



# **An Undergraduate Internship/Project on Art-Home Web Application**

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Science in Computer Science

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# Attestation

This is to certify that this report is my own working process, based on my previous learning activities. Even my internal supervisor miss "Moumit Asad" helps me a lot. Here are all the report requirements is taken by my own duly knowledge and the rest of the materials mentioned in the bibliography where I used some appellative for heading and properly cited. So there is no plagiarism. However, I followed university guidelines in this project.

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Signature

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Date

Md. Riyad Hossain

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Name

# Acknowledgement

First of all, I would like to thank almighty for helping me to reach the final goal of my project and complete the report. It is my privilege that I had the opportunity to do an internship in “Limmex Automation” as a junior software engineer.

Then I would like to express my gratitude to, Md. Fokhrul Tauhid Islam Sir, the external supervisor of my office, Who has made every effort to project me into the industry and learn about it. I will be grateful to another person in my office who is, Sakhawat Hossain, Under which I am working on my project.

Then if I have to express my gratitude, I would like to inform her that she has helped me to project properly and reach the ultimate goal of the project. She is my internal supervisor, Moumita Asad, Lecturer, Department of Computer Science and Engineering, Independent University, Bangladesh (IUB). To work on art-home, she has given directions, continuous guidance on how I can prepare for this report. She helped me a lot with his worthy information, which I cannot express in words.

Not to mention that those who have helped me a lot so far those are my best friends and my family members. Thanks to them too. They have always given helpful and valuable time.

# Letter of Transmittal

28th, August 2021

Moumita Asad,

Lecturer,

Department of Computer Science and Engineering,  
Independent University,Bangladesh

**Subject: Letter of Submission for Internship Report, Summer 2021**

Dear Ma'am,

This is to inform that with due honor and respect, I, MD. Riyad Hossain (ID:1731407) from Internship Course of Summer 2021 Semester, Section 03, would like to submit my Internship report. This report is based on my internship program and the project I have worked on. My internship was conducted from 1st July 2021 to 15 September 2021 and it has been completed at Limmex Automation.

This report depends on my experience and the work I did at Limmex Automation during my internship program. The essential objective for my internship was to acquire experience from working in the software engineering industry and acquaint myself with all the distinctive innovation related fields of the organization, including research and development, documentation, software development and to get familiar with software development cycles and practices.

Over the time of my internship at Limmex Automation, I needed to learn and adjust to the advancing technologies being utilized in various circumstances and necessities and to have the option to apply them in real life projects.

I hope the following report can achieve your approval and is adequate.

Sincerely,

MD. Riyad Hossain

Email: riyadhossain677@gmail.com

# Evaluation Committee

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# Abstract

This is the course of CSE499 (Internship). During this internship, I worked on "Limmex Automation". The company Where they assign me "Art" related projects and provide some resources. That is used when I will be planning, designing, and implementing. So the project name has been defined as an "Art-Home" web application. Because during this COVID-19, people are not going outside to buy/sell an art-related product. So in this case, The company had a great chance to create an Art/calligraphy website in online. This internship report is based on my experience as an intern for the Art/Calligraphic website. Where I covered project objectives, the scope of the project, management, design issues, and implementing issues. All the knowledge and experience I gained studying in the Bachelor of Computer Science And Engineering at Independent University, Bangladesh. And some knowledge gained in "Limmex Automation" where the company provides IT services. The website provides the user with a catalog of different art/calligraphy products purchased and sold in the store. An admin can manage all activities from his/her dashboard. **Keywords**— alpha, beta, gamma

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# Chapter 1

## Introduction

The Internship can be an integral platform for anyone to get experience with an office that is real. Hence, an Internship is just a possibility this is certainly good for students to learn, to gain knowledge also to make planning. Men learn through knowledge, as well as a life that is high in different varieties of experiences. So the purpose of the internship program is always to help students consider their particular professional passions and potentials. Through learning in university, I learned about theories but by doing an internship, I learned practically instructions. So, I have decided to take the internship course. To grab the golden opportunities to apply theories and knowledge, that I have in a real working life setting. This **course(CSE499)** offers the Department of Computer Science & Engineering (**CSE**), under the school of, **Independent University, Bangladesh**. I'm working as a Junior Software Engineer at "**Limmex Automation**" for 3 months. Through this Internship, it helps me to identify my weaknesses and also my strengths. Even last thing, why did I choose an Internship? The reason is, Our life in institutions and college is incomparable with working life. Working life is quite difficult that I have to prepare myself and be trained to because it calls for great work, dedication, and capabilities those I need to be prepared and trained.

### 1.1 Overview/Background of the Work

I am doing my internship at Limmex Automation. The company has an Android app, software development, and web application. After joining this company, they assign me to work on "Art-Home" and provide a brief description. So, I am working on this project. In a pandemic time, Art lovers can't go outside to buy or view the new collection of ART. on the other hand The artist has no option to sell their art also represent their idea. In that case, The Art-Home platform helps art lovers to represent and sell their creations to their customers using a web browser. It is a web-based project Which is an e-commerce site/ e-business site. That represents an initiative art worker in the world through online. It helps users to search their choice as well as demands, buy products, and give ratings. It also helps the managing committee to track the selling products, delivery items, and payment transactions. Artists can use our platform to sell and buy their creations. So, a person can share their ideas, and this platform will spread their

ideas to the whole world. Using this website, a community will build up with creative people.

## 1.2 Objectives

- Through this system, the art lovers will be able to spread their innovative thoughts to the people of the world.
- This system will be cost-effective in both ways.
- A system that stores and displays information about art/calligraphy's.
- In Covid-19, social distance is being mandatory to keep safe. This service helps both art lovers to keep themselves safe.

## 1.3 Scopes

- User can access this website through their membership-ID and password using any kind of browser.
- View the new art/calligraphy's and more selling products, monitoring products, and overview the products.
- In general, people must go outside to shop for this product but by this system, they can find out their desire products of art/calligraphy through the searching process.
- Make the task easier: online system management will be easier. Automated system management will be some buttons click. So, we can say that through this automated system art lovers can upload or buy art/calligraphy.
- How many products are pending delivery and how much discount is getting on a special day. All things are checked by admin.
- Admin/user can easily check previous transactions through the graph.
- Admin can control these types of features. Example: creator or Administrator create account, delete account and notice (for working activities).

# Chapter 2

## Literature Review

### 2.1 Relationship with Undergraduate Studies

This is last semester. So, almost I have done so many courses with valuable knowledge. Through this knowledge I represent this project sail smoothly. While some courses are directly involved this platform like,

- **Data structure (CSE-203)** This course was about teaching how to handle and manipulate complex arrays, objects, classes, array of objects, objects of array,nested arrays, nested objects, etc. As “Above & Beyond” involves many complex data structures, the skills gained from this course made handling them much easier.
- **Object Oriented Programming (CSE-213)** This course helps to find out logical and physical object. Also, how to handle clients and express imaginary/ visualization thoughts through in code. Also, as the application grew bigger, this practice helped avoid writing new modules from scratch by using parts of old modules and adding new functions to them.
- **Database Management System (CSE-303)** In this course, I created a system called SPM (Student Performance Monitoring). The rich picture, goal achievement plan, functional requirements, process modeling and requirement analysis that we have learned in this course that will take place in the developmental life cycle. These techniques helped in the development planning and strategy of “Above & Beyond!” and also they helped in writing this report.
- **System Analysis & Design (CSE-307)** This is most important course for a system life cycle. Cause in this course I learned agile methodology, system planning, structure analysis, system design, testing environment, maintenance and identify its objectives. I think this is so important through this course to know and analyze a system. With all these items, I will be able to apply for my project and complete my internship.
- **Web Application and Development (CSE-309)** This course is very much familiar with a web developer. Because even if you are not a web developer but doing the course,

you have an idea about web application and try to make something. In this course I have created some portfolio web sites that helps my internship to create a web site. In general, I learned all the materials as a full stack web developer and apply it my project “Art-Home”.

## 2.2 Related works

**Art.com :** They actually work on very fast. They provide Free Shipping, Free Returns, Free Design. They work with passion to bring you the world's largest art collection. Whatever your interest, your decor style, your inspiration. **Features** like, live chat , favourite option, add cart for more shopping, different category for art, notice panel for upcoming discount or special discount, search option with filter by different category, contact option, policy and proper condition, for Customer Service: Contact Us Low Price Guarantee Ordering Shipping & Delivery Returns Gift Cards FAQs, An art.com, this Company Careers Shop their Catalog do not sell their user Personal Information. They use also some features like, My Account Access, My Account Track, My Order. They have provided multiple items with art. But in my system will be easy to find and easy to access.

**Artful home :** This website has been created 2021 for customer who are interested to hand-made items. if customer needs help then there is some option for call us and live chat. another option is for subscribe with personal email. **Features** like, main feature is contact us, my account and basket , search option with filter by different category. They have provided multiple items with art. But in my system will shows only art/calligraphy related products. That will be easy to find out and easy to access.

**Art and Home :** An art & home website has been created 2021 for customer who are interested in Home & Garden Decor For the Fine Art of Living. there is another option recent posts where user can view the recent post. They also mention their available partners. if customer needs help then there is some option for emailing. another option is for subscribe with personal email. **Main feature** is contact us, my account and basket, search option with filter by different category. This website is not friendly and home page like stack. But our art-home home page like view the new art/calligraphy and Which has been sold many times.

# **Chapter 3**

## **Project Management & Financing**

This chapter is responsible for making plans, leading, and taking control of exercises of the money-centered undertakings, systems changes, and technology improvements inside the branch of money. Individuals responsible for projects the executives in finance supervises the planning, implementation, and monitoring of short, mid, and long-term initiatives from idea to implementation; creates projects plans, and assurance errands are finished on schedule, inside assigned budgets, and satisfactory.

### **3.1 Work Breakdown Structure**

The WBS is a strategy for getting a complex, multi-step project done. It is an approach to partition and vanquishes large projects, so things are done faster and all the more proficiently. Work breakdown structure (WBS) is a various leveled tree structure that traces a venture and separates it into more modest segments. So, the Work Breakdown Structure is the principal tool that articulates the scope of our project. The WBS of ‘Art-Home’ is written in a set of activities or tasks and breaking it down into smaller chunks means work can be done simultaneously. As a result, it became easier for the developer to complete the project. [1]

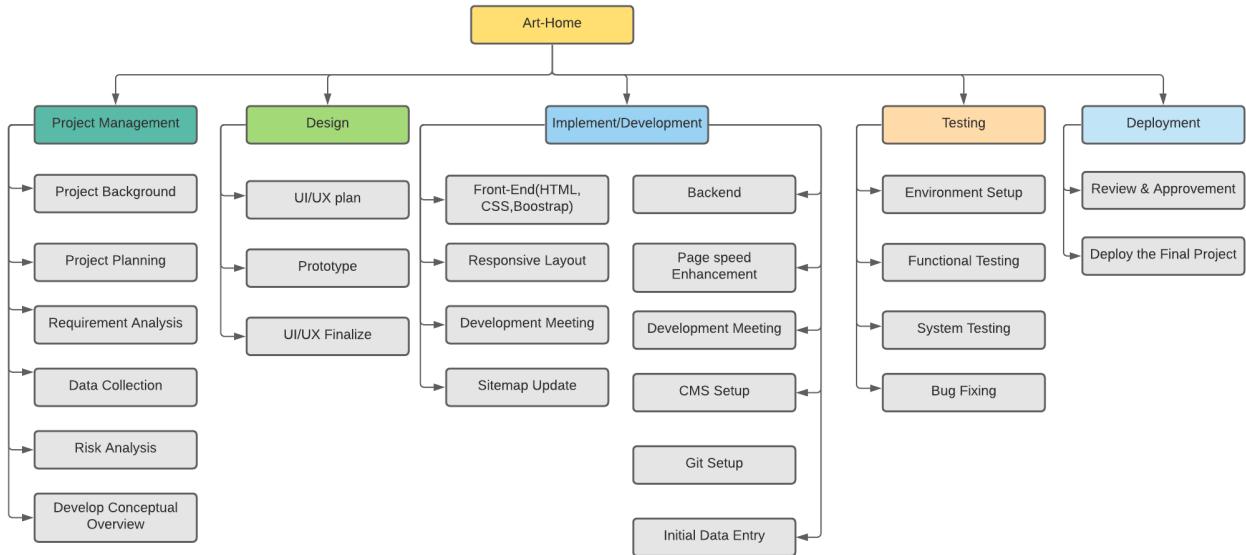


Figure 3.1: Work Breakdown Structure (WBS).

## 3.2 Process/Activity wise Time Distribution

A project schedule is a timetable that puts together assignments, assets, and due dates in an ideal succession so a project can be finished on schedule. A project schedule is made during the arranging stage and **incorporates the following**:

- A project timeline with start dates, end dates and milestones.
- The work necessary to complete the project deliverable.
- The costs, resources and dependencies associated with each task.
- The team members that are responsible for each task.[1]

Project schedules are created and tracked with project scheduling software, which has key features that allow project managers to monitor the progress of tasks. They can also assign work, link dependent tasks, view dashboards, allocate resources, and more.

**Project Management:** Letter one day they provide guidelines, how I'm collecting all art-related data and where. And also what type of data I'm going to use. In this part, there are a few points like: project background, Data collection, Requirements. Like: History is just one of the crucial traits of the task to describe the reason why initiate the project, just what requirements are, and just what email address details are allowed to be acquired effective. Planning, Develop Conceptual Overview. Like, In these parts, we will go through the logical steps. When I need to formulate a project plan successfully. Project plans to vary in size, elements, formats, and components. So, there is no single right way of creating a project plan example. (<https://blog.masterofproject.com/project-plan-example/>) and so on..

**Design:** For this, I've worked from the last 13-July to 26-July. It is also the main part. Because without the front-end we never send or view any data. There are a few

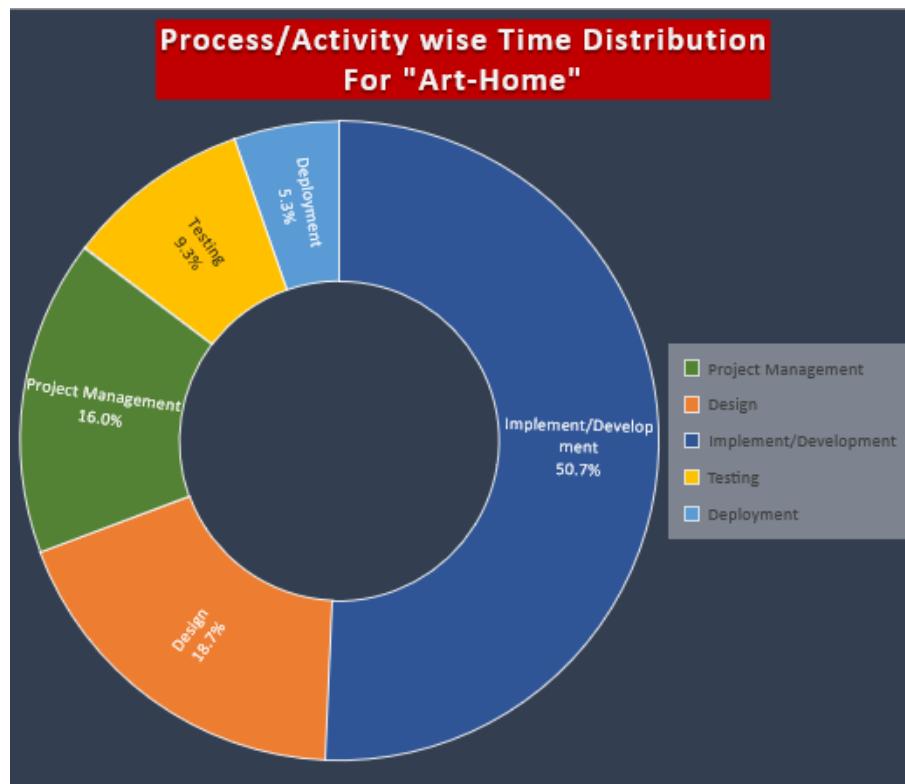


Figure 3.2: Process/Activity wise Time Distribution.

front pages like: Home, Product, Category, About us, Login, Registration, Contact, Dashboard, Add user, settings, Add Product, Comments, Review, Order, Check out, Sub Categories. So, When I create a page then I wait for feedback. If any changes from my company (Limmex automation).

**Implementation/Development:** This is the main part of every project. Without a backend, we can't fetch any data. So, from 27-July to September-2, I worked on this project. Yes, for a long time I work on this project cause in implement site there is some working process like, first I create frontend (same view of the prototype in design sector). Then create a responsive layout after that we have a meeting(as I mentioned in the previous selection, we meet on the google meet link) for the development process. Then I fixed the frontend with the backend for 23days. Because fixing sites is so tough. After that overall, I store and test with some data.

**Testing:** This is for the system testing part. So, If I talk about time distributions, then that was too short because here, I think 3-4 days is enough to test a system. But, I worked on it for a week. Because if I find out any problem then try to fix it as early as possible.

**Deployment:** During this part, I handed over my art-home project, also an understanding part for the new system like how it works, and what the output would be.

### 3.3 Gantt Chart

A Gantt chart has been produced to help plan and schedule project tasks. It helped assess how long the project should take, determine the resources needed and plan the order in which tasks, will be completed. It also helped in managing the dependencies between tasks. This Gantt

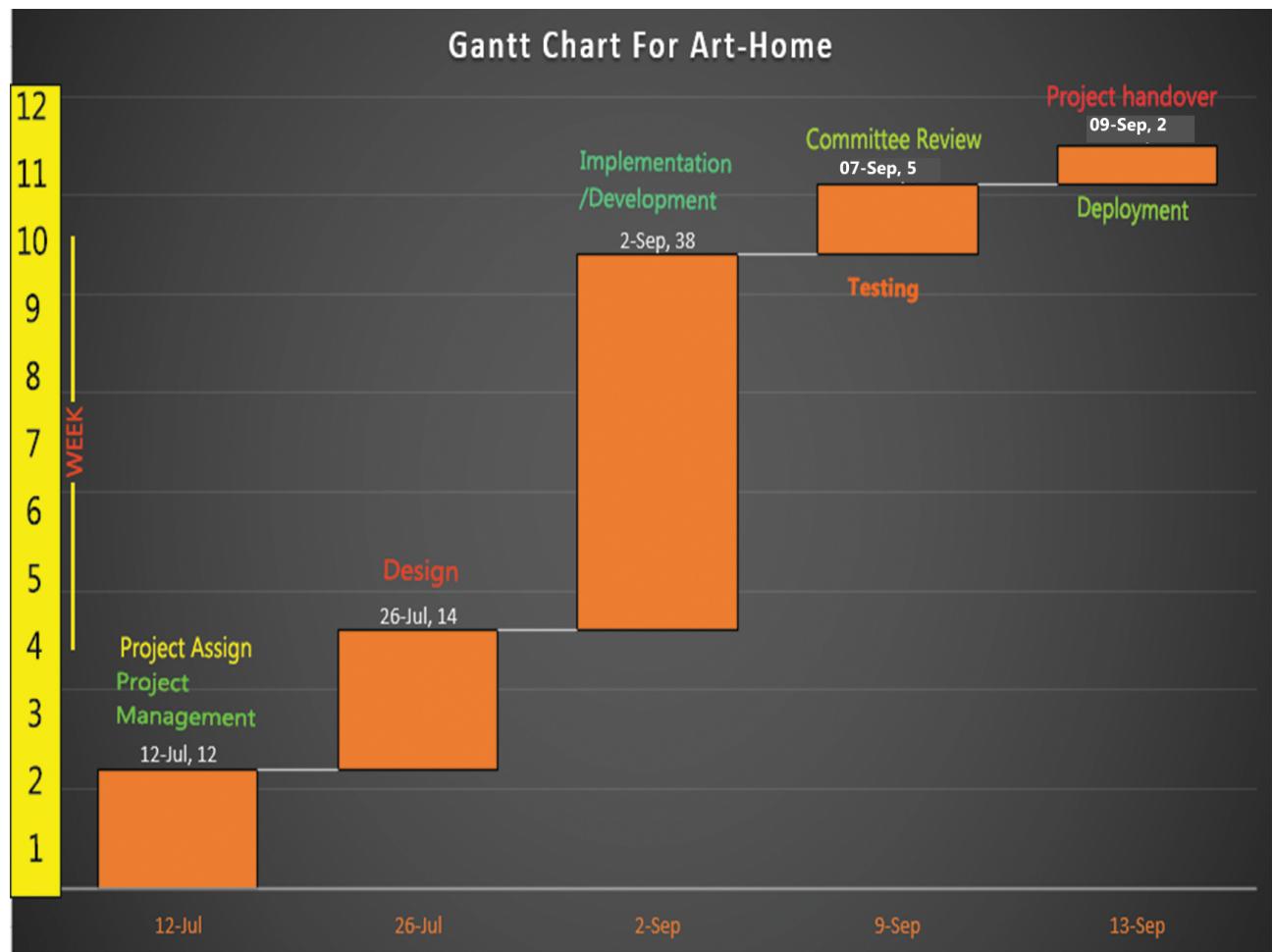


Figure 3.3: Gantt Chart.

chart helps us to ensure that the schedule is workable. That, the right people are assigned to each task. And that we have workarounds for potential problems before we start.

### **3.4 Process/Activity wise Resource Allocation**

Projects have a lot of moving parts, unclear because land and landmines are involved. No project manager has the crystal ball to deal with future risks. However, it can be moderate very well. So we will separate the elements of a strong system and the different regions that it should cover. We will then look at how we can put together a work breakdown framework at that time and use it to sort out our project and its various agencies. We need to master the most significant skills that will help us oversee and control and advance projects. Like-

- **Project Management :** The "Art - Home" project where the idea of the project was introduced by the CEO of the organization. Inside the initial not many weeks the CEO and developers examined the requirements expected to finish the project. For instance, you need to utilize computer specifications, software/technology to create applications, features, and developer requirements. It is the first run through the project. Where the idea of the project was introduced by the CEO of the organization. Since it was an internal item, it was not very late and the project administrative work started.
- **Design :** In this stage, not many visual designers were worked for planning the site pages of the application just as the management group began working on the undeniable level and low-level diagrams for the project all together the get the master plan without hesitation.
- **Implementation/Development :** At this stage, the plans for the pages were finished and the developers began working on composing the code for the front end and back-end of the application while the management group continued controlling whether every one of the cutoff times was kept up with.
- **Testing :** Testing began when an element was added to the site. Consequently all, while the testing was being done by the developers. Toward the finish of the implementation stage, unit testing for the application began. In that time, all the poles are correct.
- **Deployment :** Deployment in software and web development intends to push changes or updates starting with one deployment climate then onto the next. After the testing, it was genuinely finished, the group understood that it was delayed. For deployment, a VPS (Virtual Private Server) and a memory space were purchased to convey the application on a live server.

### **3.5 Estimated Costing**

Project estimation is a significant process for achieving the set goals of a specific project. Project evaluations might in general get troublesome, as the project progresses and new difficulties come up. Consequently, for getting an exact project gauge it is first important to decide the scope of the project. So, this the estimated cost 1,74,500 BDT for whole project. This is the approximate cost of the project. It can be expanded on the changes in the website and keeps up fetched.

Table 3.1: Estimated Cost for "Art-Home" website.

Features	Cost
Internet Bills	4500
Domain Bills	3500
Hosting Bills	1500
Project Manager	40000
Frontend Developer	50000
Backend Developer	75000
Total Costs	1,74,500

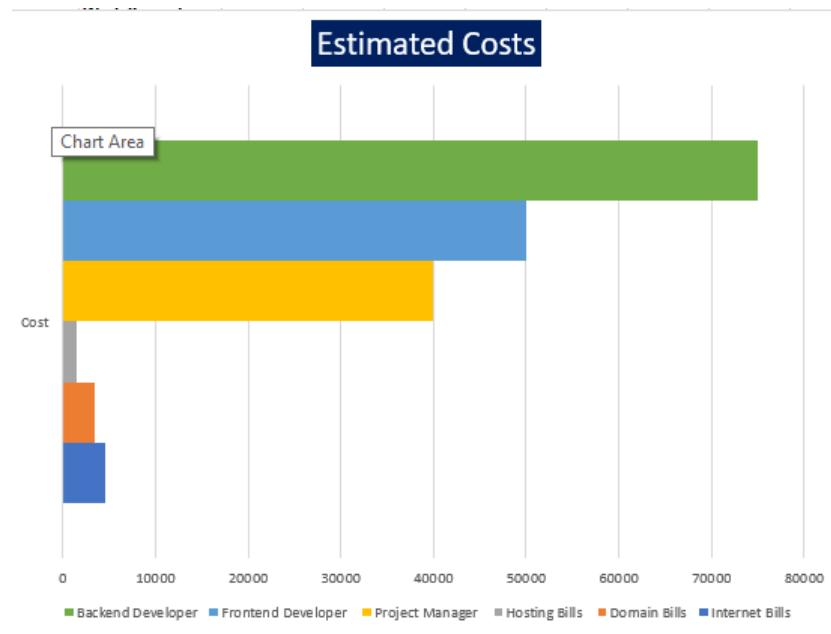


Figure 3.4: Estimated Costs Chart.

# Chapter 4

## Methodology

### 4.1 Systems Development Life Cycle (SDLC)

The systems development life cycle is a phased approach to solving business problems. In software engineering, a software development measure is the way toward separating software development work into particular stages to improve design, product management and project management. It is otherwise called a framework development life cycle (SDLC). We can characterize SDLC as a structure that depicts the exercises performed at each phase of a System Development Project. Thus, it has some essential stages to be followed during the development stage. Developed through the use of a specific cycle of analyst and user activities. Each phase has unique user activities. There are different types of SDLC those are:[2]

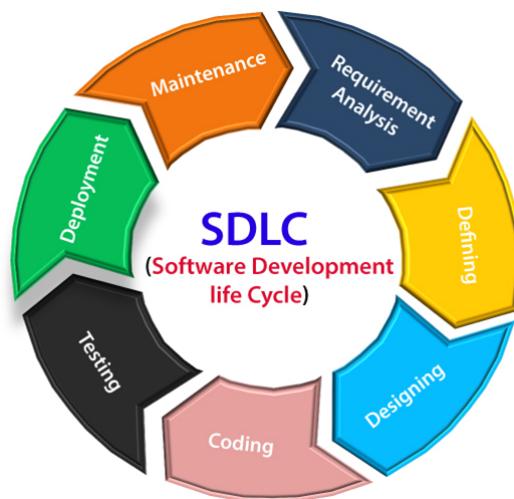


Figure 4.1: Software Development Life Cycle (SDLC)

- Waterfall Model Prototyping
- Agile
- Spiral Model

- Rapid Application Development
- V-Model
- Incremental
- Evolutionary Model.

So, all these methodologies have some specific criteria along with their advantages and disadvantages. Whatever working by an agile method is better for us. Because we need low investment gain highly profit. Moreover, the fact that the requirements were sets by us instead of having them defined by the client meant that we had very well-defined requirements, which are not likely to change soon.

### **4.1.1 Agile Methodology**

The Agile thought process had started early in software development and started becoming popular with time due to its flexibility and adaptability. That's why we use agile methodology. In the business world, the portable application is added and expanding the market step by step. So to arrive at the market at most punctual and eclipse the company business pioneers are chasing for each conceivable way and one of them is "Programming Development Methodology" (PDM) as a system to plan and control the interaction of development and maintenance. Cascade and Agile are two SDM. Here Cascade is the client for a long time from an absolute starting point and it was the best quality level for programming development. Yet, in this period practically all the product company utilizes Agile methodology or accept they accomplish because development work is impacted by Agile methodology.

The agile software development emphasizes on some core values like-[3]

- **Working software:** Demo working software is viewed as the best method for correspondence with the customers to comprehend their necessities, rather than simply relying upon documentation.
- **Customer collaboration:** As the prerequisites can't be accumulated totally in the start of the project because of different elements, nonstop client association is vital to get appropriate product necessities.
- **Individuals and interactions:** In Agile turn of events, self-association and motivation are significant, as are collaborations like co-area and pair programming.

So, engineering team of limmex spotlights on a conveyance rhythm called a sprint. For that here meeting structure like,

**Planning** – Project managers and team leaders will identify priority sprints. **Meetings** – This is pandemic situation for covid-19. Since, most of the time we have to work sitting at home that's why the teams can communicate updates on their development process and need to clarify dependencies on every Monday at 11:00 am through google meet.

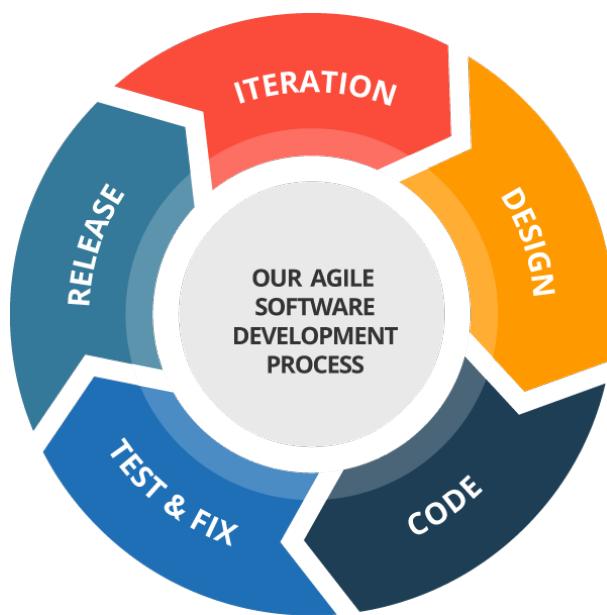


Figure 4.2: Agile Methodology

# Chapter 5

## Body of the Project

The component that is the main report usually comes with three to four chapters detailing the technical work undertaken during the project. This chapter is extremely task-centered. The chapter explores the development process of project design, execution, experimentation, optimization, analysis. Here represent Project Background, System Stakeholders, Six Element Analysis, Features, UML Diagram and System Feasibility.

### 5.1 Work Description

The Art-Home platform helps art lovers to represent and sell their own creations to their customers using a web browser. It helps users to search their choice, as well as demands, buy products and give ratings. It also helps the managing committee to track the selling products, delivery items and payment transactions. An artist can use Art-Home platform to sell and buy their creations. So a person can share his/her ideas and this platform will spread their ideas to the whole world. Using this website, a community will build up with creative people.

- **Login / Registration:** If a user wants to buy or represent his/her creativity then s/he needs to create an account. Then the user can log-in with their emailID and password on Art-Home website. When a user wants to create an account, they have to maintain some terms and conditions and fill up a form. In that form they have to write-down name, email, password, date of birth, address. After submitting the form, the user will get confirmation mail from the Art-Home system.
- **News feed:** When a user visits Art-Home website, then the user will see the latest updated art / calligraphy information. It can be changed by the user from filter information. The user will view and purchase all the products that are available on the art-home website.
- **Update & Add product:** A user can update their profile, profession and Visa card no. But before that happens the user gets an email from our system for confirmation. A user can upload their creativity with an art or calligraphy name, set the price, date of preparation and upload those as private or public.

- **Purchasing Management:** If a guest/user wants to buy “calligraphic” then they need to have an account on Art-Home. After login they can search for their desired art /calligraphy to purchase or to order anything from Art-Home for home delivery using their account. When the customer wants to place an order then s/he has to choose a product and click on add to cart or add more items to purchase and then see a “Checkout” page. Then customers have to provide or update all information in the Art-Home system Example: Name, email, delivery date, time, phone number, address and then check item list and amount. Also users can easily see and observe on the graph for order and selling reports.
- **Financial Management:** If administrator wants to see the financial report, then s/he can see the total list of selling items, how many products are pending for delivery, how much discount are getting on a special day. Example: owner’s want to give 15% discount on his/her birthday, that will be counted here as special discount. In this system, there is a director/admin who can control these types of features. Example: creator or Administrator create account, delete account and notice (for work activities).

## 5.2 System Analysis

It is a 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. It is a problem-solving technique that improves the system and ensures that all the components of the system work efficiently to accomplish their purpose. Analysis specifies what the system should do. This chapter contains parts of System Analysis that will help understand the project better.

### 5.2.1 Six Element Analysis

This is the hidden process of the art-home system. In this process diagram, there is no non-computing hardware. Because the Art-system is used online. There is no need for stationary equipment.

Process	System Roles				
	Human	Computing hardware	Software	Database	Comm. & Network
New Product	User/Admin	Desktop Laptop	Web Browsers, Chrome, Edge, etc	mySQL	WAN GPRS
Update & Upload Product	User/Admin	Desktop Laptop	Web Browsers, Chrome, Edge, etc	mySQL	WAN GPRS
Product Category	User/Admin	Desktop Laptop	Web Browsers, Chrome, Edge, etc	mySQL	WAN GPRS
Purchase report	Admin/User	Desktop Laptop	Web Browsers, Chrome, Edge, etc	mySQL	WAN GPRS
Post & Settings Coupon	Admin	Desktop Laptop	Web Browsers, Chrome, Edge, etc	mySQL	WAN GPRS
Add user,Shippin g,Reviews	Admin	Desktop Laptop	Web Browsers, Chrome, Edge, etc	mySQL	WAN GPRS

Figure 5.1: Six Element Analysis

### 5.2.2 Feasibility Analysis

- **Technical Feasibility:** In Technical Feasibility, current assets; both hardware and software alongside required technology are investigated/evaluated to develop the project. This technical practicality study gives a report whether there exists right required assets and advancements which will be utilized for project development. Alongside this, practicality concentrate likewise analyzes technical skills and capacities of technical team, existing technology can be utilized or not, upkeep and up-degree is simple or not for picked technology, and so forth. The Art-Home web application is assembled utilizing JavaScript, PHP, HTML, CSS. These are the advancements that are exceptionally mainstream in the cutting edge industry and first stage was relegated for the front finish of the application where in I was intimately acquainted with the technology and 2nd stage allocated for the backend of the application which incorporates the custom-made RESTFUL APIs. Subsequently, it very well may be inferred that the project is Technically Feasible.
- **Operational Feasibility:** In Operational Feasibility level of offering support to prerequisites is broke down alongside how simple the item will be to work and keep up with after organization. Along with these, other functional extensions are deciding convenience of the item and deciding regardless of whether a recommended arrangement by the software development team is adequate or not and so on.

The Art-Home online interface is a web application made with complex logic and technology however for any end client it is very simple. The UI of the project was planned considering convenience. A parcel of troublesome decisions were made to make it easy to understand despite the fact that they made the development confounded. Additionally, a short preparing will likewise be given despite the fact that everything is extremely self-explanatory. In this manner, the project can be resolved as Operationally Feasible.

- **Economical Feasibility:** In the Economic Feasibility study cost and benefit of the project are analyzed. A detailed analysis of what will be the cost of the project for development includes all required costs for a definite development process. Like hardware and software resources significance, design and development cost, operational cost, etc. After that, it analyzes whether the project will be beneficial in terms of finance for association or not. We have made a system keeping the economic factor at the top of the priority list as this web application is intended to improve the e-business site of people who live in country metropolitan areas and have low income. who need to explore their ideas. whatever, even just the cost in developing this software in terms of other services are the payment for the area for connectivity. However, even when that happens the measure of money will be unimportant before the service it will be giving, all in all, one might say that the project is Economically Feasible.

### 5.2.3 Problem Solution Analysis

The existing system, today is a very dangerous situation for covid-19 and extremely expensive to Purchase art-related items and their creative idea. There have been advances in systems or processes everywhere. However, for some reason the manual art management system, sellers/buyers are still holding on to their old ways. The problems that our system is solving are listed below:

- Online selling products, can be remotely monitored.
- This system shares their innovative ideas.
- All art lovers can purchase online.
- Admin/Users can see the transaction process more easily than before.
- Customers can review(rate) their goods.
- Customers can see a variety of products containing the best reviews.

### 5.2.4 Effect and Constraints Analysis

- The individual this is certainly person should work separately. They ought to not have any dependency on one another.
- There may not be any outage or downtime while integrating functions into the working system or while integrating various other API is certainly 3rd party in the system.
- While brand-new functions are increasingly being included, the people it's still with a couple of third-party solutions- by-side. Therefore, information persistence should be preserved because of the 3rd- celebration programs.

## 5.3 System Design

The system design phase deals with transforming the customer requirements as described for the stage through the diagram in the documents which will implementable using a programming language.

### 5.3.1 Rich Picture

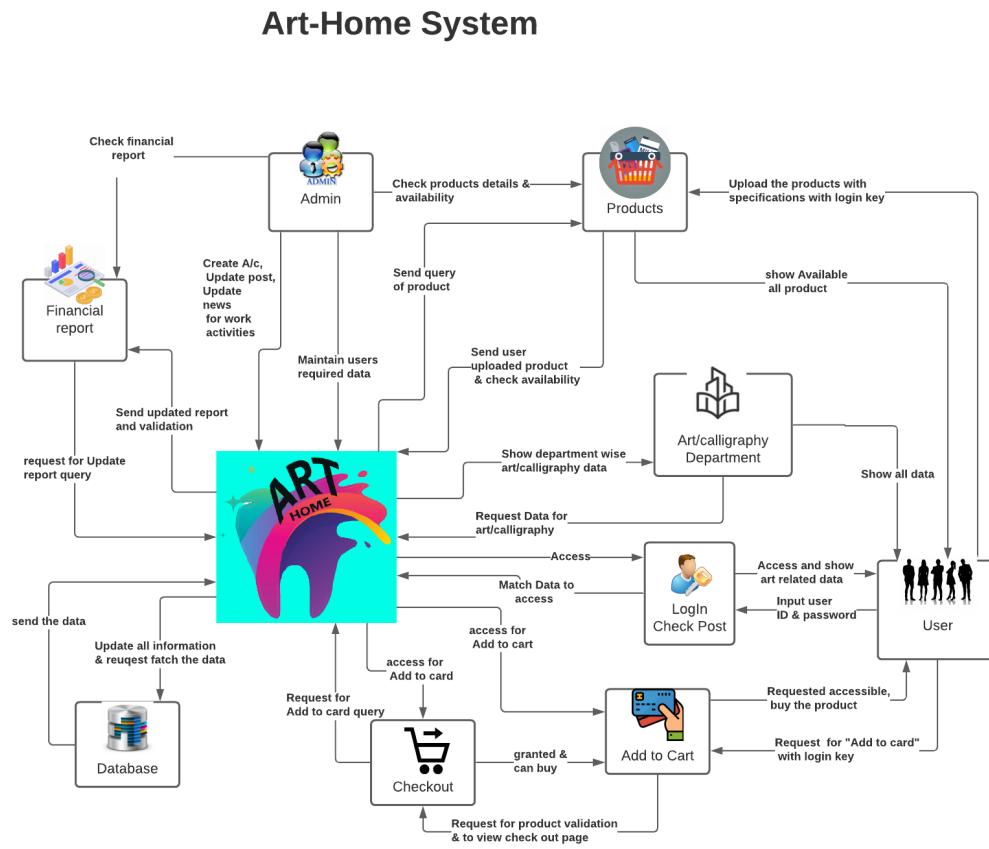


Figure 5.2: Rich picture for Art-Home system

This is how the system work. Here shown, all the system process and their activities. Also how all the processes are enter-related for their assigning work.

### 5.3.2 UML Diagrams

This chapter describes scenario based modeling of the Art-Home system.

#### **Use Case Diagram:**

This is the use case diagram for Art-Home web site application. There are three actors. They are User, Guest, Admin. This diagram also shows that which actor can perform which activity.

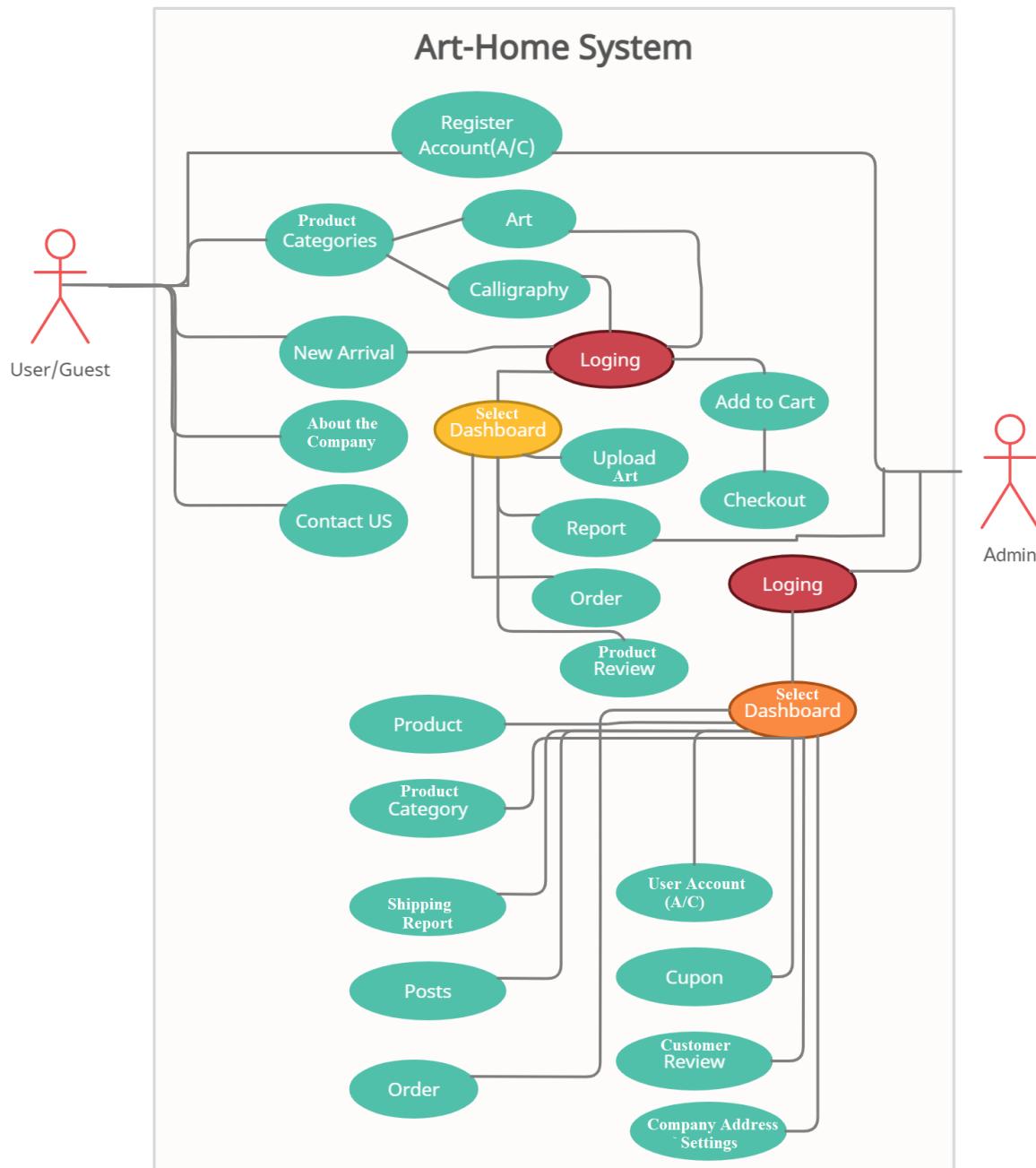


Figure 5.3: Use case diagram for Art-Home system

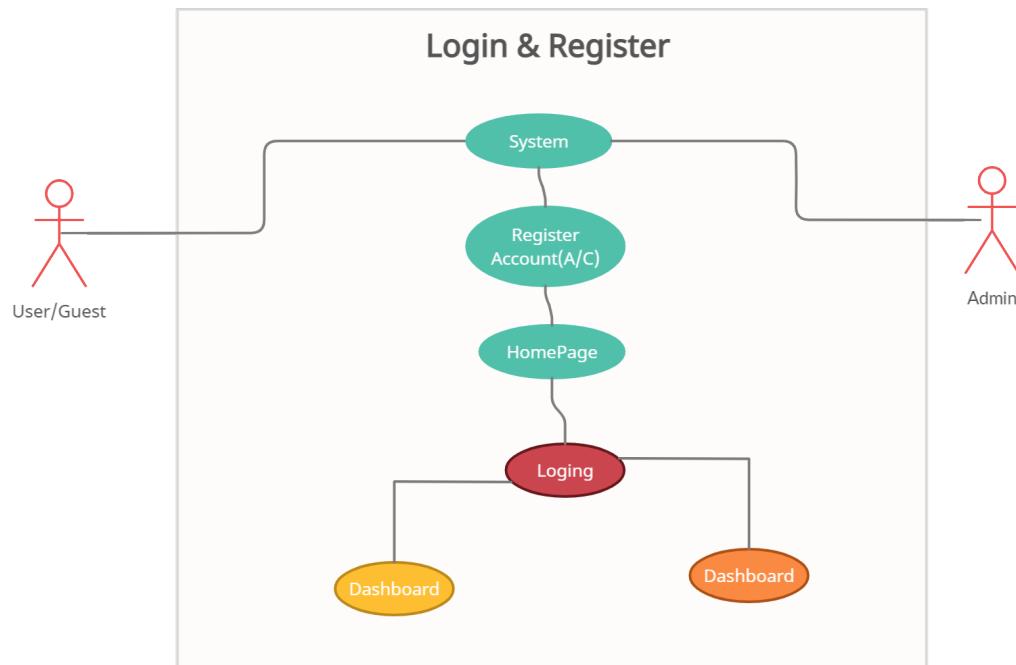


Figure 5.4: "Login & Register" use case diagram for Art-Home system

This figure is represent of system "Log in" and "Registration".



Figure 5.5: "News-feed" use case diagram for Art-Home system

This diagram is represent of news-feed. When the user enter in the system.

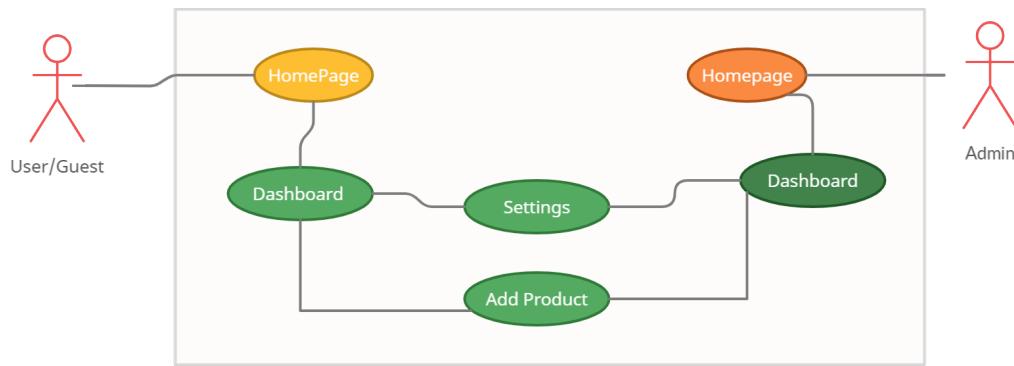


Figure 5.6: "Update & Art Upload" use case diagram for Art-Home system

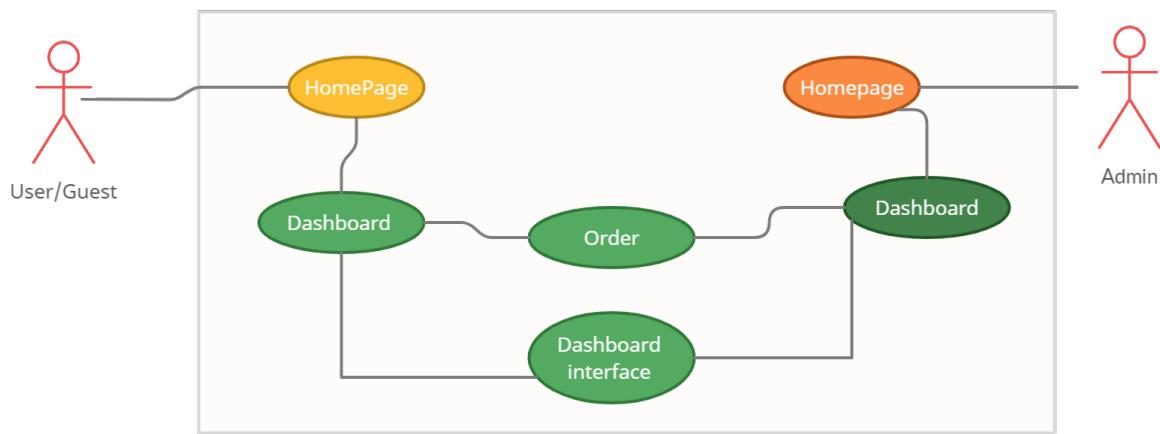


Figure 5.7: "Order Selling Report" Use case diagram for Art-Home system

This diagram is represent of profile setting and upload art/calligraphy picture.

This diagram is represent of buy and selling report.

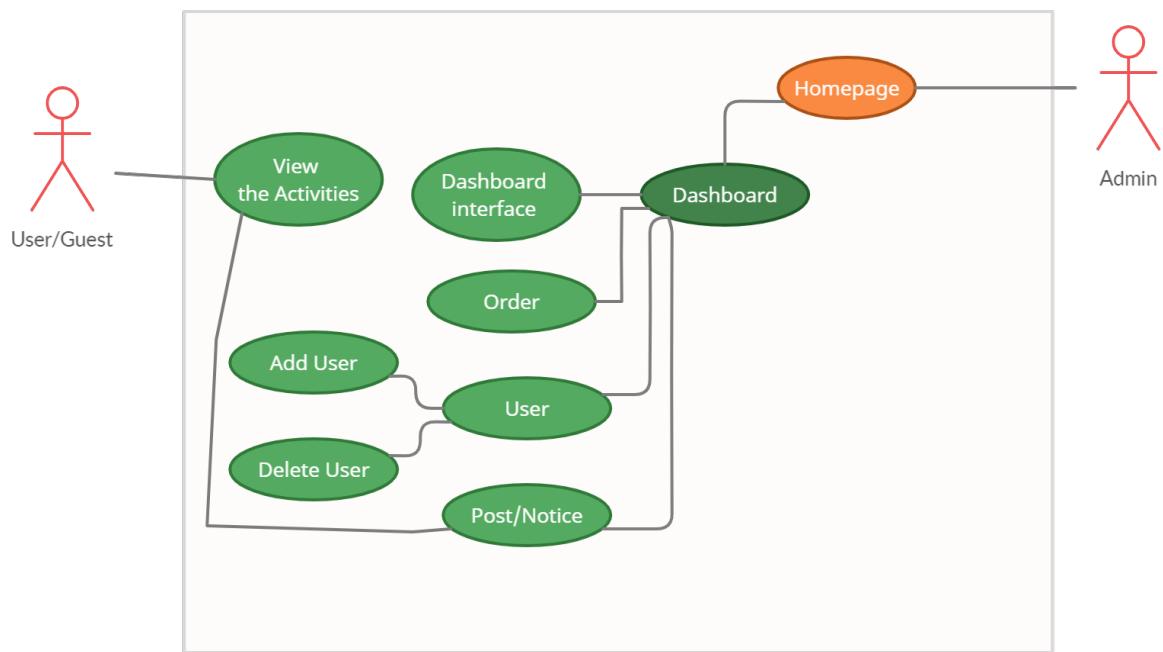


Figure 5.8: "Admin Activities" Use case diagram for Art-Home system

This diagram is represent of management activities and also add/delete the user.

**Activity Diagram:**

In Art-Home system, how a user or admin can enter our system. And then will be able to see and enjoy the features of our system. so this is the login process.

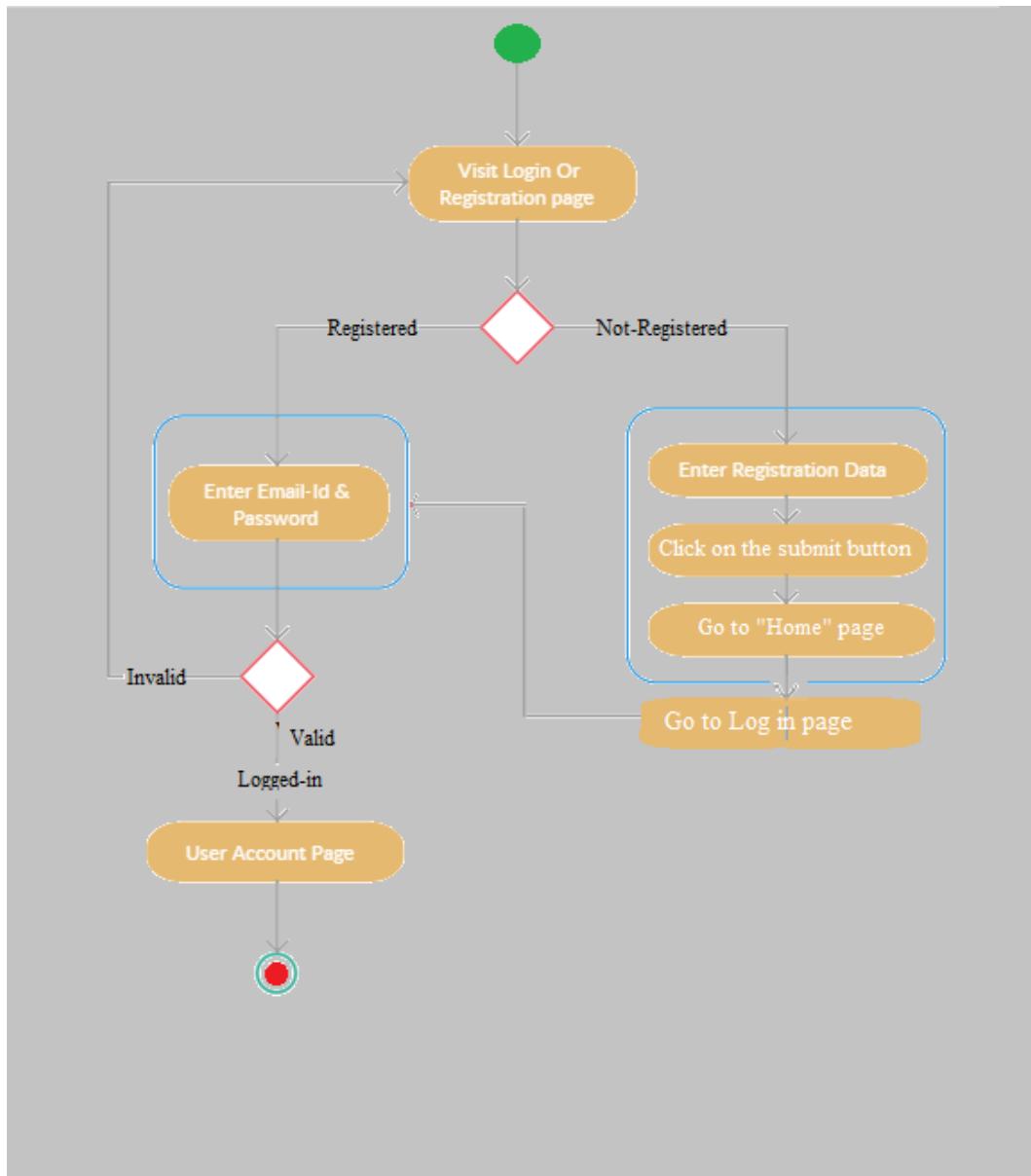


Figure 5.9: Login process for Art-Home System

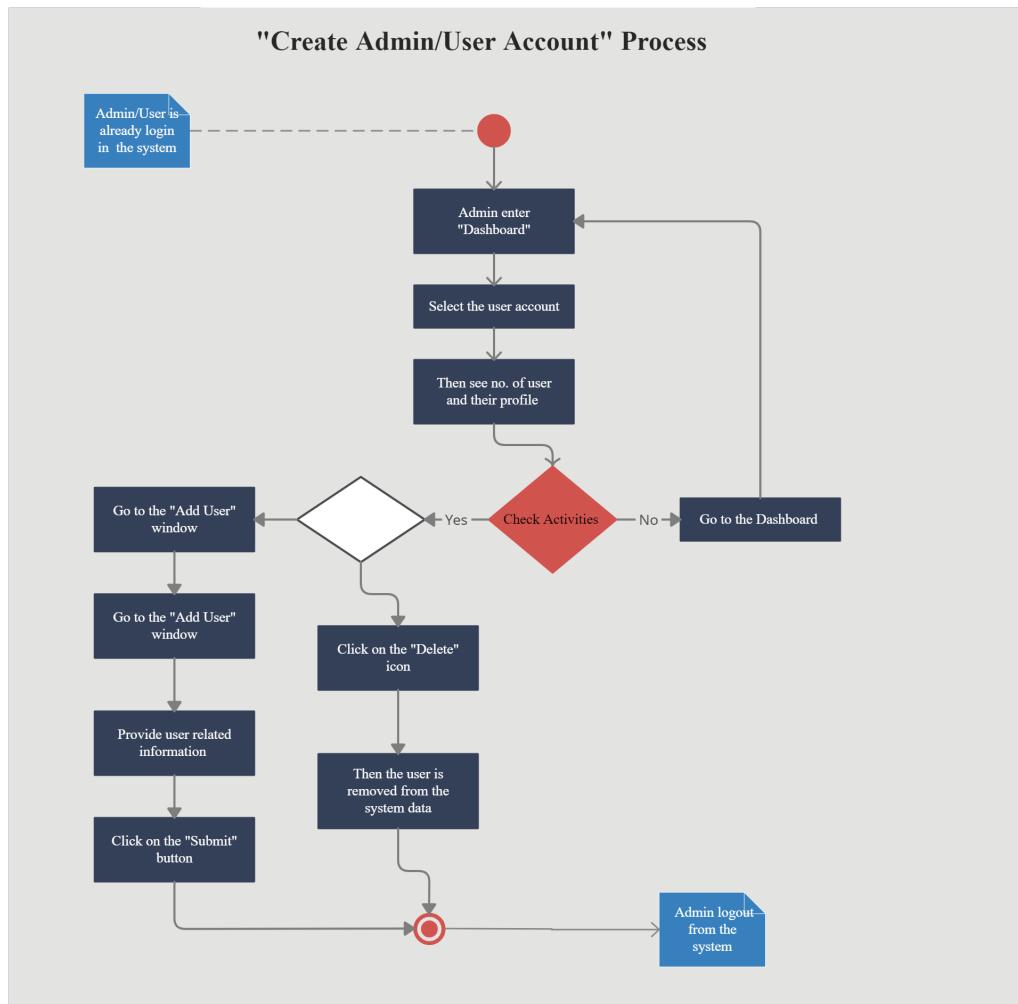


Figure 5.10: Create an Account for Art-Home System

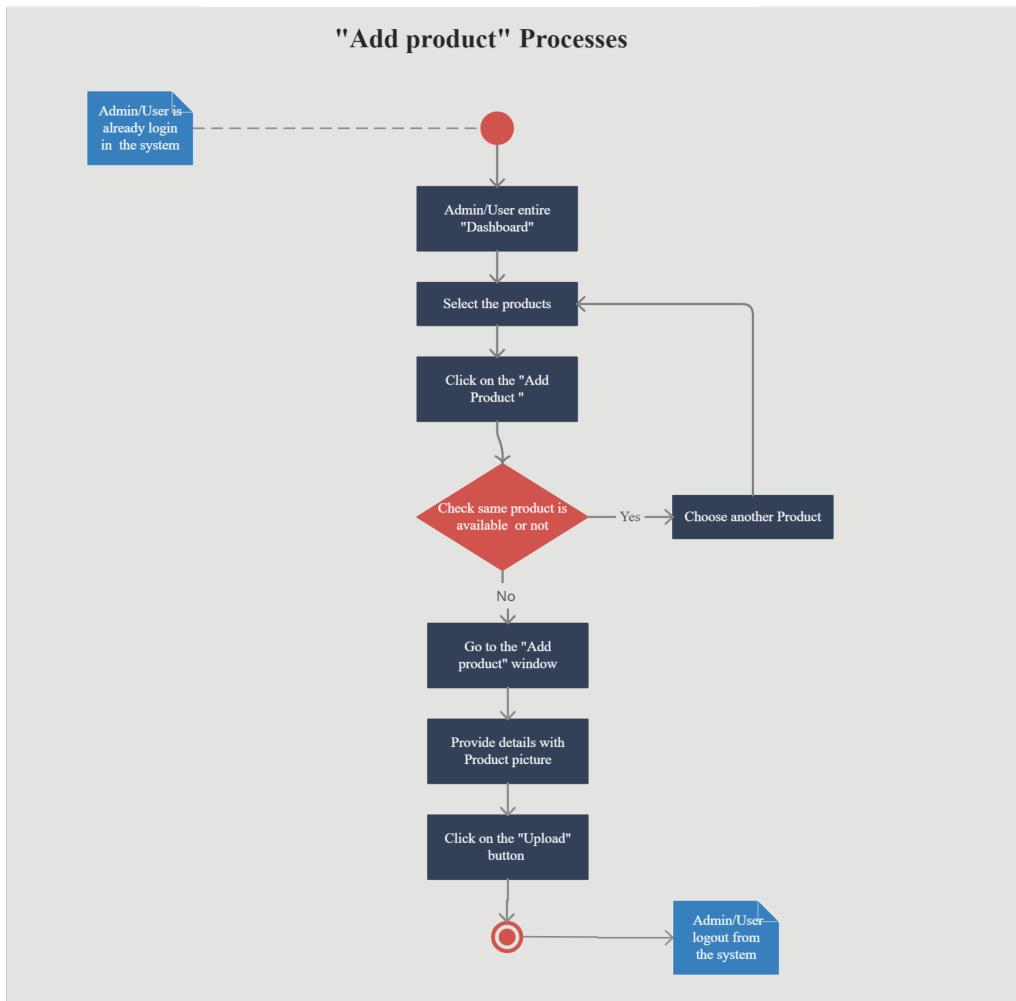


Figure 5.11: Add product process for Art-Home System

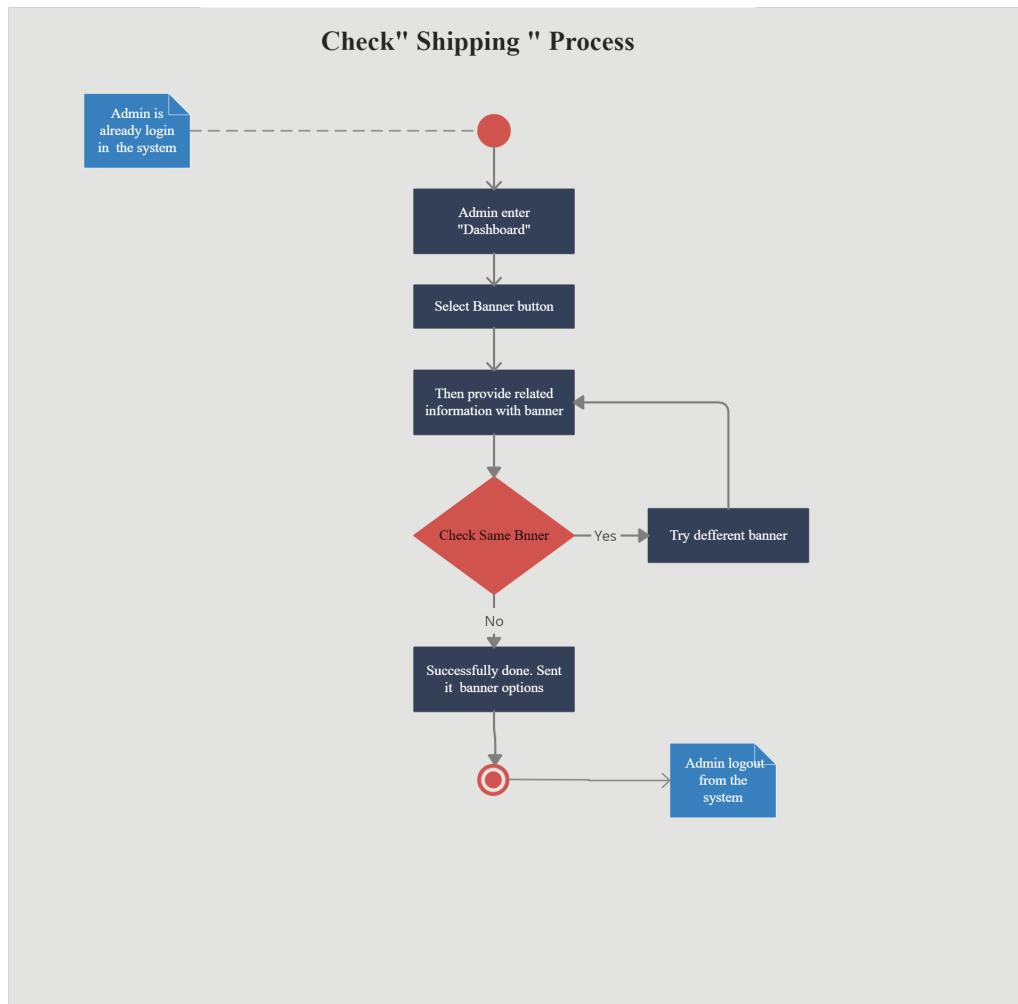


Figure 5.12: Add Banner process for Art-Home System

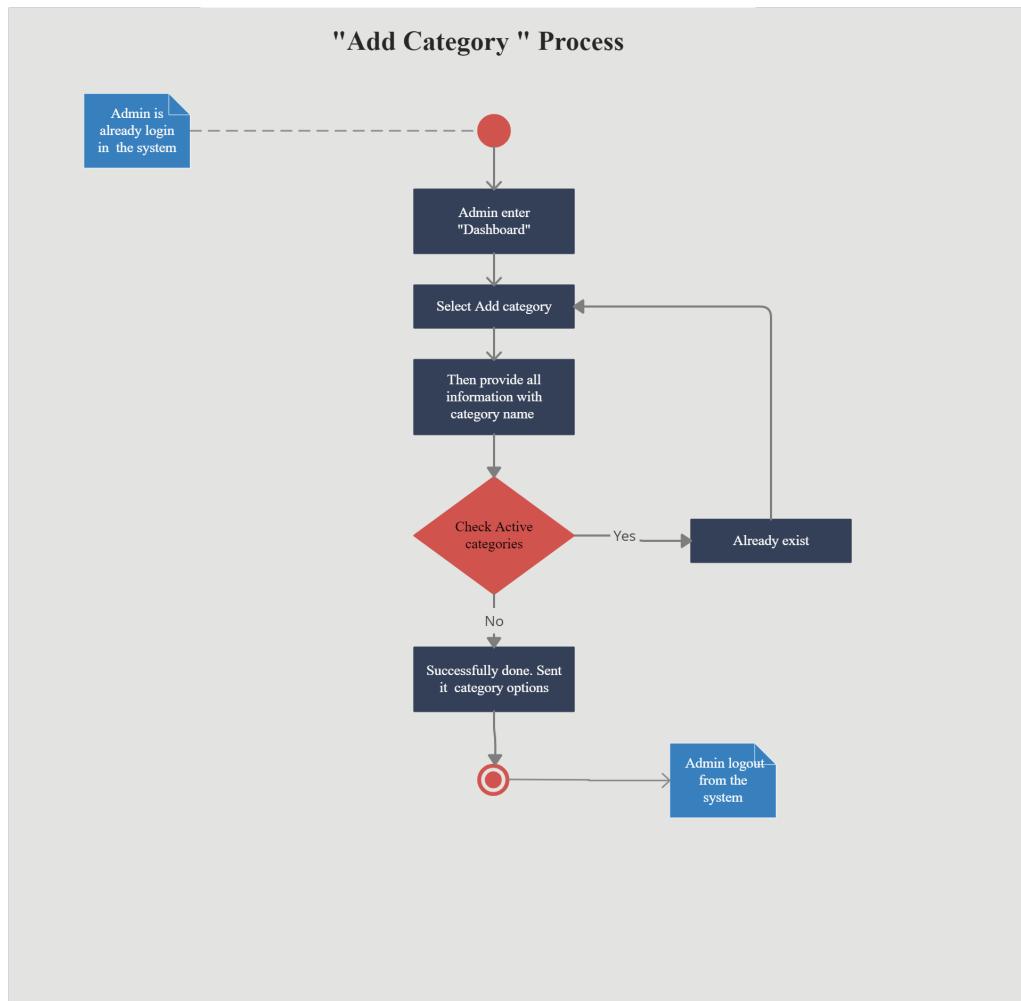


Figure 5.13: Add Category process for Art-Home System

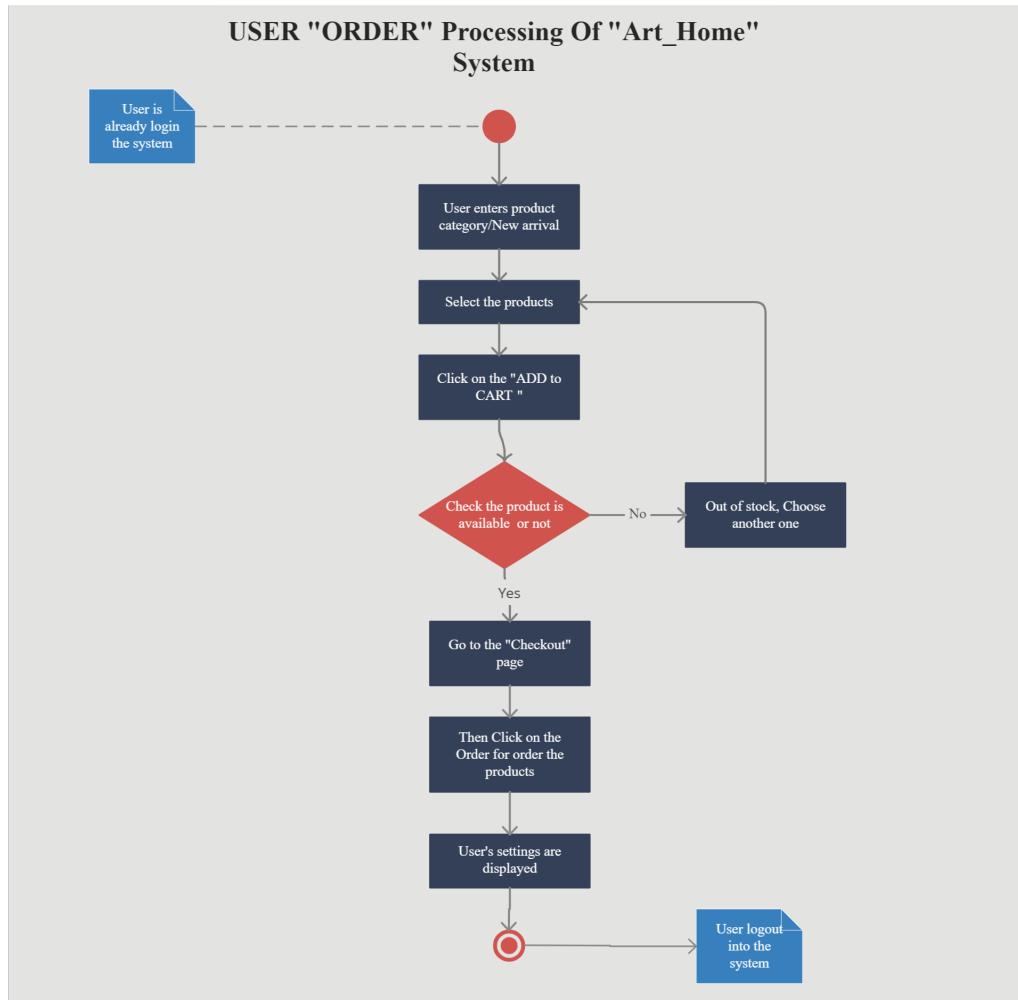


Figure 5.14: Order process for Art-Home system

### ERD Diagram:

In ERD, what is the structure behind this art-home system? That's the represent in blew the diagram.

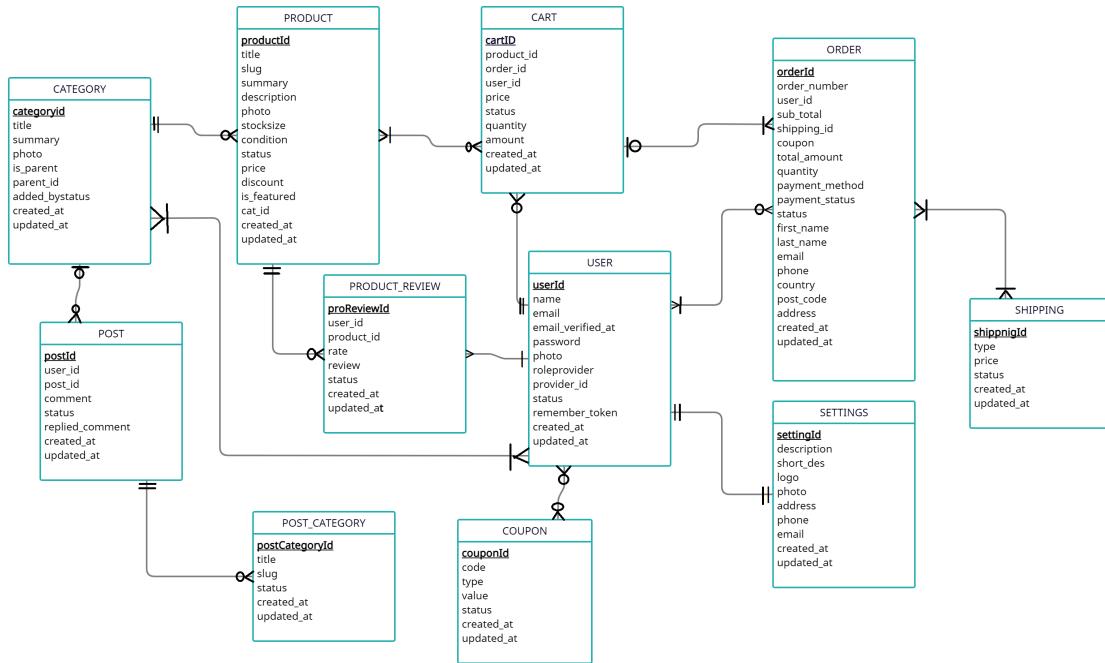


Figure 5.15: Entity Relationship Diagram for Art-Home system

### 5.3.3 Functional and Non-Functional Requirements

**Functional requirements**, these are statements of services the system should provide, how the system should react to particular inputs, and how the system should behave in particular situations. It specifies the software functionality that the developers must build into the product to enable users to accomplish their tasks.

- **Log in:**

- The system should allow "Admin" to login to the system using their username and password.
- System won't allow user to access with invalid password.
- The system should allow "Users" to login to the system using their emailID and password.
- The system will allow the Admin to create new user account if necessary.
- The system will allow Admin to change account settings and profile.

- **Dashboard For user's:**

- Users can access dashboard features including Order, Report, Add Product, Review.
- users can see their ordered report.
- Users can upload their Art/Calligraphic.
- They also reviewed the product which they have buy.

- **Admin Dashboard:**

- Dashboard was contain about section like order report,add product, Add Banner, Media, Settings,User account, post Activities,Review checker, Add categories. where the user will be able to know about the system.
- Create an account (A/C) for Admin and user also.
- Can change company address in the settings process.
- Can check shipping details.
- Can able to check the product selling report.
- Admin can add new product and also add new category.
- Admin also can add coupon for a specific day.
- Previous record of all additionally accessible in the system.

- **Checkout:**

- The system will not allow users before sign-in in to the website.
- Then the user can allow the checkout page to buy the product.

- The system will provide the user-item list and amount for checking purposes or cancel(if the user can't want to buy).
- Add to Cart:
  - After enter the home page, user/guest can choose their desired products.
  - Then the system should allow user for add to cart.

**Non-functional requirements**, as the name suggests, are requirements that are not directly concerned with the specific services delivered by the system to its users. They may relate to emergent system properties such as reliability, response time, and store occupancy. Alternatively, they may define constraints on the system implementation such as the capabilities of I/O devices or the data representations used in interfaces with other systems. Non-functional requirements, such as performance, security, or availability, usually specify or constrain characteristics of the system as a whole.[\[4\]](#)

- **Performance:** Represents the performance of the system which is required to exhibit and to meet the needs of users. Performance describes the acceptable throughput rate and accepted response time. This application should provide a smooth experience for the user and also should have no input lag as long as the device has a certain minimum hardware specification.
- **Usability:**
  - The system provides a help and support menu in all interfaces for the user to interact with the system.
  - The UI must be user-friendly.
  - The UI will exhibit conceptual integrity.
- **Security:** Security and administrations are consistently a worry for any system. All data on the worker side and customer side are gotten. Just the application heads and designers approach the center code of the application to have the option to straightforwardly control any kind of data. In this project, Php, MySQL has been utilized for backend innovation, which has different layers of security, where security requirements for this system have been taken care of. Control requirements address the environment where the system should work, just as the kind and level of security that should be given. Admittance to the system or data should be controlled with the security requirements.
- **Maintenance:** Maintenance windows should be scheduled after regular business hours to prevent scheduled maintenance from disrupting pickup and delivery. If possible, maintenance windows should provide a means for customers to access the Web site and payment system. This way, customers will not experience a disruption when they use the Web site to find information about the company, order, pay the bill or look up a package's status.

- **Reliability:** Because On the Spot is switching from a low-tech system based on paper records, the new system must deliver the same reliability as the older methods. An unplanned period of downtime could cause serious disruption to the company's business processes. Implementing redundant servers will help alleviate the risk of a server going down, and On the Spot will contract with an ISP that guarantees 97.99% up-time during business hours.

## 5.4 Product Features

Product features tend to be discrete aspects of upgraded and new functionality that deliver worth to customers. Broadly, features can relate to capabilities, elements, graphical user interface (UI) design, and performance updates.

### 5.4.1 Input

Input design is basically implement with both data, back-end and front-end. I'm Merge with these feature to create input page-

**For Login:** If a user wants to access the "Art-Home" website then s/he has to register in the system. Then go to the login page from the home page. Then give this required information.

- Give the user an email ID.
- Give a valid password.

**For Registration:** If the users want to access this website, then the users have to register before the login procedure. Then give this required information.

- Give the user name.
- Email ID.
- password.
- Again confirmation password.
- Give NID card number.

**For Add Category:** If the admin wants to add a category, Then give this required information.

- Give the Category title.
- Category summary (short description).
- Mark it, if it is the Main category, otherwise do not mark it.
- Add a Photo for specification.
- Select active otherwise inactive.

**For Add product:** If the admin/user wants to add a product, Then give this required information.

- Enter Category title.
- Give product summary (short description).
- Product detail's description.
- Mark the selection box if featured product, otherwise do not.
- Select category.
- Set product price.
- Set discount/percentage.
- Select brand.
- Select condition.
- Set quantity.
- Choose the product photo.
- Select active otherwise inactive.

**For Add user:** When the admin adds a user, then the admin has to fill up this information.

- Enter the user Name.
- Give the user's email address.
- Set password.
- Select the user photo.
- Give the user a NID number.
- Set user role.

**For Add Banner:** If the admin wants to change the banner for homepage purposes then-

- Set title.
- Give a description.
- Set the photo.
- Set active or inactive.

**For Settings:** If the admin wants to change/update their company details/address, then go to settings and set this information.

- Short description (company purpose).
- Company overall description.
- Set company logo.
- Set company picture.
- Set company address.
- Set company email address.
- Set the company phone number.

**For Contact purpose:** If a user wants to contact the "Art-Home" management site. Then they have to fill up this information.

- Give the user name.
- Set subjects.
- Email address.
- User phone number.
- Give the message (write down user message).

So the input table is shown below-

Table 5.1: Input Table for "Art-Home" system

Input Name	Fields	Tables	Complexity
User Login	2	1	Low
User Registration	5	1	Medium
Add Category	5	1	Low
Add Product	12	1	Medium
Add User	6	1	Low
Add Banner	4	1	Low
Settings	7	1	Low
Contact Us	5	1	Simple

### 5.4.2 Output

Project Output is the result that is certainly measurable upon successful conclusion of the task when all planned tasks and tasks are accomplished and task deliverables are manufactured. It is described as the quality, timeliness, and quantity of task deliverables available for usage in the project summary. Undertaking output relates to a specific product which is a measurable service or chance that is generated because of the project distribution process. Product functions are generally discrete aspects of enhanced and new functionality that deliver value to your prospects. Broadly, features can connect with abilities, elements, graphical user interface (UI) design, and performance changes.

**User:**

- Can view the profile settings.
- Can view order reports.
- Can view all the related item products.
- Can view working activities.

**Admin:**

- Can view added banner description.
- Can view all products.
- Can view user list.
- Can view reviews.
- Can view Ordered reports.
- Can view the shipping product process.
- Can view the added category.

Table 5.2: Output Table for "Art-Home" system

Output Name	Fields	Tables	Complexity
Registered Profile	4	1	Low
Product View	11	1	Medium
Post/Notice	5	1	Low
User List	8	1	Medium
Order Reports	9	1	Medium
Reviews	8	1	Low
Shipping	5	1	Medium
View Category	7	1	Low

### 5.4.3 Architecture

Software architecture is what defines and structures a solution that meets technical and operational requirements. Software architecture optimizes attributes involving a series of decisions, such as security, performance, and manageability. It describes the organization and interaction of software components. There are many types of architectures that are used among them. We are using the client-server architecture for our "Art-Home" for customer's safety website application system. We use client server architecture in our project.

**Client server :** Architecture of a computer network in which many clients (remote processors) request and receive service from a centralized server (host computer). User's computer provide an interface to allow a computer user to request services of the server and to display the landing page in return. When user create an order then order request go to "Admin" through server. After payment verification (In Future) "Admin" process the order. On the other side user can see their order in which step of processing through the server. Admin can create user through server. [5]

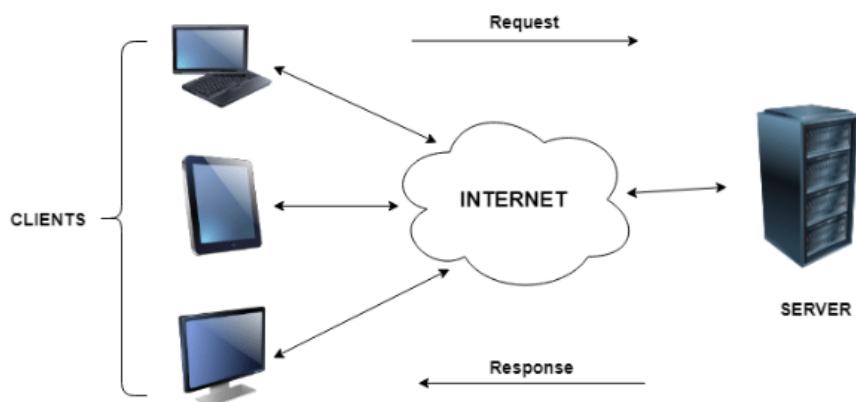
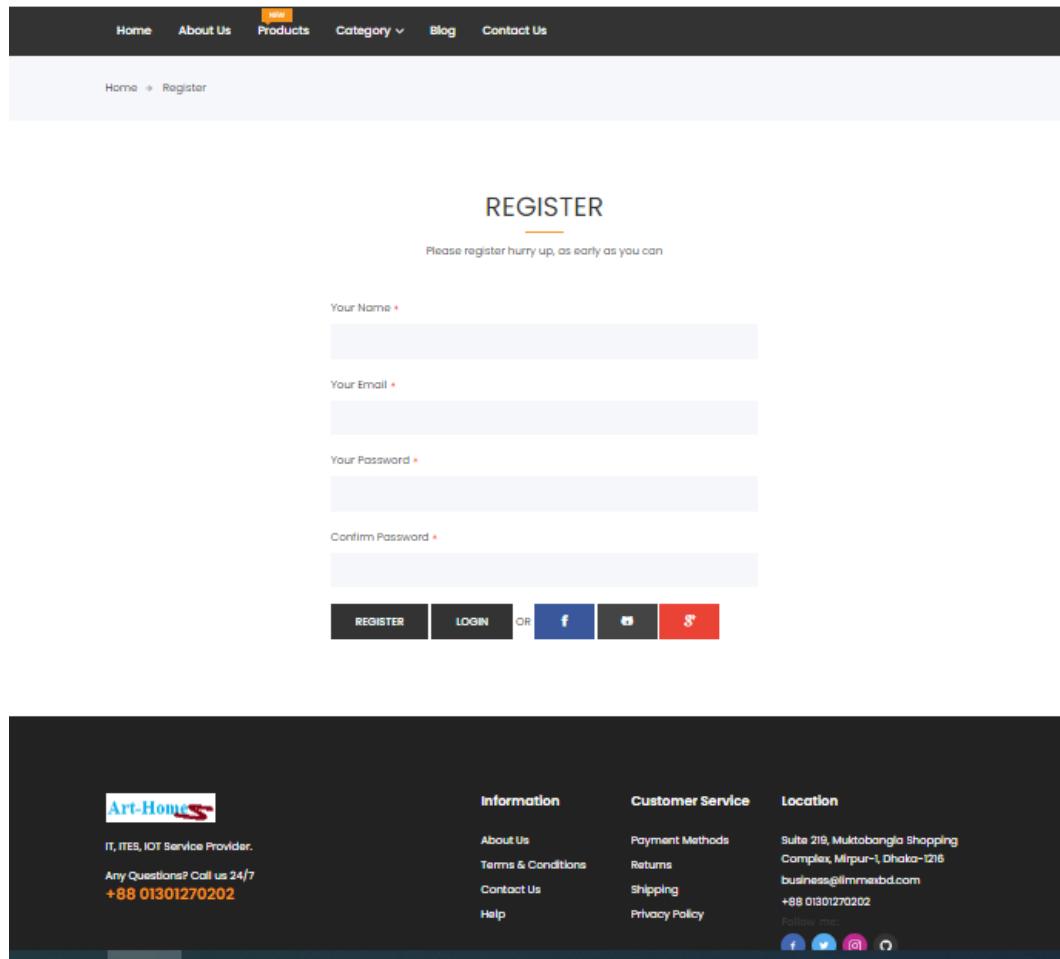


Figure 5.16: Client Architecture for Art-Home system

## 5.5 Project Prototype

Here is the prototype of "Art-Home" website in below:

**For Registration :** This is the registration interface.



The image shows the registration page of the Art-Home website. At the top, there is a navigation bar with links for Home, About Us, Products (highlighted with a yellow box), Category, Blog, and Contact Us. Below the navigation bar, a breadcrumb trail shows 'Home > Register'. The main title 'REGISTER' is centered at the top of the form. A sub-instruction 'Please register hurry up, as early as you can' is displayed below the title. The form contains four input fields: 'Your Name \*', 'Your Email \*', 'Your Password \*', and 'Confirm Password \*'. Below the input fields are two buttons: 'REGISTER' and 'LOGIN', followed by the text 'OR'. To the right of 'OR' are three social media icons: Facebook, Google+, and Twitter. At the bottom of the form, there is a footer section with the Art-Home logo, contact information ('IT, ITC, IoT Service Provider. Any Questions? Call us 24/7 +88 01301270202'), and links for Information (About Us, Terms & Conditions, Contact Us, Help), Customer Service (Payment Methods, Returns, Shipping, Privacy Policy), and Location (Suite 218, Multibangla Shopping Complex, Mirpur-1, Dhaka-1216, business@immeabd.com, +88 01301270202). The footer also includes a 'Follow me:' section with social media icons.

Figure 5.17: Registration page for Art-Home website.

**For Login :** This is the login interface.

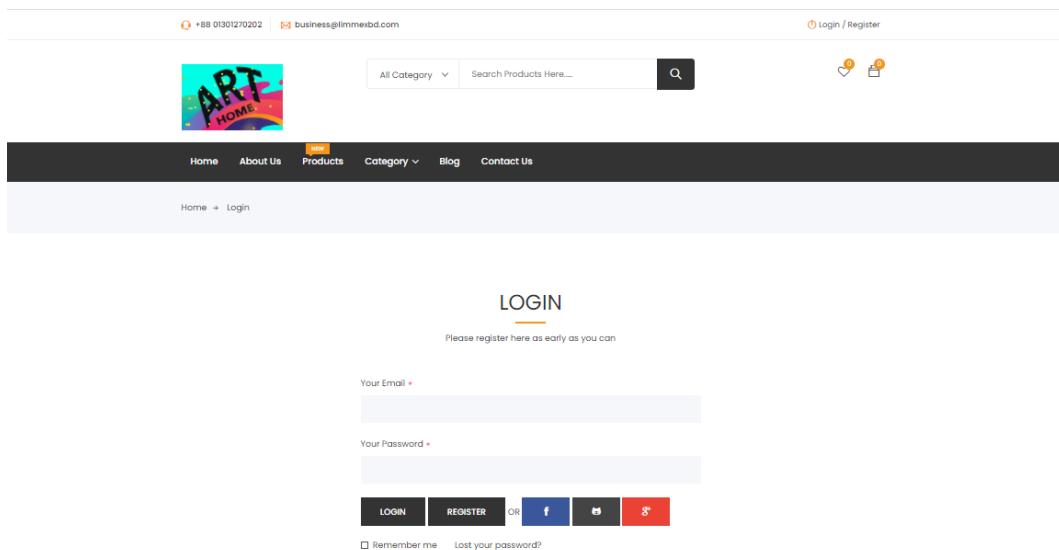


Figure 5.18: Login page for Art-Home website.

**For Home :** This is home page of the Art-Home website.

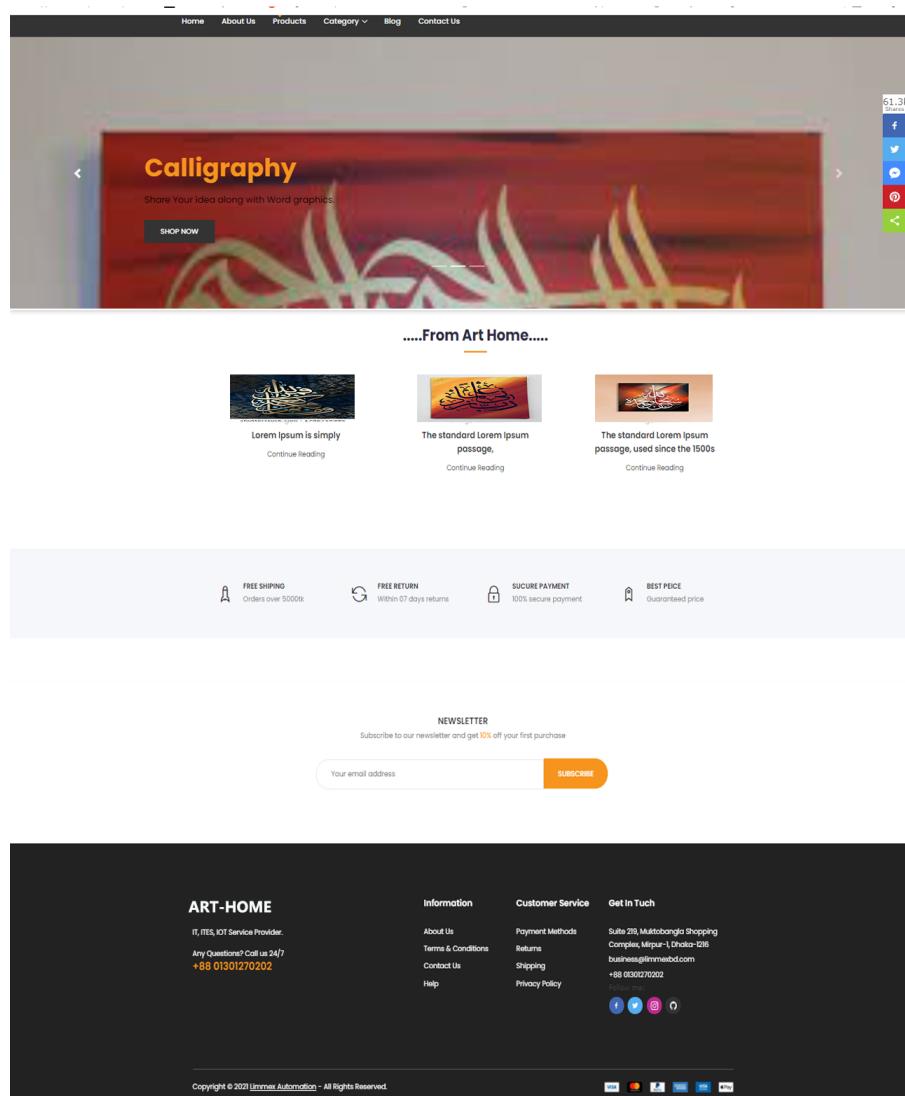


Figure 5.19: Home page for Art-Home website.

**About-Us :** This is the about interface for Art-Home website.

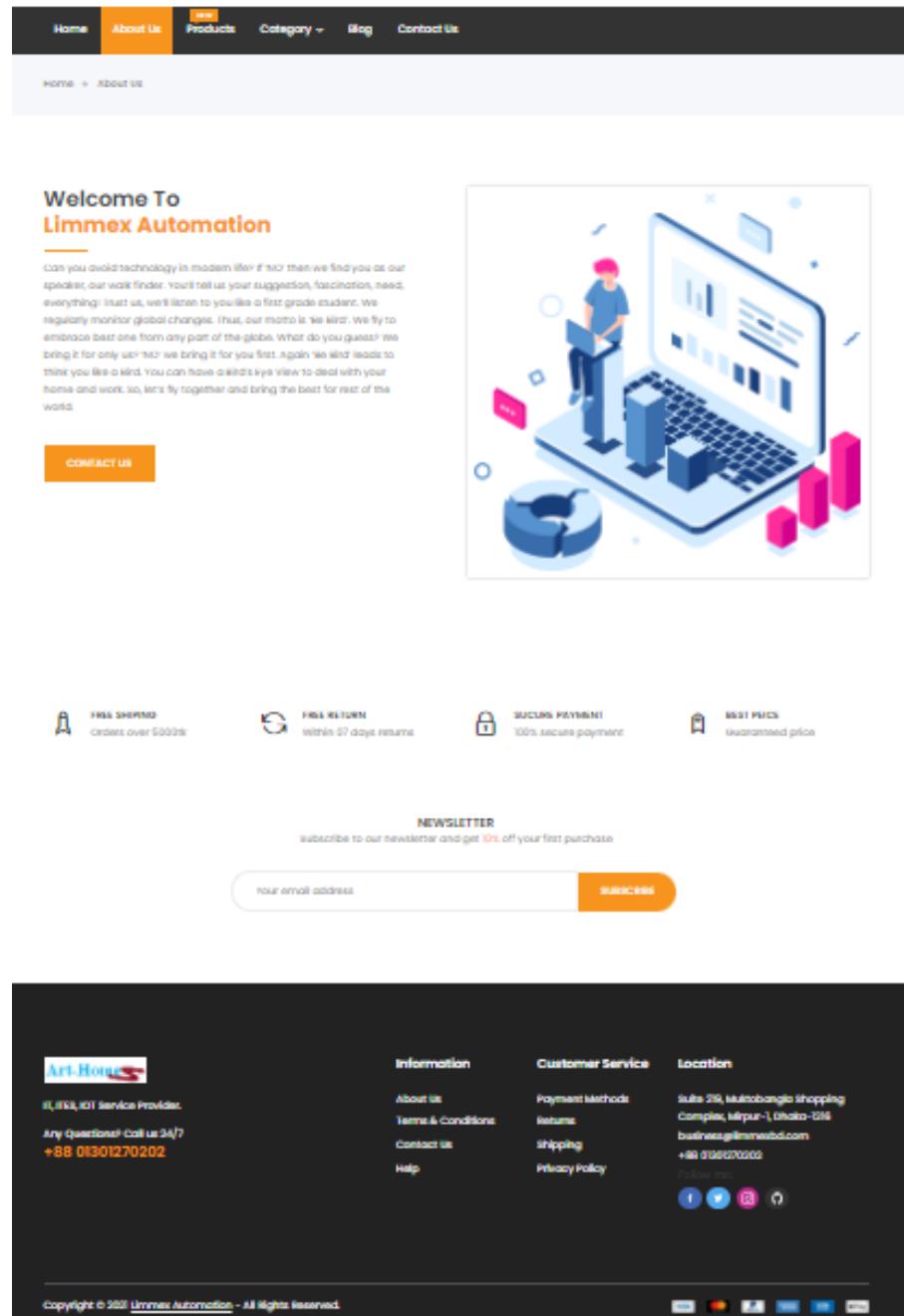


Figure 5.20: About-Us page for Art-Home website.

**Contact-Us :** This is the contact interface. Where the user's can contact with Art-Home management site.

The screenshot shows the 'Contact Us' page of the Art-Home website. At the top, there is a header with a logo, a search bar, and a login/register button. Below the header is a navigation menu with links for Home, About Us, Products, Category, Blog, and Contact Us. A breadcrumb trail indicates the current page is 'Home > Contact'.

The main content area is divided into two sections. On the left, there is a form titled 'Write Us A Message' with fields for Your Name, Your Subject, Your Email, Your Phone, and a large area for your message. A 'SEND MESSAGE' button is at the bottom of the form. On the right, there are three contact options: 'Call us Now!' with a phone icon, 'Email' with an envelope icon, and 'Our Address' with a location pin icon. Below these is a 'NEWSLETTER' section with a sign-up form for email address and a 'success' button.

The footer contains links for Information (About Us, Terms & Conditions, Contact Us, Help), Customer Service (Payment Methods, Return, Shipping, Privacy Policy), and Location (Address: suite 209, Multobangla shopping complex, Mirpur-1, Dhaka-1205, business@immedbd.com, +88 01301270202). It also features social media icons for Facebook, Twitter, YouTube, and Instagram.

Figure 5.21: Contact-Us page for Art-Home website.

**User Dashboard :** This is the user dashboard interface.

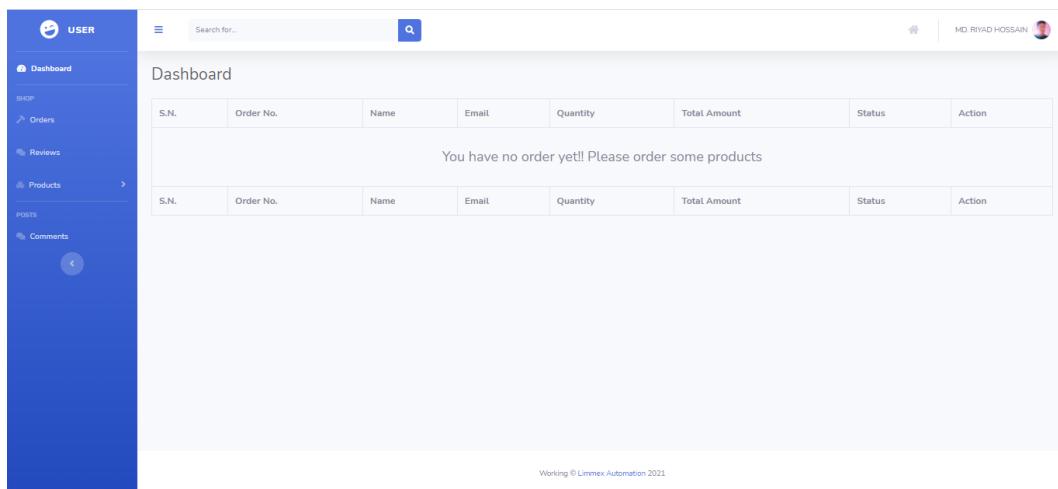


Figure 5.22: Dashboard page of Art-Home website.

**Admin Dashboard :** This is the admin dashboard interface.

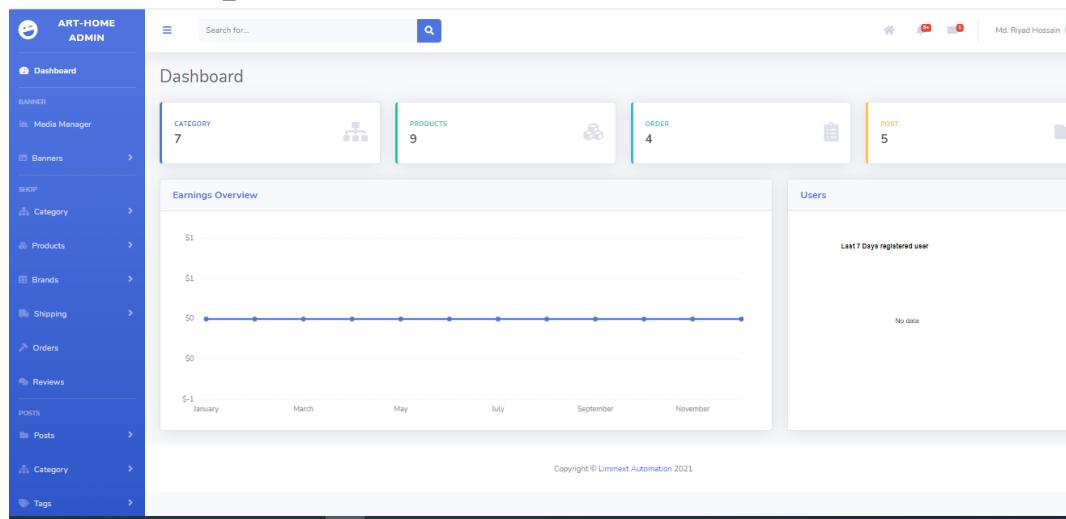


Figure 5.23: Admin Dashboard page of Art-Home website.

**Add Product :** This is the add product interface. Where user can upload their product.

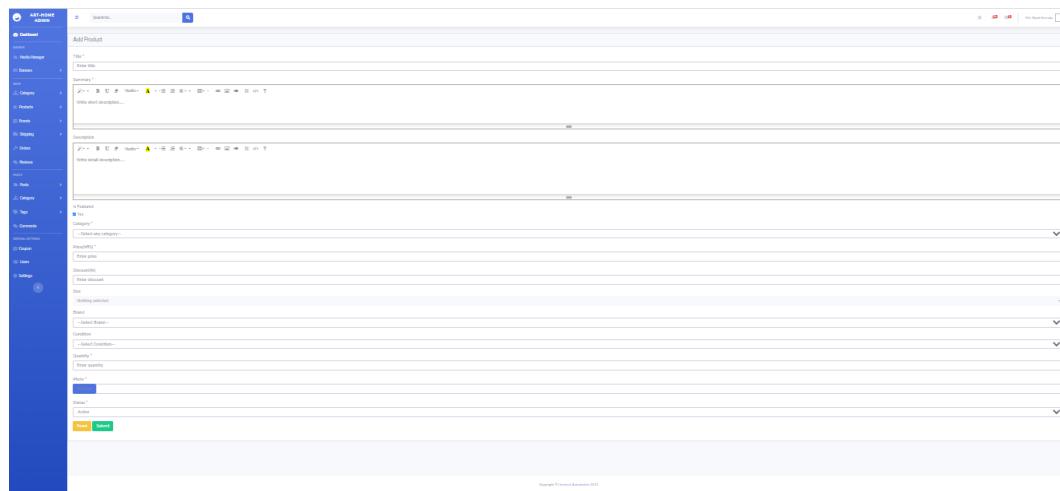


Figure 5.24: Add Product page for Art-Home website.

**Checkout :** This is the checkout interface. Where the user can buy a product.

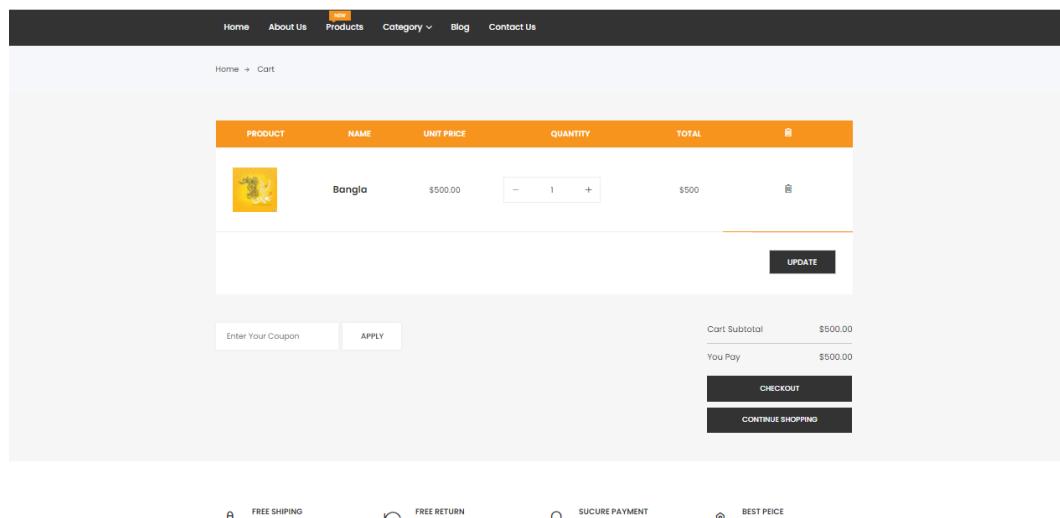


Figure 5.25: Checkout page for Art-Home website.

**Reviews :** This is the review interface. Where the user's can reviews about product quality.

S.N.	Review By	Product Title	Review	Rate	Date	Status	Action
1	Ahraf Tazwar	White Sports Casual T-	nice product	★★★★★	Aug 16 Mon, 2021 1:44 pm	active	
2	User	Lorem ipsum is simply	nice	★★★★★	Aug 17 Tue, 2021 3:08 am	active	

Figure 5.26: Review page for Art-Home website.

**Add Category :** This is the add category interface. Where admin can add more art/calligraphy related categories.

The form fields include:

- Title: A text input field with placeholder "Enter title".
- Summary: A rich text editor with a toolbar and a text area for "Write short description....".
- Is Parent: A checkbox labeled "Yes" which is checked.
- Photo: A file upload input field with a "Choose" button.
- Status: A dropdown menu set to "Active".
- Buttons: "Reset" and "Submit" at the bottom.

Figure 5.27: Add Category page for Art-Home website.

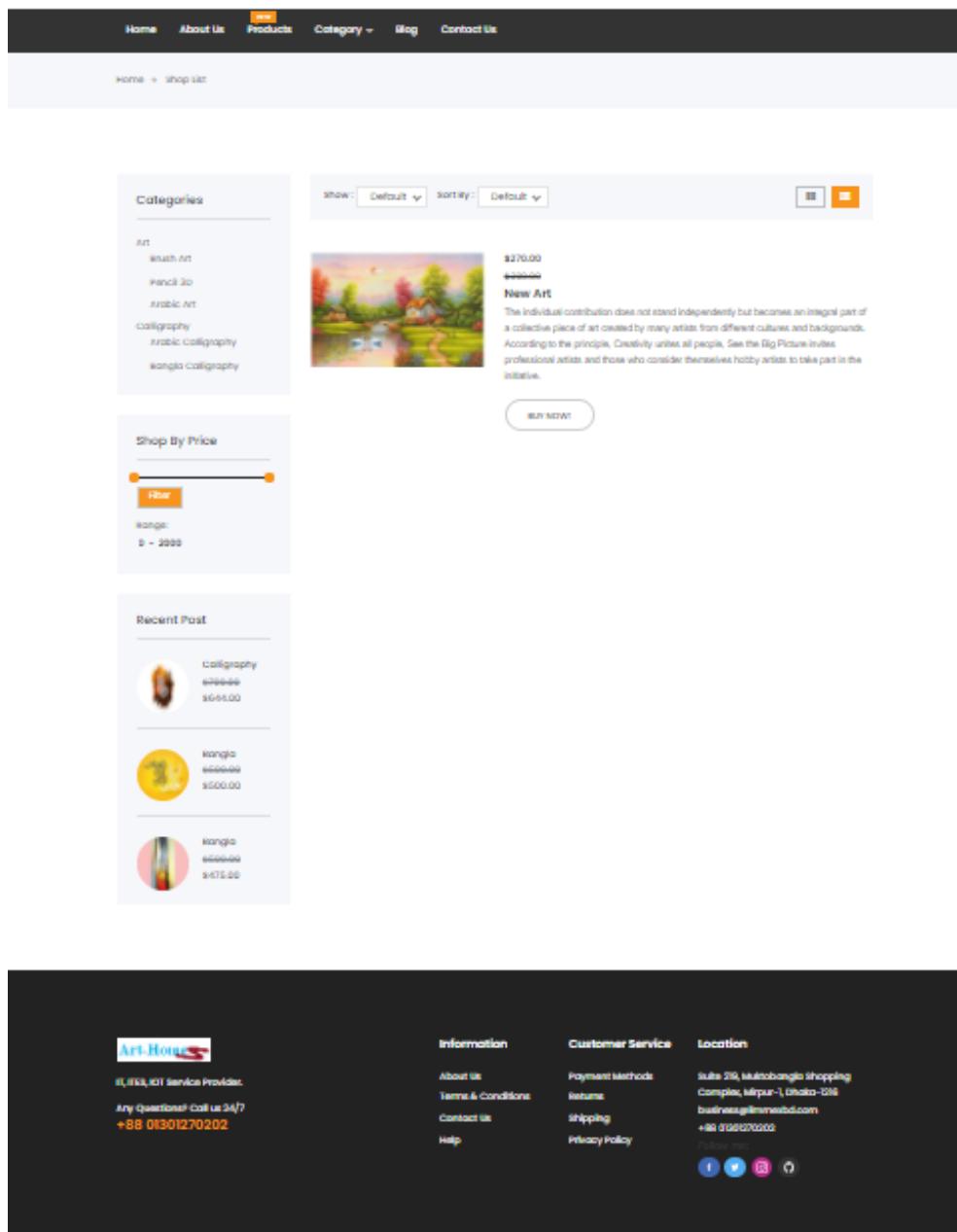


Figure 5.28: Category of Art page for Art-Home website.

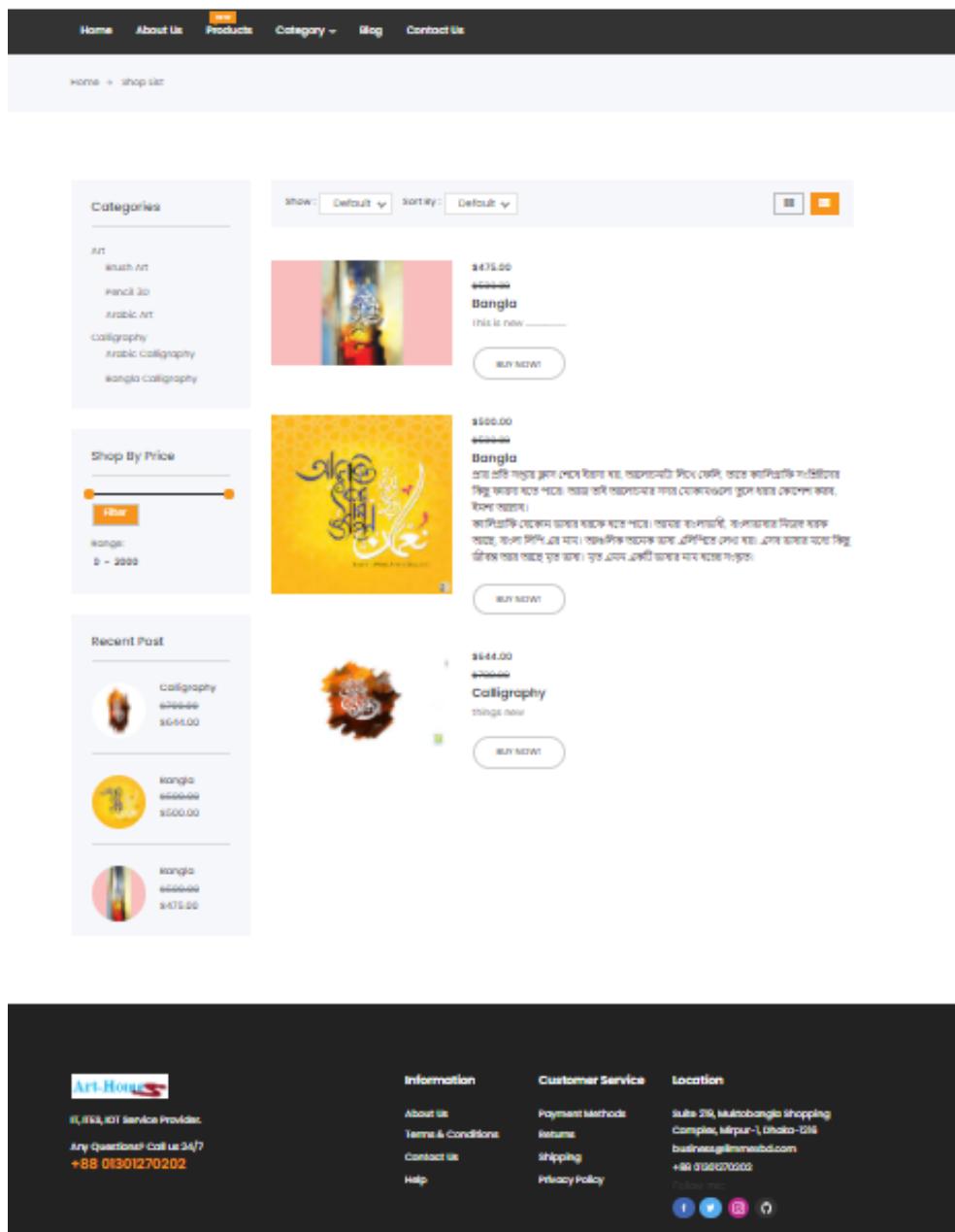


Figure 5.29: Category of Calligraphy page for Art-Home website.

**Post/Notice :** This is the post interface. Where admin can post for each of the product percentage.

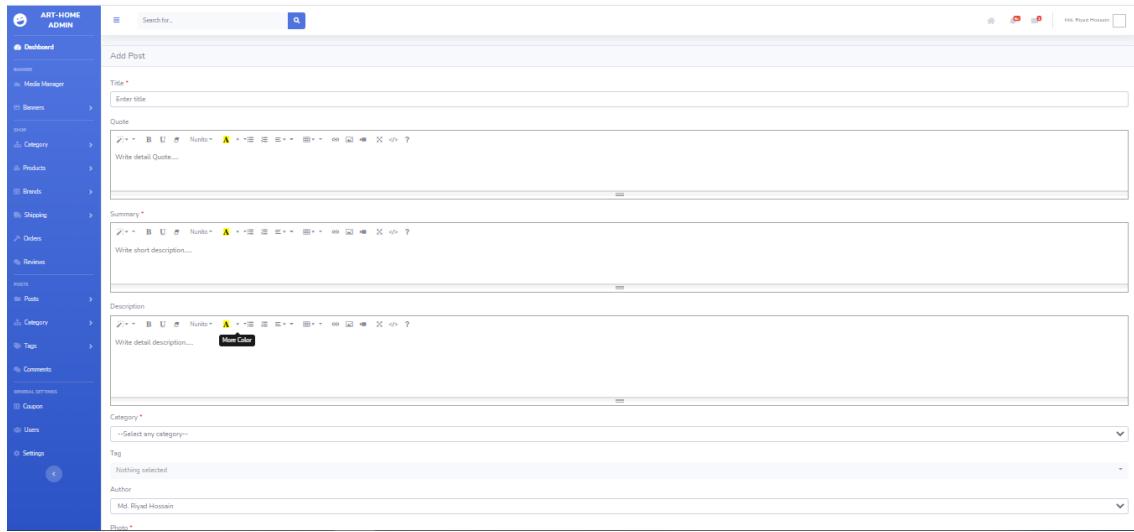


Figure 5.30: Post/Notice page for Art-Home website.

**User List :** This is the user list interface. Where admin can see the list also create a user account.

S.N.	Name	Email	Photo	Join Date	Role	Status	Action
1	Md. Riyad Hossain	admin@gmail.com			admin	active	
2	User	user@gmail.com			user	active	
3	Ahnaf Tazwar	ahnaf@gmail.com		3 weeks ago	user	active	
30	MD. RIYAD HOSSAIN	riyadhossain677@gmail.com		1 week ago	user	active	
31	Rfi Khan	rafikhana677@gmail.com		1 week ago	user	active	
S.N.	Name	Email	Photo	Join Date	Role	Status	Action

Showing 1 to 5 of 5 entries

Figure 5.31: Create User Account(A/C) page for Art-Home website.

**Settings :** This is the settings interface. Where admin can change the company logo also address.

Short Description \*

IT, ITES, IOT Service Provider.

Description \*

Can you avoid technology in modern life? If 'NO' then we find you as our speaker, our walk finder. You'll tell us your suggestion, fascination, need, everything! Trust us, we'll listen to you like a first grade student. We regularly monitor global changes. Thus, our motto is 'Be Bird'. We fly to embrace best one from any part of the globe. What do you guess? We bring it for only us? 'NO' we bring it for you first. Again, 'Be Bird' leads to think you like a Bird. You can have a Bird's Eye View to deal with your home and work. So, let's fly together and bring the best for rest of the world.

Logo \*

Photo \*

Address \*

Suite 219, Multobangla Shopping Complex, Mirpur-1, Dhaka-1216

Email \*

business@imrexbd.com

Phone Number \*

+88 012012370202

Update

Figure 5.32: Update Company profile page.

# Chapter 6

## Results & Analysis

This chapter represents the results and analysis might include an assessment of the plan or technique utilized. In feasibility or contextual investigation, the results and analysis area would include estimating the feasibility or evaluating (like security, performance) the achievement of at least one solution.

### 6.1 Testing

Testing is a process of executing a scheduled program with the intention of finding a mistake. A good test situation is one with a big probability of finding an as-yet error that is undiscovered. An effective test is regarded as one that reveals a mistake that is as-yet-undiscovered. The test needs to be designed that has the highest likelihood of finding the most errors with minimum time frame and effort. Also, the techniques supply the possibility that this is certainly greatest for uncovering errors when you look at the software.<sup>[6]</sup>

#### Objectives Of Testings:

- TESTING is a process of executing a program with the intent of finding an error.
- A good test case is one that has a high probability of finding an as-yet-undiscovered error.
- A successful test is one that uncovers an as-yet-undiscovered error.

#### 6.1.1 Testing Client Side

Following test cases have been performed on client side. To run these cases, internet must be in working condition otherwise can't enter.

Table 6.1: Test Cases of Client Side for "Art-Home" system.

Test ID	Test Case	Input Test Data	Steps to be Executed	Expected Result	Actual Result	Pass/Fail
T1	Test user Login	emailID & Password button.	1.Select Login page 2.Click on the submit	Will view home page with dashboard.	Load user "Home page" with dashboard.	Pass
T2	Test if user's add a Product	Product related data. Give Title, Photo, Brand, Quality, Quantity, Short description, Details.	1. Go to Add Product 2. Select Photo 3. Select "Category" 4. Click "Submit"	Product will add successfully	Product is added successfully and can see in category/new product page.	Pass
T3	Test if a user order a product.	user name, email,address1, phone no., address2, country.	1.click on add to cart. 2. Go to checkout page. 3. choose "Cash on delivery" 4. Click "Purchase"	In order page will view all the ordered products with details.	In order page is viewed all the ordered products	Pass
T4	Test if user's want to contact the company.	Give user Name, Email ID, Issue, Phone number, Message.	1. Go to the "Contact" page. 2. Click "Send Message".	If any field missing to fill up then the user will see "error message". other-wise admin will see the sending message	The message is sent successfully. And the admin is viewed the sender message.	Pass
T5	Test if want to update profile.	Give the user Name,Email, Photo.	1. Go to the "Dashboard". 2. Click on profile icon. 3. Click on "Submit".	Instant,the user can see his/her updated profile.	Changes profile is updated and can see.	Pass
T6	Test if the admin wants to delete a user account.		1. Go to the admin "Dashboard" page. 2. Click on "User" 3. Click on "Delete" icon.	The user account will delete. And S/he can't accessible.	The user account is deleted from "Art-Home" website. And can't access.	Pass
T7	Test if add a user.	Set user related data (Name, Email, Photo, Role, Phone number)	1. Go to the admin "dashboard". 2. Click on "User". 3. Click on "Add user" Click on "Submit"	The user will successfully added.	The user is added in "Art-Home" website.	Pass
T8	If admin wants to add banner.	Banner title, Short description, Percentage of product.	1. Select admin "Dashboard". 2. Click on "Add Banner". 3. Click on "Submit".	The banner will add successfully. And shown in the home page.	Banner is added and viewed in the home page.	Pass

## 6.2 Analyzing

This has to do with testing where objectives are attained and deciding on what should be done following conclusions. Acceptable and feasible proposals that highlight the benefits of carrying it out, and risks of forfeiture, that is technical which is doing the process. Here the client test is better for system testing purposes. Because in the table-

- If a user wants to buy or upload a product then needs to register before doing these activities. Also if the user wants to update his/her profile, comments on a product, and contact the company. Before login, the user can't do these activities. So the system maintains the security issues.
- In the table the observation is like, there is no error when the user sends data from the client-server site and also when fetching the data for validation purposes. If the user forgot to set his/her specific information, then the system is automatically alert to fulfill the system requirement. So there is no alternative to giving and losing data in the system. Also, the functionality working process is well.

And the "Home" page -

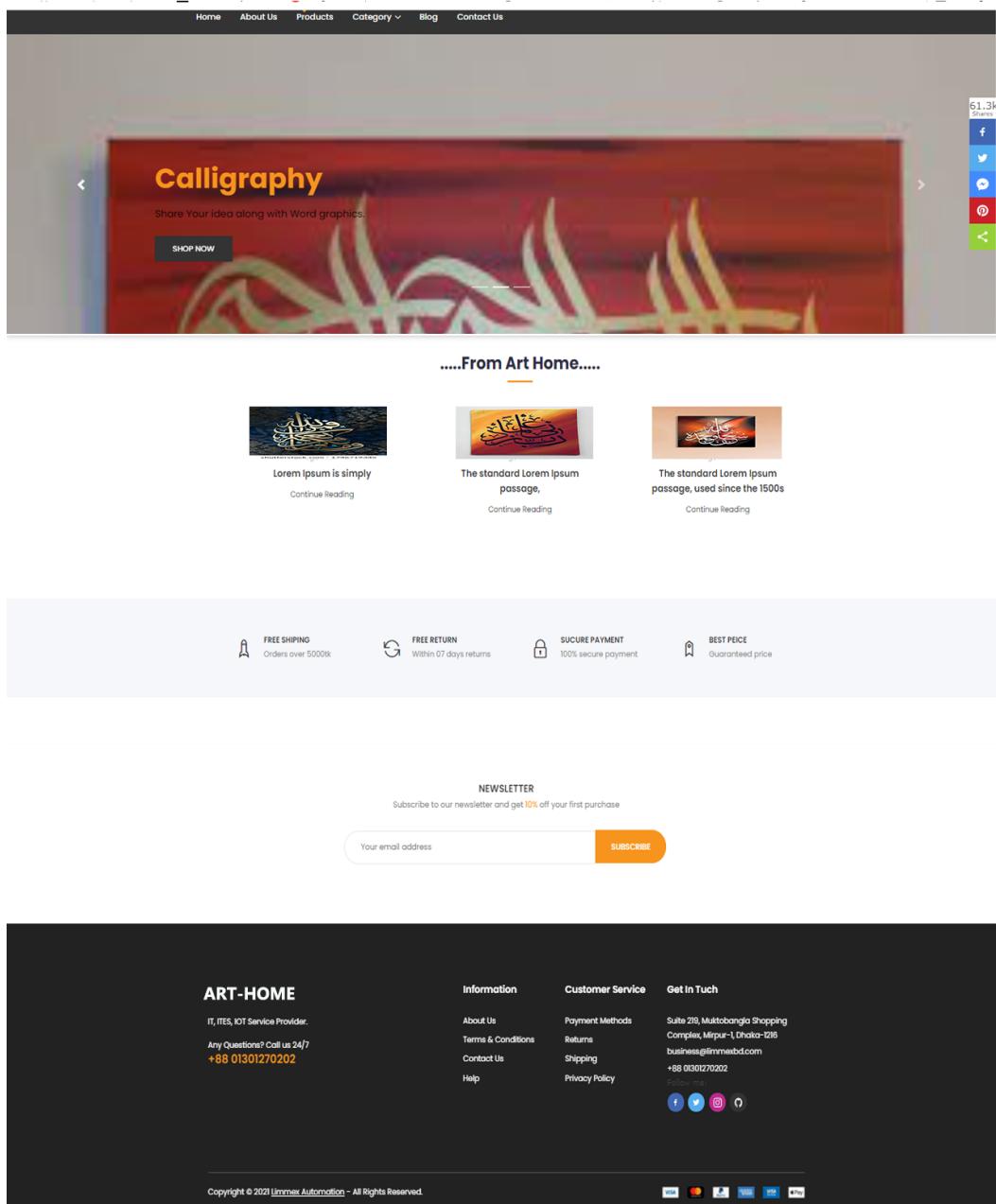


Figure 6.1: Home Page for Art-Home system After join in the system.

# Chapter 7

## Project as Engineering Problem Analysis

Engineering design is the method that is creative of requirements and then creating an answer to fill those needs. This solution may well be a item, a technique, a framework, a task, an approach, or a number of other things with respect to the issue. The procedure that is general completing a good manufacturing design can be known as the Engineering Method of Creative Problem Solving. Problem solving involves determining the best activity that is possible take-in a offered scenario. The nature of conditions that engineers must solve varies between and among the list of different limbs of manufacturing.<sup>[7]</sup> So in this chapter we are covering the "Art-Home" system problems, project sustainability, social effect, environmental effect, and also ethics.

### 7.1 Sustainability of the Project/Work

Project sustainability is currently a strategy that is certainly typical to the management of projects, programs, establishments, organizations, as well as other entities needing efficient and efficient production, advertising, circulation, as well as the distribution services and products. Usually, for projects to be sustained, certain metrics and criteria must be set from project recognition through feasibility studies, formulation, design, appraisal, financing, implementation, tracking, and assessment. It is a proven truism that many tasks are failing due to the lack of a sustainability plan that is certainly proper. Hence, very essential for an analysis that is comprehensive of social, financial, legal, social, educational, and political surroundings for task execution. The task viewpoint, mission, eyesight, values, targets, and goals should be stated and articulated when you look at the program. The involvement of stakeholders and supporters is of paramount relevance since it facilitates some logistical planning. Beneficiary assessment, appropriate and regulatory framework research, marketing and competition analysis, cooperation development and institutional evaluation give room for effective execution that is efficient.<sup>[8]</sup> A product can be sustainable in three main categories:

- **Community Sustainability:** It means how much and how actively the users will

support the project. Support comes in many forms such as downloading and installing the application, loading, using the application, subscribing to paid services, giving rating and feedback, referring to other people, etc. After the deployment and official release of the "Art-Home" website, it is believed that the website has a strong security system also just art/calligraphy-related products are available. So that we can expect the users are more interested and refer to others thus it's growing the user base and growing the community. So it can be said that it is sustainable.

- **Financial Sustainability :** After launching on BD and outside of the countries the "Art-Home" website will get more users. And that time the "Art-Home" management will provide a premium package for more opportunities and services. So that the users are more attracted and beneficial website as they will know. Also, there is no need to install or download the process. They can simply search on google or through website links from any browser. Also if a user wants to sell his/her product. Then some percentage will be deducted from the sale of user products. So this way website can be financially sustainable.
- **Technical Feasibility:** It's basically How an application is interactive when the application is released. In that case, after the release of a web application, the organization maintains its current scenario and working with a new updated Framework.

## 7.2 Social and Environmental Effects and Analysis

Now people are very popular with the internet. The Internet makes communications with people very simple. People enjoy plenty of benefits in various types of their everyday work. A few benefits web gives a better method for correspondence, learning choices to users, great exposure to the most recent things. So by the "Art-Home" website, people can now easily buying /selling their art/calligraphy products through the internet in any web browser during this pandemic.

- **Social Effect :** The Art-Home website is goals to introduce each creative art/calligrapher. We believe that after launching it on the social platform. It will increase the user activities and the quality of services and consistency. Day after, it will automatically grow on social sites effectively for the services and benefits.
- **Environmental effect :** Due to COVID- 19, people are not going outside for selling or buying an art/calligraphic product. But, It is better to stay in the home rather than visit physically these days due to safety issues. Neither the seller nor the buyer knows who is the carrier. So more people will be interested to stay at home and upload and selling their products and services to reduce the outspread of the corona.

## 7.3 Addressing Ethics and Ethical Issues

Now we are in the 21st century. So the data will be more available on the internet. But the Fact is this data is not valuable in the upcoming internet world. So things new that would be more consistent and reliable and unique. Now in the world so many art/calligraphy-related websites are available there have to be unique features and privacy for their users. Here are some ethical guidelines that will be following:

- **Collect User Relevant Data :** The application does collect user data, yet those are stringently and just important for the application. The data that is being collected is the user's storeroom information and preferences information that the user will just provide on their consistency.
- **Data Security & Storage :** Here only the developer and the admin also Manager have access to the server and database. But the fact is the admin can access all information after login into his/her account. On the other hand, developers can access server sites. But the users are not able to see without their specific site. So the data will be safe and secure.
- **Not Sharing/Selling User's Data :** This is an online system. So we have to maintain the user's information. Because of this, the system doesn't allow any third party to access the data so that the system will be secure. And the last thing there is no discrimination like: age, birth, national, colour, language in the "Art-Home" website.

# Chapter 8

## Lesson Learned

This chapter represents finding problems and their solutions during the internship.

### 8.1 Problems Faced During this Period

During my internship program, I have faced lots of issues when I'm working on this project. Because of so many things I didn't know before joining this internship course.

- **COVID-19 Effect :** During COVID-19, we can't go outside. In that case, sometimes it's so difficult for me to join the office.
- **Mind setup to New Environment :** On the first day of my office, I was confused about how they react to their new employee. What is the requirement for during this internship? So many things are in my mind.
- **Adopting New Technologies :** In Limmex Automation as I'm a Junior Software Engineer. So they assigned me the "Art-Home" project and implemented it with the "Laravel" framework. At that time actually, I didn't know how to work and implement the process on Laravel.
- **Planning Issues :** At the very beginning, I don't know how to gather project-related information like client requirements, client expectations, what's system input and output, and what it looks like. Even in a project how much time I have taken?
- **Implementation And Fixing-Bugs Issues :** In every front-end page related to the backend. So when I create a page then I have to relate it with the backend. In the meantime, I also have to create a database to fetch the data. Also when I was testing the "Art-Home" system, I found huge bugs. It became a big problem to fix these issues.

### 8.2 Solution of those Problems

- So during COVID-19, we were working on the discord server site software for our working purpose.

- When it comes to solutions, first set up the mind. In fact, “Shakhawat Hossain” Sir, the software engineer of “Limmex Automation” company inspired me, how to understand an IT firm’s environment and their needs and the last thing to achieve their satisfaction and how to work there.
- Secondly, the company assigned me an ”Art-Home” website and implemented it in the Laravel framework. But I don’t know the Laravel process. Then they suggest that I learn it as early as possible and also apply it every day in my project as a practice. That’s how I overcame it but not deeply.
- After learning new technologies and putting them to use was a slow interaction for me at first as it was the first occasion when I have at any point utilized it. Subsequently, it was very hard to meet weekly deadlines and this slowed down the by and large speed at which the application was developing.
- Thirdly, at the very beginning time, for the data analysis part. The company guides me in data gathering. And suggest me to observe some websites. And another thing, my internal supervisor and the company from both sites, I learn about project planning, time duration (Gantt chart, Activity wise time duration), and Requirements.
- And finally, every time I design a page I have to know about the input and the desired output for this project. Because of this, the client loses if the satisfactory level is not met. So every time I have to check if it is ok and change the front-end, backend with the database. In that case, my external supervisor helps me a lot. And provide a google drive where store bugs and problems. The supervisor helps me solve this problem when I fix them.

# Chapter 9

## Future Work & Conclusion

This chapter represents what would be the future plan and what have I learned so far during my internship.

### 9.1 Future Works

The project has an exceptionally immense scope in the future. The project can be refreshed sooner rather than later as and when the prerequisite for the equivalent emerges, as it is entirely flexible in terms of extension. With the proposed software of database Space Manager prepared and completely utilitarian, the customer is presently ready to oversee and consequently run the whole work in a much better, improved, accurate, and error-free way. The following are the future scope for the project.

- For customer product order tracking.
- Online payment methods.
- Membership payment method.
- Update UX and UI design.

### 9.2 Conclusion

Today, people want to self-developed in short ways and try to represent new things in the world. But they can't because no agent is available. So during my internship, I try to solve one of them, which is "Art" related services in online. When I started this project, I faced several problems but tried to fix and overcome all problems with the easiest solution. During the internship period I have learnt and applied a great deal of knowledge from my university courses and experience here.

To execute this as a web application we utilized the LARAVEL framework as the Technology. Laravel enjoys several benefits like enhanced performance, scalability, built-in security, and simplicity. To assemble any web application using LARAVEL we need a programming language

like PHP, HTML, CSS, JavaScript, etc. And for database I used "XAMPP" software.

**Moreover,** I have learned a lot about developing different kinds of applications also about various development styles. I was pushed to adapt to changes rapidly and come up with logical solutions. During my project, I cooperated with my mentors and seniors to solve the challenges faced. Despite their workload, my supervisors were always there to answer any queries and help me settle nicely. This internship opportunity has paved the way to investigate the development environment and marketplace. I would like to appreciate once again everyone who has made my life as an intern such a great experience.

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