
**Tribhuvan University**

# Faculties of Humanities and Social Sciences

## ONLINE GUITAR STORE SYSTEM

**A PROJECT REPORT**

**Submitted to**

**Department of Computer Application**

**Arunima College Boudha, Kathmandu**

***In partial fulfillment of the requirements for the Bachelors in Computer Application***

**Submitted by**

**Mingmar Sherpa**

**Kamal Devkota**

**November, 2023**

**Under the Supervision of**

**Satya Ram Suwal**


# Tribhuvan University

## Faculties of Humanities and Social Sciences

### Arunima Education Foundation

**Supervisor's Recommendation**

I hereby recommend that this project prepared under the supervision by **Kamal Devkota** and **Mingmar Sherpa** entitled "**ONLINE GUITAR STORE SYSTEM**" in partial fulfillment of the requirements for the degree of Bachelor of Computer Application is recommended for the final evaluation.

_ _ _ _ _ _ _ _

Satya Ram Suwal Sir

**Supervisor**

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**Tribhuvan University**

**Faculty of Humanities and Social Sciences**

**Arunima Education Foundation**

**LETTER OF APPROVAL**

This is to certify that this project prepared by **Mingmar Sherpa** and **Kamal Devkota** entitled "**Online Guitar Store System**" in partial fulfillment of the requirements for the degree of Bachelor in Computer Application has been evaluated. In our opinion it is satisfactory in the scope and quality as a project for the required degree.

| | |
|---|---|
| ---------- | ---------- |
| Satya Ram Suwal Sir | Satya Ram Suwal Sir |
| Supervisor | Program Coordinator |
| Arunima College | Arunima College |
| Boudha, Kathmandu | Boudha, Kathmandu |
| ---------- | ---------- |
| **Internal Examiner** | **External Examiner** |

# ABSTRACT

All people love to learn and play guitar as it give them joy and happiness to learn new notes and sounds. But most of them have no clue to where to start or where to buy those guitars. In order to ease that, we bring forward our **"Online Guitar Store System"** website with easy UI and user friendly guidelines. We offer them different choices not only about guitar but all accessories that come with it as well as price.

So our project is developed to make guitar shopping easy and save user's valuable time. It is a system that is accessible throughout Nepal with delivery facility so user needn't need to travel and visit shops. Our system also provides the features for online payment which will itself save time and effort from the customer side.

**KEYWORDS: PHP, JS, XAMPP**

# ACKNOWLEDGEMENT

We would like to express our sincere gratitude to several individuals for supporting us throughout our final project. First, we wish to express our sincere gratitude to our supervisor, **Mr. Satya Ram Suwal Sir**, for his enthusiasm, patience, insightful comments, helpful information, practical advice and unceasing ideas that have helped us tremendously at all times in our research and during the development of our project. His immense knowledge, profound experience and professional expertise in Data Quality Control have enable us to complete this research and project successfully. Without his support and guidance, this project would now have been possible.

We also wish to express our sincere thanks to **Arunima Education Foundation** for providing and giving us a permission to use all required equipment and the necessary material to complete the project.

We would also like to extend our gratitude to each individual, friends and guardians for providing us with all the facility that was required.

Mingmar Sherpa

Kamal Devkota

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# LIST OF ABBREVIATION

COD: Cash on Delivery

DFD: Data Flow Diagram

ERD: Entity Relationship Diagram

JS: Java Script

PHP: Personal Home Page

SQL: Structured Query Language

UI: User Interface

UX: User Experience

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# CHAPTER: 1

# INTRODUCTION

## 1.1 Introduction

Online Guitar Store is the system where the user can select the guitar they like and buy it using the website. In today's world people (mostly youths) are fond of the guitar. Guitar is the most popular musical instrument due to its playing pattern. It can be played by strumming or plucking. The guitar is a fretted musical instrument that typically has six strings. They find the guitar very interesting due to its structure and tone that it gives. They need to learn them. In most of the cases, they have no clue where to buy it and how to. And also, in the context of Nepal, the guitar shop is found rarely in a specific area so, this system will help them to get their own best guitar and they do not have to worry about price matter cause it's reasonable. In our system we provide all the information related to products brands prices details and also other delivery activities and so on. This gives a lot of privilege and assurance to guitar players.

Our application has been implemented in PHP and MYSQL.As they are open-source server-side programming languages used to create dynamic websites. They provide flexibility, as they can be used and manipulated on any operating system. Our system consists of two main components Admin and Customer side.

Firstly, users see the Home page where numbers of guitars are seen with their price and name. If they want to know more about the guitar, they can even see the details. In this site guitar products of different brands are available. You just need to search the product of your willing brand by name and this site will give you that product in a short time. There are also different filters available in this site that defines Area filter, price filter, etc. The main advantage of this site is that if you are ordering the product and you do not like the product on receiving it, you can exchange it.

Secondly, our online Payment is totally secure. Just came to our site, select the product, our site will also give you suggestions about your choice, select the product of your own choice by just one click and after selecting the product our site will ask for a payment, choose the payment method and submit the order. In the mentioned time you will receive product.

## 1.2 Problem Statement

The challenges encountered by the existing system serve as a major drawback to the realization of efficiency and customer satisfaction. The traditional method of purchasing guitars involves visiting physical stores, limiting the options available to customers and requiring them to allocate time and effort. Additionally, geographical limitations restrict access to specialized stores for enthusiasts. But more often the existing online system also lacks personalized assistance and expert guidance that customers would typically receive in physical stores. Also, they are unable to physically interact with the guitars before purchase, leading to concerns regarding the tactile experience, sound quality, and overall playability of the instrument. The online guitar store shop aims to address these issues by providing a wide range of guitar options and accessories, accessible to customers worldwide.

## 1.3 Objectives

The main objective of this project is to develop an application which gives provision Guitar players to flourish their business by buying valuable products according to their necessary or interest and will in variably lead to higher customer retention and acquisition rates.

The objectives of online guitar store system are as follows:

- To offer personalized recommendations based on user preferences to enhance the shopping experience.
- To provide all required details about the desired instrument.
- To provide simple user interface to navigate each of our pages easily.

## 1.4 Scope and Limitation

### 1.4.1 Scope

This system is designed mostly for every enthusiastic individuals who really fall for a fretted musical instrument that typically has six strings. Developing this system includes popularity of online shopping and the interest in musical instruments. This system is using powerful search functionality that helps customers find products more easily. Allow users to create accounts to track their orders, save favorite products, and manage their personal information. Implement a secure login and registration system. As it is an automated system it is less probable to make any mistakes.

### 1.4.2 Limitations

There are some criteria that may not be fulfilled by this application implemented. Some of such limitations of this project are mentioned below:

- The system needs external payment gateway for online payment.
- Users need internet access in order to open the site.
- Managers can find it difficult sometimes to supervise all the demands simultaneously and update sites with latest products.
- Sometimes users might not able to find particular guitar from specific brand.

## 1.5 Development Methodology

For the development of this system, Structured approach is used that includes data modeling: ER-diagram, Process modeling: DFD, Architectural design, Database Schema design, Interface design (UI/UX), Physical DFD.

## 1.6 Report Organization

Chapter 1 deals with the introduction of the system with its objectives and limitations along with the reason why the system is made.

Chapter 2 describes the features about some existing applications related to the online e-commerce sites selling their products and summarizes whole work that has been carried out in the field of e-commerce.

Chapter 3 focuses on the different requirement of the system, which describes about the functional, non-functional, feasibility analysis, Structured approach: Data modeling: ER-diagram, Process modeling: DFD, Architectural design, Database Schema design, Interface design (UI/UX), Physical DFD and the implementations of Algorithm with its details.

Chapter 4 emphasizes tools used in system development, implementing details and result of test performed.

Chapter 5 highlights brief summary of lesson learnt, outcome and conclusion of the whole project and explain what have been done and what further improvements could be done.

# CHAPTER: 2

# BACKGROUND STUDY AND LITERATURE REVIEW

## 2.1 Background study

In present context, the system that is currently being followed by the guitar stores. Presently all the functionalities are done manually. If customer wants to order or buy guitar, he should visit the guitar shop but limited options. Offline guitar stores are typically located in specific physical locations, which can limit accessibility for customers who are located far away or in remote areas. This can make it difficult for some customers to visit and explore the available options. They have limited physical space, which restricts the number of guitars, and accessories they can display and offer for sale. Visiting guitar store requires customers to allocate time and effort to travel to the store and spend time browsing through the available options. It makes harder for customers to return or exchange a guitar if they are not satisfied with their purchase or if there is a defect, so to avoid these limitations and make the system working more accurately it needs to be computerized.

## 2.2 Literature Review

In today's world, there are many websites that has been developed or in developing process available where some are free and some need to be subscribed. Similar systems applications are found in different web portals and different applications likewise Google play store, apple store, Microsoft store and some are third parties applications.

In present context, people are being surrounded with digital devices like mobiles, computers, laptops etc. Thus these devices can be used for different trading activity quickly and easily. Person can get those shopping facility without any geographical restrictions access to specialized stores for enthusiasts. Those enthusiasts can purchase their need items without any hesitation of visiting stores physically. They can order their parcels on their own residential area through the help of online e-commerce portals. On the concept of this e-commerce business we have been developing "Online guitar store system" which prioritizes guitar and related products where needy person can get chance to purchase their wished item through our system.

For the first time in, Sastodeal.com [1] is a leading e-commerce company in Nepal,

established in December 2011 when internet penetration was only around 9%. They began with just Rs. 50,000 and a small rented garage, but today have millions of customers and thousands of vendors/partners all over Nepal. Their goal is to provide affordable products and ensure they are delivered on time regardless of location. Thulo.com [2] is also an ecommerce site operating in Nepal since 2013. It claims to be the first online shopping site in Nepal to offer a "Cash on Delivery" option. [3]

These large online retailers have a massive inventory which offers a wide range of products, including guitars but avoid accurate focus to guitars. So, online guitar systems often curate their inventory to focus solely on guitars and related equipment. This means you'll find a wider variety of guitar brands, models, and styles tailored specifically for musicians. These platforms may also offer niche brands that may not be as readily available on general marketplaces like thulo.com, sastodeal.com, daraz.com [4] etc. Our system provides knowledgeable staff or experts who can assist you with selecting the right guitar based on your skill level, playing style, and musical preferences. They can provide personalized recommendations and guidance to help you make an informed decision, which may not be available on daraz.com, thulo.com, sastodeal.com etc. where the focus is on general customer reviews. Our system generally offer dedicated customer support for any inquiries or issues related to guitars and accessories. You can reach out to their support team for assistance with product selection, technical queries, or any concerns you may have.

In present context of Nepal, different e-commerce site based on music instruments like Treasure music [5] and Guitar Shop Nepal [6] have been popular among guitarists of Nepal. Where musicians can enjoy large inventories related to guitars and musical accessories. These sites have been distributing all kind of musical accessories to musicians for better music environment. Also provides different warranty based products with maintenance services. Thus Our "Online guitar store system" has been developed for distribution of guitar which prioritized guitar more than other musical based products. This system is more focused to the guitar brands, models, and styles tailored which lead quality products to guitarists.

# CHAPTER: 3

# SYSTEM ANALYSIS AND DESIGN

## 3.1 System analysis

In this project our system is based on waterfall model. Because this model is clear and well-defined structure for software development. Each phase has specific deliverables and objectives, making it easier to plan and estimate project timelines and resources. And also, this system fulfil all the requirements of the project which are all stable and unlikely to change significantly during the development process. As this model emphasizes documentation at each phase, this model ensures that each phase is completed before moving on the next, providing a systematic progression. Waterfall model often includes milestone reviews at the end of each phase, allowing stakeholders to estimate progress, provide feedback and make informed decisions. Waterfall model provides clear visibility into progress, provide feedback, and make informed decisions. Waterfall model provides clear visibility into project progress and status. This can be helpful for project management and communication.

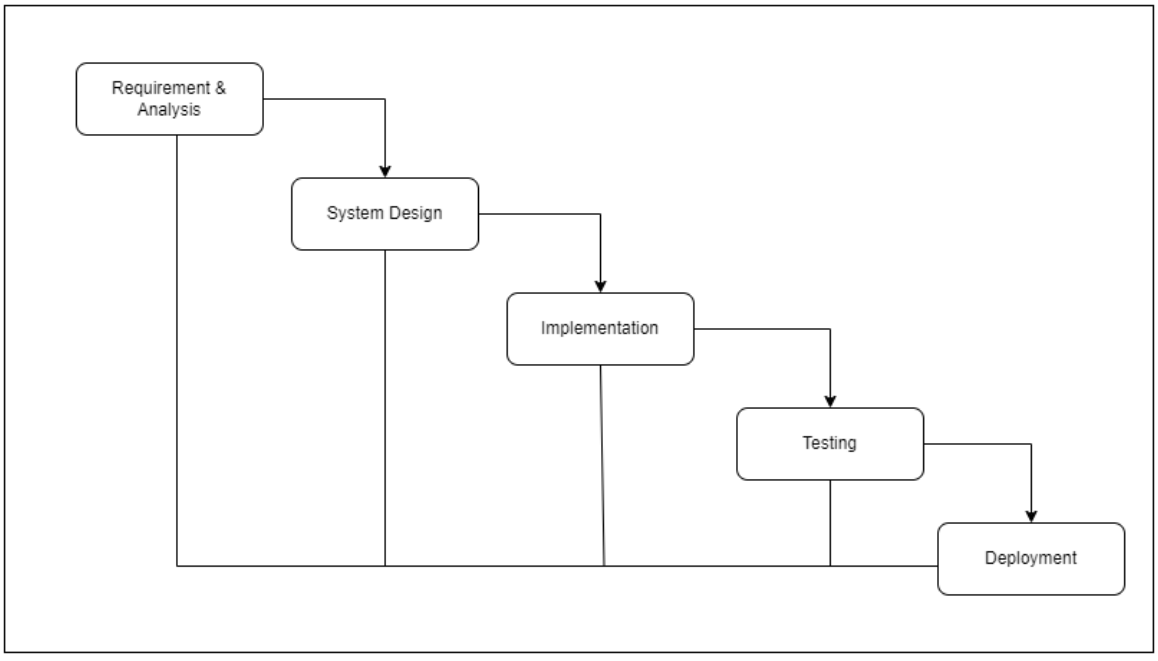



***Fig3.1: Waterfall Model for Online Guitar Store System***

### 3.1.1 Requirement Analysis

The requirements are to be collected before starting projects' development life cycle. To design and develop system, functional as well as non-functional requirement of the system has been studied.

**I. Functional Requirements:**

- User Registration: Users should be able to create an account and login to entry orders.
- Product Details: Each guitar listing should include detailed information such as specifications, images, pricing, and availability.
- Product Catalog: The online store should have a catalog of guitars categorized by types and brands.
- Shopping Cart: Users should be able to add guitars to their cart, view the contents, update quantities, and proceed to checkout.
- Secure Checkout: The online store should provide a secure and convenient checkout process, allowing users to enter shipping details, choose payment options, and complete the purchase.
- Customer Support: Provide options for users to contact customer support via email, phone, or live chat for assistance, inquiries, or returns.
- User Reviews and Ratings: Allow users to leave reviews and ratings for guitars, promoting user engagement and aiding other customers in their purchasing decisions.
- Admin Registration: Admin should be able to register and login to the system.
- Manage Product: Admin should be able to manage information of the products, users.

## Use-case diagram

Use case diagram are considered for high level requirement analysis. It is used to capture the changes that occur in our system. It helps to solve different problems and improve the system. It ensures that all the components of the system behave as it is supposed to.

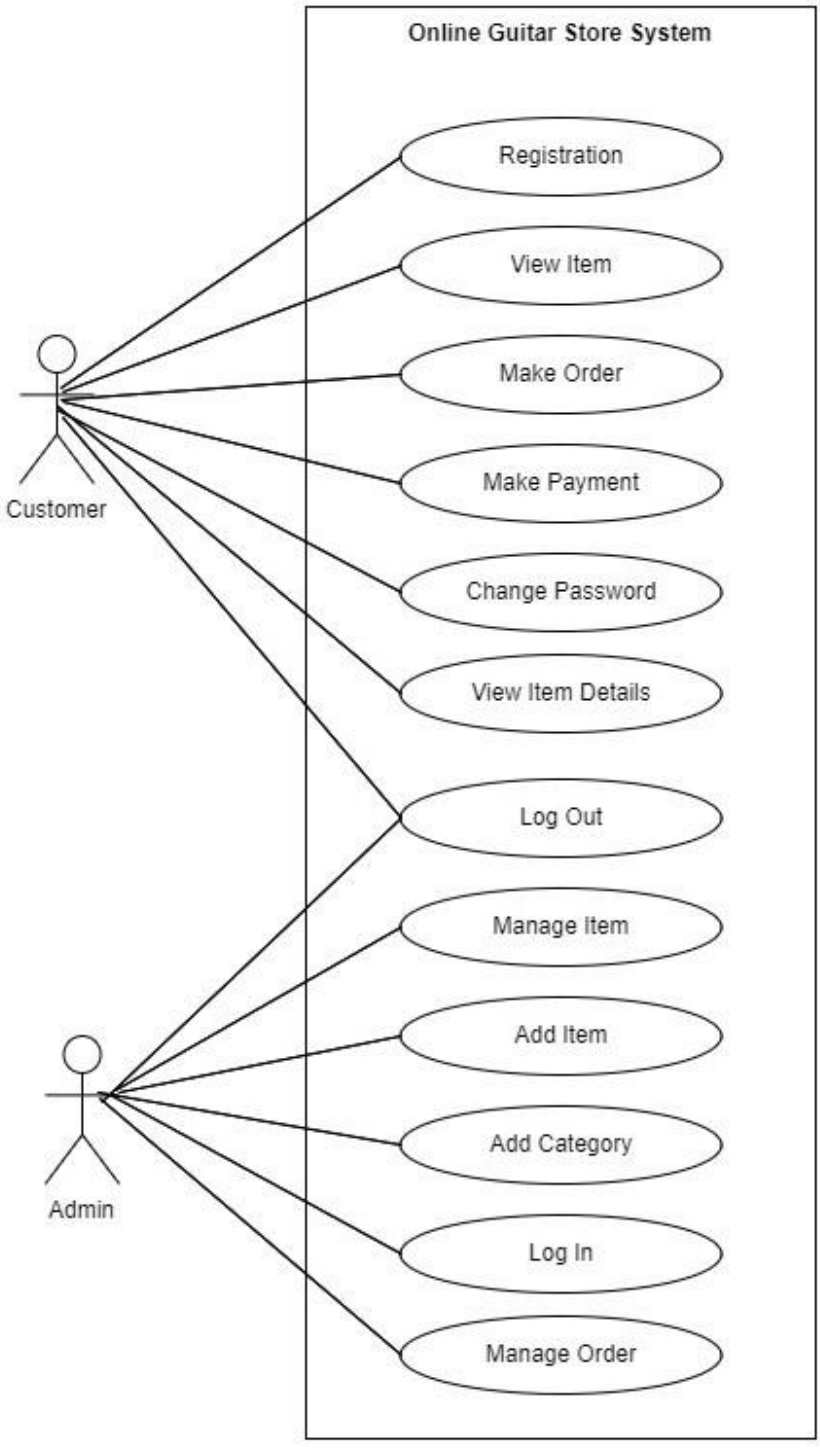



***Fig 3.2 Use Case Diagram of Online Guitar Store System***

**II. Non-Functional Requirements:**

- Performance: The website should load quickly and handle a high volume of traffic without significant slowdowns.
- Scalability: The System should be designed to handle increased traffic and a growing number of products without sacrificing performance.
- Security: The system should provide secured user authorization and authentication. And should implement secure protocols for data encryption.
- User-Friendly Interface: The online guitar store design should be responsive user interface, ensure ease of navigation, clear product presentation and smooth user experience across different devices.
- Payment Gateway Integration: Integrate with secure and popular payment gateways to provide a variety of payment options to customers.
- Mobile compatibility: The system should be mobile friendly and responsive.

### 3.1.2 Feasibility Study

The feasibility study concluded that the project is able to be implemented successfully as it was carefully planned.

- **Technical Feasibility**

  In technical feasibility of an online guitar store system it involves evaluating the necessary infrastructure, software, and technical requirements. It identifies the necessary integrations with payment Gateways**.** It determines the required expertise and resources for developing a user-friendly and secure e-commerce website. And also evaluates the hosting options that can handle the anticipated traffic and provide sufficient storage space for the product catalog and media files. It also determines the database management system required to handle inventory, customer data, and transactions efficiently.

- **Operational Feasibility:**

  The operational feasibility involves evaluating the resources, Employee, and processes required to run the online guitar store system effectively. It determines

the required staffing levels to manage inventory, customer support, website maintenance, and marketing activities. And also evaluates the capability to efficiently manage inventory, including tracking stock levels, updating availability in real-time, and coordinating with suppliers to ensure a continuous supply of guitars. It also estimates all the ability to provide responsive customer support through various channels, such as chat, email, or a Phone call. It determines the processes and partnerships required for efficient order fulfillment and delivery.

- **Economic Feasibility:**

  Economic feasibility study involves analyzing the costs and potential returns associated with the online guitar store system. It evaluates the initial investment required for website development, infrastructure setup, software licensing, and ongoing maintenance. Include all the ongoing costs required with inventory management, Employee, customer support, marketing, hosting, payment gateway fees, and shipping services. Also, analysis the revenue of the online guitar store system, considering factors such as product pricing, sales, and potential market share. Also implements secured payments to protect customer payment information.

- **Schedule Feasibility Study**

  The system is completed within scheduled time and do not exceed the scheduled time.

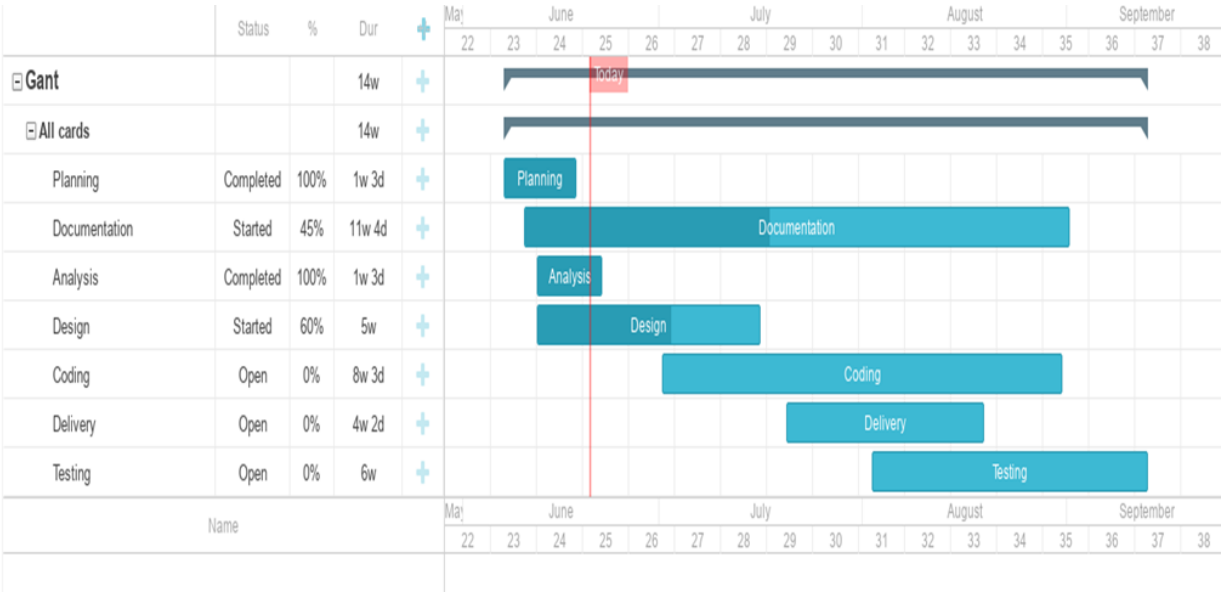



***Figure 3. 3: Gantt chart for Online Guitar Store System***

### 3.1.3 Data modelling: ER-diagram

An entity relationship diagram (ER-diagram), also known as an entity relationship model, is a graphical representation that shows relationships among people, objects, places, concepts or events within an information technology system. Following ERD shows relationship between different entities involved in the running system.

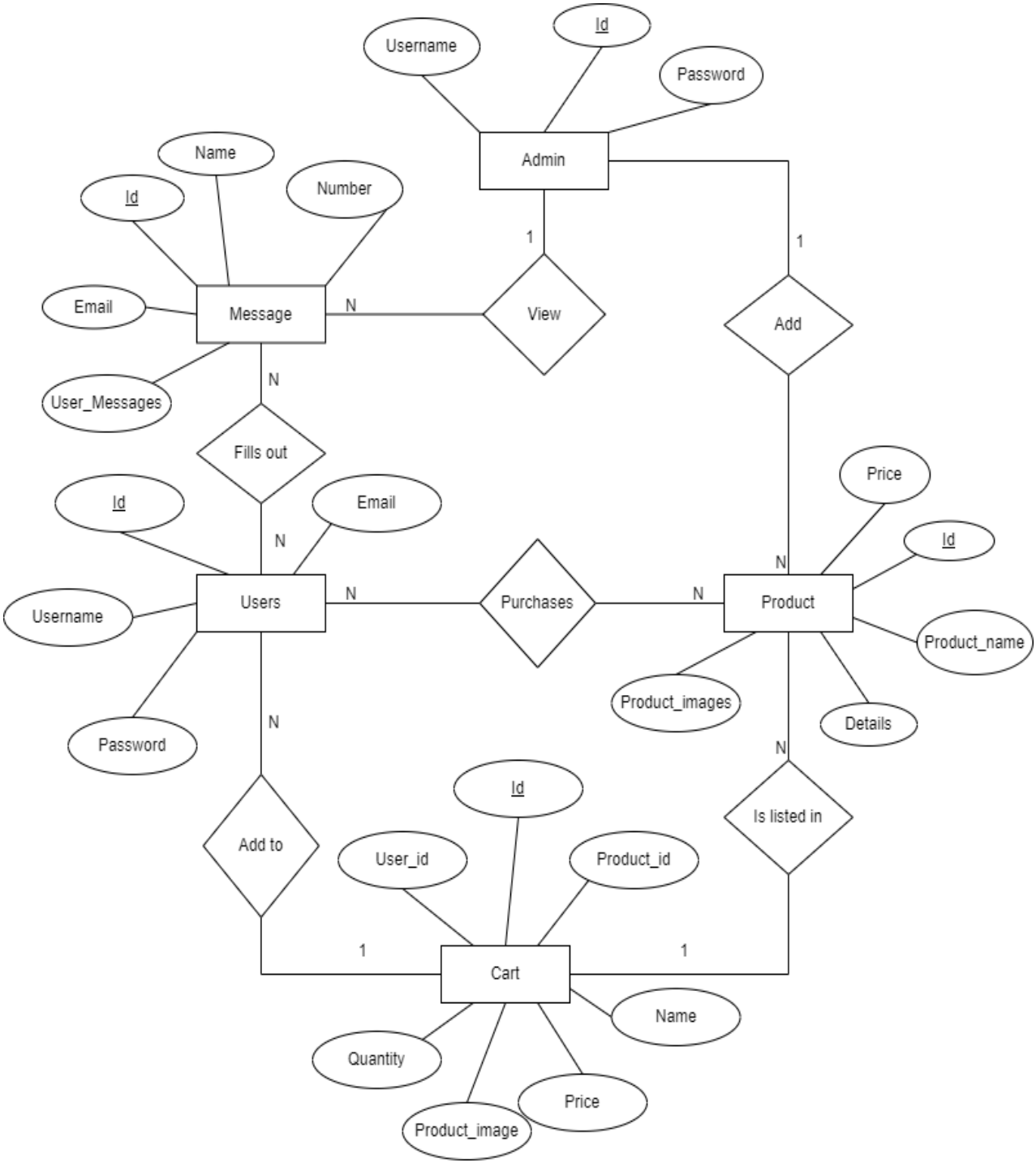



***Figure 3. 4: ER-diagram for Online Guitar Store System***

### 3.1.4 Process modelling: DFD

A data flow diagram (DFD) maps out the flow of information for any process or system. It shows organizational needs fulfilled by system. DFD for Online Guitar Store System is given below:

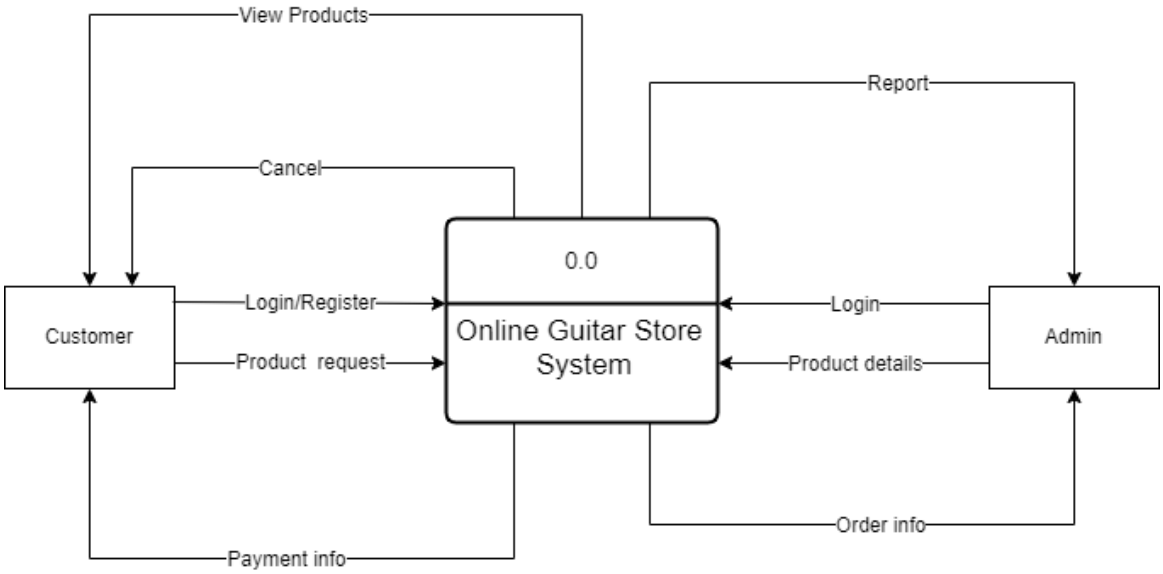



***Figure 3. 5: Level 0 DFD for Online Guitar Store System***

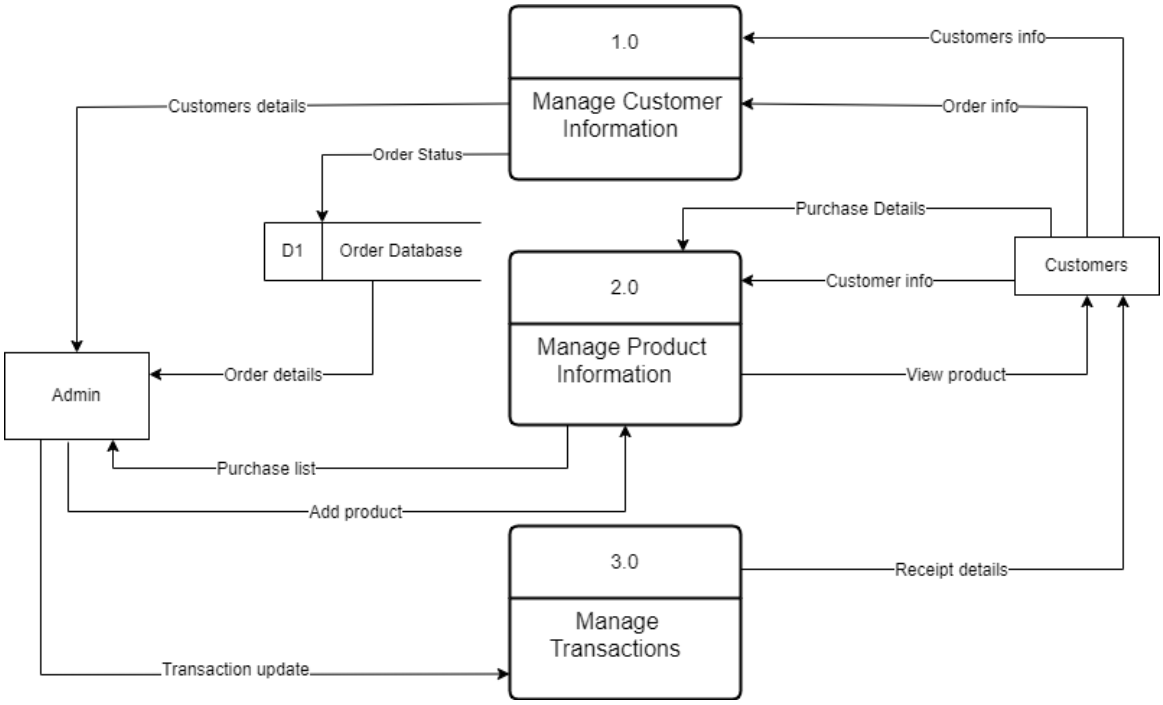



***Figure 3. 6: Level 1 DFD for Online Guitar Store System***

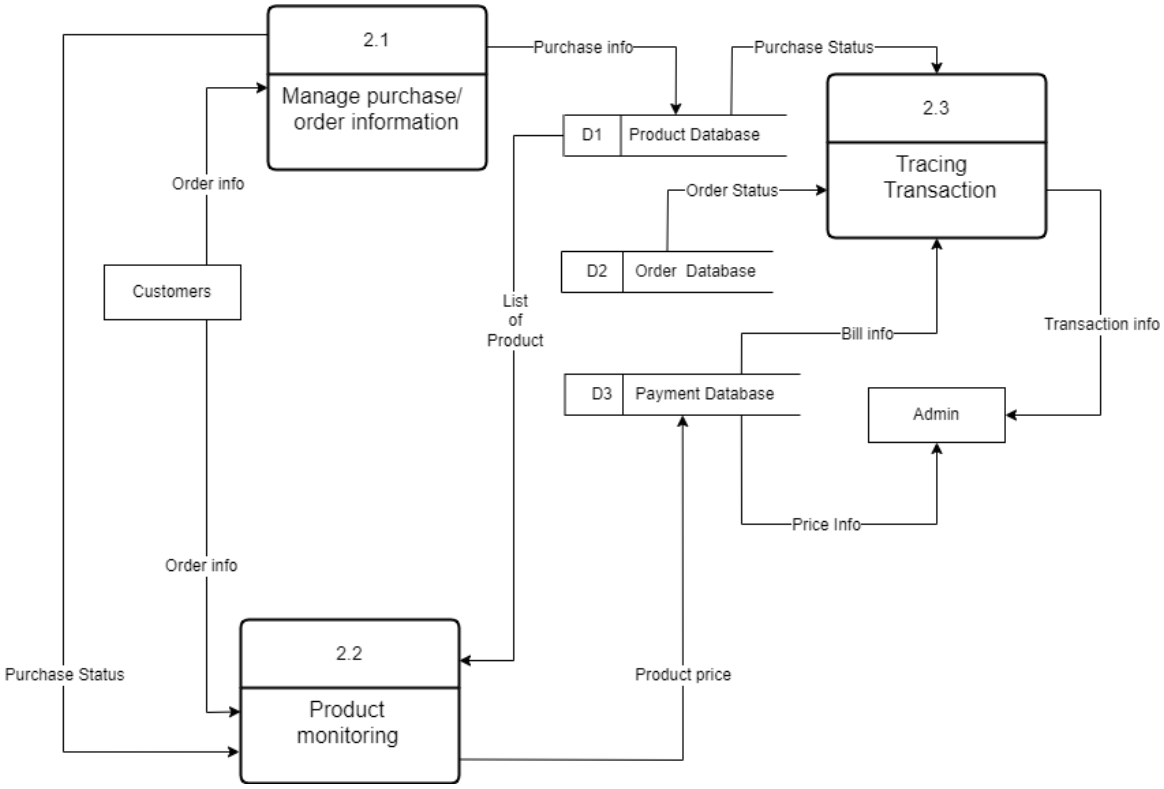



***Figure 3. 7: Level 2 DFD for Online Guitar Store System***

## 3.2 System design

To realize the different functional requirement of the system in graphical form, different design diagram of the system has been prepared which are as follows:

### 3.2.1 Architectural design

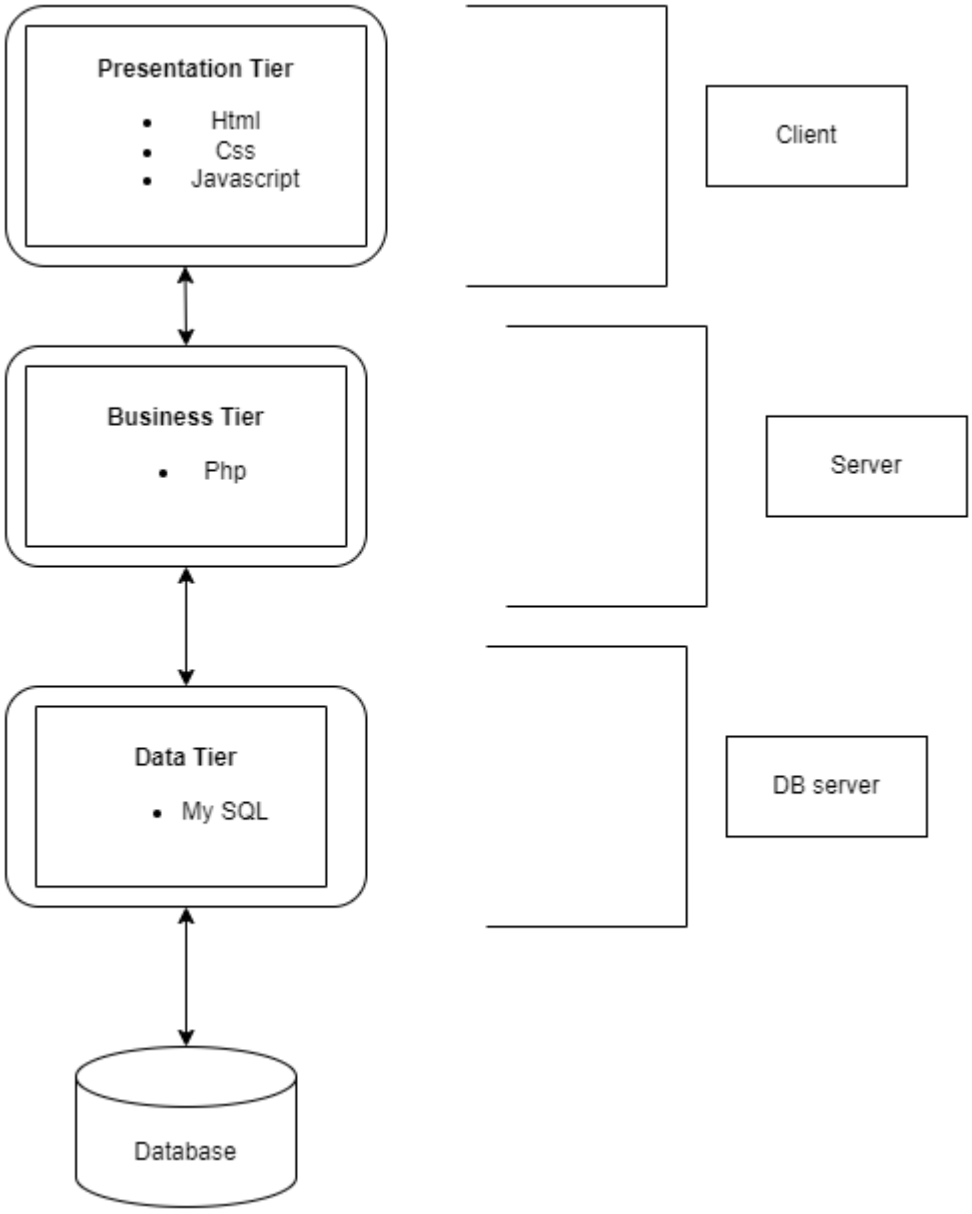



***Figure 3. 8: Architectural design for Online Guitar Store System***

### 3.2.2 Database schema design

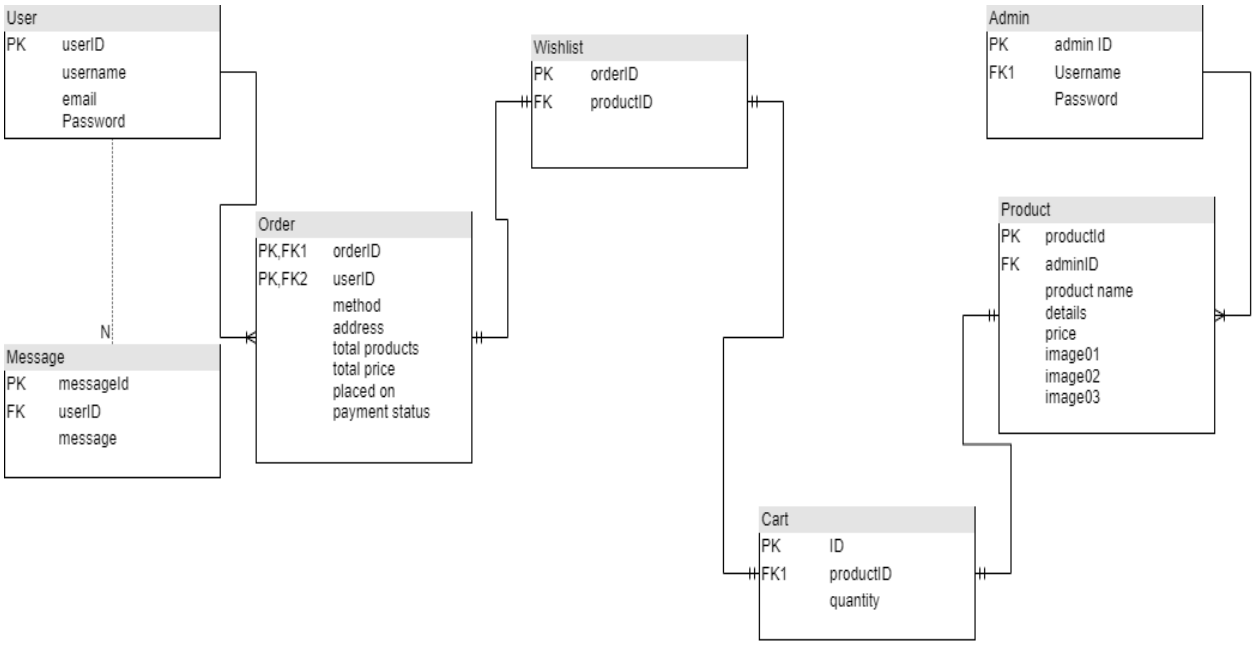



***Figure 3. 9: Database schema design for Online Guitar Store System***

### 3.2.3 Interface design (UI/UX)

User interface (UI) design is the process designers use to build interfaces in software or computerized devices, focusing on looks or style. UI design refers to graphical user interfaces.

**Home page UI**

The user interface for home page of the system is shown below:


***Figure 3. 10: Home page for Online Guitar Store System***

**Login page UI**

The user interface for login page of online guitar store system is shown below:

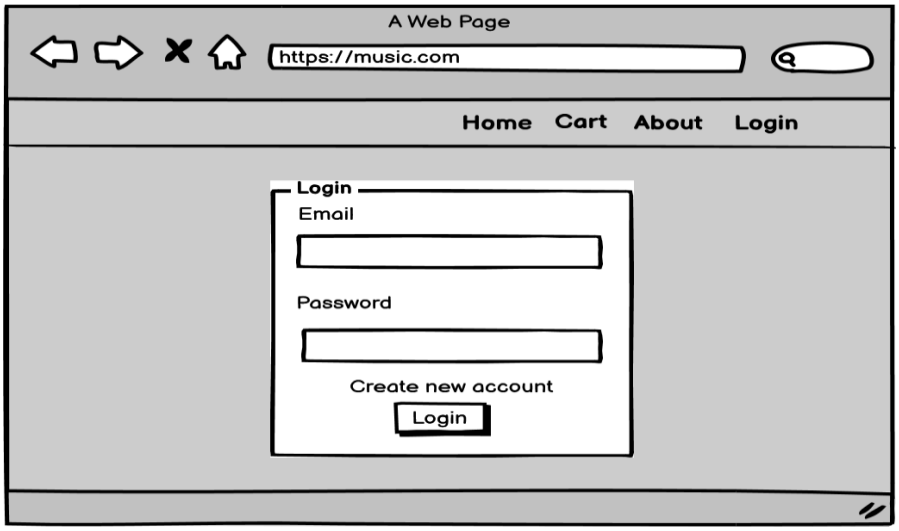



***Figure 3. 11: Login page UI for Online Guitar Store System***

**Registration page UI**

This system provides registration page where user can register to create an account to get access to the system. The user interface for registration page of online guitar store system is shown below:

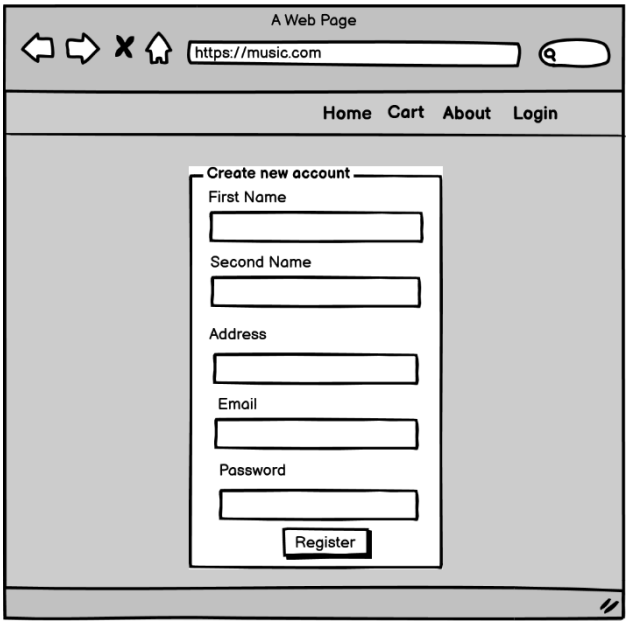



***Figure 3. 12: Registration page UI for Online Guitar Store System***

**Product page UI**

This system also provides product page where user can view product details, price, models and brands to purchase guitars and accessories. The user interface for product page of online guitar store system is shown below:

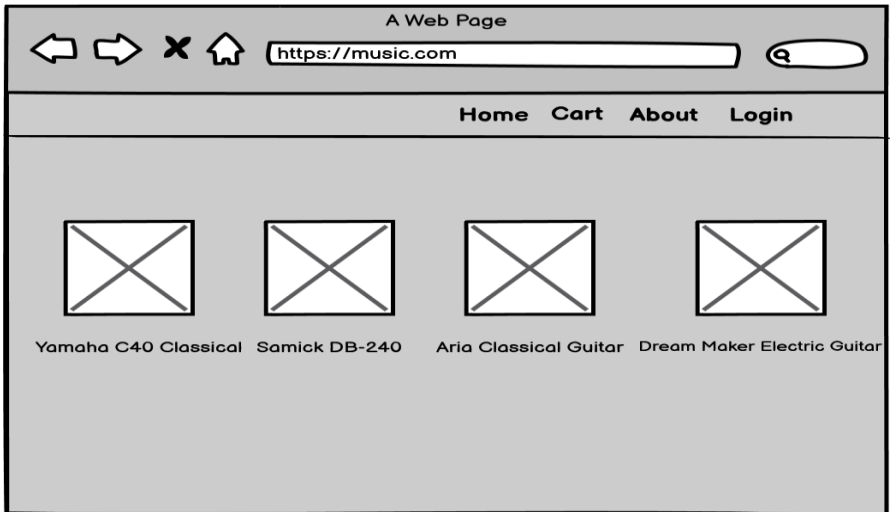



***Figure 3. 13: Product page UI for Online Guitar Store System***

**Payment page UI**

This system provides Payment page where user can pay for the product they desired for. The user interface for payment page of online guitar store system is shown below:

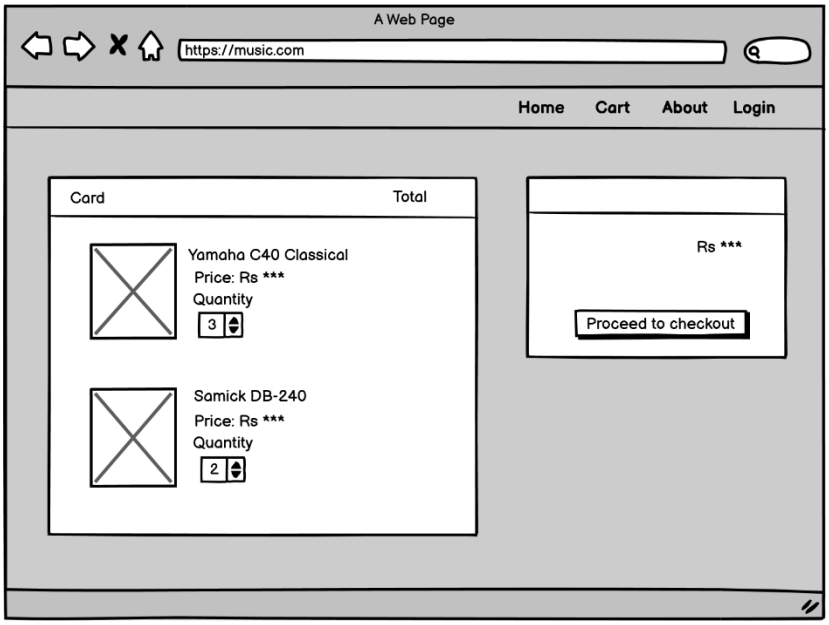



***Figure 3. 14: Payment page UI for Online Guitar Store System***

### 3.2.4 Physical DFD

A Physical Data Flow Diagram is a graphical representation of how data flows through a system. It can be used to show the flow of data between people within each element.

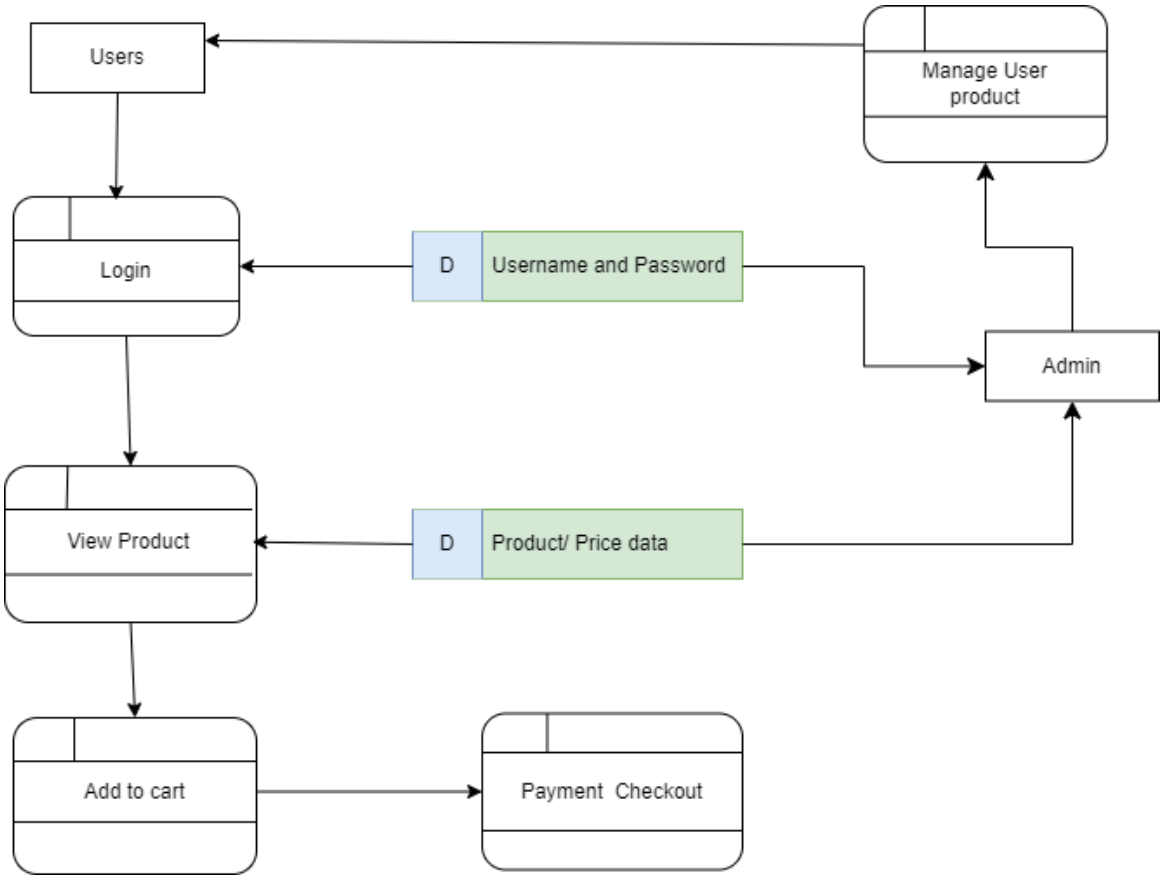



***Figure 3. 15:Physical DFD for Online Guitar Store System***

## 3.3 Description of algorithm

In this "Online guitar store system" we are using search algorithm. When it comes to implementing a search algorithm for an online guitar store system, one common and effective algorithm is the TF-IDF (Term Frequency-Inverse Document Frequency) [7] algorithm. TF-IDF is used by search engines to better understand the content that is undervalued.TF (Term Frequency) measures the frequency of a term within a document. It indicates how often a term appears in a specific document compared to the total number of terms in that document. Where, IDF (Inverse Document Frequency) measures the rarity or importance of a term across the entire corpus (Collection of text). It quantifies how much information a term provides by considering how many documents contain the term. This

algorithm work as follows:

- Corpus Creation: In this algorithm, the first step is to create a corpus which is a collection of documents or product descriptions in the case of a proposed system online guitar store. Each document represents a guitar or a product listing.
- Tokenization: The corpus is tokenized, meaning that each document is split into individual terms or tokens. This process generally removes the stop words likewise (“the”, “is”,”at”,”which” etc.) and apply stemming (removing prefixes or suffixes from a word) to reduce words to their root form.
- Term Frequency (TF) Calculation: For each document, the algorithm calculates the term frequency, which represents how often a term appears within that document. The TF value can be calculated using various methods, such as raw term count or logarithmic scaling to give less weight to very frequent terms.
- Inverse Document Frequency (IDF) Calculation: IDF measures the importance of a term across the entire corpus. It is calculated by taking the logarithm of the ratio between the total number of documents in the corpus and the number of documents that contain the term. . Terms that appear frequently in many documents receive a lower IDF value, while terms that appear in a limited number of documents receive a higher IDF value.
- TF-IDF Calculation: The TF-IDF score for a term within a document is obtained by multiplying its TF value by its IDF value. This score reflects the relative importance of the term within the document and the entire corpus. Terms with higher TF-IDF scores are considered more relevant to document.
- Query Processing: When a user enters a search query, the query is processed using the same tokenization and stemming techniques as the corpus. The TF-IDF scores are calculated for the terms in the query.
- Search result presentation: The search results, typically a list of guitars or product listings, are presented to the user based on their relevance scores. The user can then browses and select the desired guitars.

**IMPLEMENTATION OF TF-IDF SEARCH ALGOITHM**

```
// Function to calculate TF-IDF for a term in a document
function calculateTFIDF($term, $document, $documentCollection) {
    // Check if $term is empty
    if(empty($term)) {
        return 0;
    }
    // Calculate Term Frequency (TF)
    $termFrequency = substr_count(strtolower($document), strtolower($term)) / str_word_count(strtolower($document), 0);
    // Calculate Inverse Document Frequency (IDF)
    $documentFrequency = 0;
    foreach ($documentCollection as $doc) {
        if (stripos($doc, $term) !== false) {
            $documentFrequency++;
        }
    }
    // Check if document frequency is zero
    if($documentFrequency == 0) {
        return 0;
    }
    $inverseDocumentFrequency = log(count($documentCollection) / $documentFrequency);
    // Calculate TF-IDF
    $tfidf = $termFrequency * $inverseDocumentFrequency;
    return $tfidf;
}
```

# CHAPTER: 4

# IMPLEMENTATION AND TESTING

## 4.1 Implementation

### 4.1.1. Tools Used

To implement the project, following tools are being used:

**Draw.io**

It was used for designing the system designs such as system flowchart, ER diagram, relational model, architectural design, use case diagram etc.

**Visual paradigm**

It was used for designing the DFD and physical DFD.

**HTML CSS JavaScript**

HTML, CSS and JavaScript was used for the front-end development. HTML was used for the webpage elements.CSS was used for providing own styling to the components. JavaScript was used for client-side validations and adding dynamic components to the website.

**BOOTSTRAP**

Bootstrap was used for adding responsive components in our system as well as other bootstrap components were used such as buttons, cards , nav bar etc.

**PHP**

PHP was used as the back-end programming language. The project is completely based on PHP.

**My SQL**

My SQL was used for the implementation of the database of system. In this system it is used for creating database and tables, performing updates on the data and deleting the data from the database.

**XAMPP**

As mentioned above HTML CSS and PHP are the languages used in this project. As PHP is server-side language it requires a server to be interpreted. Therefore, XAMPP server is used in our online guitar store system. This software was used to connect to Apache and My SQL.

**Visual Studio Code**

The codes of the system were written using Visual studio code.

**MS Word**

This software is used for writing and editing the documentation of online guitar store system.

### 4.1.2 Implementation Details of Modules

The major functional modules of online guitar store system and their implementation are shown in the figure below:

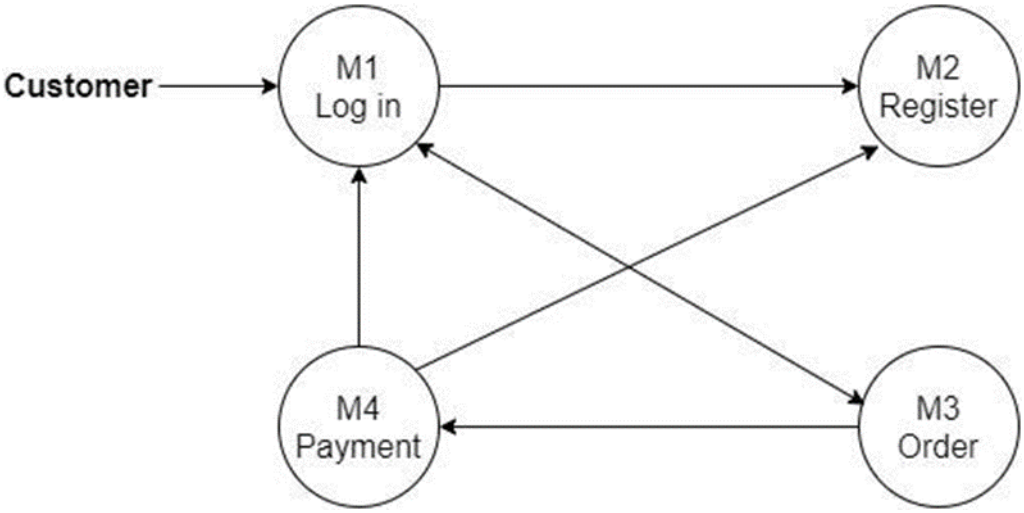



***Figure 4. 1: Implementation of modules***

In the above figure, there are four modules M1, M2, M3 and M4. Each module is related with the other module as shown in the figure. If the customer is not registered he/she must register into the system then only he/she can login into the system. Likewise, for payment module the customer must be logged in the system. When the customer wants to make order he/she must be registered in the system.

**Table 4. 1: Descriptions of modules**

| Code | Module Name | Description | Argument | Return Types |
|---|---|---|---|---|
| M1 | Login Module | This modules has been used for logging username and password. | Email<br>Password | Boolean |
| M2 | Register Module | This modules has been used for register user into the system. | Username<br>Email<br>Password | Boolean |
| M3 | Order Module | This modules has been used for view and order according to user's wish list. | OrderID<br>UserID<br>Payment method<br>Address<br>Total product<br>Total price | Void |

| | | | | |
|---|---|---|---|---|
| | | | Status | |
| M4 | Payment module | This modules accept payments from users and stores the payment details in database. | Email<br>Card number<br>Date<br>Amount<br>Username | Boolean |

## 4.2 TESTING

### 4.2.1. Unit Testing

In unit testing, online guitar store system is designed in modularized pattern and each module is tested. Until this system get the accurate output from the individual module, this system is maintained on the same module. The input forms is tested so that they do not accept invalid input.

**User registration**

**Table 4. 2: Testing for user registration**

| S.No | Test Name | Input | Expected Output | Actual Output | Result |
|---|---|---|---|---|---|
| 1 | Enter Invalid Username , Email address, Password click register | Username: Mingmar<br>Email:ming12<br>Password:111 | Incorrect Email | Registration Not success! | Pass |
| 2 | Enter Valid Username , Email address, Password click register | Username: Mingmar<br>Email:mingmar1@gmail.com<br>Password:111 | Registration Success! | Registration Success! | Pass |

**User Login**

**Table 4.3: Testing for User login**

| S.No | Test Name | Input | Expected Output | Actual Output | Result |
|---|---|---|---|---|---|
| 1 | Enter Invalid Email address, Password click login | Email:ming111<br>Password:111 | Incorrect Email | Login Not success! | Pass |
| 2 | Enter Valid Email address, Password click login | Email:mingmar1@gmail.com<br>Password:111 | Login Success! | Login Success! | Pass |

### 4.2.1. System Testing

In system testing, whole system is tested below:

**Test plan**

| S.No | Test Plan |
|---|---|
| 1 | To check if registration modules works properly. |
| 2 | To check if login modules works properly. |
| 3 | To check if product added successfully. |
| 4 | To check if user can shop and pay successfully. |

**User Order**

**Table 4. 4: Testing for User Order**

| S.No | Test Name | Input | Expected Output | Actual Output | Result |
|---|---|---|---|---|---|
| 1 | Shop | Click shop now button | Product shown | Product shown | Pass |
| 2 | Cart | Click add to cart button | Added successfully | Added successfully | Pass |

**Admin adding products**

**Table 4. 5: Testing for Adding products from admin**

| S.No | Test Name | Input | Expected Output | Actual Output | Result |
|---|---|---|---|---|---|
| 1 | Enter Valid product name, price, required images and description Click add | Product Name: Stratocaster<br>Product Price: 12000<br>Image 01:str.jpeg<br>Image 02:str2.png<br>Image 03:str<br>Description: Enjoy your Strat | Invalid images | Invalid images | Pass |
| 1 | Enter Valid product name, price, required images and description. Click add | Product Name: Stratocaster<br>Product Price: 12000<br>Image 01:str.jpeg<br>Image 02:str2.png<br>Image 03:str3.png<br>Description: Enjoy your Strat | Added successfully | Added successfully | Pass |

**User Payment**

**Table 4. 6: Testing for Payment**

| S.No | Test Name | Input | Expected Output | Actual Output | Result |
|---|---|---|---|---|---|
| 1 | Enter Invalid name, contact no, email,<br>Payment method<br>Address line1,line2<br>City and province no<br>click proceed to checkout | Full name: Mingmar Sherpa<br>Contact no: 983653635122<br>Email:mingmar1@gmail.com<br>Payment method: E-sewa<br>Address line 01:Aarubari<br>Address line 02:Boudha<br>City:KTM<br>Province no:1 | Contact number exceed than 10. | Contact number exceed than 10. | Pass |
| 2 | Enter name, contact no, email,<br>Payment method<br>Address line1,line2<br>City and province no<br>click proceed to checkout | Full name: Mingmar Sherpa<br>Contact no: 9836536351<br>Email:mingmar1@gmail.com<br>Payment method: E-sewa<br>Address line 01:Aarubari<br>Address line 02:Boudha<br>City:KTM<br>Province no:1 | Order placed Successfully | Order placed Successfully | Pass |

# CHAPTER 5

# CONCLUSION AND FURTHER ENHANCEMENT

## 5.1 Lesson learnt

This project has helped to learn how to develop web-based online guitar store system and implement it across various platforms. It helped to get familiar with both client-side and server-side programming languages. It helped to learn how to host a web application locally on host computer. It helped to learn how a customer could make order and add items to cart. It also helped to know how to implement payment gateway using Stripe. It also helped to get familiar with Bootstrap and its components. It helped to learn how to do pair programming and finish the project within the schedule. It helped to know how to implement theoretical knowledge gained from various subjects in practical life. This project has helped to gain great skills for project management and software development.

## 5.2 Conclusion

It is presented that why and how the online guitar store systems can be used and built. This system is built for guitar players who have less access to quality guitar products and dealing with busy lives; this could help them to get branded quality guitars with multiple choices and save their quality time. With private login system customer can place a secure online order and also can system customer can place a secure online order and also can navigate through the menus and customize their orders. The experience in developing this software was to show the abilities of wireless communication and in refining the business management and decent service delivery etc. By this application customer can get branded quality guitars as their choices. Moreover, this system is designed for all the guitarist who dreams to get their guitars wish list.

## 5.3 Future Recommendations

The system can be extended in future adding the features in a different way. The system can be modified to let the users choose variety of features by themselves. Different projects can be shown as recommended projects by the system in Users side based on what users' capabilities. The following section describes the work that will be implemented with future releases of the software.

- Customize orders: Allow customers to customize guitar orders
- Enhance User Interface by adding more user interactive features. Provide Deals and promotional Offer details to home page. Provide latest products added to the system.
- Delivery Options: Add delivery option and tracing order.
- Order Process Estimate: Provide customer a visual graphical order status bar.

# REFERENCES


[1] "Sastodeal," Sastodeal PVT LTD, 2011. [Online]. Available: https://www.sastodeal.com/default/.

[2] "Thulo," ThuloInc. PVT LTD, 2013. [Online]. Available: https://thulo.com/search/?subcats=Y&pcode_from_q=Y&pshort=Y&pfull=Y&pname=Y&pkeywords=Y&search_performed=Y&cid=0&q=guitar.

[3] "Top nepali," Top nepali, [Online]. Available: https://topnepali.com/top-nepali-online-shopping-sites#:~:text=Thulo.Com%20(NepBay),shops%20offered%20by%20the%20sellers..

[4] "Daraz," Daraz 2023, June 2012. [Online]. Available: https://www.daraz.com.np/#. [Accessed July 2023 ].

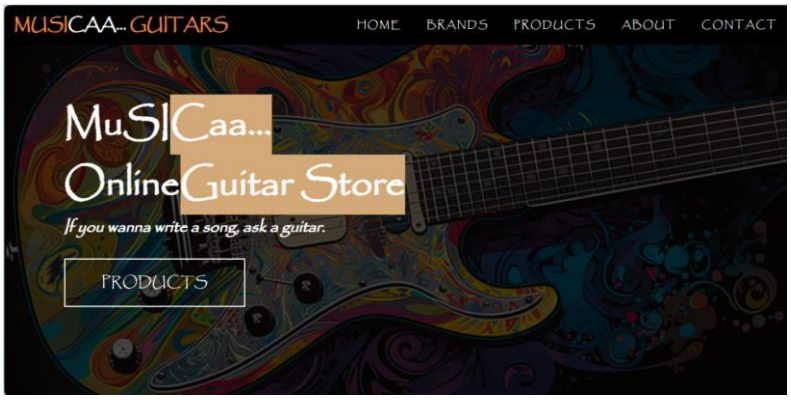
[5] "Treasure music," Treasure music store, [Online]. Available: https://treasuremusicstore.com/.

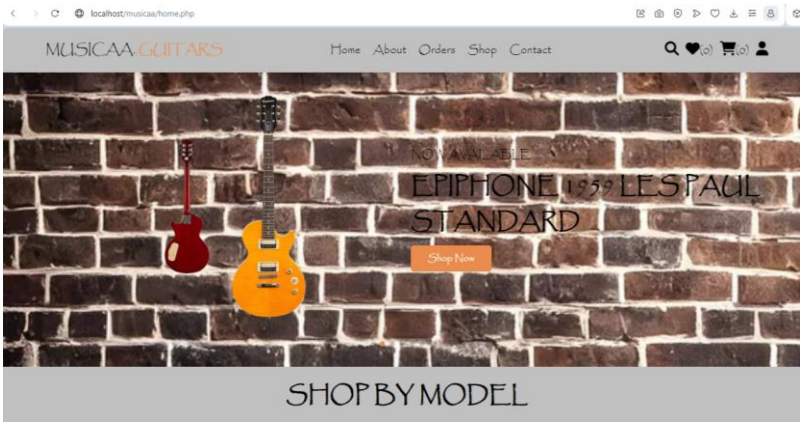
[6] "Guitarshopnepal," Guitar Shop Nepal, [Online]. Available: https://guitarshopnepal.com/.

[7] "link.springer,"SpingNature, [Online]. Available: https://link.springer.com/referenceworkentry/10.1007/978-0-387-30164-8_832.

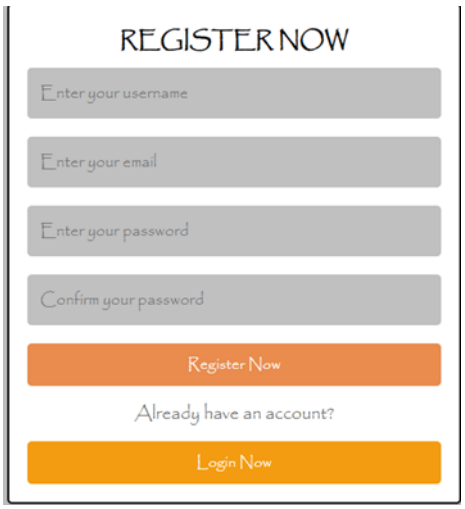
# Appendices

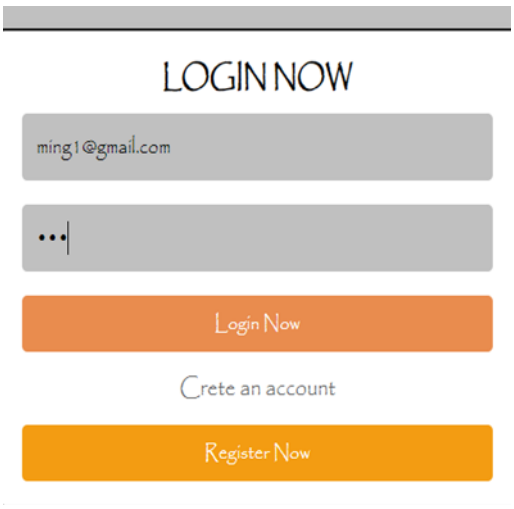
## Home Pages



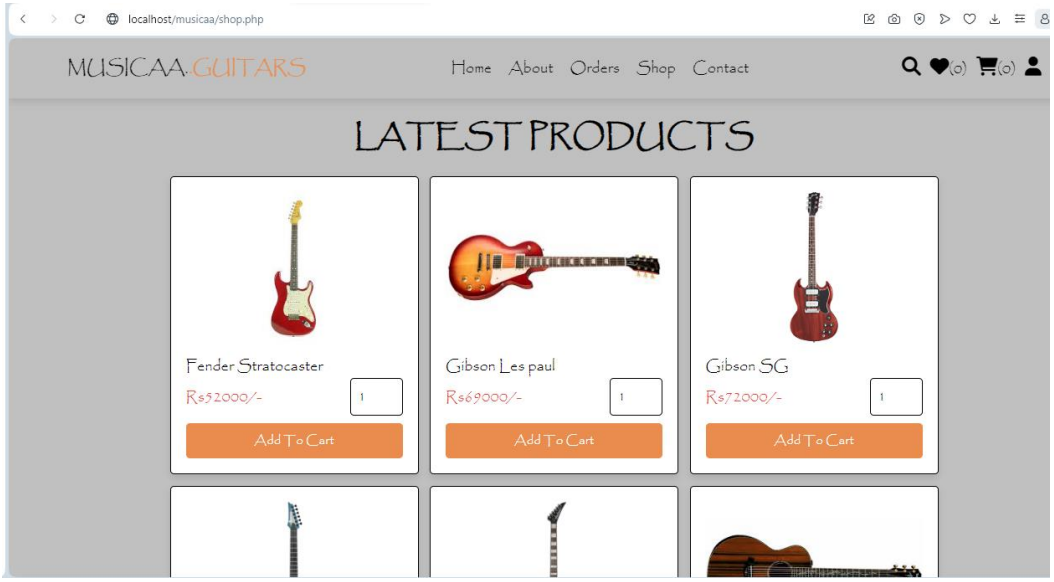



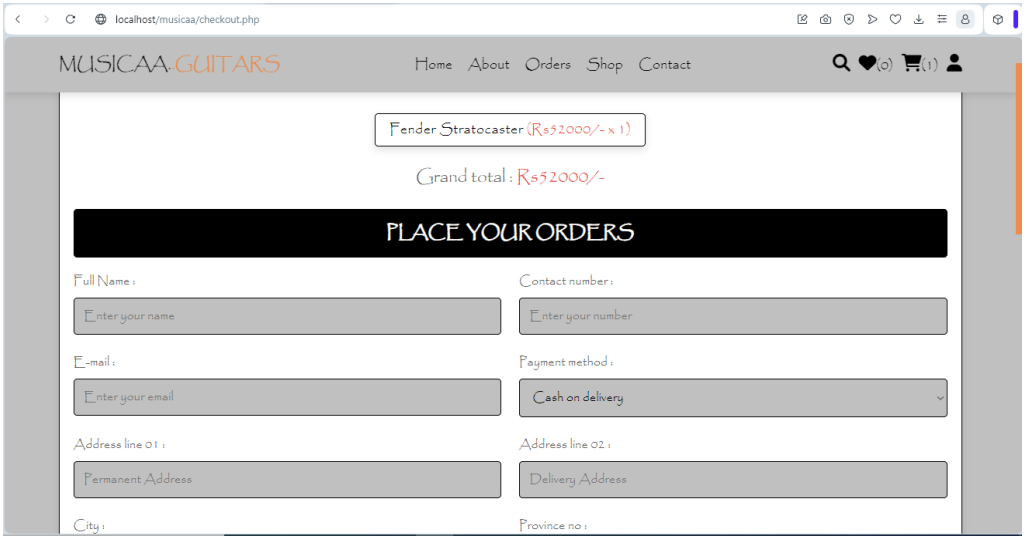

## Login and Registration Pages



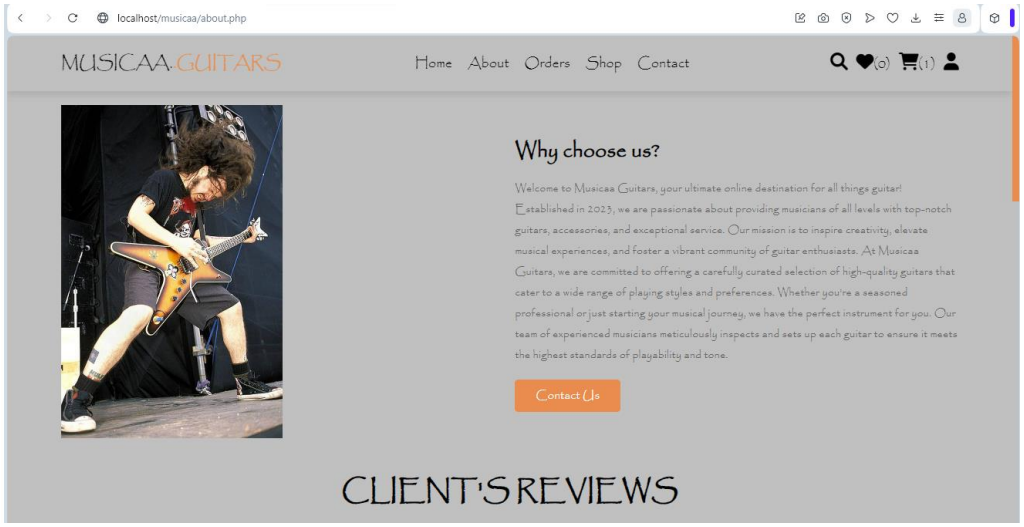



## Order Pages




## About Page



## Customer Service Pages