikh	Magura		1209	01620744048	AM		
	18	4	22	defr	df	sdf		2345	237787	BS		
	19	9	23	firoz	kamal	mirpur		1234	01736748628	AR		
	20	10	24	Firoz	kamal	Mirpur		er	02734787347	BH		

Table 5.8.10: BDBIRDS shipping address details.

5.8.11 Customer Review Of BDBIRDS

BDBIRDS customer review details in Database-

+ Options					id	name	designation	note	image
<input type="checkbox"/>					5	Sumon Sheikh	Administrator	It is very outstanding website of BDBIRDS in comm...	04032019073319.jpg
<input type="checkbox"/>					6	Sheish	INDIA	It is very outstanding website of BDBIRDS in comme...	04032019074045.jpg
<input type="checkbox"/>					7	Tamanna	Dinajpur	t is very helpfully website in region of pets. I a...	04032019074547.jpg

Table 5.8.11: BDBIRDS customer review.

5.9 Waterfall Method

Waterfall approach was first SDLC Model to be used widely in Software Engineering to ensure success of the project. In "The Waterfall" approach, the whole process of software development is divided into separate phases. In this Waterfall model, typically, the outcome of one phase acts as the input for the next phase sequentially. The following illustration is a representation of the different phases of the Waterfall Model.

All these phases are cascaded to each other in which progress is seen as flowing steadily downwards (like a waterfall) through the phases. The next phase is started only after the defined set of goals are achieved for previous phase and it is signed off, so the name "Waterfall Model". In this model, phases do not overlap.

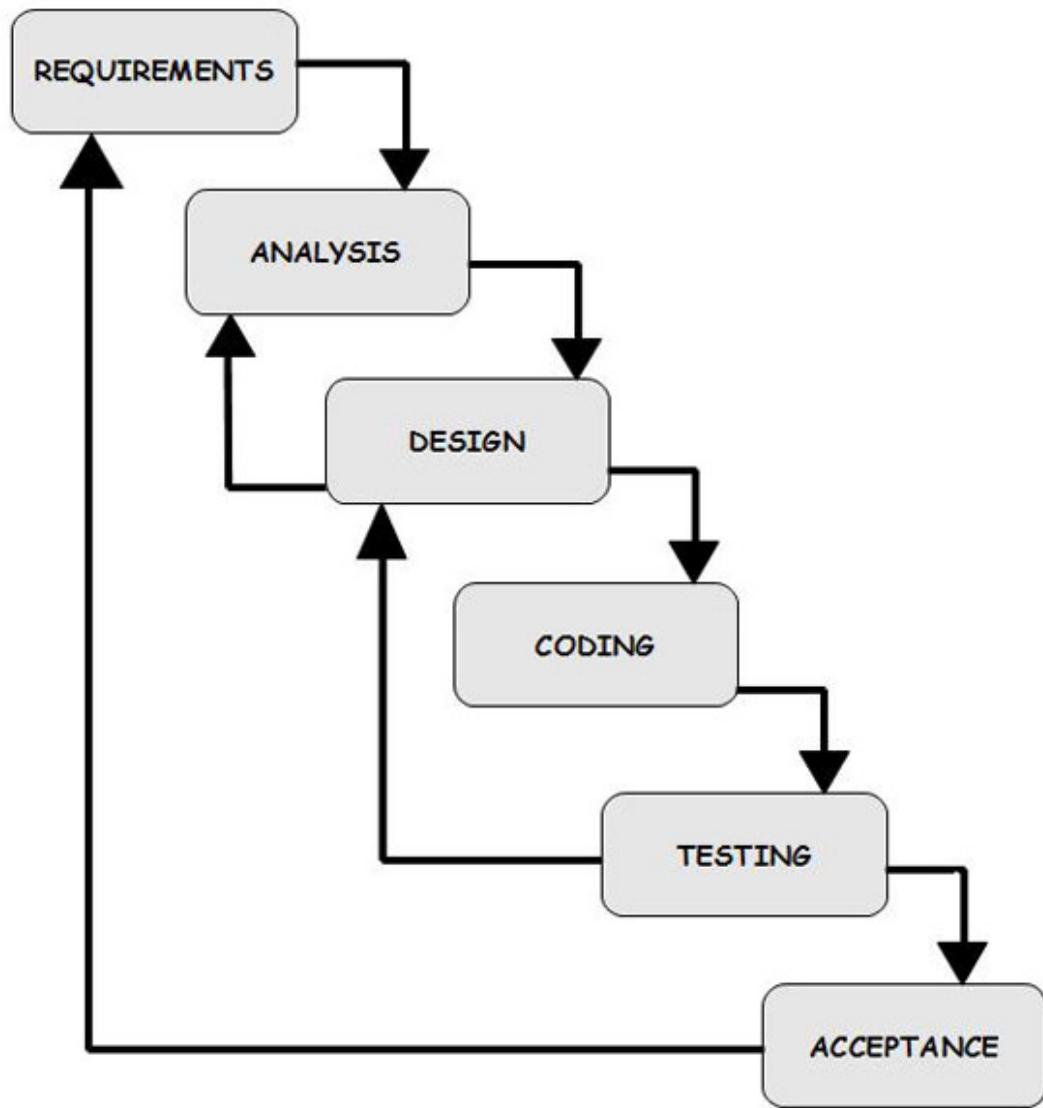


Figure 5.9: The Sequential Shapes in Waterfall Model

5.9.1 Phase I: Requirements

The first phase involves understanding what you need to design and what is its function, purpose etc. Unless you know what you want to design, you cannot proceed with the project. Even a small code such as adding two integer numbers, needs to be written with the output in mind. Here, in this stage, the requirements which the software is going to satisfy are listed and detailed. These requirements are then presented to the team of programmers. If this phase is completed successfully, it ensures a smooth working of the remaining phases, as the programmer is not burdened to make changes at later stages because of changes in requirements.

5.9.2 Phase II: Analysis

As per the requirements, the software and hardware needed for the proper completion of the project is analyzed in this phase. Right from deciding which computer language should be used for designing the software, to the database system that can be used for the smooth functioning of the software, such features are decided at this stage.

5.9.3 Phase III: Design

The algorithm or flowchart of the program or the software code to be written in the next stage, is created now. It is a very important stage, which relies on the previous two stages for its proper implementation. The proper design at this stage, ensures a execution in the next stage. If during the design phase, it is noticed that there are some more requirements for designing the code, the analysis phase is revisited and the design phase is carried out according to the new set of resources.

5.9.4 Phase IV: Coding

Based on the algorithm or flowchart designed, the actual coding of the software is carried out. This is the stage where the idea and flowchart of the application is physically created or materialized. A proper execution of the previous stages ensures a smooth and easier implementation of this stage.

5.9.5 Phase V: Testing

With the coding of the application complete, the testing of the written code now comes into scene. Testing checks if there are any flaws in the designed software and if the software has been designed as per the listed specifications. A proper execution of this stage ensures that the client interested in the created software, will be satisfied with the finished product. If there are any flaws, the software development process must step back to the design phase. In the design phase, changes are implemented and then the succeeding stages of coding and testing are again carried out.

5.9.6 Phase VI: Acceptance

This is the last stage of the software development in the waterfall model. A proper execution of all the preceding stages ensures an application as per the provided requirements and most importantly, it ensures a satisfied client. However, at this stage, you may need to provide the client with some support regarding the software you have developed. If the client demands further enhancements to be made to the existing software, then the development process must begin anew, right from the first phase, i.e., requirements.

5.9.6.1 Waterfall Model Advantages

The advantages of waterfall development are that it allows for departmentalization and control. A schedule can be set with deadlines for each stage of development and a product can proceed through the development process model phases one by one. Some of the major advantages of the Waterfall Model are as follows-

- Simple and easy to understand and use
- Easy to manage due to the rigidity of the model. Each phase has specific deliverables and a review process.
- Phases are processed and completed one at a time.
- Clearly defined stages.
- Well understood milestones.
- Easy to arrange tasks.
- Process and results are well documented.

5.9.6.2 Waterfall Model Disadvantages

The disadvantage of waterfall development is that it does not allow much reflection or revision. The major disadvantages of the Waterfall Model are as follows-

- No working software is produced until late during the life cycle.
- High amounts of risk and uncertainty.
- Not a good model for complex and object-oriented projects.
- Poor model for long and ongoing projects.
- It is difficult to measure progress within stages.
- Cannot accommodate changing requirements.
- Adjusting scope during the life cycle can end a project .

5.10 Conclusion

Project design is an early phase of the project where a project's key features, structure, criteria for success, and major deliverable are all planned out. The point is to develop one or more designs which can be used to achieve the desired project goals, in this chapter we try to design Easy Rent system properly.

6 IMPLEMENTATION

6.1 Introduction

The primary goal during the Developing Phase is to build the solution components code as well as documentation. Some Implementation work may, however, continue into the Stabilizing Phase in response to testing.

The Implementing Phase involves more than code Implementation and software developers. The infrastructure is also developed during this phase and all roles are active in building and testing deliverable. The team continues to identify all risks throughout the phase and address new risks as they emerge.

6.2 Starting the Implementation cycle

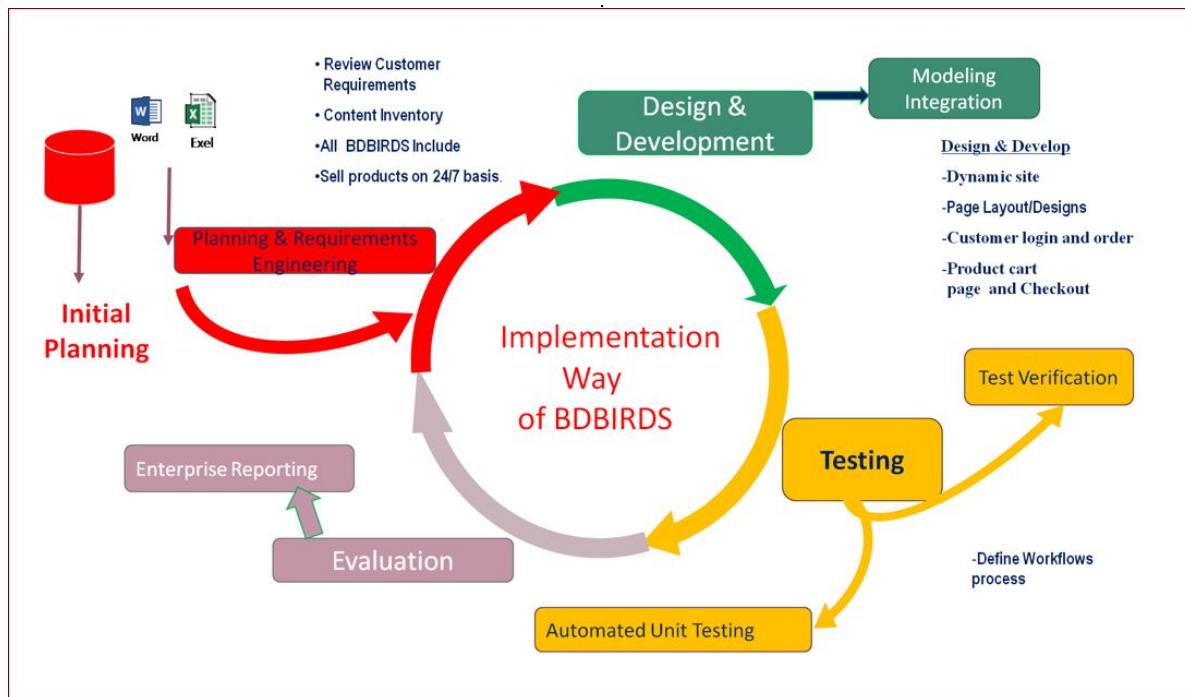


Figure 6.2: The Implementation Life Cycle of BDBIRDS

Guidance for this phase introduces and discusses each code component, discusses how to apply the code, and looks at adapting and extending the components to meet the needs of the project requirements.

6.2.0.1 Planning and Requirement Engineering

Business requirements are gathered in this phase for BDBIRDS. This phase is the main focus of the BDBIRDS admin and stake holders. Meetings with admin, stake holders and customer are held in order to determine the requirements like; Who is going to use the system? How will they use the system? What data should be input into the system? What data should be output by the system? These are general questions that get answered during a requirements gathering phase. After requirement gathering these requirements are analyzed for their validity and the possibility of incorporating the requirements in the system to be development is also studied.

Without the perfect plan, calculating the strengths and weaknesses of the project, development of software is meaningless. Planning kicks off a project flawlessly and affects its progress positively. Finally, a Requirement Specification document is created which serves the purpose of guideline for the next phase of the model. The testing team follows the Software Testing Life Cycle and starts the Test Planning phase after the requirements analysis is completed.

6.2.0.2 Design and Development

This step is about analyzing the performance of the software at various stages and making notes on additional requirements. Analysis is very important to proceed further to the next step. Once the analysis is complete, the step of designing takes over, which is basically building the architecture of the project. This step helps remove possible flaws by setting a standard and attempting to stick to it.

This phase the system and software design is prepared from the requirement specifications which were studied in the first phase. System Design helps in specifying hardware and system requirements and also helps in defining overall system architecture. The system design specifications serve as input for the next phase of the model. In this phase the testers comes up with the Test strategy, where they mention what to test, how to test.

The actual task of developing the software starts here with data recording going on in the background. Once the software is developed, the stage of implementation comes in where the product goes through a pilot study to see if its functioning properly.

6.2.0.3 Testing

After the code is developed it is tested against the requirements to make sure that the product is actually solving the needs addressed and gathered during the requirements phase. During this phase all types of functional testing like unit testing, integration testing, system testing, acceptance testing are done

as well as non-functional testing are also done. The testing stage assesses the software for errors and documents bugs if there are any.

6.2.0.4 Evaluation

Once the software passes through all the stages without any issues, it is to undergo a maintenance process wherein it will be maintained and upgraded from time to time to adapt to changes. Almost every software development Indian company follows all include steps, leading to the reputation that the country enjoys in the software market today.

Once when the customers starts using the developed system then the actual problems comes up and needs to be solved from time to time. This process where the care is taken for the developed product is known as evaluation or maintenance.

6.3 Building a proof of concept

Before Implementation, the team does a final verification of the concepts from the designs within an environment that mirrors production as closely as possible. Typically, the proof of concept is a continuation of some initial Implementation work (the preliminary proof of concept) that occurred during the Planning Phase. The proof of concept tests key elements of the solution on a non-production simulation of the proposed operational environment.

The team walks operations staff and users through the solution to validate their requirements. There may be some solution code or documentation that carries through to the eventual solution Implementation deliverable however, the proof of concept is not meant to be production-ready. The proof of concept is considered throw away Implementation that gives the team a final chance to verify functional specification content and to address any more issues prior to transitioning into Implementation.

6.4 Developing the solution components

The team develops the solution using the core components and extending them to the specific needs of the solution. The team also develops and conducts unit functional tests to ensure that individual features perform according to specification. MSF recommends that project teams follow a best practice of performing daily builds with their solution. Building a solution in a form that is executable on a daily basis provides a number of valuable benefits simply by putting different pieces of the code together.

A daily build exposes unanticipated design defects and makes diagnosing defects easier. The daily build should be subjected to as much of the full suite of tests as can be run during the available time. This build validation test pass helps expose integration defects as early as possible. It also allows the team to validate their testing approach and testing infrastructure.

6.5 Developing the testing tools and tests

The team develops a testing infrastructure and populates it with test cases that help ensure the entire solution performs according to specification. This solution test suite typically incorporates, as a subset, the individual feature tests used by developers in building the solution components. MSF advocates preparing frequent builds of all the components of the solution for testing and review. This approach is recommended for developing code as well as for builds of hardware and software components.

The process of creating interim builds allows a team to find issues early in the Implementation process, which shortens the Implementation cycle and lowers the cost of the project. Daily builds are the practice of assembling all the components working toward the final goal of a solution. This enables the team to determine earlier rather than later that all components will work together. This method also allows the team to add functionality onto a stable build. The idea is to have a shippable product ready at any point in time. In this way, the stability of the total solution is well understood and has ample test data prior to being released into production.

6.6 Building the solution

A series of daily, or frequent, builds culminate with major internal builds and signify points where the Implementation team is delivering on key features of the solution. These builds are subjected to some or all of the project test suite as a way of tracking overall progress of the solution and of the solution test suite itself.

6.7 Closing the Developing Phase

The team completes all features, delivers the code and documentation, and considers the solution complete, thus entering the approval process for the Scope Complete Milestone.

6.8 Conclusion

The Developing Phase culminates in the Scope Complete Milestone. At this mile-stone, all features are complete and the solution is ready for external testing and stabilization. This milestone is the opportunity for customers and users, operations and support personnel, and key project stakeholders.

6.9 Front End

Front-end is what you see on your display. A "front-end" application is one that application users interact with directly. It is typically means the parts of the project a user interacts with—such as the graphical user interface or command line. It's a vague term, there isn't an exact definition. So HTML is a front-end language because it displays something on the users screen. The front end part, comprising

of pages which user can view, is created by using templates so that it can expedite design and loading processes. This part, in the appearance, the main menu is consistent, thus it is easy to use. Considered as the most frequently access when comparing with other parts of the website, front end pages have to use template and in turn saving bandwidth and number of database accesses.

The most common languages used for front-end development are: Javascript, HTML and CSS. Another example is when you open Facebook login page this is the front end page when you enter your email and password and press login then which process start is back end process. Back end page is not visible to user. In our BDBIRDS project we use HTML, PHP, CSS, Bootstrap, and JAVASCRIPT to implement the frontend.

6.9.1 *Front End Of Our BDBDIRDS*

6.9.2 *Home Page*

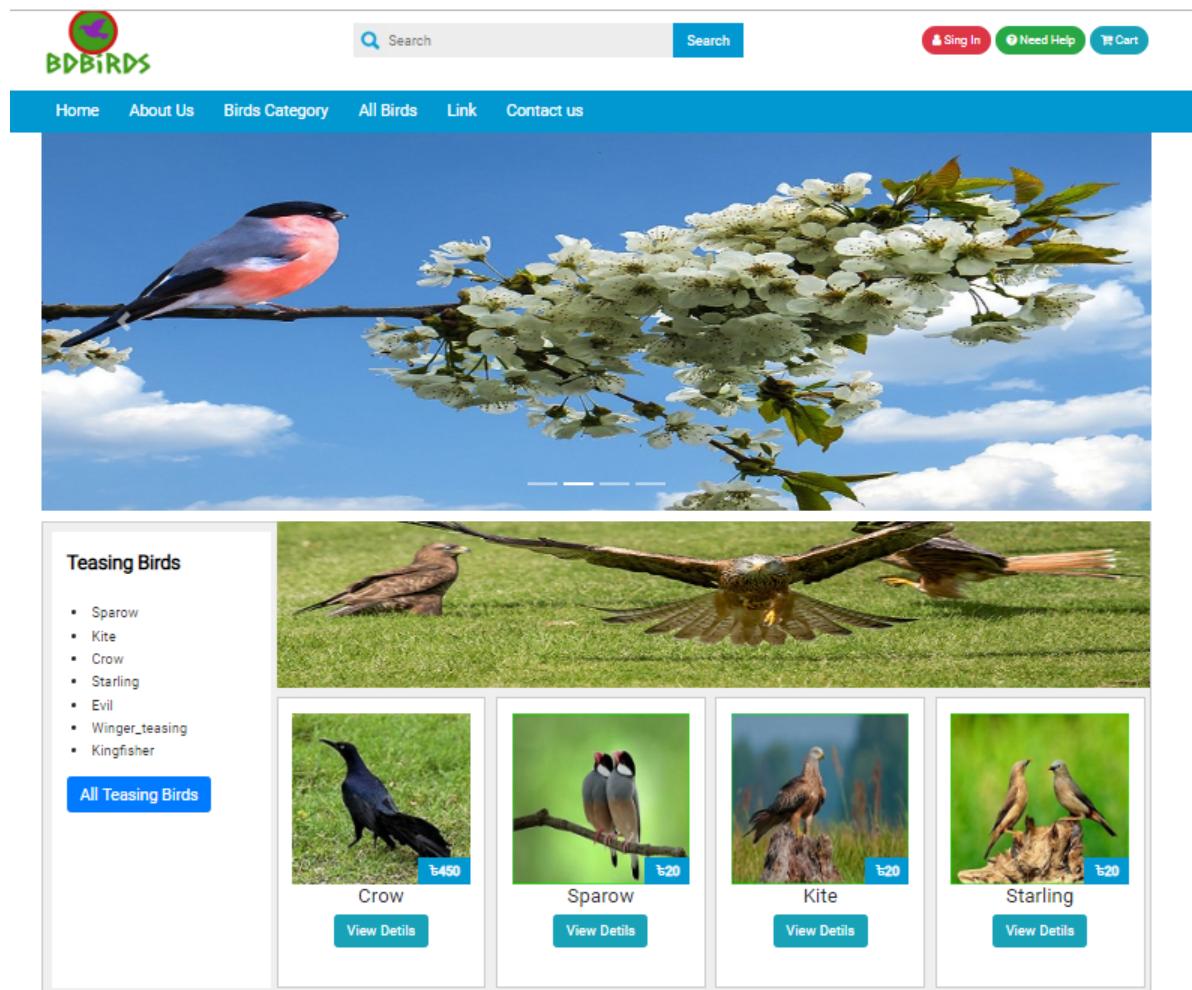


Figure 6.9.2: The Home Page of BDBIRDS

6.9.3 About BDBirds Page

Introduction:

Our dear Bangladesh is a beautiful country. It is a land of forests and trees, hills and vales, rivers, marshes and canals, wide open meadows. Bangladesh is a favorite homeland of a great variety of birds. The names of all kinds of birds are not even known to us. It has got a moderate climate neither too hot nor too cold. So this land is a happy abode of different kinds of birds.

Birds have increased the beauty of our country. We sleep at night and rise early in the morning hearing the sweet song of different birds. Besides, it has lots of fruits, fishes, insects, trees, bushes, forests, piers and marshy rivers.

Kinds of birds:

There are many varieties of birds in Bangladesh. Almost have 607 types' birds. They are different in color, size, and habit. Some are white, some are black some are green and some are red. Some are small and some are big. Some are beautiful and some are ugly. Some are wild and some are domestic. Some have a sweet voice and some have a harsh voice. Their food habits are also different.

Singing birds:

The birds which are capable of singing are called singing birds. The Doel, the shyama, the koel, the Krakatau, the magpie robin and the cuckoo, the Mayan, the Chandana, the cockatoo and the martin are the singing birds. The cuckoo is the

Figure 6.9.3: The About Page of BDBIRDS

6.9.4 Customer Registration Page

Register New User

First Name	<input type="text" value="John"/>
Last Name	<input type="text" value="Doe"/>
E-Mail Address	<input type="text" value="you@example.com"/>
Password	<input type="password"/>
Confirm Password	<input type="password"/>

GET TO KNOW US

Home	About Us	Our Services	Contact us
Our Team	Our Destiny	BDBirds History	House 273/A, Road 12
Our Customer Review	Our Customer Lists	All Tailor Birds	Block F, Niketan, Gulshan 1,
		All Teasing Birds	Dhaka - 1212, Bangladesh Mobile- 01620 740
		All Games Birds	440 01767 177 417
		All Song Birds	
		All Tailors Birds	

Figure 6.9.4: Customer Registration Page of BDBIRDS

6.9.5 Customer login Page

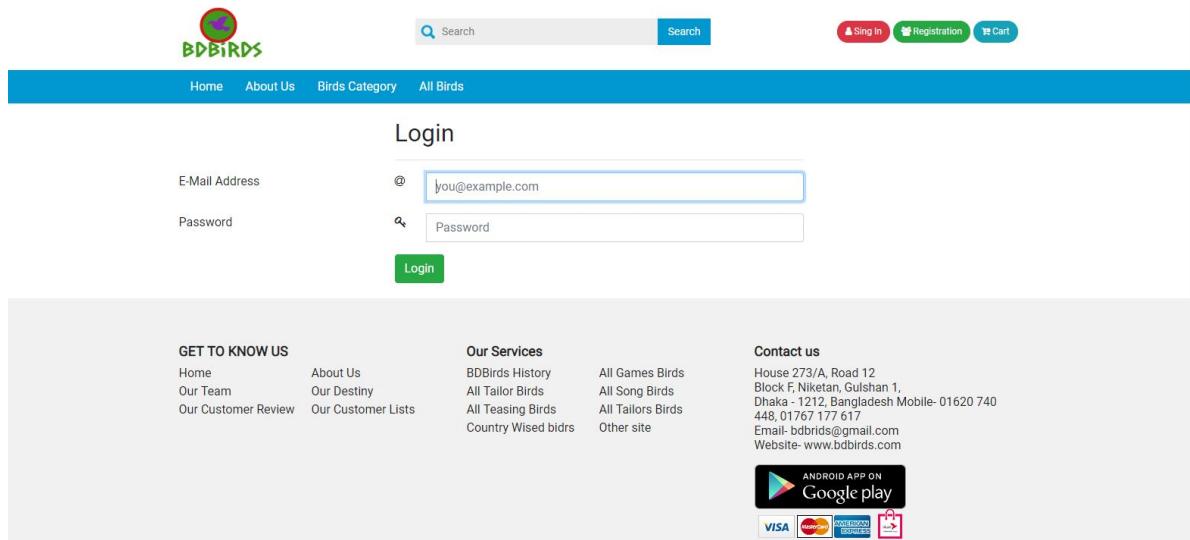


Figure 6.9.5: Customer login of BDBIRDS

6.9.6 Admin login Page

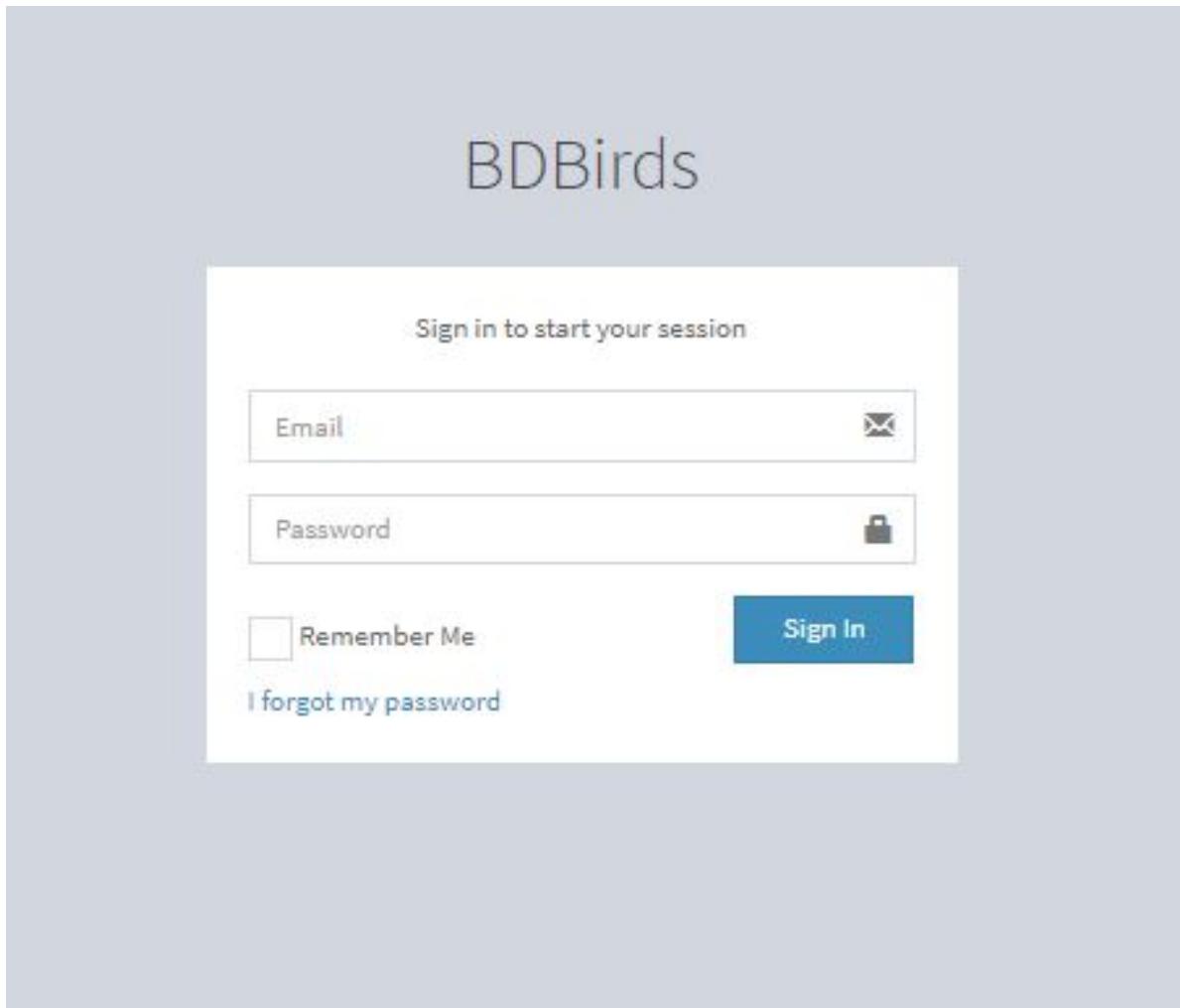


Figure 6.9.6: Admin login of BDBIRDS

6.9.7 All Birds Page

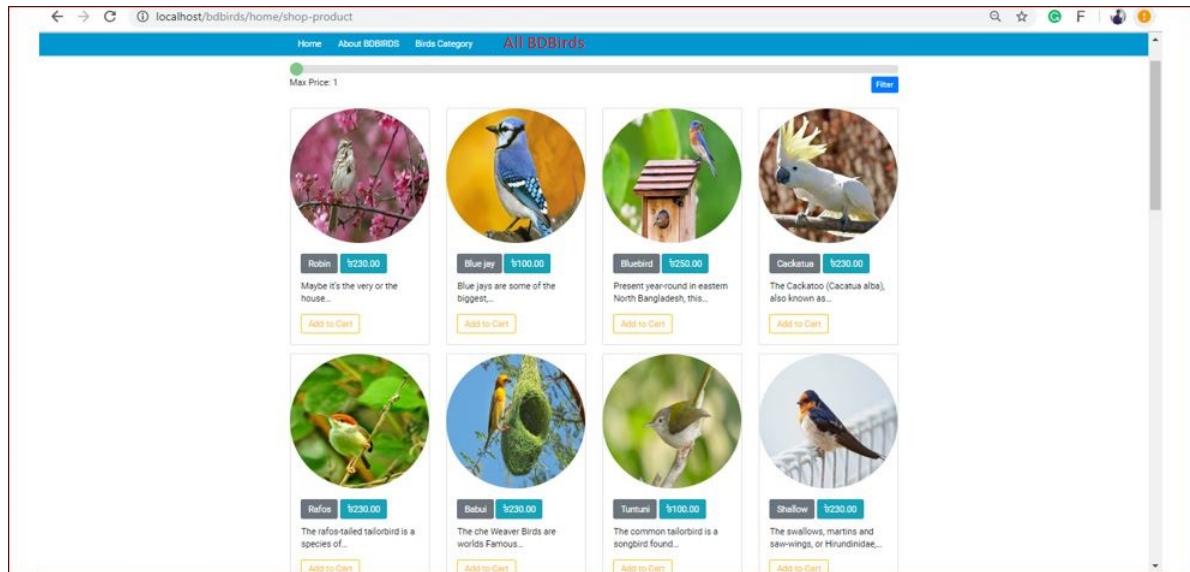


Figure 6.9.7: All Birds Page of BDBIRDS

6.9.8 Birds Category Page

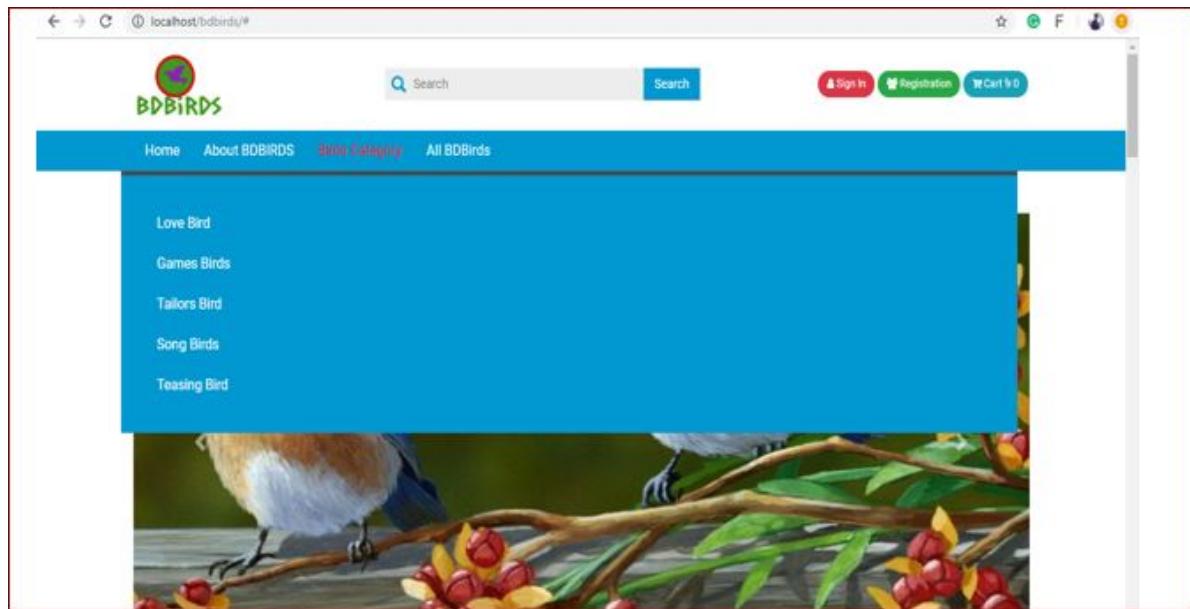


Figure 6.9.8: Birds Category Page of BDBIRDS

6.10 Back End

Many back end developers know front end languages such as HTML and CSS but need to use languages such as Java, PHP, and Ruby on Rails, Python, and .Net to get the back end job done. Back end developers are most focused on a site's responsiveness and speed. These languages are used to create

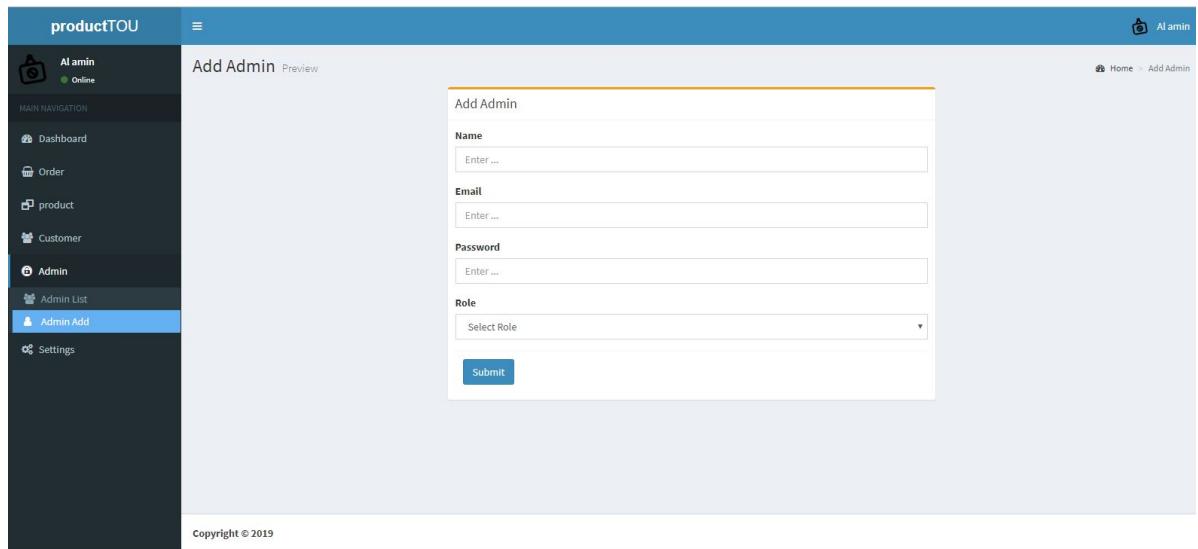
dynamic sites which are different from static sites in that these types of websites store database information. Content on the site is constantly changing and updating. Examples of dynamic sites include Facebook, Twitter, and Google Maps.

There is a portion of the application the user sees and then in most cases the largest part of the application remains unseen. This is the elusive and mystical back-end. In the chapter on web development, we mostly talked about web development as it relates to direct interaction with the end user what we might call front-end web development. In most significantly applications, there is much more non-user interface code than user-interface code. Complex systems have all kinds of logic that happen in the background that make them work. Data needs to be stored and retrieved, business logic and rules need to be followed, and results need to be calculated. All of this happens behind the scenes. The back-end developer is the kind of developer who makes all this happen.

What back-end developers do can vary greatly, depending on the size and the scope of the application they are working on? I've held many jobs where I was a back-end developer, working on the business logic in an application, and feeding and retrieving data from the front-end. In the web development world, most back-end developers concern themselves with building the actual logic behind the application they are working on. Often, front-end developers will build out a user interface, and back-end developers will write code that makes it all work.

For example, a front-end developer might create a screen in an application with a button to press to get the customer's data. A back-end developer might write the code that makes that button work by figuring out what data to fetch from the database for the appropriate customer and delivering it back to the front-end, where it is eventually displayed. In our developed system the back end is implemented we use MySQL which is used to design the databases.

6.10.1 Add Admin Page



The screenshot shows the 'Add Admin' page of the productTOU application. The left sidebar has a dark theme with white icons and text. It includes links for Admin (highlighted in blue), Admin List, Admin Add (which is the active page), and Settings. The main content area has a light blue header with the title 'Add Admin'. Below the header is a form titled 'Add Admin' with four input fields: 'Name' (placeholder 'Enter ...'), 'Email' (placeholder 'Enter ...'), 'Password' (placeholder 'Enter ...'), and 'Role' (a dropdown menu with placeholder 'Select Role'). At the bottom of the form is a blue 'Submit' button. The footer of the page contains the text 'Copyright © 2019'.

Figure 6.10.2: Add Admin Page of BDBIRDS

6.10.2 Product page

product name	product category	product code	Action
Babui	Tailors Bird	Tailor-3	Edit Now Active Delete View
Crow	Teasing Bird	C-1	Edit Now Active Delete View
Cuckoo	Song Birds	s1	Edit Now Active Delete View
Dove	Games Birds	g2	Edit Now Active Delete View
Fischer's	Love Bird	3453454	Edit Now Active Delete View
Hybrid	Love Bird	l4	Edit Now Active Delete View
Kite	Teasing Bird	t2	Edit Now Active Delete View
Koel	Song Birds	s3	Edit Now Active Delete View
Love	Love Bird	345345	Edit Now Active Delete View
Mayna	Song Birds	S4	Edit Now Active Delete View

Figure 6.10.2: Product Page of BDBIRDS

6.10.3 Add Product page

Add product [Preview](#)

Add product

product Name	<input type="text" value="product Name"/>
product Category	<input type="text" value="Select Category"/>
product Code	<input type="text" value="product Code"/>
product Price	<input type="text" value="product Price"/>
product About	<input style="height: 40px;" type="text"/>
product Ingredients	<input style="height: 40px;" type="text"/>
Image:	<input type="button" value="Choose File"/> No file chosen <input type="button" value="ADD"/>
<input type="button" value="Submit"/>	

Copyright © 2019

Figure 6.10.3: Add Product Page of BDBIRDS

6.10.4 Birds Categories page

Category name	Category image	Action
Games Birds		Edit Delete
Love Bird		Edit Delete
Song Birds		Edit Delete
Tailors Bird		Edit Delete
Teasing Bird		Edit Delete

Showing 1 to 5 of 5 entries

Copyright © 2019

Figure 6.10.4: Birds Category Page of BDBIRDS

6.10.5 Add Birds Categories page

Add Category Preview

Add Category

Name

Image
 Choose File No file chosen

Submit

Copyright © 2019

Figure 6.10.5: Add Birds Category Page of BDBIRDS

6.11 Implementation and Result Analysis

Once the system was tested satisfactory, then comes to the implementation of the system. Implementation process of migrating from the old system. For an implementation process to be successful, many task between different locations need to be accomplished in sequence. Companies strive to use proven and enlisted professional help to guide them through the implementation of a system but the failure of many implementation processes often stems from the lack of accurate planning in the beginning stages

of the project due to inadequate resources or unforeseen problems that arise. Software maintenance denotes any change made to a software product after it has been delivered. Every software product continues to evolve after its development through maintenance effort.

6.12 System Hierarchy

Below we try to show hierarchy of our developed project. First admin login the system for access all feature. After login admin can add bus, add location and cost. He can also update, delete, view data.

6.12.1 Admin Hierarchy

Admin Hierarchy of BDBIRDS are given below- .

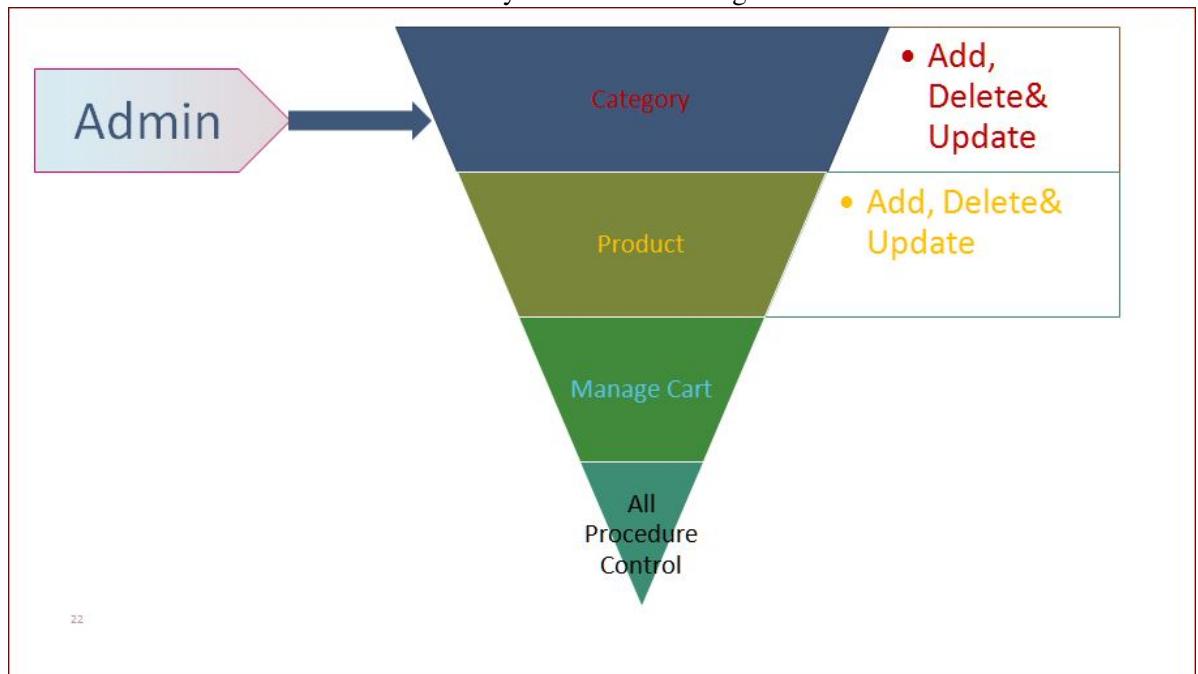


Figure 6.12.1: Admin Hierarchy of BDBIRDS project

6.12.2 Customer Hierarchy

Customer Hierarchy of BDBIRDS are given below- .

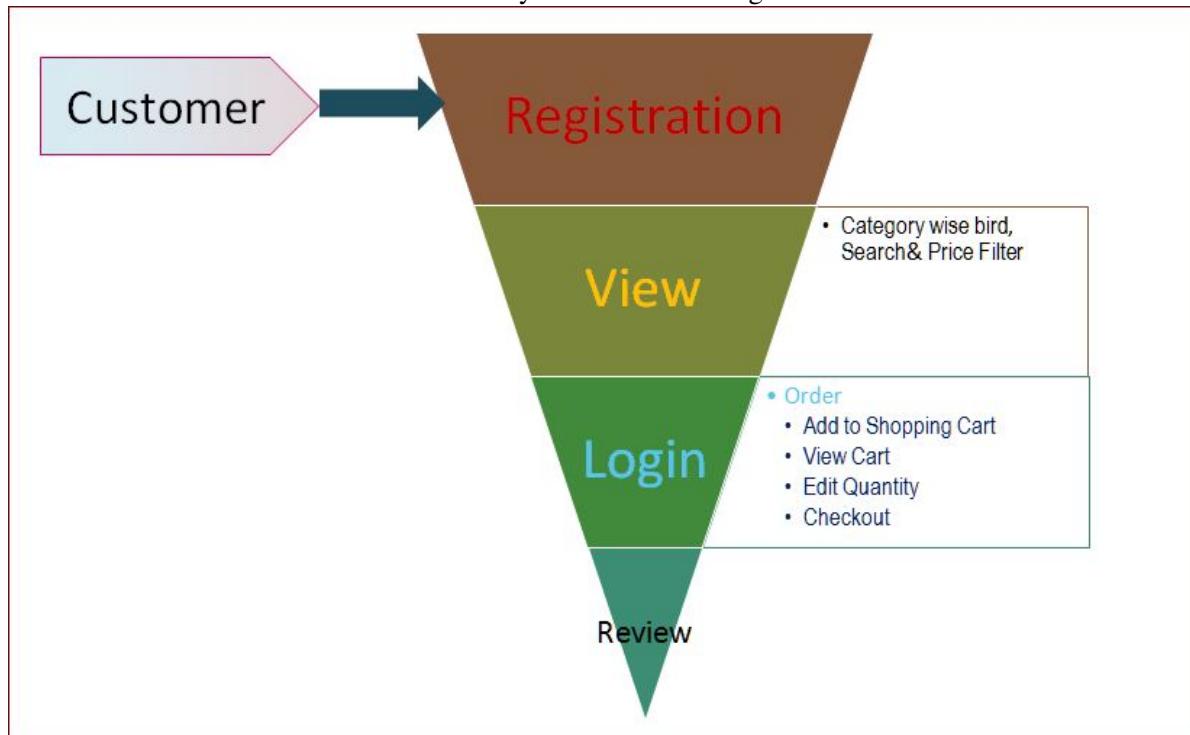


Figure 6.12.2: Customer Hierarchy of BDBIRDS project

7 USER MANUAL

7.1 *Introduction*

This chapter will show the Graphical User Interface (GUI) of the system through screen-shots and user guides that how will they operate the application. A complete direction for a user to properly run Online Judge.

The user interface (UI), in the industrial design field of human computer interaction, is the space where interactions between humans and machines occur. The goal of this interaction is to allow effective operation and control of the machine from the human end, whilst the machine simultaneously feeds back information that aids the operators' decision-making process. Examples of this broad concept of user interfaces include the interactive aspects of computer operating systems, hand tools, heavy machinery operator controls, and process controls. The design considerations applicable when creating user interfaces are related to or involve such disciplines as ergonomics and psychology. Generally, the goal of user interface design is to produce a user interface which makes it easy (self-explanatory), efficient, and enjoyable (user-friendly) to operate a machine in the way which produces the desired result. This generally means that the operator needs to provide minimal input to achieve the desired output, and also that the machine minimizes undesired outputs to the human. In Our system we give an attractive graphical interface for the user. It is user friendly and easy to understand .

7.2 *System Requirements*

For developing our system we needs hardware and software requirement.

7.2.1 *Hardware requirements*

To be used efficiently, all computer software needs certain hardware components or other software resources to be present on a computer. These prerequisites are known as (computer) system requirements and are often used as a guideline as opposed to an absolute rule. Most software defines two sets of system requirements: minimum and recommended. With increasing demand for higher processing power and resources in newer versions of software, system requirements tend to increase over time. Industry analysts suggest that this trend plays a bigger part in driving upgrades to existing computer systems than technological advancements. A second meaning of the term of System requirements is

a generalization of this first definition, giving the requirements to be met in the design of a system or sub-system. Typically an organization starts with a set of Business requirements and then derives the System requirements from there. So the most important hardware requirements are-

7.2.2 Hardware Requirements

Any Computer and Mobile with an active internet connection can access our site through the approved browsers.

Below minimum hardware requirement as-

- Processor core Family
- RAM 512 MB
- Hard Disk: 20 GB of Available Space or More Optical Drive: DVD-ROM (Required If Installing Vision from Our Disc)
- Display: Dual XGA (1024 x 768) or higher resolution monitors
- Mobile Devices:All Mobile and Tabs
- Software Name: Dhaka City Public Bus Information System
- Another Computers device
- Other electronic accessories

7.2.3 Software requirements

In the software development process, requirement phase is the first software engineering activity. This phase is a user-dominated phase and translates the ideas or views into a requirements document. Note that defining and documenting the user requirements in a concise and unambiguous manner is the first major step to achieve a high-quality product. Browser with Java Script Support. A software requirements specification (SRS) is a document that captures complete description about how the system is expected to perform. It is usually signed off at the end of requirements engineering phase. Below give summarized hardware and software requirements-

- Database: MySQL Framework: Bootstrap, CodeIgniter
- Editor: Notepad++, SublimeText3
- Language: HTML5, CSS3, jQuery, SQL, PHP
- Operating System- windows 7 and windows 10
- Local server setup Package: XAMPP, WAMP or other apache, MYSQL Server.
- Microsoft Office Power point- Used during presentation
- Browser (Mozilla Firefox, Chrome, Safari, Opera, UC etc.)

7.3 User Interfaces

User interface is the front end application view to which user interacts in order to use the software. User can manipulate and control the software as well as hardware by means of user interface. Today, user interface is found at almost every place where digital technology exists, right from computers, mobile phones, cars, music players, airplanes, ships etc.

User interface is part of software and is designed such a way that it is expected to provide the user insight of the software. UI provides fundamental platform for human-computer interaction. UI can be graphical, text-based, audio-video based, depending upon the underlying hardware and software combination. UI can be hardware or software or a combination of both.

The software becomes more popular if its user interface is:

- Attractive
- Simple to use
- Responsive in short time
- Clear to understand
- Consistent on all interfacing screens
- More Reliable
- Retail and wholesale.
- Marketing of BDBIRDS to the whole country.
- Easy operation, reliant while sitting at home.
- Those who love pets , especially birds to buy birds sitting at home.

UI is broadly divided into two categories:

- Command Line Interface
- Graphical User Interface.

The user interface must be intuitive and should be in such a way that it should make the customer to shop with pleasure and without any assistance.

8 CONCLUSION

Birds are really a wonderful creation of God. They maintain a balance of healthy environment in nature. They contribute much to add charm and beauty to our country. They are friends to the friendless and source of living to the unemployed. So, we should all be kind to these birds and make our land a happy and sound homeland for them. Our small efforts to preserve the beauty of the birds.

The Internet has become a major resource in modern business, thus online shopping has gained significance not only from the entrepreneurs but also from the customers point of view. For the entrepreneur, online shopping generates a new business opportunities and for the customer, it makes the comparative shopping possible. A good shopping cart design must be accompanied with user-friendly shopping cart application logic. It should be convenient for the customer to view the contents of their cart and to be able to remove or add items to their cart. The shopping cart application described in this project provides a numbers of features that are designed to make the customer more comfortable.

Technology has made significant progress over the years to provide customer a better online shopping experience and will continue to do so for years to come. With the rapid growth of products and brands, people have speculated that online shopping will overtake in-store shopping. While this has been the case in some areas, there is still demand for brick and mortar stores in market areas where the customer feels more comfortable seeing and touching the product being bought. However, the availability of online shopping has produced a more educated customer that can shop around with relative ease without having to spend a large amount of time. In exchange, online shopping has opened up doors to many small retailers that would never be in business if they had to incur the high cost of owning a brick and mortar store. At the end, it has been a win-win situation for both customer and sellers.

8.0.1 *Limitations*

The software we have developed have some limitation. We are trying to fulfill all requirements. But some tasks are not done here. Real time services like voice, chatting and video conferencing are not done here. The system is developed for only cash on delivery as payment method. PayPal not added just added to show it. Upcoming product will display only website but not added messaging service that when any product will come will send message to customer mobile that new product available.

- This is the first bird related website in Bangladesh and the first of its kind in the country. Therefore creating it was very challenging.

- No institutional office currently exists.
- Delivery is available only for Bangladesh.

8.0.2 Future Enhancement

If its limitation can be solved then it would be more effective. In future we will try to develop our project so that we able to give these facilities and credit card validation is not done. The administrator of the website can be given more functionality, looking specific customer generate invoice from admin panel of customer till present for taking decision. Adding SMS gateway to confirm that customer order successfully submitted, and also the current stats of order that means any state change of order customer will get a notification.

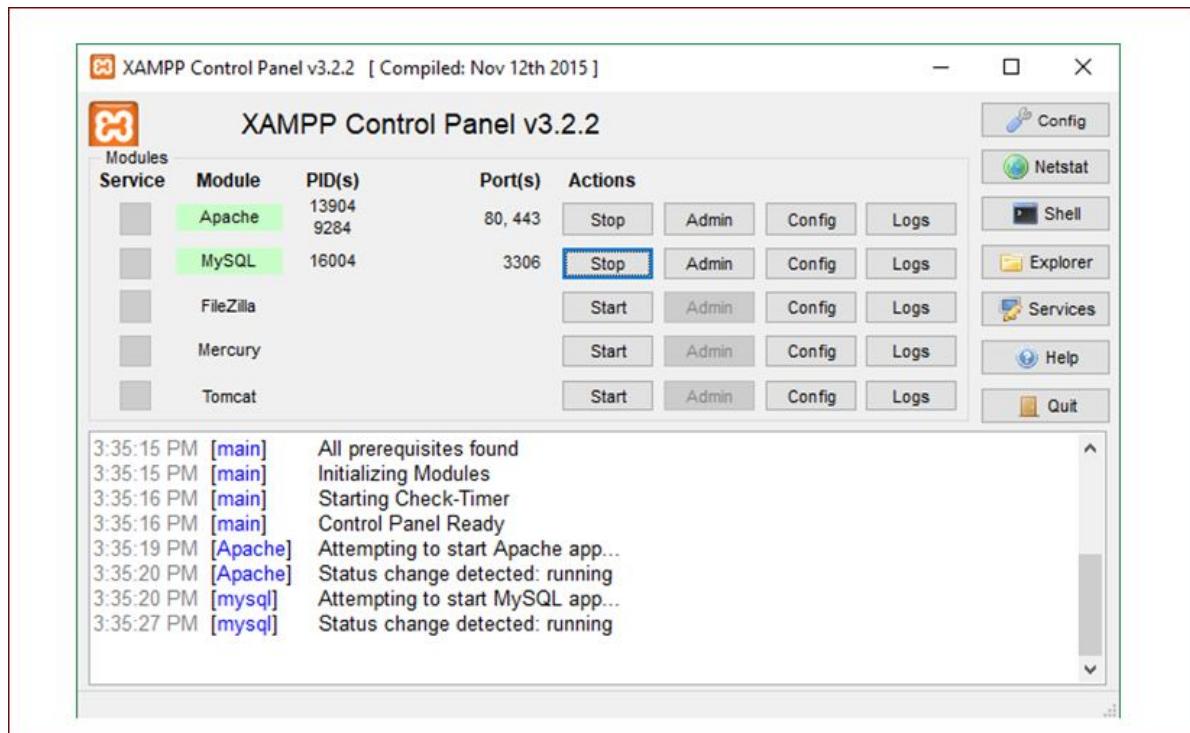
- Currently no multiple payment gateway option has been added to our website. Planning to include it in the future.
- No Institutional office currently available. Working on establishing it.
- Social site and chat option not included. Planning to include it in the future.

9 Appendix

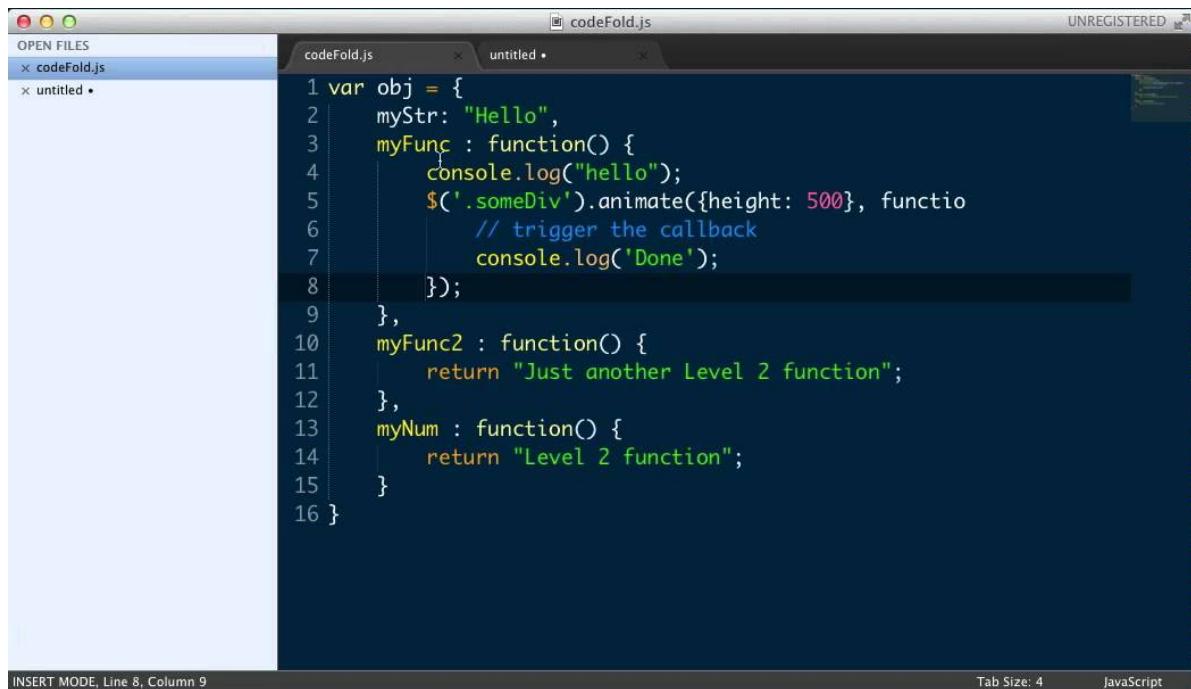
Appendix is just a different type of Section - it's included at the end of the document (after the bibliography or list of references) and before the Hebrew part and it's numbered in a different manner.

- Xampp server
- Sublime Text
- HTML
- Adobe Photoshop
- PHP
- Bootstrap 4

9.1 Xampp server



9.2 Sublime Text Format



The screenshot shows the Sublime Text interface with a dark theme. A file named 'codeFold.js' is open in the center editor pane. The code contains several functions and variables, with some lines collapsed under a single line indicator. The status bar at the bottom left shows 'INSERT MODE, Line 8, Column 9'. The status bar at the bottom right shows 'Tab Size: 4' and 'JavaScript'.

```
1 var obj = {
2     myStr: "Hello",
3     myFunc : function() {
4         console.log("hello");
5         $('.someDiv').animate({height: 500}, function
6             // trigger the callback
7             console.log('Done');
8         });
9     },
10    myFunc2 : function() {
11        return "Just another Level 2 function";
12    },
13    myNum : function() {
14        return "Level 2 function";
15    }
16 }
```

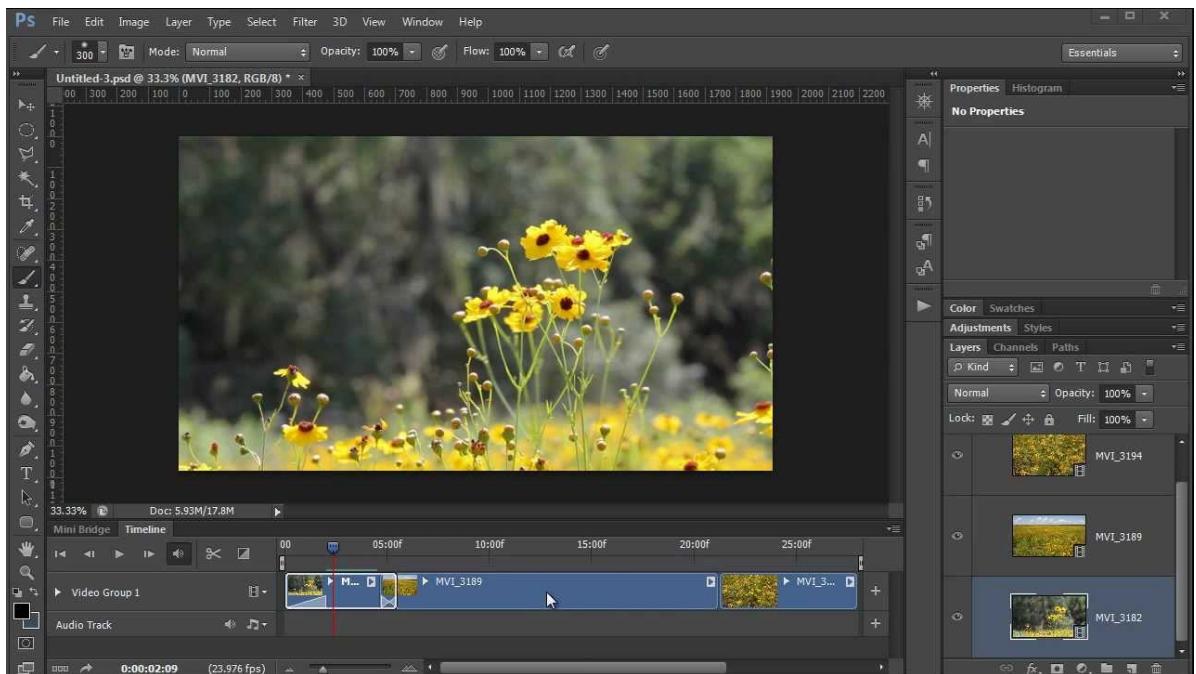
9.3 HTML Format

```
<!DOCTYPE html>
<html>
<head>
<title>Page Title</title>
</head>
<body>

<h1>My First Heading</h1>
<p>My first paragraph.</p>

</body>
</html>
```

9.4 Adobe Photoshop Format



9.5 PHP Format

The slide features a large code block in the center:

```
<?php  
?  
?>
```

Below the code, a text block reads:

Below, is an example of a simple PHP script which sends the text "Hello World" to the browser:

```
<html>  
<body>  
<?php  
echo "Hello World";  
?>  
</body>  
</html>
```

Basic PHP Syntax

MOHAMAD RAHIMI MOHAMAD ROSMAN

9.6 Bootstrap 4 Format

The screenshot shows the Bootstrap 4 Documentation website. The header includes a search bar, navigation links for Home, Documentation, Examples, Themes, Expo, and Blog, and a version dropdown set to v4.2. The main content area features a large heading 'Introduction' with a subtext: 'Get started with Bootstrap, the world's most popular framework for building responsive, mobile-first sites, with BootstrapCDN and a template starter page.' Below this is a promotional banner for Adobe Creative Cloud. To the left is a sidebar with 'Getting started' and 'Layout' sections. To the right is a sidebar with links for 'Quick start', 'CSS', 'JS', and other documentation pages.

9.7 References

1. <https://www.slideshare.net/ShamimAhmed36/E-commerce,eport> [Accessed 06 March 2019]
2. <https://en.wikipedia.org/wiki/E-Commerce> [Accessed 06 March 2019].
3. <https://en.wikipedia.org/wiki/world e-commerce service> [Accessed 07 March 2019].
4. <https://en.wikipedia.org/wiki/e-commerce,inBangladesh> [Accessed 07 March 2019].
5. http://www.authorstream.com/Presentation/Online_shopping_system [Accessed 08 March 2019]
6. http://www.ece.uvic.ca/_bhung/399/motivation.html [Accessed 08 March 2019]
7. <https://www.scribd.com/doc/30635395/Synopsis-of-OnlineShopping> [Accessed 09 March 2019].
8. https://en.wikipedia.org/wiki/Use_case_diagram [Accessed 11 March 2019].
9. https://www.tutorialspoint.com/uml/uml_use_case_diagram.html [Accessed 13 March 2019].
10. https://en.wikipedia.org/wiki/Use_case_diagram [Accessed 13 March 2019].
11. https://www.tutorialspoint.com/uml/uml_use_case_diagram.htm [Accessed 13 March 2019].
12. https://en.wikipedia.org/wiki/Use_case_diagram [Accessed 14 March 2019].
13. https://www.tutorialspoint.com/uml/uml_use_case_diagram.html [Accessed 14 March 2019].
14. https://www.w3schools.com/bootstrap/bootstrap_getstarted.asp [Accessed 15 March 2019].
15. <https://developer.mozilla.org/en-US/docs/Web/JavaScript/Guide/> [Accessed 15 March 2019].
16. <https://blog.udemy.com/xampp-tutorial/> [Accessed 16 March 2019].
17. <https://en.wikipedia.org/wiki/XAMPPUsage> [Accessed 16 March 2019].
18. <https://developer.mozilla.org/en-US/docs/Web/JavaScript/Guide/> [Accessed 17 March 2019].
19. https://www.w3schools.com/jquery/jquery_intro.asp [Accessed 19 March 2019].

20. <http://www.indianbirds.com/> [Accessed 22 March 2019].
21. <http://www.worldbirds.com/> [Accessed 22 March 2019]
22. <https://www.animals.com/> [Accessed 25 March 2019].
23. <https://animals.wordpress.com/benefits-birds/> [Accessed 25 March 2019].
24. <https://en.wikipedia.org/wiki/Bird> [Accessed 26 March 2019].
25. <https://www.birdlife.org/sowb2018> [Accessed 26 March 2019].
26. <https://www.hansondodge.com/blog/2014/february/9-steps-to-e-commerce-success/> [Accessed 27 March 2019].
27. <https://simplicityc.com/ecommerce-implementation/> [Accessed 27 March 2019].
28. https://www.tutorialspoint.com/system_analysis_and_design/system.htm [Accessed 28 March 2019].
29. <https://study.com/academy/lesson/what-is-system-analysis-in-software-engineering.html> [Accessed 29 March 2019].
30. <https://www.techopedia.com/definition/9611/systems-analysis> [Accessed 29 March 2019].
31. <http://dspace.ewubd.edu/bitstream/handle/123456789/2173/Md.MehadiHasan.pdf?> [Accessed 30 March 2019].
32. https://en.wikipedia.org/wiki/Feasibility_study_Technical_feasibility [Accessed 01 April 2019].
33. https://en.wikipedia.org/wiki/Feasibility_study_Operational_feasibility [Accessed 01 April 2019].
34. <https://www.scribd.com/doc/13569522/09-Project-Hospital-Management-System> [Accessed 01 April 2019].
35. <http://docshare03.docshare.tips/files/6381/63811982.pdf> [Accessed 02 April 2019].
36. https://en.wikipedia.org/wiki/Requirements_analysis [Accessed 02 April 2019].
37. https://en.wikipedia.org/wiki/Non-functional_requirement [Accessed 02 April 2019].
38. <https://www.slideshare.net/kapilsharma416/ecommerce-project-in-brief-pdf> [Accessed 02 April 2019].
39. https://en.wikipedia.org/wiki/Relational_database_management_system [Accessed 03 April 2019].
40. <http://whatisdbms.com/explain-relational-database-management-system-rdbms/> [Accessed 05 April 2019].
41. <https://www.quora.com/What-are-disadvantages-of-relational-databases> [Accessed 06 April 2019].
42. https://en.wikipedia.org/wiki/Database_design [Accessed 07 April 2019].
43. <http://db-book.com/> [Accessed 07 April 2019].
44. https://en.wikipedia.org/wiki/Use_case_diagram [Accessed 08 April 2019].
45. https://www.tutorialspoint.com/uml/uml_use_case_diagram.htm [Accessed 08 April 2019].
46. https://en.wikipedia.org/wiki/Class_diagram [Accessed 09 April 2019].
47. https://www.tutorialspoint.com/uml/uml_use_case_diagram.htm [Accessed 09 April 2019].
48. https://en.wikipedia.org/wiki/activity_diagram [Accessed 11 April 2019].
49. https://www.tutorialspoint.com/uml/uml_activity_diagram.htm [Accessed 11 April 2019].
50. https://en.wikipedia.org/wiki/Relational_database_management_system [Accessed 12 April 2019].
51. https://www.w3schools.com/sql/sql_primarykey.asp [Accessed 12 April 2019].
52. <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.28.4447&rep=rep1&type=pdf> [Accessed 13 April 2019].

53. https://www.tutorialspoint.com/sdlc/sdlc_waterfall_model.htm [Accessed 13 April 2019].
54. https://www.tutorialspoint.com/sdlc/sdlc_waterfall_model.htm [Accessed 14 April 2019].
55. <https://simpleprogrammer.com/what-is-back-end-development/> [Accessed 15 April 2019].
56. https://en.wikipedia.org/wiki/User_guide [Accessed 16 April 2019].
57. https://en.wikipedia.org/wiki/System,_requirements_Hardware,_requirements [Accessed 17 April 2019].
58. https://www.tutorialspoint.com/software_engineering.html [Accessed 18 April 2019].
59. https://www.overleaf.com/learn/latex/Text_alignment_Centred_text [Accessed 18 April 2019].
60. <https://www.freeprojectz.comdfd/online-shopping-system-dataflow-diagram> [Accessed 19 April 2019].
61. <https://www.pinterest.com/pin/464011567851838268/> [Accessed 20 April 2019].
62. <http://studyyppointtt.blogspot.com/2013/11/data-flow-diagrams-for-online-shopping.html> [Accessed 20 April 2019].
63. <http://www.iosrjournals.org/iosr-jbm/papers/Vol16-issue7/Version-2/A016720106.pdf> [Accessed 21 April 2019].
64. <https://www.google.com/search?q=entity++diagrams&source=lnmssa=Xved> [Accessed 21 April 2019].
65. <https://searchdatamanagement.techtarget.com/definition/entity-relationship-diagram-ERD> [Accessed 22 April 2019].