EPICRAFT – WEBSITE FOR ARTISANS

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Abstract - *India, a country of great cultural heritage and India's cultural diversity in the form of art and craft products provides plenty of opportunities to the local artists. In today's world, most people are using technology for leading their lives and fulfilling their daily needs. In this generation most of us are using E-commerce websites for shopping clothes, groceries, and electronics. We will be developing one E commerce web application by using MERNstack technology. This application will be fully functional with different views for user and admin and it will also be integrated with payment gateway for checkout. Epicraft website aims to help creative entrepreneurs of handloom and handicraft sector.*

KEY WORDS: JavaScript, Software Stack, Framework, Library, Performance Analysis, React.js, MongoDB, Node.js, Express.js

I.INTRODUCTION

Every state of India has a unique handloom product to offer such as jacquard from Uttar Pradesh, Chanderi from Madhya Pradesh, phulkari from Punjab, Brocare from Benares and Daccai from West Bengal. The Indian handloom sector employs 43.31 lakh weavers directly and indirectly throughout the country with 77% of them being women as per government data [7]. This sector through ecommerce will open up with new opportunities for the artisans.

Epicraft community includes creative entrepreneurs who sell on our platform, customers looking to buy Indian traditional and cultural art, goods in marketplace. Epicraft help them grow their business and the individual artist who wants to sell their creativity on our platform and employees who maintain our platform and nurture our ecosystem.

Epicraft 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 Epicraft 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 a lot of time but also covers all the fields required to complete a product preparation.

II. SURVEY OF EXISTING SYSTEM

B2C e-commerce have compelling benefits in today's online shopping industry. Effective implementation of B2C ecommerce can help this industry to grow with faster revenue. Thus, eCommerce might be a major area for research thanks to its novelty and exploding growth. Development of Ecommerce is done by B2B and B2C and helps the customer to fulfill the requirement. 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 hardcopied documents leads to the following problems.

Problems with Present System

1.   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.

2.   Filing poses a problem Sorting out the documents categorically is a time consuming and tedious exercise

3.   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.

4.   Reviewing becomes time-consuming – All the process done manually at the centers and all the records are maintained on the courses. So, the 10 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.

5.   The Existing system of Indian art and culture is paper based, time consuming, less flexible and hard to manage. The chance of loss of records is high and also record searching is difficult. Maintenance of the system is also very difficult and takes a lot of time.

6.   Result Processing: is slow due to paperwork and requirement of staff

III. PROPOSED SYSTEM

We are proposing one E-commerce web application using MERN-stack technology as it contains MongoDB, Express.JS framework, React.JS library, Node.JS platform. This application is a fully functional website with different option for users and admin including payment gateway for checkout. By using this website, we can buy different types of products based upon customer interests. In this project, we can add different products and can delete them also. We have developed administrative functions for the website such as create a product, create categories, Admin dashboard, manage products, Manage categories.

For customers, they can quickly add their items to the cart. Based on the items in the cart then the bill gets generated and the customer can pay by using stripe. In this project we are intended to develop a full stack E-commerce shopping using MERN technology with easy and interactive UI interface for this we have decided to divide proposed methodology into 5 modules starting from Coding, designing UI Interfaces using React context, seller management, customer management, and management of delivery and payment functionality.

Our mission is to reimagine commerce in ways that build one of the largest exports of Indian handlooms and handicrafts. Epicraft This Web site allows artists to apply for various craftsmen jobs available provided by administrators, also the customers to go through the website and shop for various products. It saves time as it allows a 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, 13 handicrafts. Users can register, login and select the item with his/her specific id, and can see the entire catalogues
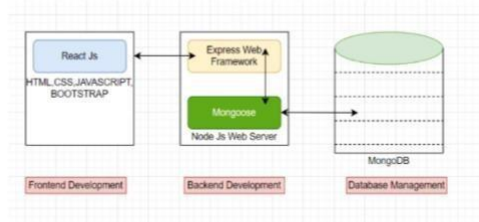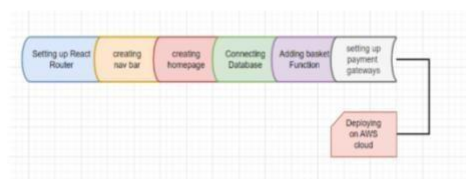

Figure 1-1: Architecture Framework

Figure 1-2: Architecture Framework

IV. PROBLEM STATEMENT

To develop an exclusive e-commerce platform for artisans to sell their products. The demand forecast of the items required, automatic quality checks on the items as well as Sentiment analysis with next recommendation actions for the artist shall be added [9]. To promote the Indian handicraft industry globally. Providing a common platform to make, market, and sell high-quality handicrafts and goods

V. PROJECT IMPORTANCE

Ecommerce is one of the largest factors of economy growth, it connects businesses with customers in fast, easy and secure way. In all, numerous opportunities exist for India in order to expand the scope of ecommerce research and to benefit from the same. Individuals, organizations, policy makers and government alike are poised to gain from insights that could be offered by research on EC.

Handicraft reflects the culture and skill of the local population and hence the country. India is one of the biggest markets for handicraft due to variation in culture and people who produce varied kinds of handicraft. Epicraft This Web site allows artists to apply for various craftsmen jobs available provided by administrators, also the customers can go through the website and shop for various products.

It is time saving, effective and easy to perform shopping activities online. All the data are stores at the server.

Administrator has a privilege to create, modify and delete the products, handicrafts. Users can register, login and select the item with his/her specific id, and can see the entire catalogue.

VI. SCOPE OF PROJECT WORK

- An interesting yet easier to understand UI.
- Improved database queries.
- Add more varieties of products.

Different places are famous for different cultural craft products. It is one of the biggest employers in rural India. Nearly 13 million artisans, mostly women and people from weaker sections of the society, get jobs in this industry. Many artisans work on full time and many on part time basis to produce these goods by hand. Few of the factors which are helping this industry to grow further are low initial investment, potential for export and foreign earning The Indian handicraft industry is highly decentralized. Handicraft market in India is growing at a very steady pace. It is almost doubling every five years. In the handmade products India enjoys 2% of share at global level.

The goods and services are ordered over those networks, but the payment and the ultimate delivery of the goods or service may be conducted on or offline."

India is one of the largest users of the Internet across the world and is expected to cross the US in the coming years. Hence ecommerce provides vast opportunities to the local artists who aim to expand their business.

This is one of the most unique and important qualities 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

VII. REQUIREMENT ANALYSIS

HARDWARE REQUIREMENTS**:**

CPU: 3.6GHz

RAM: 8GB

Memory: 10 GB (Minimum)

SOFTWARE REQUIREMENTS:

Languages:HTML5, CSS3, Javascript

Database: MongoDB

Frameworks: Node.js

Cloud Hosting: AWS cloud

JS Libraries: React, ExpressJS;

Code collaboration and version control: GitHub.

VIII. ALGORITHM AND FRAMEWORK

The algorithmic procedure for making the website is as follows:

For the implementation section we have divided the complete designing process into two algorithms first part for developing client-side and second for administration both the algorithms are presented as follow :

1. Client-side: At client-side visitor and customer both can be users Customer need to register visitors can visit the products and price details Customer will have to input details and get customer ID Data can be updated Customers can make any inquiries
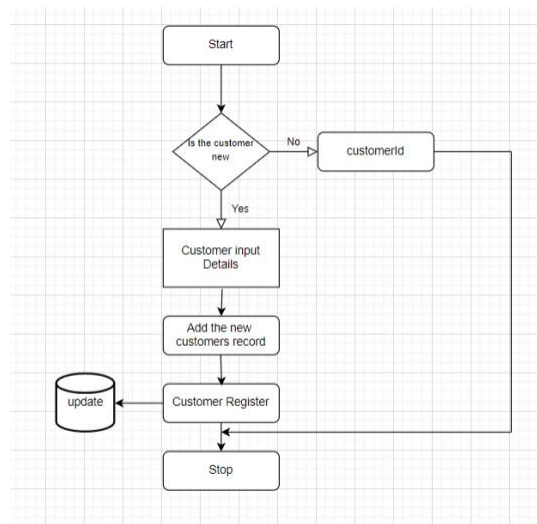

Figure Client side algorithm

2. Administration-side:

- Admin will login
- Input category id and product id
- Add item
- Add price and sales
- Check and collect payment
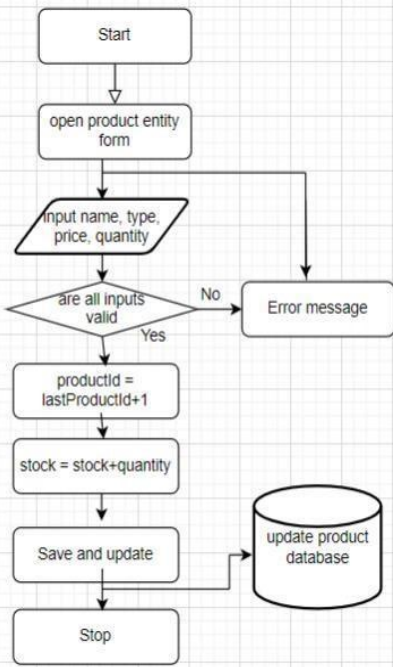- Manage order and shipping
- Update data

Figure Administration side algorithm

These are some of the algorithms that we might use in our project implementation to make the system more

interesting:

- Product Recommendation Algorithm

- Sorting Algorithm

III. DESIGN DETAIL

STRUCTURAL UML DIAGRAM

Class diagrams are the heart of UML. It represents the core task of UML as it separates the design elements from the coding of the system. UML was developed as a standardized model for describing object-oriented programming approaches. A class is a building block of objects, so a class diagram is a building block of UML. A diagram component within a class diagram can represent the actual class being programmed, the main object, or the interaction between the class and objects. The class shape itself consists of three rows of rectangles. The top row contains the name of the class, the middle row contains the attributes of the class, and the bottom section shows the methods or operations available to the class.
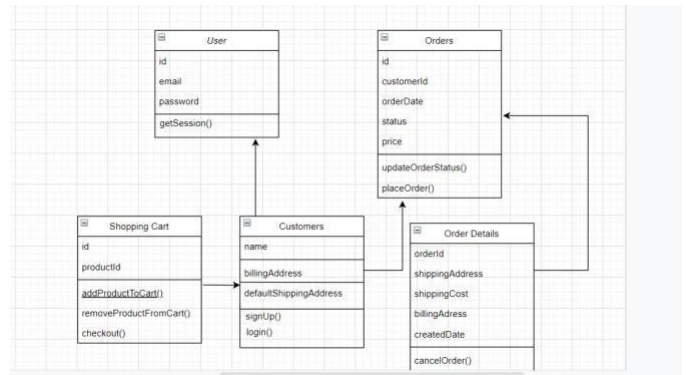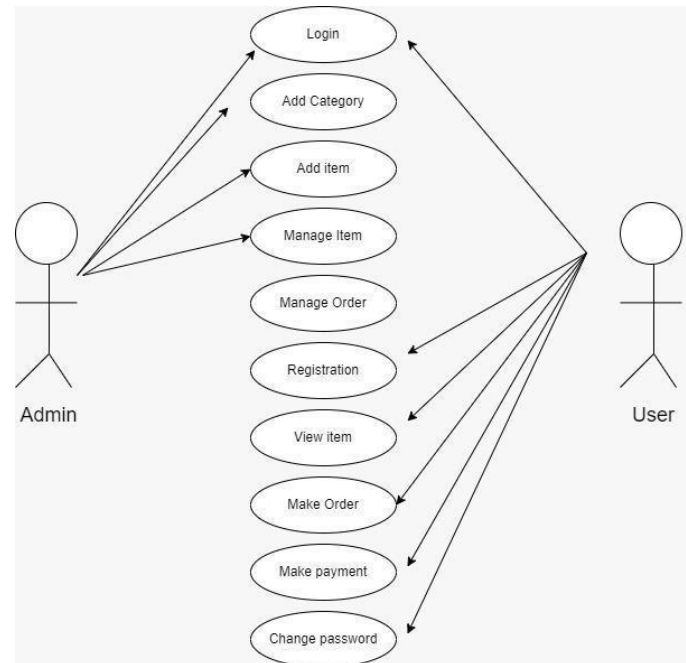

Figure Class Diagram

BEHAVORIAL UML DIAGRAM

IX.   METHODOLOGY

We have divided the project methodology into 5 modules which includes :

- Coding(HTML,CSS3,JavaScript,Bootstraps,React+NodeJs)

- Seller

- Customer

- Management

- Delivery and Payment

Complete Workflow Methodology is explained as follows with the help of workflow diagram:

He has any issues regarding products, prices, and any other issues.

Dashboard: This page will be different for the user. Admin Dashboard will have a chance to create some categories and can add products to those categories, as well as admin can delete products and he can change prices also.

Sign in and Sign up: These two-option redirects to the page where the user can find a form to fill either to create an account or to sign in to an account.

Cart: After selecting any product users can see their product on this page and here the payment will be carried on. Stripe Payment is included for the cart which is a third party tool that helps users to make payment by some debit cards, credit cards, UPI's.

FRONT-END Development:

Home Page: The home page of the web Application mainly contains a list of the products which are saved in the database. And there are some options that will be in the menu bar if the user does not sign in/login in yet then "Sign in" and "Sign up" options will be there. The home page will show all type of products ,If customer want to add another product they can simply add a wide r, customers have the facility to add the product to the cart which they like, the customer will have another facility to contact the admin if

BACK-END Development: Here we define the structure of the data that should be in the database. By using some models which help to store the data in the database like mongoose, it is one of the most famous libraries in NodeJS. Creating the schemas by mongoose which can mention the names and type of the data. Routers: All the work related to the routing of the pages was done here. ExpressJS is a

popular library for routing. CRUD operations and routingrelated code are saved in this folder.

X. CONCLUSION AND FUTURE WORK

Epicraft is an online handloom and handicraft portal which aims at giving employment to poor artists who are not able to sell their products online. This project helps in understanding the creation of an interactive website and the technologies used to implement it. The building of the project has given us precise knowledge about how MERN stack technology is used to develop a website, how it connects to the database to access the data and how the data and web pages are modified to provide the user with a shopping cart application.

XI. REFERENCES

[1]   Gunasekaran, A., Marri, H., McGaughey, R., & Nebhwani, M. (2002). Ecommerce and its impact on operations management. International Journal Of Production Economics, 185-197.

[2]   Gupta, A. (2014, January). E-Commerce: Role of E Commerce In Today's Business. International Journal of Computing and Corporate Research, 4(1). [4] Mac, R. (2014, October).Retrieved from https://www.google.co.in/amp/www.forbes.com/ sites/ry anmac/2014/10/28/softbank betsbig-on-india-with-627- million-snapdealinvestment / amp/

[3]   Chanana, N., & Goele, S. (2012). Future of ecommerce in India. International Journal of Computing & Business Research, 8.

[4]   Mai, N. (2020). E-commerce Application using MERN stack. [7] Ullah, S. E., Alauddin, T., & Zaman, H. U. (2016, January). Developing an E commerce website. In Krishna4 , D.Venkata Sai Kumar5 , B. Uma Rani6. ECommerce Website For Handloom. International Journal of Research Publication and Reviews Journal homepage: www.ijrpr.com ISSN 2582- 7421/May 2022.

[5]   King, D. N., & King, D. N. (2004). Introduction to ecommerce. Prentice Hall. [9] Nemat, R. (2011). Taking a look at different types of ecommerce. World Applied Programming, 1(2), 100-104.

[6]   Niranjanamurthy, M., Kavyashree, N., Jagannath, S., & Chahar, D. (2013). Analysis of e-commerce and mcommerce: advantages, limitations and security issues. International Journal of Advanced Research

in Computer and Communication Engineering, 2(6), 2360-2370.

[7] https://www.investindia.gov.in/sector/textilesap parel/handlooms-handicrafts

[8] https://www.researchgate.net/publication/32528 5588_ECOMMERCE_AND_RURAL_HANDICRAFT_A RTISANS M.Ushasri1 , N.Charitha2 , P.Chaitanya3 , G.Giridhar Sai 2016 International Conference on Microelectronics, Computing and Communications (MicroCom) (pp. 1-4). IEEE.

[9] https://www.sih.gov.in/sih2022PS?technology_bu cket= NQ==&category=U29mdHdhcmU=&organization= QWxs&o rganization_type=QWxs