

# ARTESANIA E- COMMERCE FOR HANDLOOM

A Project Report of Capstone Project - 2

Submitted by

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in partial fulfilment for the award of the degree

of

## **BACHELOR OF TECHNOLOGY**

## IN

## **COMPUTER SCIENCE AND ENGINEERING**

## SCHOOL OF COMPUTING SCIENCE AND ENGINEERING

Under the Supervision of

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APRIL/MAY 2020



# SCHOOL OF COMPUTING AND SCIENCE AND ENGINEERING BONAFIDE CERTIFICATE

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## **ABSTRACT**

Artesania offers a wide range of seller services and tools that help creative entrepreneurs start, grow and manage their businesses that come under the Handloom and Handicraft sector. The Indian Handloom and Handicraft industries have also been much-appreciated elements of society. The Artesania community includes creative entrepreneurs who sell on our platform, thoughtful consumers looking to buy unique goods in our marketplace, retailers and manufacturers who partner with Handloom sellers to help them grow their businesses and employees who maintain our platform and nurture our ecosystem. Our mission is to reimagine commerce in ways that build a more fulfilling and lasting world. We will take the Handloom sector to its apex in the market. The value, as well as the prevalent status of the Handloom and Handicraft, will be redefined. We're committed to using the power of business to strengthen communities and empower people.

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# **CHAPTER 1: INTRODUCTION**

Artesania offers a wide range of seller services and tools that help creative entrepreneurs start, grow and manage their businesses that come under the Handloom and Handicraft sector. The Indian Handloom and Handicraft industries have also been much-appreciated elements of society. The Artesania community includes creative entrepreneurs who sell on our platform, thoughtful consumers looking to buy unique goods in our marketplace, retailers and manufacturers who partner with Handloom sellers to help them grow their businesses and employees who maintain our platform and nurture our ecosystem. Our mission is to reimagine commerce in ways that build a more fulfilling and lasting world. We will take the Handloom sector to its apex in the market. The value, as well as the prevalent status of the Handloom and Handicraft, will be redefined. We're committed to using the power of business to strengthen communities and empower people.

The Indian handloom industry is the largest in the world but is slowly vanishing. Economically, it only precedes the agricultural sector in terms of the provision of livelihood for the rural population in India. The beginning of the 21st century saw the growth of Globalisation in the world. Along with that, we also saw a drastic fall in one of the largest employment industry in India, the Handloom Industry. Globalization has adversely affected this sector in India. Various news websites and channels have been reporting about the dying culture of handloom in India due to the lack of policies and support. The main reason for this decline is the "not well to do" situation of the workers. The Indian market is getting flooded with the product manufactured by these big machines and power looms. As a result, people are shifting from the original handlooms and handicrafts to the new and easy made cheaper goods.

### **1.1 Classification of Handloom and Handicraft**

Different parts of India are sources of various specific and original disciplines of handloom. The handloom artistry of every region is a display of a mixture of its culture and long-lasting tradition. The Handlooms and Handicrafts made in India are classified based on the product and the raw materials used. It is given as follows

(i) Handloom

- 1. Clothing: Saris, Dress material, Dhotis, Shirts, and Trousers.
- 2. Fashion Accessories: Scarves, Stoles, Gloves, Mitts, Mittens, and Handkerchiefs.
- 3. Made Ups: Bed linen, Table linen, Kitchen linen, and Upholstery.
- 4. Floor Coverings: Carpets, Mats, and Matting.
- (ii) Handicraft
  - 1. Wood: Figurines, tabletops, wall hangings, kitchenware, office, and home accessories.
  - 2. Stone: Furniture, tabletops, utensils, decorative items, and home accessories.
  - 3. Metal: Furniture, figurines, utensils, Jewellery, and decorative items.
  - 4. Natural Fibre: Mats, baskets, coasters, lighting, furniture, and furnishings.
  - 5. Papier Mache: Decorative items and home accessories.
  - 6. Glass: Jewellery, beads, vases, utilities, decorative items, and home accessories.
  - 7. Cane and Bamboo: Furniture, utilities, decorative items, and home accessories.
  - 8. Clay/Ceramics: Tiles, figurines, utilities, garden accessories, and other decorative items.
  - 9. Textile-Based soft Goods: Dolls, wall hangings, utilities, and other decorative items.

#### **1.2 Internet Scenario**

The beginning of the year 2019, recorded a massive increase in the number of digitally active people across India. There were approximately 213 million digitally active users in India in 2014, and this number went up to 636 million in 2019. This statistic is estimated to go up to 821 million in the year 2021. The changing technical scenarios resulted in the reduction of internet costs. With that in hand, the Digital India campaign started by the Government of India resulted in increased internet connectivity and a digitally empowered country.

#### 1.2.1 What is E-commerce?

E-Commerce or Electronic Commerce is a way of buying and selling of commodities over the internet or some other dedicated online platform. Ecommerce is often used to refer to the sale of physical products online, but it can also describe any kind of commercial transaction that is facilitated through the internet. For example, one can buy a book from amazon and pay either through online transaction or by cash on delivery as provided by the seller. Whereas e-business refers to all aspects of operating an online business, ecommerce refers specifically to the transaction of goods and services.

The history of e-commerce begins with the first ever online sale: on the August 11, 1994 a man sold a CD by the band Sting to his friend through his website NetMarket, an American retail platform. This is the first example of a consumer purchasing a product from a business through the World Wide Web—or "e-commerce" as we commonly know it today.

Since then, ecommerce has evolved to make products easier to discover and purchase through online retailers and marketplaces. Independent freelancers, small businesses, and large corporations have all benefited from ecommerce, which enables them to sell their goods and services at a scale that was not possible with traditional offline retail.

#### **1.2.2 E-commerce in India**

E-commerce is the cause of the complete transformation of the Indian way of doing business. New innovative ideas are developing every day to enhance the market under the influence of the e-commerce industry.



#### Figure 2.1 Growth of E-commerce in India

The e-commerce market in India has grown from \$3.9 billion to \$38.5 billion in 2018. It is estimated to grow by up to \$200 billion by the year 2026. Among the top e-commerce companies in India, we have Amazon India, Flipkart, Snapdeal, 1mg, BookMyShow, Paytm, etc.

E-commerce provides means to workers to attract new customers while holding on to old ones. The ease of using e-commerce is increasing day by day. The latest technical innovations like digital payments and advertisements and government campaigns such as Digital India, Make in India, and Skill India have greatly helped in the growth of e-commerce.

# **CHAPTER 2: CHANGING NEEDS**

### 2.1 Need for the New System

Artesania is a dynamic and informative website through which the sellers/artists can directly access, the information they require to update different products and their prices, or to even add/delete certain products. It deals with different categorical catalogues which entail various products having handicraft materials, handmade cards, pottery products, and etc. It focuses on developing a product which the customer's request for or order. The project serve administrator to view the details of products and their prices and maintain their database in an efficient and effective manner so that their maintenance will be easy. The services providing for administrator are approving the courses by adding fields, different questions of different artists and feedbacks, add/delete the products. The services provided to the users are to view the content of a product, related to their links and along with their prices. Users can search here different items related to different occasions/needs a customer wants.

Artesania is a web site to give employment and take it to a new level through an efficient manner and no time wasting for searching for a required phase of the job placements techniques. The main objective of Artesania is to efficiently evaluate the sections of the society and identify the artists and craftsmen thoroughly through a fully developed system that not only saves lot of time but also covers all the fields required to compete a product preparation. For customers it can be of great help as there are very less platforms which provides artists help for their employment. It can be used anywhere any time as it is a web based application (user location doesn't matter). It can be accessed at any time, any place and by anyone who wants.

### 2.2 Detailed Problem Definition

#### 2.2.1 Existing System

The first problem is that there are loads of hard copied documents and records being generated. This brings us to the age-old discussion of keeping information in the form databases versus keeping the same on sheets of paper when we want to run a business. Keeping the information in the form of hard-copied documents leads to the following problems.

#### 2.2.2 Drawbacks of Existing System

- Lack of space It becomes a problem in itself to find space to keep the sheets of paper being generated as a result of the ongoing discussion. The documents being generated are too important to be ill-treated.
- Filing poses a problem Sorting out the documents categorically is a time consuming and tedious exercise
- Filtering is not easy It becomes hard to filter relevant products for the irrelevant ones if the count of the same crosses a certain manageable number.
- Reviewing becomes time-consuming All the process done manually at the centers and all the records are maintained on the courses. So the maintenance of the record is very difficult in the departments and as well as it's very difficult for the workers to check the record. The Existing system is paper based, time consuming, monotonous, less flexible and provides a very hectic working schedule. The chance of loss of records is high and also record searching is difficult. Maintenance of the system is also very difficult and takes lot of time.

> Result Processing: is slow due to paper work and requirement of staff.

#### 2.2.3 Proposed System

This Web site provides artists to apply for various craftsmen jobs available provided by administrator, also the customers to go through the website and shop for various products.

It saves time as it allows number of customers to choose from various products/ items so that they don't have to search for them individually online, instead they can register themselves on the website from their respective available laptops or mobile. Registration will be automatically stored by the server. Administrator has a privilege to create, modify and delete the products, handicrafts. User can register, login and select the item with his/her specific id, and can see the entire catalogues.

#### 2.2.4 Features of Proposed System

- Functional Capabilities: This project aims at creating an online portal for handmade crafts. This allows registered users of the system to buy a product available in the site and access the website published for various products. There will be an admin approval page where admin can approve the changes in the prices for any product by the seller in the back end. The handloom home page should contain the title of the product and a brief description.
- Performance Level: The scope of this project gives immense opportunity for the customers to know the available products which are crafted by the artisans, so that they can choose the product according to their interest and can buy them efficiently. It provides effective measures so as to help the artisans providing them employment. There will be different sections/levels for artisans so that they can individually work on different skill set required for artists to crack an employment.

- Data Structures: The data in this project are maintained in the tabular form using MYSQL in the form of database. It provides easy access to the user. Easy category questions are maintained in the database which provides easy for the user to access and choose the category.
- Safety: No data loss occurs in the system. It is very much protected in such a way that it gives permission to the customers to access only when the username and password is correct.
- Reliability: We assure that the project is completely authenticated in order to enhance security and corruptions of database as well as the software. The person is given access only if he/she has a valid username and password.
- Quality: The project is developed with the help of sublime Text software which meets the requirement of the user, the project is checked whether the phases individually have served its purpose.

## 2.3 Project Scope

Handicraft reflects the culture and skill of local population and hence the country. India is one of the most sought after destinations for handicraft due to variation in culture and people who produce varied kinds of handicraft. Different places in India are famous for different handicrafts like Saharanpur for its wooden articles, the North Western state of Rajasthan for Jaipuri quilts, Gujarat for embroidered stuff, and Narsapur for lace and lace material, Punjab for Phulkari, Jodhpur for wrought iron product etc. Handicraft industry is one of the biggest employers in rural India. Near about 13 million artisans mostly women and people from weaker sections of the society get job in this industry. Many artisans work on full time and many on part time basis to produce these goods with hands.

Low initial investment, potential for export and foreign earning are few of the factors which are helping this industry to grow further. But Indian handicraft industry is highly decentralized.

Handicraft market in India is growing at a very steady pace. It is almost doubling in every five years. In the handmade products India enjoys 2% of share at global level. Because of weak market forces and fake products near about 7-10 people leave this job to explore other opportunities.

Handicraft export promotion in India is handled by the Export Promotion Council for Handicrafts (EPCH). Industry experts believe that global trade now depends upon more on ecommerce along with traditional medium for trading.

Though there is no standard definition of e-commerce but the OECD (Organization for Economic Co-operation and Development) defines e-commerce transactions – "the sale or purchase of goods or services, whether between businesses, households, individuals, governments, and other public or private organizations, conducted over computer-mediated networks. The goods and services are ordered over those networks, but the payment and the ultimate delivery of the good or service may be conducted on or off-line."

India is one of the largest users of Internet across the world and expected to cross US in the coming years. Hence e-commerce has huge hidden and untapped opportunities for the businesses as well as local artisans. It also provides scope for the expansion to the exporters.

This is one of the most unique an important quality for any establishment. A lot of initial support and work is needed to make anything work and it can be done so in India in today's era.

#### 2.4 Presently Available Systems

- 1. Dastkar: Dastkar is a private not-for-profit NGO established in 1981, working to support traditional Indian craftspeople, many of them women and village based, with the objective of helping craftspeople regain their place in the economic mainstream, in a country where the craft sector is second only to agriculture in providing employment. Dastkar carries out its mission through advocacy with governmental, non-governmental & foreign agencies; as consultant, evaluator & resource provider to craftgroups. Dastkar assists craftspeople through support service activities such as capacity building workshops, skills training, collaborative design innovation and product development; helping them transform traditional skills into products that have contemporary appeal, thereby providing craft communities with a source of permanent employment and sustained earning. Dastkar provides marketing platforms to craftspeople, thereby empowering the crafts community to bypass exploitative middlemen and directly operate in the market. Dastkar bazaars and exhibitions bring together craftspeople, producer groups, environmental organisations, social activists & cultural performers with urban consumers, students and international buyers.
- 2. Charu Creation Pvt. Ltd.: Charu Creation Pvt. Limited, the parent company, was established in the year 1993 and has since been successfully engaging in the retail and trade of a wide range of export fabrics. The company has a display area of 8000 square feet in Nehru Place, New Delhi. Charu Exports Incorporation is a sister company of Charu Creation Pvt. Limited. It has been exporting fabrics to all over the world. It has now launched an e-commerce platform for the Indian customers to buy readily available fabrics online

- 3. AARMART E-Commerce LLP: "AARMART", as the name suggests "OUR MART – Our Market", Sellers and Buyers Market. AarMart is India's online marketplace that promotes and markets India's rich Handloom and Handicraft products worldwide. It enables organizations and artisans in connecting directly with Buyers and brings together weavers, artisans to collectively market their produce online. AarMart is a marketing partner for Govt. Of India for the eminent India Handloom Brand and Handloom Mark.
- 4. Crafts Villa Handicrafts Pvt. Ltd.: Craftsvilla Handicrafts Private Limited is a Subsidiary of Foreign Company, incorporated on 19 Dec, 2014. It's a private unlisted company and is classified as 'company limited by shares'. Company's authorized capital stands at Rs 500.0 lakhs and has 34.3% paid-up capital which is Rs 171.5 lakhs. Craftsvilla Handicrafts Private Limited last annual general meet (AGM) happened on 30 Sep, 2016. The company last updated its financials on 31 Mar, 2016 as per Ministry of Corporate Affairs (MCA). Craftsvilla Handicrafts Private Limited is majorly in Business Services business from last 6 years and currently, company operations are active. Current board members & directors are Manoj Gupta and Monica Gupta.

# **CHAPTER 3: GENERAL DESCRIPTION**

## 3.1 Project Plan

- Requirement Gathering and analysis All possible requirements of the system to be developed are captured in this phase and documented in a requirement specification document. During this phase, detailed requirements of the software system to be developed are gathered from client
- System Design the requirement specifications from first phase are studied in this phase and the system design is prepared. This system design helps in specifying hardware and system requirements and helps in defining the overall system architecture. Plan the programming language like PHP, CSS, database like MySQL, etc. Or other high-level technical details of the project
- Implementation with inputs from the system design, the system is first developed in small programs called units, which are integrated in the next phase. Each unit is developed and tested for its functionality, which is referred to as Unit Testing. After design stage, it is built stage, that is nothing but coding the software
- Integration and Testing All the units developed in the implementation phase are integrated into a system after testing of each unit. Post integration the entire system is tested for any faults and failures. In this phase, you test the software to verify that it is built as per the specifications given by the client.

- Deployment of system Once the functional and non-functional testing is done; the product is deployed in the customer environment or released into the market. Deploy the application in the respective environment.
- Maintenance There are some issues which come up in the client environment. To fix those issues, patches are released. Also to enhance the product some better versions are released.

#### **3.2 About Technology**

#### 3.2.1 HTML:

HTML is a computer language devised to allow website creation. These websites can then be viewed by anyone else connected to the Internet. It is relatively easy to learn and quite powerful in what it allows you to create. It is constantly undergoing revision and evolution to meet the demands and requirements of the growing Internet audience under the direction of the W3C, the organization charged with designing and maintaining the language. The definition of HTML is Hyper Text Markup Language. Hyper Text is the method by which you move around on the web by clicking on special text called hyperlinks which bring you to the next page. The fact that it is hyper just means it is not linear i.e. you can go to any place on the Internet whenever you want by clicking on links. The World Wide Web (WWW for short), or simply the Web, is the worldwide network formed by all the documents (called "web pages") which are connected to one another by hyperlinks. Web pages are usually organized around a main page, which acts as a hub for browsing other pages with hyperlinks. This group of web pages joined by hyperlinks and centered on a main page is called a website.

The Web is composed of web pages stored on web servers, which are machines that are constantly connected to the Internet and which provide the pages that user's request. Every web page, and more generally any online resource, such as images, video, music, and animation, is associated with a unique address called a URL. The key element for viewing web pages is the browser, a software program which sends requests to web servers, then processes the resulting data and displays the information as intended, based on instructions in the HTML page. The most commonly used browsers on the Internet include:

- ➢ Mozilla Firefox,
- Microsoft Internet Explorer,
- Netscape Navigator.

HTML provides a means to describe the structure of text-based information in a document.

#### 3.2.2 JavaScript:

JavaScript, often abbreviated as JS, is a high-level, dynamic, weakly typed, objectbased, multi paradigm, and interpreted programming language. Alongside HTML and CSS, JavaScript is one of the three core technologies of World Wide Web content production. It is used to make web pages interactive and provide online programs, including video games. The majority of websites employ it, and all modern web browsers support it without the need for plug-ins by means of a builtin JavaScript engine. Each of the many JavaScript engines represent a different implementation of JavaScript, all based on the ECMA Script specification, with some engines not supporting the spec fully, and with many engines supporting additional features beyond ECMA.

JavaScriptsupports eventdriven, functional, and imperative (including objectoriente d and prototype-based) programming styles. It has an API for working with text, arrays, dates, regular expressions, and basic manipulation of the DOM.

But does not include any I/O, such as networking, storage, or graphics facilities, relying for these upon the host environment in which it is embedded.

Initially only implemented client-side in web browsers, JavaScript engines are now embedded in many other types of host software, including server-side in web servers and databases, and in non-web programs such as word processors and PDF software, and in runtime environments that make JavaScript available for writing mobile and desktop applications, including desktop widgets.

Although there are strong outward similarities between JavaScript and Java, including language name, syntax, and respective standard libraries, the two languages are distinct and differ greatly in design; JavaScript was influenced by programming languages such as Self and Scheme.

#### 3.2.3 CSS:

Cascading Style Sheets (CSS) is a style sheet language used for describing the presentation of a document written in a markup language.[1] Although most often used to set the visual style of web pages and user interfaces written in HTML and XHTML, the language can be applied to any XML document, including plain XML, SVG and XUL, and is applicable to rendering in speech, or on other media. Along with HTML and JavaScript, CSS is a cornerstone technology used by most websites to create visually engaging webpages, user interfaces for web applications, and user interfaces for many mobile applications.

- CSS is designed primarily to enable the separation of presentation and content.
- Including aspects such as the layout, colors, and fonts.
- CSS is a language that describes the style of an HTML document.

- CSS describes how HTML elements are to be displayed on screen, paper, or in other
- ➤ media
- CSS saves a lot of work. It can control the layout of multiple web pages all at once
- External stylesheets 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.

HTML was NEVER intended to contain tags for formatting a web page!

HTML was created to describe the content of a web page, like:

<h1>this is a heading</h1>

this is a paragraph.

When tags like <font>, and color attributes were added to the HTML 3.2 specification, it

Color information were added to every single page, became a long and expensive process.

To solve this problem, the World Wide Web Consortium (W3C) created CSS.

#### **3.2.4 Bootstrap:**

Bootstrap is a free and open source front end web-framework for designing websites and web applications. It contain HTML CSS based design templates for typography, forms, buttons, navigation and other interface components as well as optional JavaScript extensions. Unlike many web framework it concerns itself with front-end development only.

Bootstrap is the second most-starred project on GitHub, with more than 111,600 stars and 51,500 forks.

Bootstrap is the most popular HTML, CSS, and JavaScript framework for developing responsive, mobile-first web sites.

Bootstrap is completely free to download and use!

- > Bootstrap is a free front-end framework for faster and easier web development
- 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
- Bootstrap also gives you the ability to easily create responsive designs Responsive web design is about creating web sites which automatically adjust themselves to look good on all devices, from small phones to large desktops.
- Bootstrap was developed by Mark Otto and Jacob Thornton at Twitter, and released as an open source product in August 2011 on GitHub.
- Easy to use: Anybody with just basic knowledge of HTML and CSS can start using Bootstrap
- Responsive features: Bootstrap's responsive CSS adjusts to phones, tablets, and desktops.

#### **3.2.5 JQuery:**

JQuery is a fast, small, and feature-rich JavaScript library. It makes things like HTML Document traversal and manipulation, event handling, animation, and Ajax much simpler with an easy-to-use API that works across a multitude of browsers. With a combination of Versatility and extensibility, jQuery has changed the way that millions of people write JavaScript.

- > JQuery is a JavaScript Library.
- > JQuery greatly simplifies JavaScript programming.
- > JQuery is easy to learn.
- > 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:

- > HTML/DOM manipulation
- CSS manipulation
- > HTML event methods
- > Effects and animations
- > AJAX
- > Utilities

Many of the biggest companies on the Web use jQuery, such as:

- > Google
- > Microsoft
- > IBM
- > Netflix

The jQuery syntax is tailor-made for selecting HTML elements and performing some action On the element(s).

Basic syntax is:

\$(selector).action () - A \$ sign to define/access jQuery

A (selector) to "query (or find)" HTML elements.

A jQuery action () to be performed on the element(s)

Examples:

\$(this).hide () - hides the current element.

\$("p").hide () - hides all elements.

\$(".test").hide () - hides all elements with class="test".

\$("#test").hide () - hides the element with id="test".

#### 3.2.6 PHP:

- PHP (recursive acronym for PHP: Hypertext Preprocessor) is a widely-used open source general-purpose scripting language that is especially suited for web development and can be embedded into HTML.
- PHP is a server scripting language, and a powerful tool for making dynamic and interactive Web pages.
- PHP is a widely-used, free, and efficient alternative to competitors such as Microsoft's ASP.
- > PHP is a widely-used, open source scripting language
- > PHP scripts are executed on the server
- PHP is free to download and use
- > PHP files can contain text, HTML, CSS, JavaScript, and PHP code
- PHP code are executed on the server, and the result is returned to the browser as plain HTML
- > PHP files have extension ".php"
- > PHP can generate dynamic page content

- > PHP can create, open, read, write, delete, and close files on the server
- > PHP can collect form data
- PHP can send and receive cookies
- > PHP can add, delete, modify data in your database
- PHP can be used to control user-access
- > PHP can encrypt data
- > PHP runs on various platforms (Windows, Linux, UNIX, Mac OS X, etc.)
- > PHP is compatible with almost all servers used today (Apache, IIS, etc.)
- > PHP supports a wide range of databases
- > PHP is free. Download it from the official PHP resource: <u>www.php.net</u>

#### 3.2.7 SQL:

Structured Query Languages a domain-specific language used in programming and designed for managing data held in a relational database management system (RDBMS), or for stream processing in a relational data stream management system (RDSMS).

SQL was initially developed at IBM by Donald D. Chamberlin and Raymond F. Boyce in the early 1970s. This version, initially called SEQUEL (Structured English Query Language), was designed to manipulate and retrieve data stored in IBM's original quasi-relational database management system, System R, which a group at IBM San Jose Research Laboratory had developed during the 1970s.

The acronym SEQUEL was later changed to SQL because "SEQUEL" was a trademark of the UK-based Hawker Snidely aircraft company.

#### 3.2.7.1 SQL Databases:

#### a) MySQL:

MySQL is an open source SQL database, which is developed by a Swedish company –MySQL AB.

MySQL is pronounced as "my ess-que-ell," in contrast with SQL, pronounced "sequel." MySQL is supporting many different platforms including Microsoft Windows, the major Linux distributions, UNIX, and Mac OS X. MySQL has free and paid versions, depending on its usage (non-commercial/commercial) and features. MySQL comes with a very fast, multi-threaded, multi-user and robust SQL database server.

#### b) MYSQL Server:

- MS SQL Server is a Relational Database Management System developed by Microsoft Inc.
- Its primary query languages are:
  - T-SQL
  - ANSI SQL

### **3.3 Feasible Study**

A Feasibility Study determines whether a project is worth doing. The process followed for making this determination is called a Feasibility Study. This type of study determines whether a project can and should proceed. Once it has been determined that a project is feasible, the analyst can proceed and prepare the project specifications that finalize the project specification. The following are the various types of feasibility studies that can be undertaken.

#### **3.3.1 Technical Feasibility**

This is concerned with specifying the equipment and the software to satisfy the user requirements. The technical needs of the system vary considerably but might include:

- > The facility to produce outputs in a given time.
- > Response time under certain conditions.
- > Ability to process a certain volume of transactions at a specified speed.
- > Facility to communicate data to a distant location.

Technical feasibility centers on the existing computer system, hardware, software etcetera and to what extent it can support the system. In examining the technical feasibility, the configuration of the system is given more importance than the actual hardware. The configuration should provide the complete picture of the system requirements, for example how many workstations are required and how these units are interconnected so that they would operate smoothly, etcetera. The result of the Technical Feasibility Study is the basis for the documents against which dealer and manufacturer can make bids. Specific hardware and software products can then be evaluated keeping in view the logical needs.

#### **3.3.2 Economic Feasibility**

Economic analysis is the most frequently used method for evaluating the effectiveness of a new system. More commonly known as cost/benefit analysis, the procedure is to determine the benefits and savings that are expected from a candidate system and compare them with costs. If benefits outweigh costs, then the decision is made to design and implement the system. It is not done to analyze the new system. Using a Gantt chart schedule and part chart.

We assumed that the benefit of the project is greater than the cost. So if we can develop the project easily then it is used for the evaluation of the proposed. We calculate the cost/benefit analysis and we assume that the benefit is feasible so we start developing the project. It is an analysis of the cost to be incurred in the system and benefits the derivable from the system. An economic Feasibility Study should demonstrate the net benefit of the proposed course of action in the context.

#### **3.3.3 Operational Feasibility**

It determines how acceptable the software is within the organization. The evaluations must then determine the general attitude and skills. Such restriction of the job will be acceptable. To the users are enough to run the proposed budget, hence the system is supposed to the feasible regarding all except of feasibility. In operational feasibility, we attempt to ensure that every user can access the system easily. We develop a menu that users can easily access and we provide shortcut keys. We show a proper error message when any mistakes are made in the program. We provide help and a guideline menu to help the user. Changes in the ways individuals are organized into groups may then be necessary and the groups may now compete for economic resources with the needs of stabilized ones by converting a number in a file in software.

#### **3.3.4 Behavioral Feasibility**

Normal psychology of human beings indicate that people are resistant to change and computers are known to facilitate change. Any project formulations should consider this factor also. Before the development of the Project titled "Delhi Metro", the need to study the feasibility of the successful execution of the project was felt and thus the following factors are considered for a Feasibility Study. Need Analysis. Provide the users information pertaining to the preceding requirement.

### 3.3.5 Feasibility Study Report

The result of the Feasibility Study provides us with the following facts:

- > The automated system would increase the efficiency of the system.
- > The automated system would increase customer's satisfaction.
- > The automated system has many requirements such as Efficiency cost effectiveness, prompt service, Reliability.
- > The automated system would add to the security features of the system
- > The automated system should be simple to use, incorporate all necessary services and maintainable.

# **CHAPTER 4: SDLC PHASES**

## 4.1 Module

In the project mainly there are 3 modules. They are

- Registration module
- Login module
- Admin module

### 4.1.1 Registration module:

In the registration from the user has to register the bio-data. Once the user has registered, they can participate in online courses. During registration user details will be validated, if a user already exists, system will notify the user. New user can register in order to use the full features of software. Normal users can also access than the proposed system but with limited features. Only the registered users get more priorities than the unregistered, guest user. Once the guest user register to the software, they can also get full access to the software.

### 4.1.2 Login module:

Through the login module, registered users can login. It is used for authenticating the users. After logging in, user can go for course based on their desired choice. When the user clicks login button, system will check for the entered values. If both values matches, user should be able to login, else system should generate invalid user message. This condition is being tested in login module.

### 4.1.3 Admin Module:

This module consists of the following sub modules:

- Registration Module: Here admin can register new students, or whomsoever interested in the courses and store their details in database.
- Users Management Module: Here admin can access any user related information. User can be anyone interested in studying.
- Course Management Module: In this module admin can register a new course, can update a course and delete a course also.

## 4.2 Hardware Requirements

- i3/i5 processor
- 2GB RAM
- 500 GB hard disk
- 1GB Graphics card.

## **4.3 Software Requirements**

- PHP
- HTML
- XAMPP SERVER
- MYSQL
- WINDOWSOS-XP/7/8/10

# **CHAPTER 5: SYSTEM DESIGN**

## 5.1 Data Flow Diagram

A data flow diagram (DFD) maps out the flow of information for any process or system. It uses defined symbols like rectangles, circles and arrows, plus short text labels, to show data inputs, outputs, storage points and the routes between each destination. Data flowcharts can range from simple, even hand-drawn process overviews, to in-depth, multi-level DFDs that dig progressively deeper into how the data is handled. They can be used to analyze an existing system or model a new one. Like all the best diagrams and charts, a DFD can often visually "say" things that would be hard to explain in words, and they work for both technical and nontechnical audiences, from developer to CEO. That's why DFDs remain so popular after all these years.

DFD graphically representing the functions, or processes, which capture, manipulate, store, and distribute data between a system and its environment and between components of a system. The visual representation makes it a good communication tool between User and System designer. Structure of DFD allows to start from a broader overview and then expand it to a hierarchy of detailed diagrams. DFD has often been used due to the following reasons:

- > Logical information flow of the system
- > Determination of physical system construction requirements
- Simplicity of notation
- > Establishment of manual and automated systems requirements

## 5.1.1 Context Diagram



Figure 5.1 Context Diagram

## 5.1.2 Level 0 DFD



Figure 5.2 Level 0 DFD

## 5.1.3 Level 1 of Admin Process



Figure 5.3 Level 1 of Admin Process

## 5.1.4 Level 1 for customer Process



Figure 5.4 Level 1 for Customer Process

### 5.2 UML Diagrams

#### **5.2.1 Class Diagrams**



**Figure 5.5 UML Diagram** 

A class diagram is at the heart of UML. It represents the core purposes of UML because it separates the design elements from the coding of the system. UML was set up as a standardized model to describe an object-oriented programming approach. Since classes are the building block of objects, class diagrams are the building blocks of UML. The diagramming components in a class diagram can represent the classes that will actually be programmed, the main objects, or the interaction between class and object. The class shape itself consists of a rectangle with three rows. The top row contains the name of the class, the middle row has the attributes of the class, and the bottom section expresses the methods or operations that the class may utilize.

## 5.2.2 Use Case Diagram

## 5.2.2.1 For Registration



Figure 5.6 Use Case Diagram For Registration

#### **5.2.2.2 For Buying Product:**



Figure 5.7 Use Case Diagram For Buying Product

Use case diagrams are usually referred to as behavior diagrams used to describe a set of actions (use cases) that some system or systems (subject) should or can perform in collaboration with one or more external users of the system (actors). Each use case should provide some observable and valuable result to the actors or other stakeholders of the system. Note, that UML 2.0 to 2.4 specifications also described use case diagram as a specialization of a class diagram, and class diagram ass a structure diagram. Use case diagrams are in fact twofold - they are both behavior diagrams, because they describe behavior of the system, and they are also structure diagrams - as a special case of class diagrams where classifiers are restricted to be either actors or use cases related to each other with associations.

#### 5.2.3 Activity Diagram



Figure 5.8 Activity Diagram

Activity diagram is another important diagram in UML to describe the dynamic aspects of the system. Activity diagram is basically a flowchart to represent the flow from one activity to another activity. The activity can be described as an operation of the system. The control flow is drawn from one operation to another. This flow can be sequential, branched, or concurrent. Activity diagrams deal with all type of flow control by using different elements such as fork, join, etc. The basic purpose of activity diagrams is similar to other four diagrams. It captures the dynamic behavior of the system. Other four diagrams are used to show the message flow from one object to another but activity diagram is used to show message flow from one activity to another.

## 5.2.4 Sequence Diagram



**Figure 5.9 Sequence Diagram** 

UML Sequence Diagrams are interaction diagrams that detail how operations are carried out. Sequence Diagrams are time focus and they show the order of the interaction visually by using the vertical axis of the diagram to represent time what messages are sent and when.

Sequence Diagrams captures:

- the interaction that takes place in a collaboration that either realizes a use case or an operation (instance diagrams or generic diagrams)
- high-level interactions between user of the system and the system, between the system and other systems, or between subsystems (sometimes known as system sequence diagrams)

#### **5.2.5 Collaboration Diagram:**



**Figure 5.10 Collaboration Diagram** 

A collaboration diagram resembles a flowchart that portrays the roles, functionality and behavior of individual objects as well as the overall operation of the system in real time. Objects are shown as rectangles with naming labels inside. These labels are preceded by colons and may be underlined. The relationships between the objects are shown as lines connecting the rectangles. The messages between objects are shown as arrows connecting the relevant rectangles along with labels that define the message sequencing. Collaboration diagrams are best suited to the portrayal of simple interactions among relatively small numbers of objects. As the number of objects and messages grows, a collaboration diagram can become difficult to read. Several vendors offer software for creating and editing collaboration diagrams.

#### 5.2.6 Deployment and Component Diagram



Figure 5.11 Deployment and Component Diagram

Deployment diagrams are used to visualize the topology of the physical components of a system, where the software components are deployed. Deployment diagrams are used to describe the static deployment view of a system. Deployment diagrams consist of nodes and their relationships. The term Deployment itself describes the purpose of the diagram. Deployment diagrams are used for describing the hardware components, where software components are deployed. Component diagrams and deployment diagrams are closely related. Component diagrams are used to describe the components and deployment diagrams are used to describe the components and deployment diagrams shows how they are deployed in hardware. UML is mainly designed to focus on the software artifacts of a system. However, these two diagrams are special diagrams used to focus on software and hardware components.

## 5.3 Database Design

## 5.3.1 Administrator Table

#### Table 5.1

S. NO.	FIELD NAME	DATATYPE
1.	id	int
2.	username	varchar
3.	password	varchar

## 5.3.2 Contact Us Table

S. NO.	FIELD NAME	DATATYPE
1.	id	int
2.	name	varchar
3.	email_id	varchar
4.	contact_no	varchar
5.	contact_message	varchar

## 5.3.3 Customer Register Table

S. NO.	FIELD NAME	DATATYPE
1.	id	
2.	name	
3.	email_id	
4.	password	
5.	address	
6.	contact_no	

## Table 5.3

## 5.3.4 Feedback Table

S. NO.	FIELD NAME	DATATYPE
1.	id	int
2.	name	varchar
3.	email_id	varchar
4.	contact_no	varchar
5.	feedback	varchar

## 5.3.5 Order Details Table

<b>S. NO.</b>	FIELD NAME	DATATYPE
1.	id	int
2.	ordered_item	varchar
3.	total_amt	int
4.	order_date	varchar
5.	delivery_date	varchar
6.	customer_id	int
7.	status	varchar

### Table 5.5

## 5.3.6 Product Category Table

S. NO.	FIELD NAME	DATATYPE
1.	id	int
2.	category	varchar

## **5.3.7 Product Detail Table**

S. NO.	FIELD NAME	DATATYPE
1.	id	int
2.	category	varchar
3.	product_name	varchar
4.	img	varchar
5.	item_no	varchar
6.	price	varchar
7.	description	varchar
8.	featured	int

## 5.3.8 Shipping Details

S. NO.	FIELD NAME	DATATYPE
1.	id	int
2.	sname	varchar
3.	semail	varchar
4.	scontact	varchar
5.	saddress	varchar
6.	scity	varchar
7.	sstate	varchar

# **CHAPTER 6: RESULT SCREENSHOT**

## Figure 6.1 Admin Login

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## Figure 6.2 Admin Homepage



## Figure 6.3 Admin Product Manager

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	CATEGORY	NAME	IMAGE	ITEM NO.	PRICE	DESCRIPTION		+	Add			
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Product Manager								î	Delete			
User Manager	1	Bandhani blue dupatta	M	2	300	Beaufiful bandhani blue dupatta		/	Ydia Debete			
Featured Product Manager	1	Bandhani yellow dupatta		3	300	Beautiful bandhani yellow dupatta			Fale			
Order Manager			P					î	Delete			
Feedback Manager	1	Bandhani orange dupatta		4	300	Beautiful bandhani orange dupatta		1	Edit			
Contact Message								î	Delete			
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## Figure 6.4 Admin Featured Product Manager

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RTESANIA									logout			
		P	RODUCT	DETAILS	4							
	CATEGORY	NAME	IMAGE	ITEM NO.	PRICE	DESCRIPTION						
Home	1	Bandhani black dupatta		1	300	Beautiful black bandhani dupatta		+	Add			
Product Manager	1	Bandhani biue dupatta		2	300	Beautiful bandhani blue dupatta						
User Manager			V					1	Renurs			
Featured Product Manager	1	Bandhani yellow dupatta		3	300	Beautiful bandhani yellow dupatta		+	Add			
Order Manager												
Feedback Manager	1	Bandhani orange dupatta		4	300	Beautiful bandhani orange dupatta		+	All			
Contact Message	1	Chaniya Choli		5	800	Chaniya Choli						
Manager								1	Remova			
	1	Chaniya Choli		6	800	Chaniya Choli			AM			

## Figure 6.5 Admin All User Details

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		ALL US	ER DETAILS							
	NAME	EMAIL-ID	ADDRES\$	CONTACT NUMBER						
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Product Manager										
User Manager										
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Order Manager										
Feedback										
Manager										
Contact										
Message										

## Figure 6.6 Admin Order Details

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TESANIA							- 6000				
			ORDERS								
	ORDERED ITEM	CUSTOMER NAME	TOTAL AMOUNT	ORDER DATE	DELIVERY DATE	STATUE					
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	77	ж.	500	2020-03-02	2020-03-09	Delivered	i Delete				
Product Manager	46.57	1	950	2020-04-21	2020-04-25	Delivered	B Delete				
User Manager	47,57	1	950	2020-04-24	2020-05-07	Pending	i Delete				
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Feedback Manager											
Contact											
Message											

## Figure 6.7 Admin Feedback Manager

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			EDBACK DETAIL							
	NAME	EMAIL-ID	CONTACT NUMBER	QUERY						
Home	Manish Singh	manish@yahoo.com	7275030658	This is the best place to buy products.		Delete				
Product Manager										
User Manager										
Featured										
Product Manager										
Order Manager										
Feedback										
Manager										
Contact										
Message										
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## Figure 6.8 Admin Contact Message Manager

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		CONT	ACT DETAILS			
	NAME	EMAIL-ID	CONTACT NUMBER	QUERY		
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Product Manager						
User Manager						
Featured						
Product Manager						
Order Manager						
Feedback						
Manager						
Contact						
Manager						

## Figure 6.9 User Registration

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	FILL WOUR DETAILS	
	Register yourself to enjoy shopping	
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	Emal-id: username@gmail.com	
	Create Faisword. Password	â l
	Re-enter Passuart: Re-enter Password	
	Address Address	#2 #
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	Tours.	2
		~
	Featured Products	
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## Figure 6.10 User Login

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		Home   Customer Service   Terms Of Use   Disclaimer   Priva	acy Policy   Returns and Cancellations Policy   Feedback			

### Figure 6.11 User Homepage



### Figure 6.12 User Contact Us



## Figure 6.13 User Feedback Form



## Figure 6.14 User Products Page



## Figure 6.15 User Cart

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	CAS	a	
Product Image	Product	Price	Total
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	Lord Shive	94 <b>7</b> .000	Renove
		Grand Total (NR 800	
	Continue Shopping	Exy New	
	Featured I	Products	
Product-manet: Bandhani blue dusatta	Profestiname. Chanya Chall	Podetname lieb bag	Product name : Bunboo pwelley
Item no.: 2	Item no.: 5	Item no.: 15	item no.: 19
calhost/Artesania/cart_page.php?removeid=77	Price: Bs 000	Price: Bo 550	Price: Sn 750

## 7.1 Test plan

#### 7.1.1 Black Box Testing

Black box testing is a software testing techniques in which functionality of the software under test (SUT) is tested without looking at the internal code structure, implementation details and knowledge of internal paths of the software. This type of testing is based entirely on the software requirements and specifications. For example: an operating system like Windows, a website like Google, a database like Oracle or even your own custom application. Under Black Box Testing, you can test these applications by just focusing on the inputs and outputs without knowing their internal code implementation.

#### 7.1.1.1 Steps

Here are the generic steps followed to carry out any type of Black Box Testing.

- > Initially requirements and specifications of the system are examined.
- Fester chooses valid inputs (positive test scenario) to check whether SUT processes them correctly. Also some invalid inputs (negative test scenario) are chosen to verify that the SUT is able to detect them.
- > Tester determines expected outputs for all those inputs.
- > Software tester constructs test cases with the selected inputs.
- > The test cases are executed.
- > Software tester compares the actual outputs with the expected outputs.
- > Defects if any are fixed and re-tested.

#### 7.1.1.2 Types

There are many types of Black Box Testing but following are the prominent ones -

- Functional testing This black box testing type is related to functional requirements of a system; it is done by software testers.
- Non-functional testing This type of black box testing is not related to testing of a specific functionality, but non-functional requirements such as performance, scalability, usability.
- Regression testing Regression Testing is done after code fixes, upgrades or any other system maintenance to check the new code has not affected the existing code.

#### 7.1.1.3 Tools

Tools used for Black box testing largely depend on the type of black box testing.

For Functional/ Regression Tests you can use - QTP, Selenium

For Non-Functional Tests, you can use - Load runner, Jmeter

#### 7.1.2 White Box Testing

White Box Testing is the testing of a software solution's internal coding and infrastructure. It focuses primarily on strengthening security, the flow of inputs and outputs through the application, and improving design and usability. White box testing is also known as Clear Box testing, Open Box testing, Structural testing, Transparent Box testing, Code-Based testing, and Glass Box testing.

It is one of two parts of the **"box testing" approach** of software testing. Its counter-part, black box testing, involves testing from an external or end-user type perspective. On the other hand, White box testing is based on the inner workings of an application and revolves around internal testing.

The term "white box" was used because of the see-through box concept. The clear box or white box name symbolizes the ability to see through the software's outer shell (or "box") into its inner workings. Likewise, the "black box" in "black box testing"

#### 7.1.2.1 Techniques

A major White box testing technique is Code Coverage analysis. Code Coverage analysis, eliminates gaps in a Test Case suite. It identifies areas of a program that are not exercised by a set of test cases. Once gaps are identified, you create test cases to verify untested parts of code, thereby increase the quality of the software product

There are automated tools available to perform Code coverage analysis. Below are a few coverage analysis techniques

- Statement Coverage This technique requires every possible statement in the code to be tested at least once during the testing process.
- Branch Coverage This technique checks every possible path (if-else and other conditional loops) of a software application. Tools: An example of a tool that handles branch coverage testing for C, C++ and\_applications is TCAT-PATH.

#### 7.1.2.2 Types

*White box testing* encompasses several testing types used to evaluate the usability of an application, block of code or specific software package.

<u>Unit Testing</u>: It is often the first type of testing done on an application. Unit testing is performed on each unit or block of code as it is developed. Unit Testing is essentially done by the programmer. As a software developer, you develop a few lines of code, a single function or an object and test it to make sure it works before continuing Unit Testing helps identify majority of bugs, early in the software development lifecycle. Bugs identified in this stage are cheaper and easy to fix.

Apart from above a few testing types are part of both black box and white box testing. They are listed as below

- White Box penetration testing: In this testing, the tester/developer has full information of the application's source code, detailed network information, IP, addresses involved and all server information the application runs on. The aim is to attack the code from several angles to expose security threats
- White Box Mutation Testing: Mutation testing is often used to discover the best coding techniques to use for expanding a software solution.

#### 7.1.2.3 Advantages

- Code optimization by finding hidden errors.
- White box tests cases can be easily automated.
- Testing is more thorough as all code paths are usually covered.
- Testing can start early in SDLC even if GUI is not available.

### 7.1.2.4 Disadvantages

- White box testing can be quite complex and expensive.
- Developers who usually execute white box test cases detest it. The white box testing by developers is not detailed can lead to production errors.
- White box testing requires professional resources, with a detailed understanding of programming and implementation.
- White-box testing is time-consuming, bigger programming applications take the time to test fully.

# **CHAPTER 8: CHALLENGES**

Artesania is an online handicraft portal which aims at giving employment to poor artists who are not able to work in good conditions because of lack of resources or network or what so ever. The limitations with our website is the actual connection that needs to be built with the artists, identifying a specific group of people in a population of 5 billion, and mustering them up together, making them believe in us and gaining their trust is a next level issue. Also because of lack of education and proper knowledge they tend to have a hard time in developing relationships with any company. Apart from the personal limitations the technical ones include that sometimes the customer returns back the product and that cost is bore by the company because we cannot afford to do any harm, be it in terms of financial crisis or physical stress, to our employees.

The shipment has to be done with utmost care and protection since the products are really sensitive for example clay toys, paper dolls, pottery products which need bubble wraps around it and a huge box to contain it. The website is dynamic because we want our partners, basically the sellers to be an active part of the community too by providing them access but this comes with a lot of trouble since most of them do not know the basics of operating a computer let alone a website. Summing up there are three major limitations of Artesania, building up connections with artists and maintaining them, the cash burn in the damage or return of the product costs a ton to the company, and the lack of literacy in sellers makes it difficult for them to update the website. However these limitations have not made us have second thoughts about our website or our idea, we overcome all of these by gaining trust in our customers and business people, by doing good work, making beautiful products and making our customers satisfied and happy.

# **CHAPTER 9: CONCLUSION**

The conclusion is that our website provides employment as well various products to customers and also we customize products according to the wish of the customer, we have flexibility in our process, from ordering of the product to the delivery. Also returns and refunds are easier than ever, the product is guaranteed for damage, if nay is done, one can request for a replacement or simply a refund.

Also, the products are completely handmade and no machines are used in the manufacture of the items, we have a wide range of products including handmade cards, handlooms, showcase elephants, paper dolls, clay toys, wooden chairs, jute bags, and etcetera. There might be many websites which provide the same service but we have an edge over the others because not only we provide various products but also we act as a bridge between the craftsmen who do not get recognized in the society and are under paid with the customers who want different handicrafts for special occasions or wants.

Products at reasonable and affordable prices, wide employment for artisans, and taking the entire handloom industry to just another level is a new ball game, not only it takes efforts to kindle the light of traditions and cultures in the modern era, it takes a lot more than business and professional skills in maintaining such business, it requires the understanding for a customer's needs/wants, the specifications of a product, the craftsmen orders and designs needs/equipment requirements. Concluding altogether ARTESANIA is an online handloom portal which contains myriads of products that are handmade with embellished gems, sheets, etc with dynamic interface and admin panel on the back end.

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