



WEB- SYSTEM FOR SELLING ARTISTIC PAINTINGS FOR PEOPLE WITH SPECIAL NEEDS



Artful Abilities
People with special needs

WEB PROJECT (2)

FWD291

Full Stack Web Developer

Supervisor: Dr. Rahmah Ali Mohammad Brnawy

Presented by:

Al-Anoud AI-Rashidi

SID #4451790

Wafaa AI-Enezi

SID #4452720

Rima Sultan.

SID #4452417

Raneem AI-Juhani

SID #4453521

Reem Al-Harbi

SID #4452011

Academic Year 1446 AH

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The success and results of this project have required a tremendous amount of guidance, and fortunately we have achieved that throughout our project.

All that we did was, firstly, by the grace of Allah Almighty for His bounty to complete the project, without his blessings, we would not be able to do anything.

Then, we like to express our special thanks and gratitude to our supervisor, **Dr. Rahmah Ali Mohammad Brnawy** , who helped us and directed us throughout the period of work on this project then.

In the end, the support and help from people around us we think it is necessary to thank them, we thank our professors and colleagues who have been supportive of us throughout the project.

Abstract

We recognized the need for a platform to empower individuals with disabilities and support their artistic talents. Through developing this web-based system, our team aims to address the socio-economic challenges faced by people with special needs in expressing their creativity and gaining meaningful employment.

Our system provides an inclusive and accessible digital marketplace specifically designed for artists with diverse abilities to display market and sell their paintings.

By leveraging modern web technologies, our solution aims to promote cultural enrichment, empowerment and social inclusion for users. This project represents our effort to utilize technical skills learned in our academic program to positively impact the community. We hope that our system serves as a step towards greater accessibility, opportunities and recognition for disabled artists.

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Chapter 1: Introduction

1.1 Introduction

The web-based system we propose is designed to provide assistance to individuals with disabilities, commonly referred to as "people of determination," who are actively seeking employment opportunities. This innovative platform focuses on harnessing their artistic talents by allowing them to submit their own artistic paintings for display and potential sale. By doing so, the system aims to serve as a valuable resource that not only facilitates income generation but also promotes the development and refinement of their artistic skills.

The primary objective of this web-based system is to address the unique challenges faced by people of determination when seeking employment. Traditional job search methods may not always cater to their specific needs or provide opportunities that align with their artistic abilities. This system aims to bridge this gap by providing a dedicated platform that showcases their artistic talent and connects them with potential employers or buyers who appreciate their work.

By leveraging the power of the web, this system offers a user-friendly interface where individuals with disabilities can easily upload their artwork and create a comprehensive profile highlighting their artistic skills. The system provides a space for them to showcase their unique style, technique, and creativity, giving them a platform to express themselves artistically.

1.2 Problem Definition

People with disabilities face great challenges in displaying and selling their artwork due to physical or mental disability, and difficulty accessing or dealing with traditional platforms. These difficulties prevent them from achieving independence and investing in effective artistic talent. There is an urgent need to provide a dedicated electronic web system through which they can display and sell their paintings easily and securely, giving

them the opportunity to achieve financial returns, improve the quality of life, and become financially independent. The electronic system includes several tasks:

1.3 Project Objectives

A specially designed electronic system aims to achieve several goals for people with disabilities. Its main objective is to promote inclusive employment by providing job opportunities that enhance their technical abilities and serve as an alternative to traditional employment options. The system also contributes to the development of their artistic skills by encouraging them to create and showcase their artwork, thereby exploring their creativity.

Additionally, the system offers a sustainable source of income by marketing and selling their artworks to interested individuals. It provides people with disabilities a platform to express themselves and share their artistic visions with the public, thus increasing awareness and appreciation for their abilities.

In general, the system aims to empower people with disabilities to pursue their artistic passions and achieve well-being and independence by providing equal and supportive opportunities for them.

1.4 Project Scope

The project scope for our web-based system for displaying artistic paintings for people with special needs includes defining the specific features and functionalities that will be developed. This encompasses aspects such as artwork display, user account creation, purchasing and payment processes, communication between artists and buyers, promotion and marketing strategies, shipping and delivery options, order and sales management, customer support services, and awareness and education initiatives. The scope also outlines the boundaries of the project by specifying what will not be included, ensuring a clear focus on the core objectives of enhancing accessibility and inclusivity in art appreciation for individuals with special needs. By defining the project scope, we aim

to create a well-defined roadmap for the development process, guiding us towards successfully implementing a user-friendly platform that caters to the unique requirements of our target audience .

1.5 Project Timeline

PROJECT TIMELINE






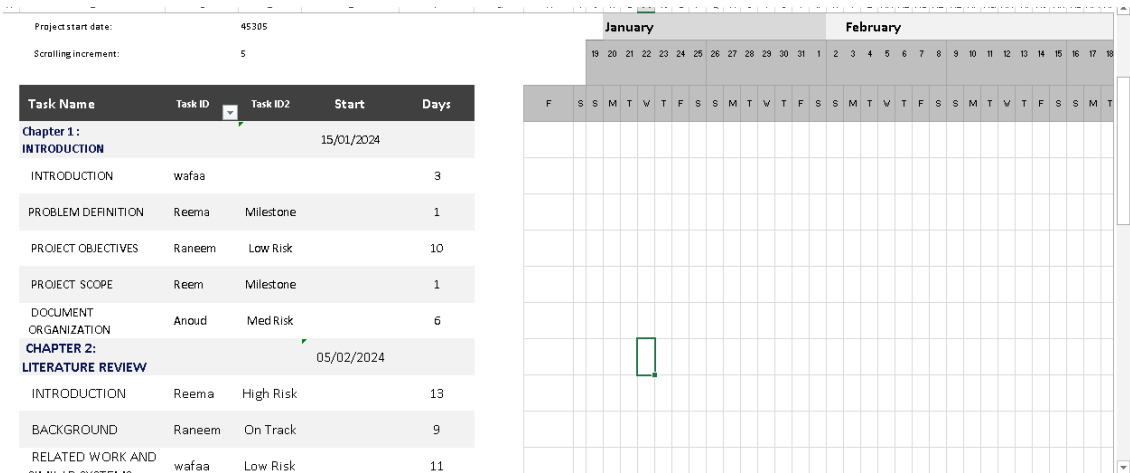
JANUARY 2024	FEBRUARY 2024	MARCH 2024	APRIL 2024	MAY 2024
01	02	03	04	05
<div><div>- Project inception meeting with supervisor</div><div>- Finalize project objectives, scope and timeline</div><div>- Commence literature review and research</div></div>	<div><div>- Complete literature review</div><div>- Define system requirements</div><div><div>- Draft functional and non-functional requirements</div></div><div>- Design system architecture</div></div>	<div><div>- Define use cases and flowcharts</div><div>- Design class, sequence and activity diagrams</div><div>- Design relational database schema</div><div>- Draft user interface prototypes</div></div>	<div><div>- Develop project management and version control plans</div><div>- Draft full system design chapter</div><div>- Implement revisions based on supervisor feedback</div></div>	<div><div>- Complete initial coding and testing</div><div>- Finalize report draft for submission</div><div>- Compile references and appendices</div></div>
				

Figure 1 Project Timeline



A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
	CHAPTER 3:			15/03/2024													
	PROJECT																
	REQUIREMENTS		On Track		4												
	Functional RequirementsAnd Non-Functional Requirements	Reema	Med Risk		8												
	Use Case Diagram	Raneem	On Track		15												
	Flow Chart	Anoud	Goal		7												
	DEVELOPMENT METHODOLOGY	wafaa	Low Risk		6												
	CHAPTER 4:			04/04/2024													
	SYSTEM DESIGN																
	ARCHITECTURAL DESIGN	all	Med Risk		5												
	OBJECT ORIENTED DESIGN	all	High Risk		5												
	Class Diagram	all	Milestone		8												
	Sequence Diagram	all	High Risk		9												
	Activity Diagram	all	On Track		10												
	DATABASE DESIGN	all	Milestone		12												

1.6 Document Organization

This project report is composed of six chapters, each crafted to lead the reader through the essential phases of our web-based system development for selling artistic paintings tailored for individuals with special needs.

Chapter 1 kicks off with the driving forces behind this initiative, aiming to tackle the unique obstacles faced by people with disabilities in showcasing and profiting from their artistic prowess. Here, we define the core problem, outline primary objectives, and provide a broad overview of the project’s scope and timeline.

Chapter 2, we dive into the literature review. This section examines the background, related projects, and similar systems within this domain. By analyzing existing initiatives and best practices, we gleaned valuable insights that enriched the design and development of our proposed solution.

Chapter 3 centers on project requirements and system analysis. We discuss both functional and non-functional requirements, document the overarching system architecture, and describe the development methodology adopted. This chapter also includes use case diagrams and flow charts to illustrate anticipated user interactions and system workflows.

Chapter 4 is dedicated to detailed system design, encompassing architectural, object-oriented, and database design elements. We present class diagrams, sequence diagrams, activity diagrams, and entity-relationship diagrams to capture the various design components underpinning our web-based platform.

Chapter 5 outlines the implementation and testing of the web application. This part provides an overview of the technology stack, tools, and programming languages employed, alongside the outcomes of the testing process to ensure the system's functionality and performance.

Chapter 6 wraps up the report by summarizing key findings, achievements, and the limitations encountered during our project. We also explore potential directions for future work and enhancements to the system, based on our experiences and insights gained throughout the development journey.

By structuring the report in this manner, we aim to offer the reader a comprehensive grasp of our web-based system for selling artistic paintings for individuals with special needs, from initial conceptualization to final implementation and future considerations.

Chapter 2: Literature Review

2.1 Introduction

The literature review and background study chapter play a crucial role in providing a comprehensive understanding of existing research, theories, and knowledge relevant to our project's subject matter. This section serves as the foundation for our exploration into the background information necessary for contextualizing the objectives and methodologies of our web-based system for displaying artistic paintings for people with special needs. By delving into foundational concepts, theories, and historical context pertinent to our project, we aim to gain valuable insights that will inform the development and implementation of our innovative platform. Through this literature review, we seek to identify best practices, learn from prior research and similar systems, and leverage existing knowledge to create a robust and effective solution that caters to the unique needs of individuals with disabilities.

2.2 Background

We were exploring opportunities for our graduation project where we could apply our technical skills to positively impact our community. After some research, we discovered how individuals with disabilities often face challenges participating in cultural and creative activities due to physical, financial or social barriers.

We were inspired by initiatives we found that were using digital platforms to increase arts accessibility worldwide. Through web-based galleries, personalized creative tools and virtual communities, people of all abilities were gaining new avenues to experience and share in visual arts. However, we noticed a lack of centralized high-quality offerings tailored for our local population.

This gave us the idea to develop a custom web application targeting this niche. Through our coursework, we had learned best practices for designing intuitive interfaces, structuring dynamic content management systems, and optimizing websites for assistive technologies. We were confident we could leverage these skills to build an engaging online art showcase and marketplace.

Further background reading helped establish a strong understanding of disability issues, art therapy benefits, and entrepreneurship barriers facing socially disadvantaged groups in our society. We aimed to ground our project concept and features firmly based on real user needs and feedback.

As web developer students with a drive for learning through hands-on projects, we saw this as an ideal opportunity to both sharpen our technical skills and contribute value through a meaningful community-focused application.

2.3 Related work and Similar Systems

This section reviews prior research, studies, projects, and similar systems related to the topic of the graduation project will be discussed. Discussion includes the overview of the system, their features, advantages, and disadvantages.

1) Creative Growth.



Figure 21 Creative Growth.

About the project:

This website seeks to display the art of creative growth for people of determination in the state of California. The center aims to provide artists with special needs and provide

them with a space full of joy for creativity to flourish. Artistic shots are shown on a regular basis But part of the money for selling paintings goes back to the artist himself, and the other part goes back to the site .

Goals:

1. Enabling artists with developmental or mental disabilities to work and become self-reliant

2. Creative Growth seeks artistic communication between artists with disabilities and the broader artistic community, with the aim of increasing understanding and appreciation of their abilities and creativity.

3. Creative Growth works to provide opportunities to display and promote the work of artists with disabilities, with the aim of encouraging interest, purchase and professional support.

The importance of the project:

It is a website that seeks to empower and promote artists with disabilities, enhance understanding and appreciation of their artistic abilities, and help them achieve success and independence in the field of art and culture.

2) Saarhi art

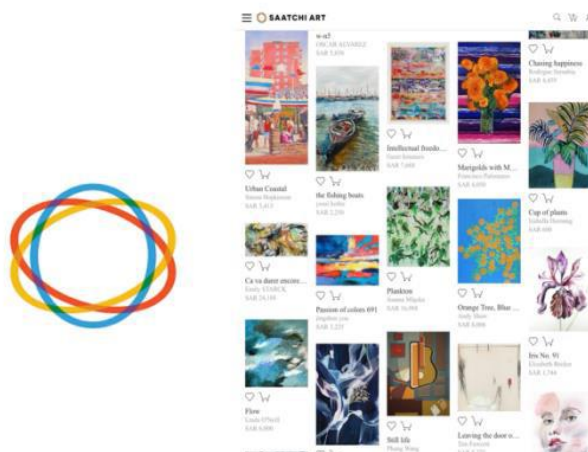


Figure 3 2 Saarhi art

It is an online arts website that serves as a global marketplace for contemporary art. Founded in 2006, it offers a platform for artists to showcase and sell their artwork directly to a global audience.

The main objectives of the project:

1. The website aims to provide an interface for artists to display their artwork and communicate with a global audience. Artists can create a gallery of their work and display it professionally and clearly.

2. Saatchi Art offers artists an opportunity to sell their work directly to potential buyers around the world. The site contains thousands of different artworks in various styles and media.

3. The site is interested in encouraging new artists and providing opportunities for emerging artists to display their work and reach a wider audience. It also provides opportunities to mentor emerging artists and develop their careers.

Target groups:

The category is artists with special needs and art community buyers and investors.

3) ArtPal

It is an online platform for selling artwork. The platform aims to support artists and enable them to showcase and sell their artwork to a wider audience.

Benefits:

1. ArtPal provides a simple and easy-to-use interface.
2. Artists can reach a global audience through the platform.
3. ArtPal does not impose monthly fees; it only takes a commission when artwork is sold.

Drawbacks:

1. ArtPal imposes a commission on sales.

2. There is significant competition on the ArtPal platform.
3. Artists are responsible for managing their own gallery on ArtPal.

Canvas Art

It is a Saudi Arabian online store specializing in the sale of art canvases. It is one among several e-commerce stores in the Kingdom of Saudi Arabia that offers a wide variety of art canvases.

Pros:

1. Canvas Art provides a wide selection of art pieces.
2. The store is committed to offering high-quality artwork.
3. It offers flexible delivery options and multiple payment methods.

Cons:

1. The prices of art canvases at Canvas Art can be high.
2. They may charge a commission on sales.

2.4 Summary

This chapter provided our team with valuable insights gathered from reviewing literature in both theoretical and applied works. The key findings from our background study and related projects analysis will help strengthen our system requirements. We have a more informed understanding of user needs and technical considerations to develop a impactful solution catering to people with special needs.

Chapter 3: Project Requirements and System Analysis

3.1 Introduction

In this chapter, the proposed system is analyzed by a comprehensive discussion of feasibility study and functional and non-functional requirements. Further, it discusses the high-level architecture and the development methodology to be followed to achieve the project.

3.2 Requirements

In This section we summarize the functional and non-functional requirements of the projects' deliverables. Depending on the nature of the requirements, they will be categorised into two categories, functional and non-functional.

3.2.1 System Hardware and Software

Hardware:

We utilized laptops with Core i5 processors, 8GB RAM, and SSD storage to carry out the work.

Software:

We installed XAMPP on our machines to test the backend functionalities. We also used Draw.io to document requirements and design workflow diagrams and database schemas.

Methodology:

We conducted interviews with potential users to understand their needs and pain points. We also examined similar platforms to identify best practices. We documented all requirements and designed workflow diagrams and database schemas.

Technology Stack for Minimum Viable Product (MVP):

Front-end:

We plan to use HTML, CSS, and JavaScript for the front-end interfacing.

Back-end:

We plan to use PHP with MySQL for the back-end.

Additional Considerations:

We expect that various additional plugins and libraries may be required as well.

This report summarizes our initial phase of analysis and planning. In the second phase next term, we will focus on building out the core features and functionalities of the web application to launch a basic version. Ongoing testing and feedback will help us refine and enhance the system over multiple iterations.

3.2.2 Functional Requirements

1. User Registration and Profile Creation: Users should be able to create an account and provide relevant information such as personal details, contact information, and artistic skills.

2. Artwork Submission: Users should be able to upload their artistic paintings through a user-friendly interface. The system should support various image formats and provide options for adding descriptions and tags to the artwork.

3. Artwork Management: Users should be able to edit, delete, or update the information associated with their submitted artwork.

4. Artwork Display: The system should provide a visually appealing gallery of artwork, allowing users to browse and view paintings submitted by people of determination.

5. Search and Filter: Users should be able to search for specific artwork based on keywords, artist name, or other relevant criteria. The system should also provide filtering options to refine search results.

6. Artist Profile: Each user should have a dedicated profile page that showcases their artwork, bio, and contact information. Users should be able to customize their profile settings.

7. Sales and Transactions: The system should support the sale of artwork, providing users with options to set prices, manage inventory, and handle transactions securely.

8. Notifications: Users should receive notifications about sales, comments, likes, and other activities related to their artwork or profile.

9. Social Interaction: Users should be able to interact with each other through comments, likes, shares, and private messaging.

10. Accessibility Features: The web-based system should be designed with accessibility in mind, ensuring compatibility with assistive technologies and providing features like text-to-speech, high contrast modes, and keyboard navigation.

3.2.3 Non-Functional Requirements

1. Usability: The system should have an intuitive and user-friendly interface, making it easy for people of determination to navigate, upload artwork, and manage their profiles.

2. Performance: The system should be responsive and provide fast loading times for artwork and profile pages. It should be able to handle a large number of concurrent users without significant performance degradation.

3. Security: The system should implement secure authentication and authorization mechanisms to protect user accounts and sensitive information. It should also have measures in place to prevent unauthorized access, data breaches, and malicious activities.

4. Scalability: The system should be designed to handle a growing number of users and artwork submissions. It should be able to scale its resources, such as storage and processing power, to accommodate increased demand.

5. Compatibility: The web-based system should be compatible with different web browsers, operating systems, and devices to ensure a wide reach and accessibility for users.

6. Data Backup and Recovery: The system should regularly backup user data to prevent loss in case of system failures or data corruption. It should also have a recovery mechanism in place to restore data if needed.

7. Performance Tracking and Analytics: The system should track and analyze user interactions, artwork views, sales, and other relevant metrics to provide insights for system improvements and business decision-making.

8. Privacy: The system should adhere to privacy regulations and provide users with control over their personal information. It should have a clear privacy policy and obtain consent for data collection and usage.

9. Support and Documentation: The system should have comprehensive documentation and provide reliable customer support to assist users in case of any issues or queries.

3.3 System Design

This section highlights the design of the proposed system by illustrating the application flow via flowchart and use case diagram.

3.3.1 Use Case Diagram

Use case diagrams visually depict the interactions between system users and the system itself.

Figure 4 Use Case Diagram



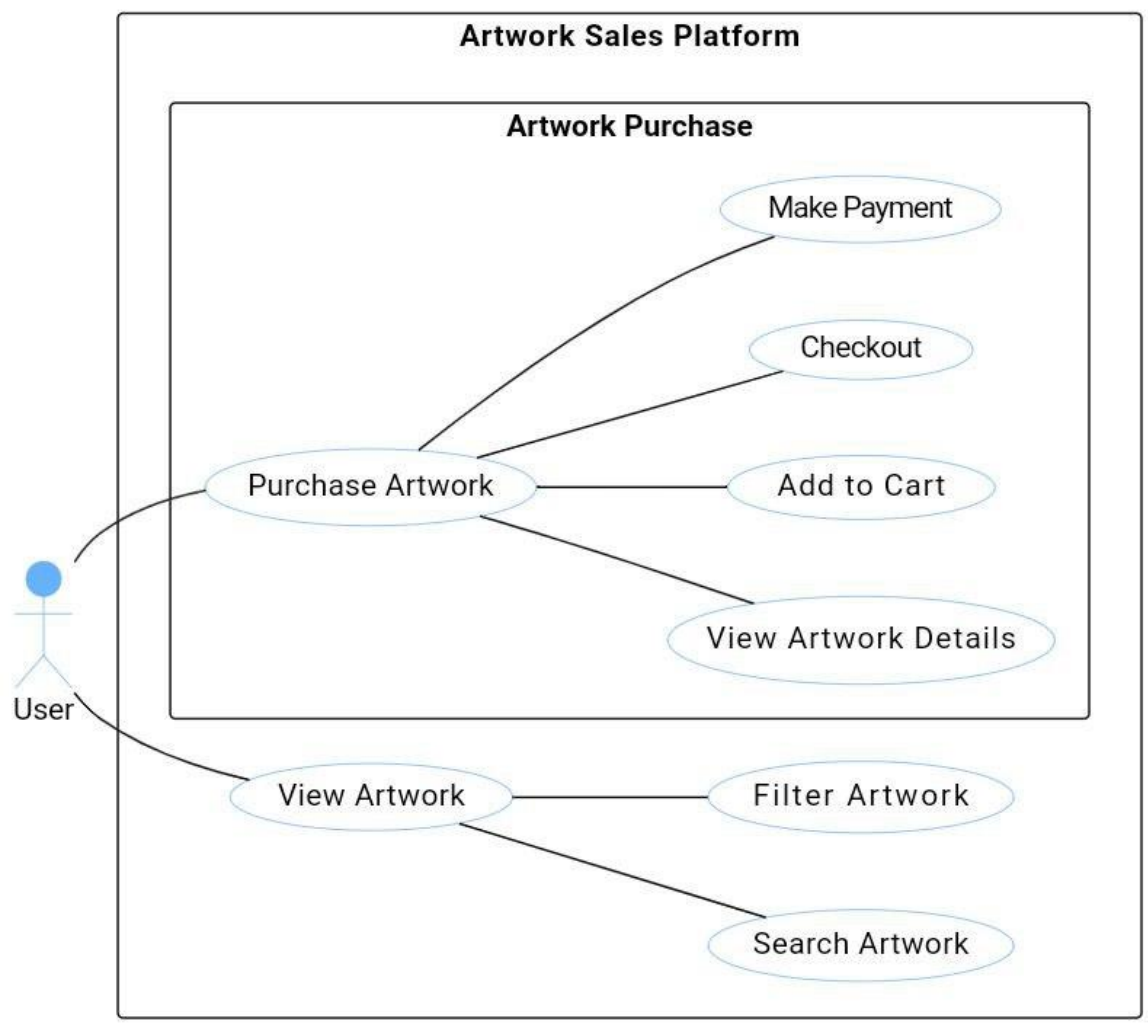


Figure 5 use case diagram 2

3.3.2 Flow Chart

3.3.2.1 Homepage Navigation

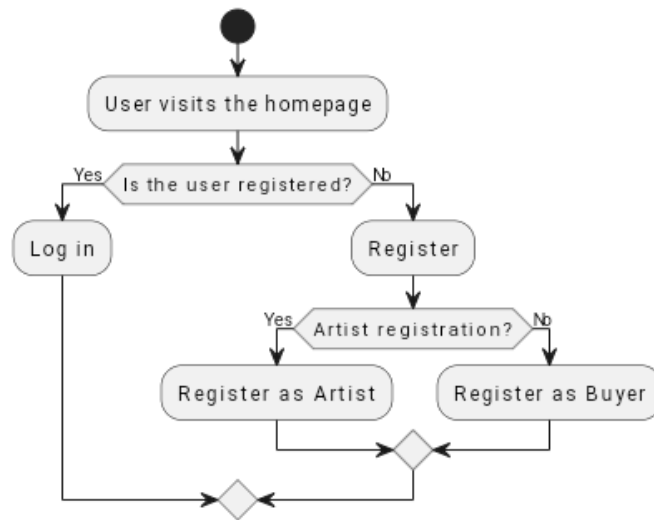


Figure 6 Flow Chart 1

3.3.2.2 User Registration

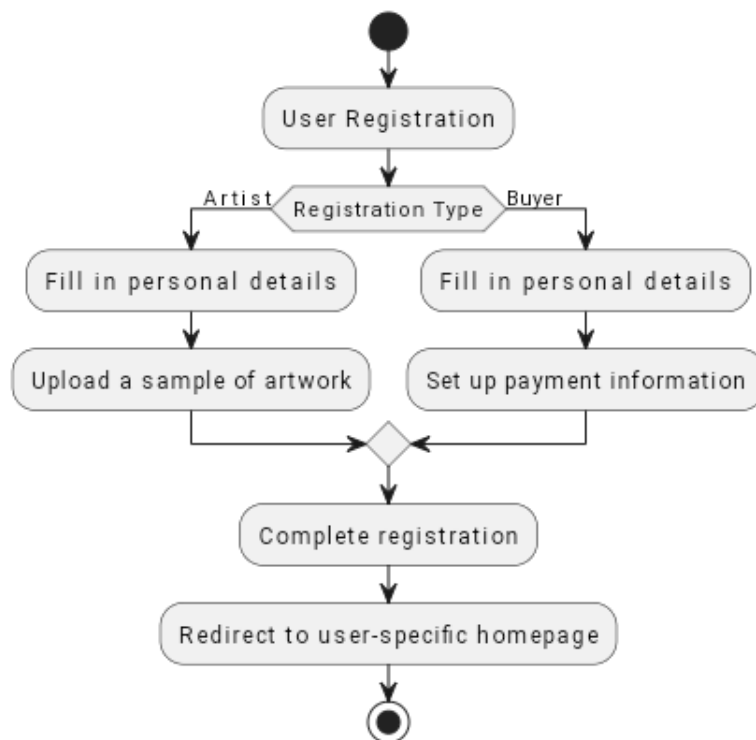


Figure 7 Flow Chart 2

3.3.2.3 Artist Profile Management

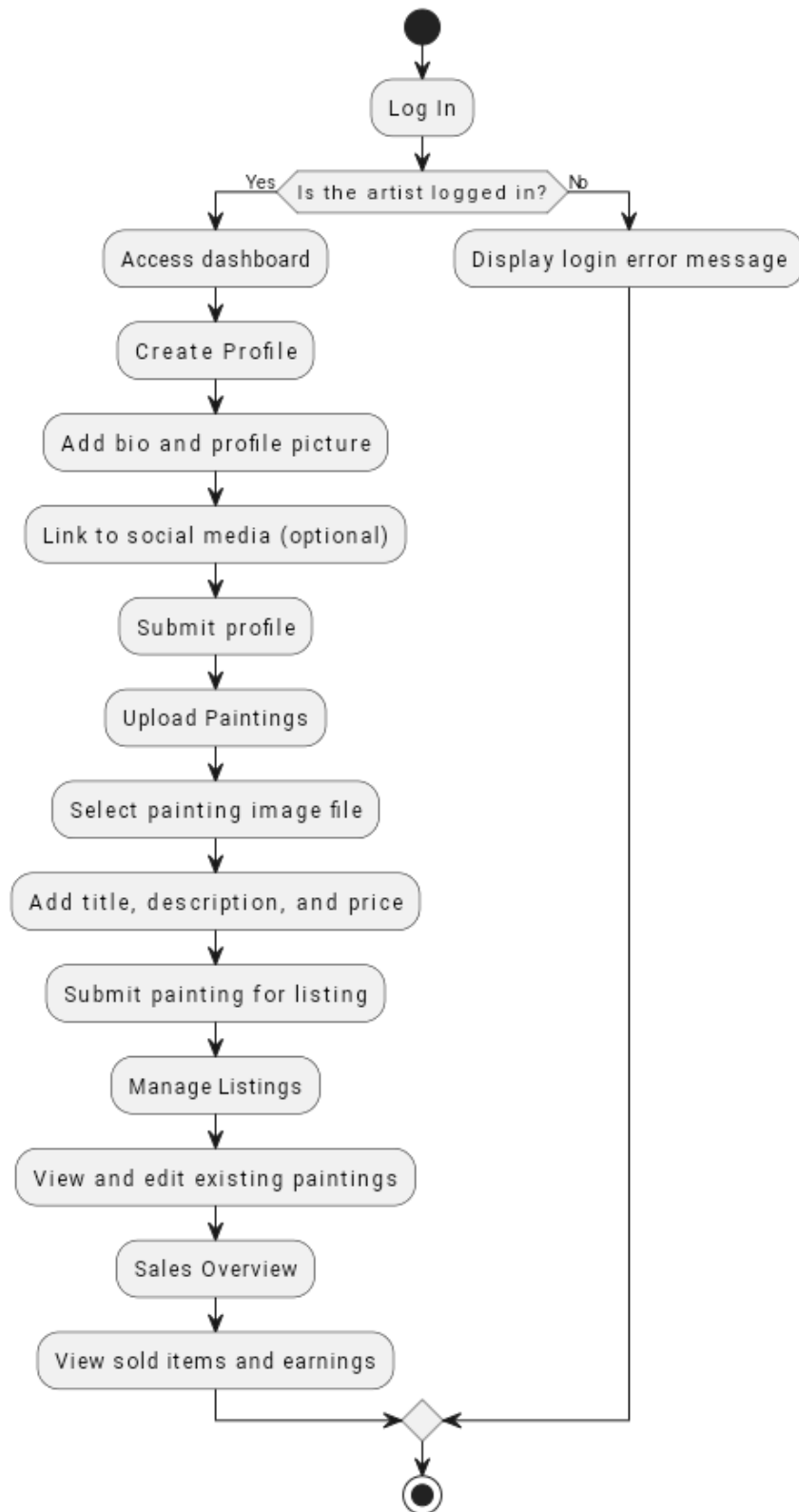


Figure 8 Flow Chart 3

3.3.2.4 Browsing and Purchasing

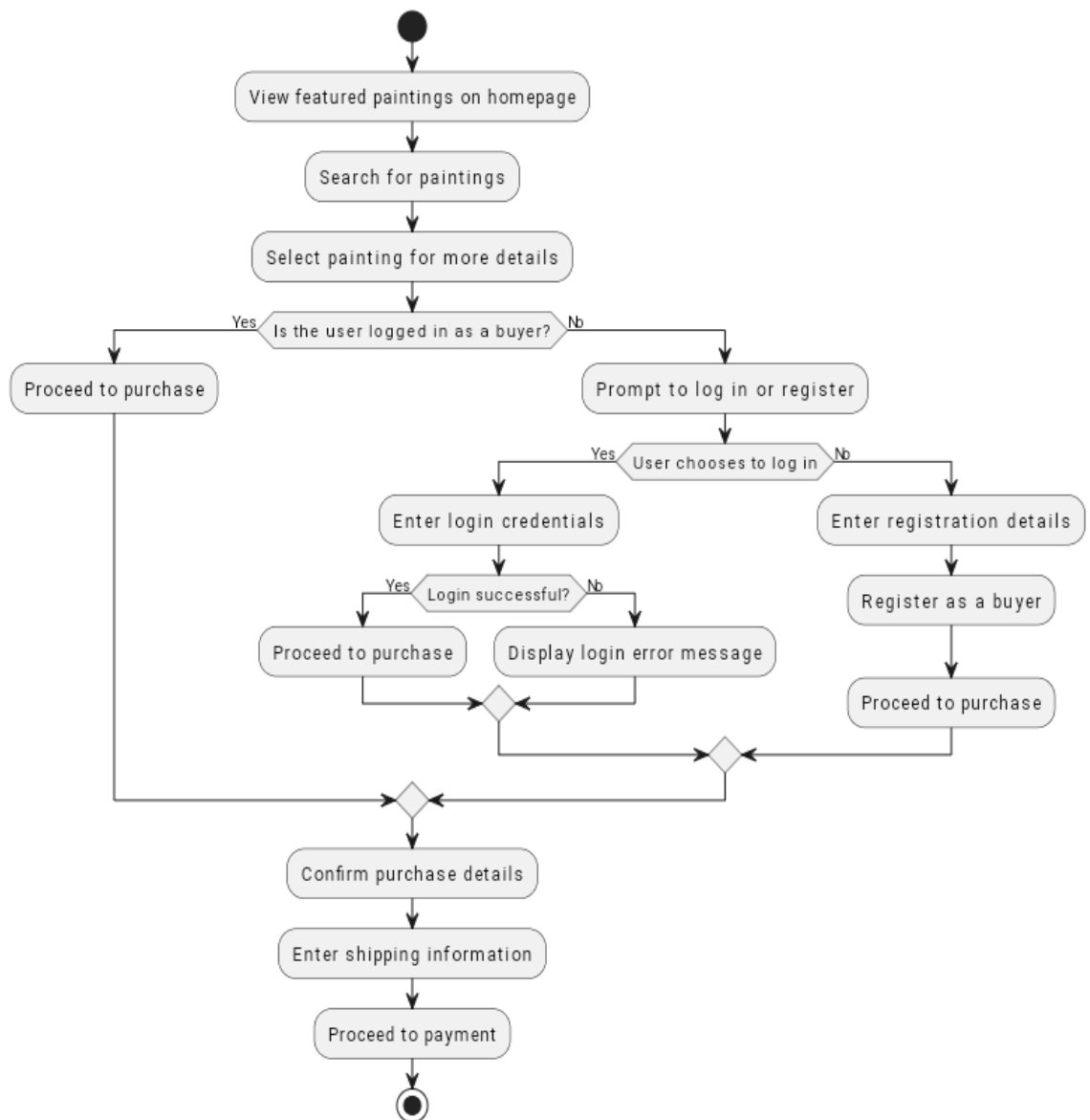


Figure 9 Flow Chart 4

3.3.2.5 Payment Processing

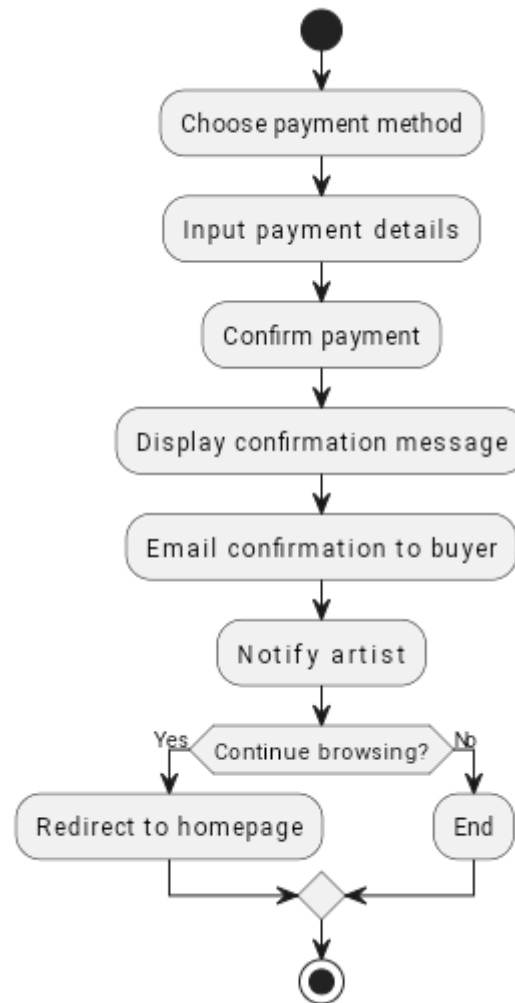


Figure 10 Flow Chart 5

3.4 Development Methodology

There are different types of methodologies in SDLS.

- 1- V-model Development Methodology
- 2- Parallel Development Methodology
- 3- Iterative Development Methodology
- 4- Agile Development Methodology
- 5- System proto-typing Development Methodology
- 6- Throwaway Prototyping Development Methodology
- 7- Waterfall Methodology

Waterfall Methodology

In this project, we will use this type because this model provides a structured approach through discrete phases that are easy to understand and interpret, provides easily identifiable milestones in the development process, and can be suitable for projects where scope requirements have been defined.

The waterfall methodology in developing the web system for panels for people of determination relies on organized and sequential stages, starting from collecting requirements all the way to periodic maintenance. The main steps include requirements gathering, system design, implementation, testing, deployment, and maintenance. This methodology aims to achieve structure and sequence in development, identify early requirements, improve product quality, ensure clarity and manage risks, which helps in developing a system that effectively meets the needs and expectations of people with special needs.

3.4.1 Waterfall Methodology

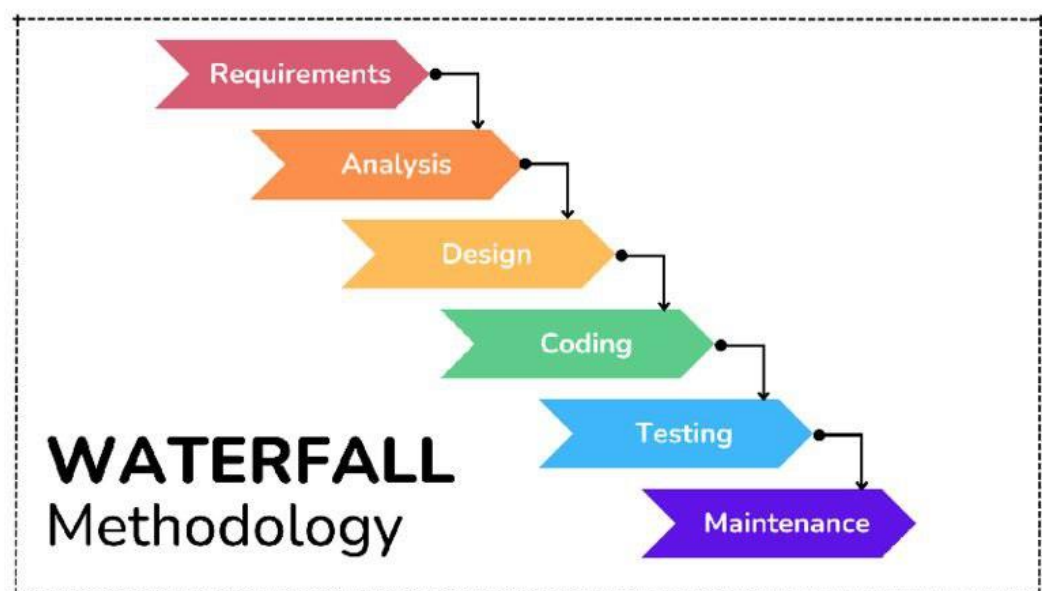


Figure 11 Waterfall Methodology

○ Compare Methodologies:

Ability to develop systems	Waterfall	Parallel	V-Model	Iterative	System Proto-typing	Throwaway Prototyping	Agile Development
With unclear user requirement	Poor	Poor	Poor	Good	Excellent	Excellent	Excellent
With unfamiliar technology	Poor	Poor	Poor	Good	Poor	Excellent	Poor
That are complex	Good	Good	Good	Good	Poor	Excellent	Poor
That are reliable	Good	Good	Excellent	Good	Poor	Excellent	Good
With a short time schedule	Poor	Good	Poor	Excellent	Excellent	Good	Excellent
With schedule visibility	Poor	Poor	Poor	Excellent	Excellent	Good	Good

Table 1 Compare Methodologies

3.5 Summary

The chapter concludes with a summary of the project requirements and system analysis, encapsulating key insights and decisions that inform the subsequent phases of system development.

Chapter 4: System Design

4.1 Introduction

This chapter presents the system design considering the main dimensions of our proposed system. Further, it discusses the various aspects of system design, including architectural, object-oriented, Database design, and user interface design.

4.2 Architectural design

The proposed system is designed with a distributed architecture featuring three primary components: a web application, a database, and a payment gateway. The web application serves as the user interface, allowing artists to create profiles, showcase their artworks, and buyers to browse and purchase. The database stores all relevant data, including artwork details, user information, and transaction records. The payment gateway ensures secure and efficient payment processing. The system adheres to accessibility guidelines to ensure ease of use for users with disabilities.

4.3 Object Oriented Design

4.3.1 Class Diagram

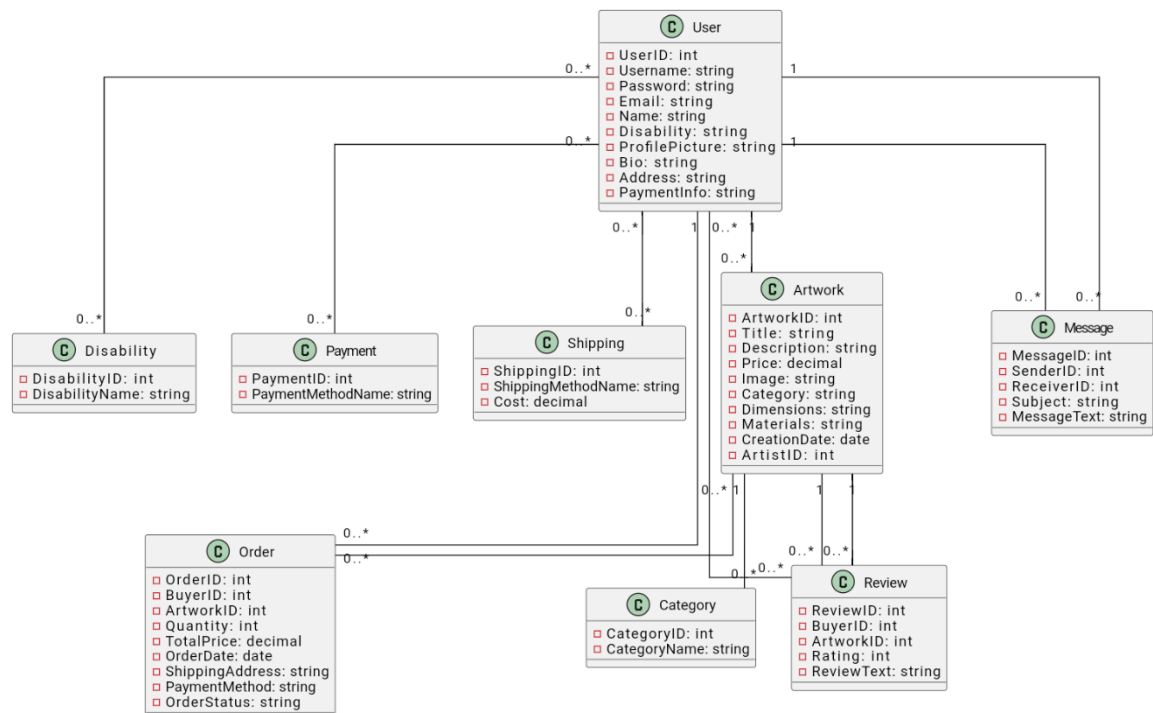


Figure 4.3-1 Class Diagram

4.3.2 Sequence Diagram

4.3.2.1 Sequence Diagram 1: User Registration and Login

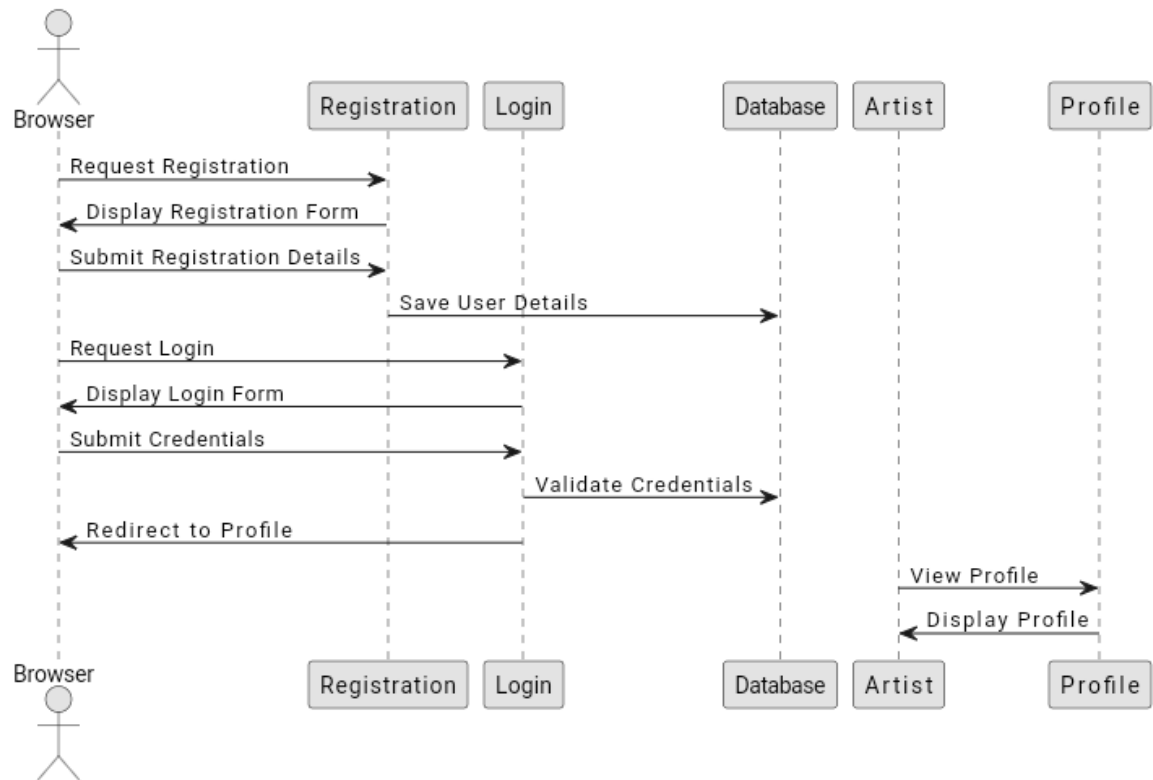


Figure 4.3-2 Sequence Diagram 1

4.3.2.2 Sequence Diagram 2: Artwork Upload and Search

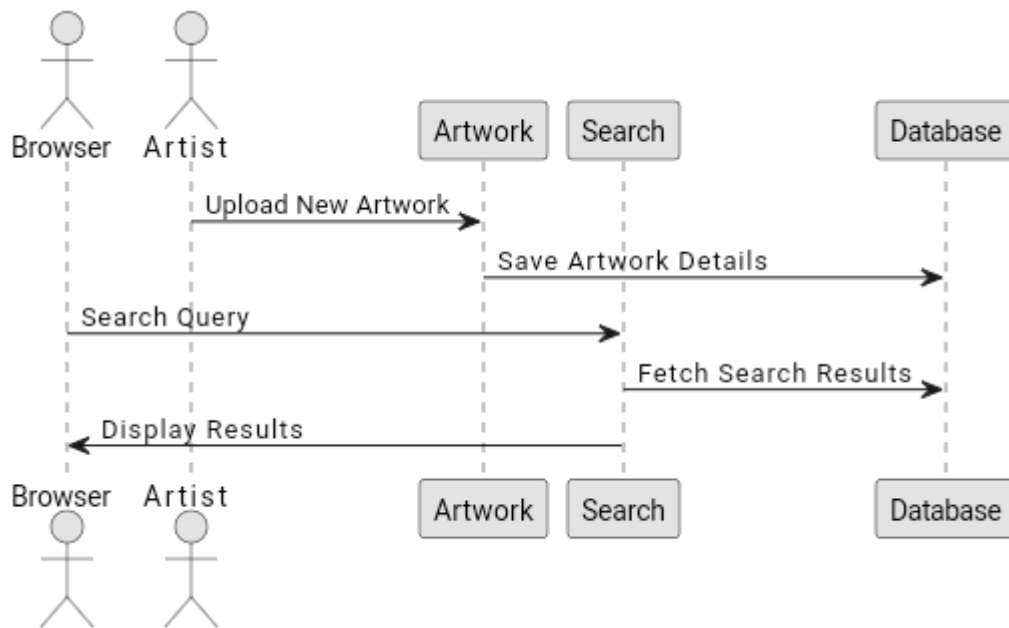


Figure 4.3-3 Sequence Diagram 2

4.3.2.3 Sequence Diagram 3: Payment and Notifications

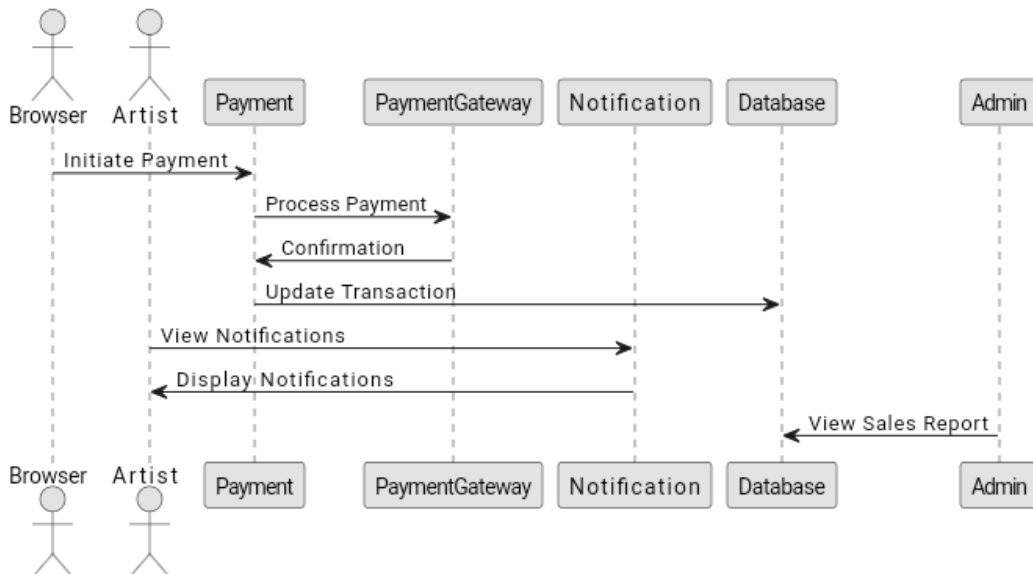


Figure 4.3-4 Sequence Diagram 3

4.3.3 Activity Diagram

Activity diagrams represent the workflow or procedural logic of a system, capturing the sequence of activities and decision points involved in a process.

4.3.3.1 Activity Diagram 1: Artist Activities

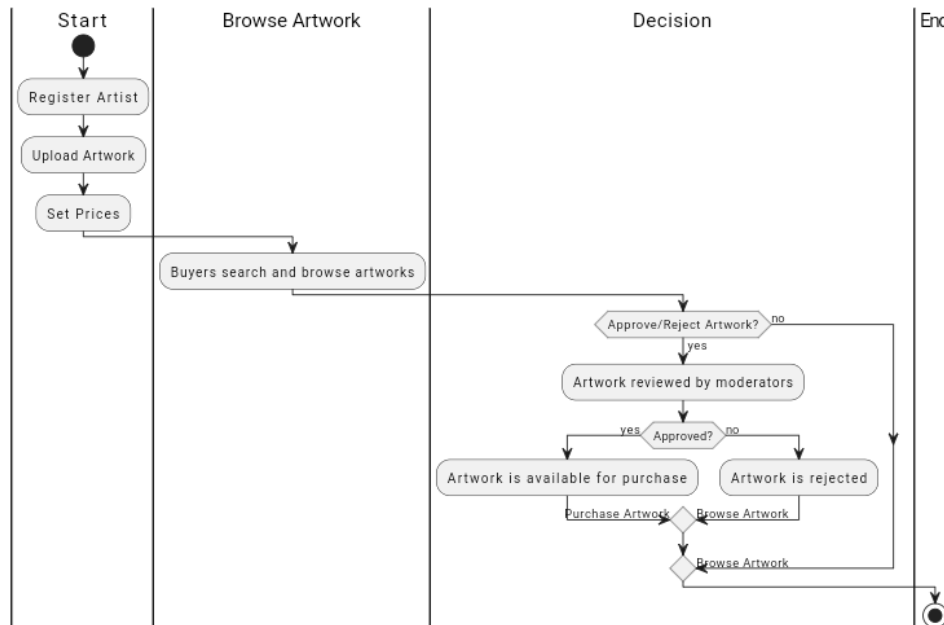


Figure 4.3-5 Activity Diagram 1: Artist Activities

4.3.3.2 Activity Diagram 2: Buyer and System Activities

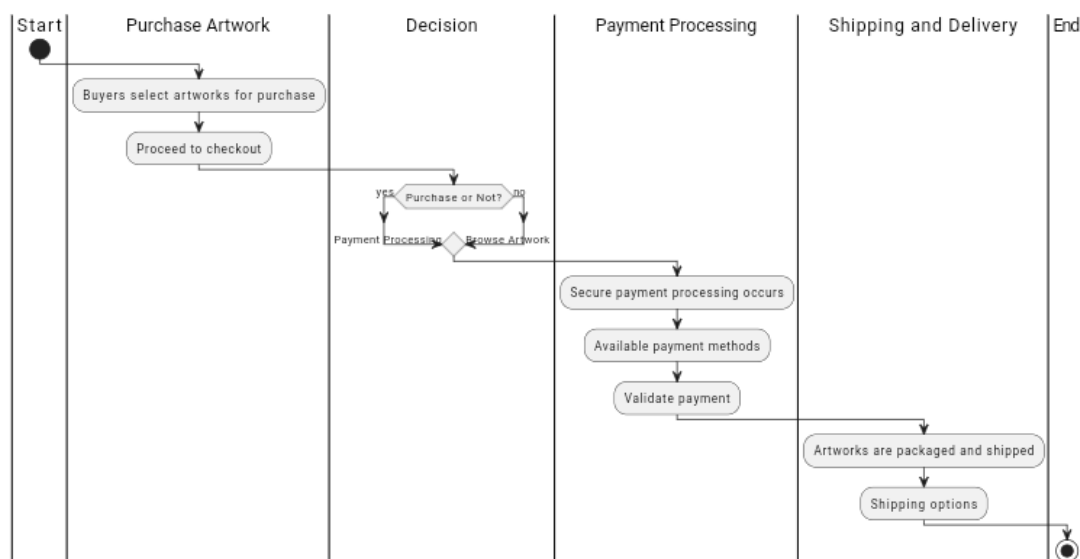


Figure 4.3-6 Activity Diagram 2: Buyer and System Activities

4.4 Database Design

This section focuses on the design of the system's database, including the creation of entity-relationship diagrams (ERDs) and schema definitions.

Table structure for table about_us

Table 2 Database Design

Column	Type	Null	Default
<i>about_id</i>	int(10)	No	
about_heading	text	No	
about_short_desc	text	No	
about_desc	text	No	

Table structure for table admins

Column	Type	Null	Default
<i>admin_id</i>	int(10)	No	
admin_name	varchar(255)	No	
admin_email	varchar(255)	No	
admin_pass	varchar(255)	No	
admin_image	text	No	
admin_contact	varchar(255)	No	
admin_country	text	No	
admin_job	varchar(255)	No	
admin_about	text	No	

Table structure for table artwork

Column	Type	Null	Default
<i>product_id</i>	int(10)	No	
cat_id	int(10)	No	
add_date	timestamp	No	current_timestamp()
product_title	varchar(255)	No	
product_img1	text	No	
product_price	int(10)	No	
product_psp_price	int(100)	No	

product_desc	text	No	
product_keywords	varchar(100)	No	
product_label	text	No	
status	varchar(255)	No	
customer_id	int(10)	Yes	NULL

Table structure for table **boxes_section**

Column	Type	Null	Default
<i>box_id</i>	int(10)	No	
box_title	varchar(100)	No	
box_desc	text	No	

Table structure for table **cart**

Column	Type	Null	Default
p_id	int(10)	No	
ip_add	varchar(255)	No	
qty	int(10)	No	
product_price	varchar(255)	No	

Table structure for table **categories**

Column	Type	Null	Default
<i>cat_id</i>	int(10)	No	
cat_title	varchar(100)	No	
cat_top	varchar(100)	No	
cat_image	text	No	

Table structure for table **contact_us**

Column	Type	Null	Default
<i>contact_id</i>	int(10)	No	
contact_email	varchar(100)	No	
contact_heading	text	No	
contact_desc	text	No	

Table structure for table coupons

Column	Type	Null	Default
<i>coupon_id</i>	int(10)	No	
product_id	int(10)	No	
coupon_title	varchar(255)	No	
coupon_price	varchar(255)	No	
coupon_code	varchar(255)	No	
coupon_limit	int(10)	No	
coupon_used	int(10)	No	

Table structure for table customers

Column	Type	Null	Default
<i>customer_id</i>	int(10)	No	
customer_name	varchar(255)	No	
customer_email	varchar(255)	No	
customer_pass	varchar(255)	No	
customer_country	varchar(100)	No	
customer_city	varchar(100)	No	
customer_contact	varchar(255)	No	
customer_address	text	No	
customer_image	text	No	
customer_ip	varchar(255)	No	
customer_confirm_code	text	No	
manufacturer_top	varchar(100)	No	
is_artist	varchar(10)	No	
disability_id	int(11)	Yes	NULL
biography	longtext	Yes	NULL
difficulties	longtext	Yes	NULL
overcame	longtext	Yes	NULL
goal	longtext	Yes	NULL

Table structure for table disability

Column	Type	Null	Default
--------	------	------	---------

<i>disability_id</i>	int(10)	No	
disability_type	text	No	

Table structure for table enquiry_type

Column	Type	Null	Default
<i>enquiry_id</i>	int(10)	No	
enquiry_title	varchar(100)	No	

Table structure for table orders

Column	Type	Null	Default
<i>order_id</i>	int(10)	No	
customer_id	int(10)	No	
due_amount	int(100)	No	
invoice_no	int(100)	No	
qty	int(10)	No	
order_date	timestamp	No	current_timestamp()
order_status	varchar(100)	No	

Table structure for table payments

Column	Type	Null	Default
<i>payment_id</i>	int(10)	No	
invoice_no	int(10)	No	
amount	int(10)	No	
payment_mode	varchar(100)	No	
ref_no	int(10)	No	
code	int(10)	No	
payment_date	text	No	

Table structure for table pending_orders

Column	Type	Null	Default
<i>order_id</i>	int(10)	No	
customer_id	int(10)	No	

invoice_no	int(100)	No	
product_id	int(10)	No	
qty	int(10)	No	
order_status	varchar(100)	No	

Table structure for table services

Column	Type	Null	Default
<i>service_id</i>	int(10)	No	
service_title	varchar(255)	No	
service_desc	text	No	
service_image	text	No	

Table structure for table slider

Column	Type	Null	Default
<i>slide_id</i>	int(10)	No	
slide_name	varchar(255)	No	
slide_image	text	No	
slide_title	varchar(255)	No	
slide_text	varchar(255)	No	

Table structure for table tblcomments

Column	Type	Null	Default
name	varchar(120)	Yes	NULL
email	varchar(150)	Yes	NULL
comment	mediumtext	Yes	NULL
postingDate	timestamp	Yes	current_timestamp()
status	int(1)	Yes	NULL
<i>id</i>	int(11)	No	
postId	int(10)	No	

Table structure for table wishlist

Column	Type	Null	Default
--------	------	------	---------

<i>wishlist_id</i>	int(10)	No	
<i>customer_id</i>	int(10)	No	
<i>product_id</i>	int(10)	No	

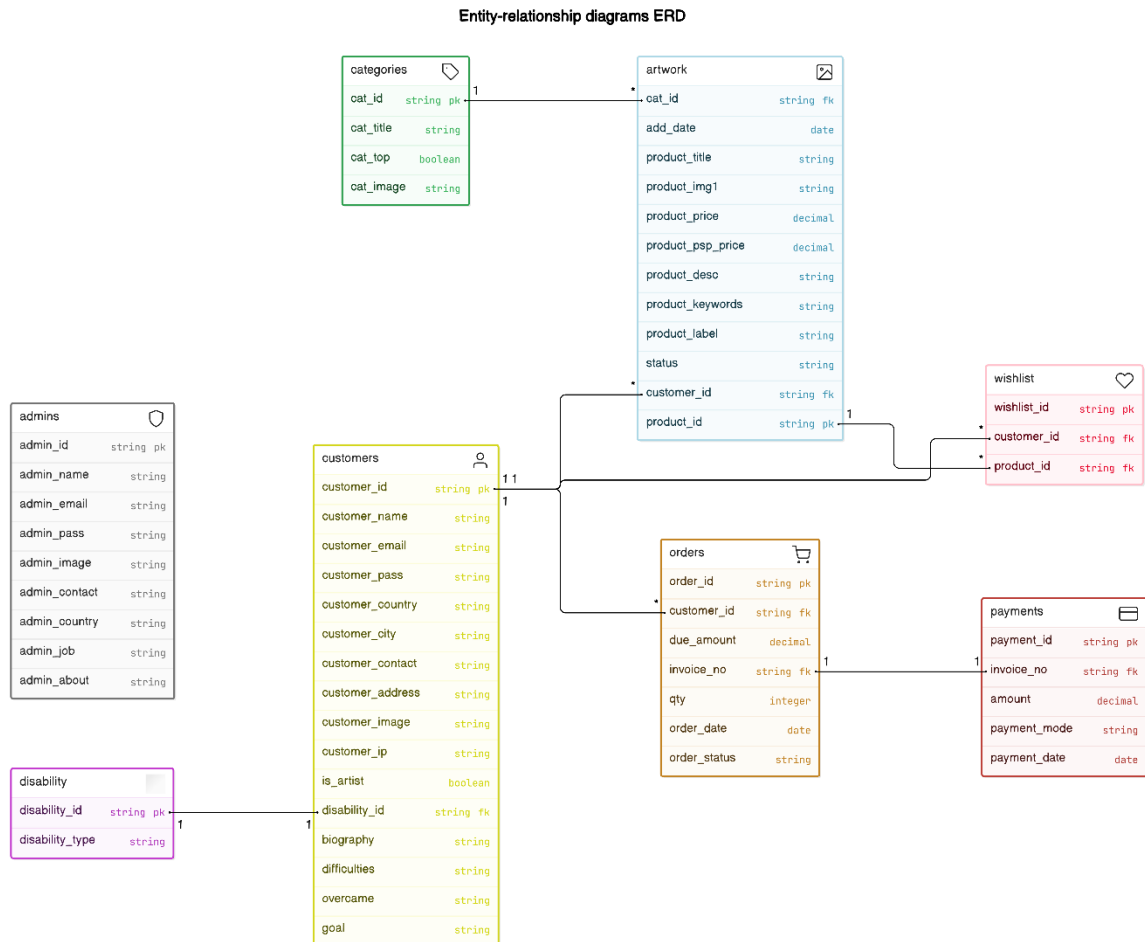


Figure 4.4-1 Entity-relationship diagrams (ERDs)

4.5 User Interface Design

✓ Home page

This screen (Figure 4.5-1) represents the main page of our website. It features a welcoming message for users and highlights the platform's purpose of supporting artists with disabilities. The layout includes options for navigation, such as account management and shopping cart access, as well as visually engaging artwork displayed in the

background.

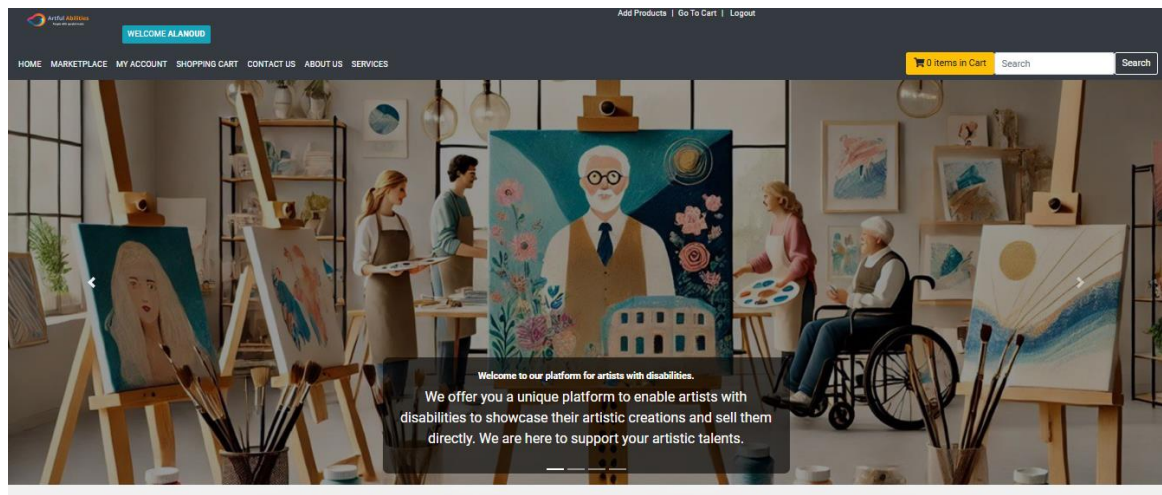
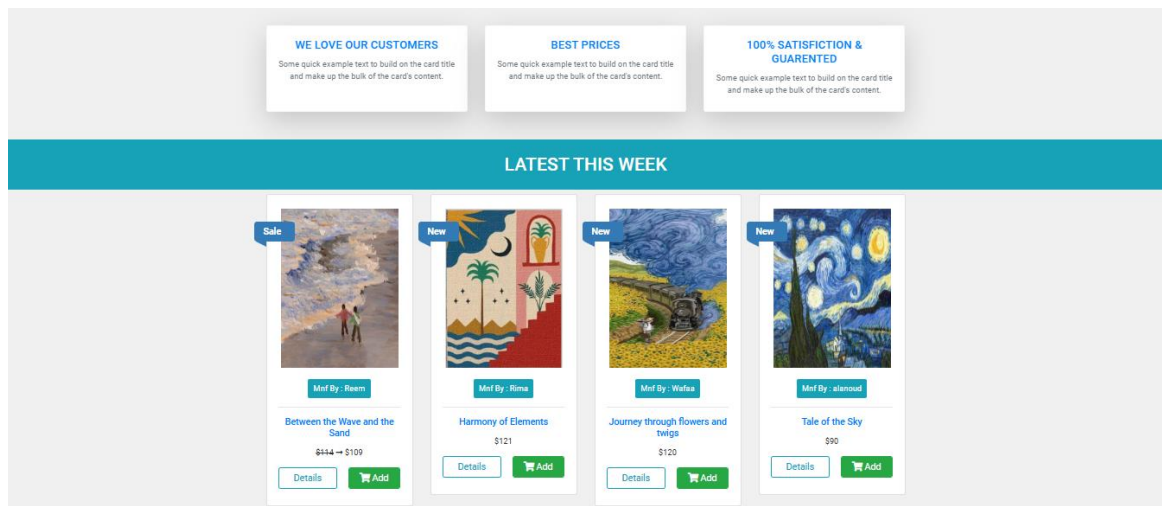


Figure 4.5-1 Home page



Profile Page

This picture (Figure 4.5-2) shows the profile page of a user . It includes personal details, such as the user's name, email, and a brief biography. The page also displays the type of

disability and offers navigation options for managing account settings.

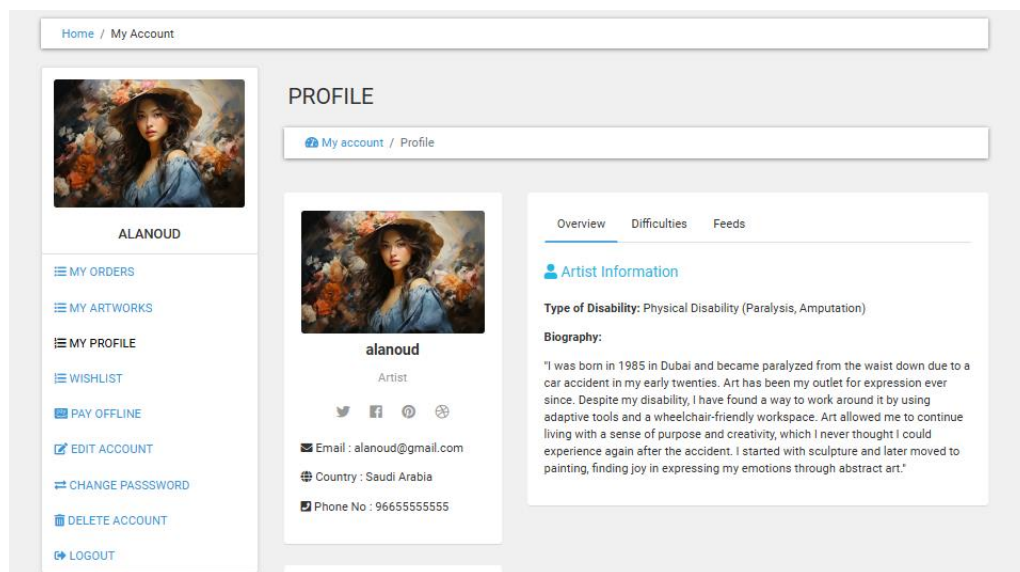


Figure 4.5-2 Profile Page

Login Page

This screen (Figure 4.5-3) prompts the user to log in by entering their email and password into the designated fields. It also provides instructions on password requirements, ensuring secure account access. The page includes options for recovering a forgotten password and a link for new users to register.

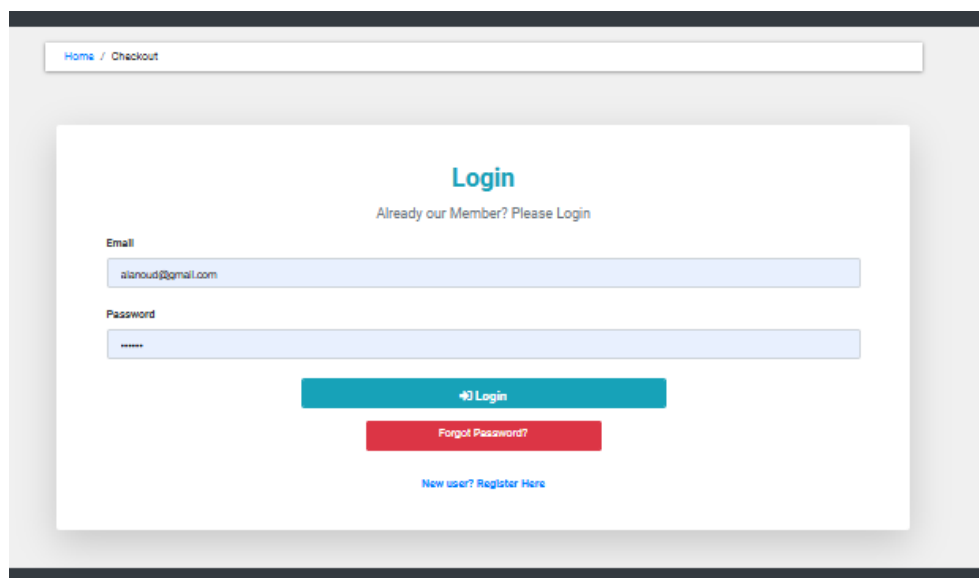


Figure 4.5-3 Login Page

Registration Page

This screen (Figure 4.5-4) provides a form for users to create a new account. It includes fields for entering essential information such as name, email, password, country, city, contact number, and address. Additional options allow users to upload a profile image,

indicate if they are an artist, subscribe to newsletters, and agree to the terms and conditions. The form also features CAPTCHA verification for security purposes, ensuring that only genuine users can register.

The registration form is titled "Register A New Account" and is located under a breadcrumb "Home / Register". It contains the following fields and options:

- Customer Name:
- Customer Email:
- Customer Password: with a strength indicator (orange bar labeled "Good")
- Confirm Password:
- Customer Country:
- Customer City:
- Customer Contact No.:
- Customer Address:
- Customer Image: (لم يتم اختيار أي ملف) (اختيار ملف)
- Is artist: ☐
- Subscribe to Newsletter: ☐
- Agree to Terms & Conditions: ☐
- Register button:

Figure 4.5-4 Registration Page

✓ Shop page

After accessing the "Shop" section (Figure 4.5-5), users can view a selection of products categorized by manufacturer and type. Each item displays details such as the title, price, and the artist's name, along with options to add to the cart or view more details.

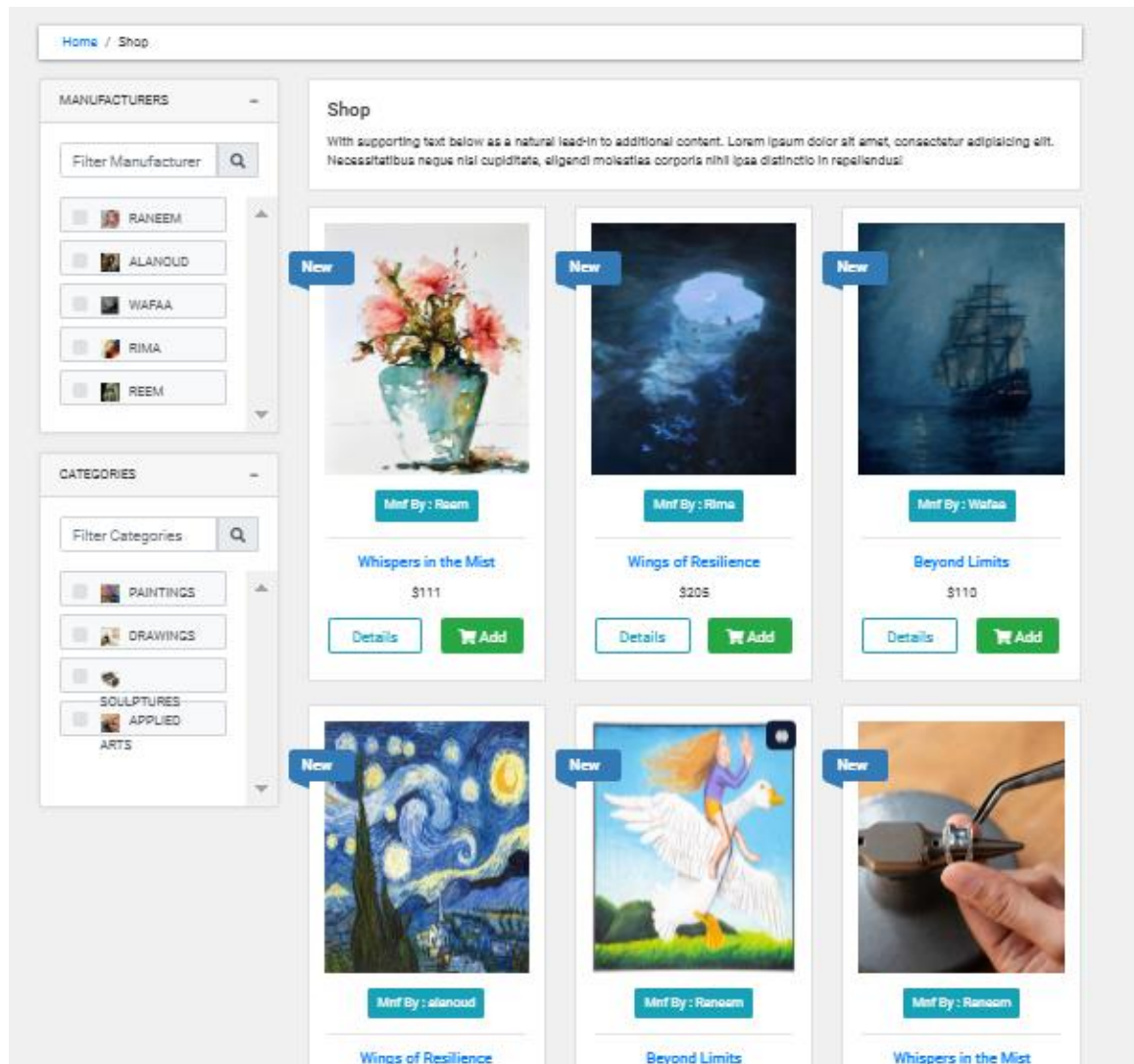


Figure 4.5-5 Shop page

Customer Page

This screen (Figure 4.5-6) displays the dashboard for a logged-in customer. It includes a navigation menu on the left-hand side, offering options such as viewing orders, artworks, profile, wishlist, and account management functions like editing the account or changing the password. The central section lists the customer's orders, showing details like invoice number, quantity, order date, payment status (paid/unpaid), and an option to confirm payment. A notification bar at the top confirms successful login and provides customer service contact information for support.

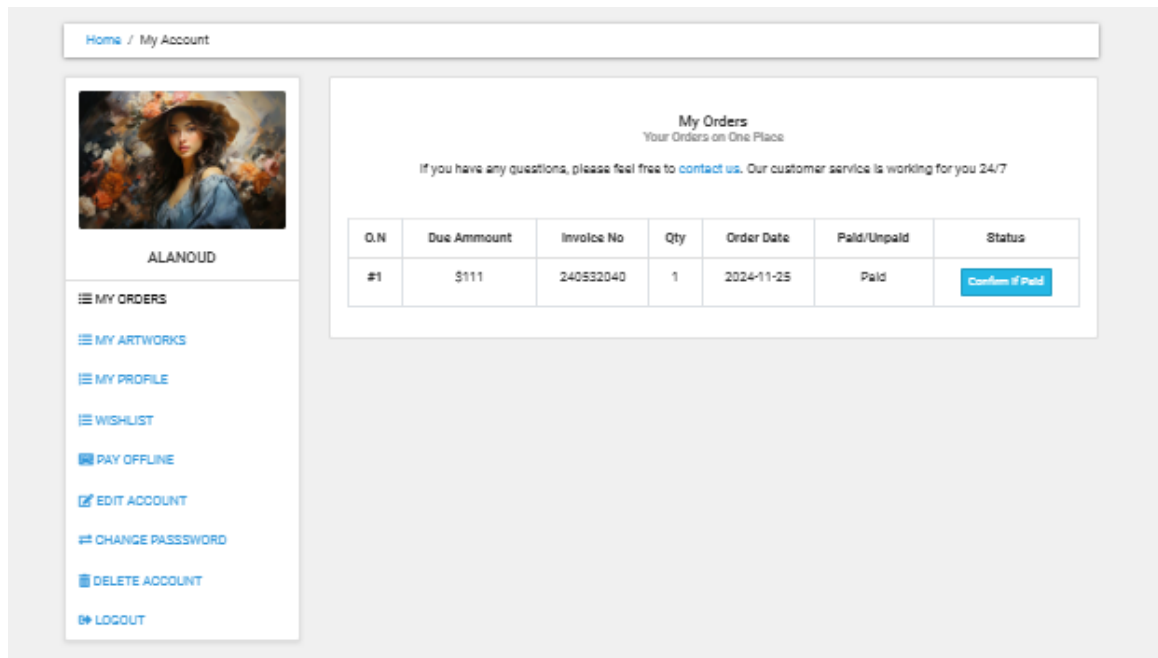


Figure 4.5-6 Customer Page

✓ Communication Page

This screen (Figure 4.5-7) features the "Contact Us" form, allowing users to reach out for assistance. It includes fields for the user's name, email, subject, and message. Users can select an enquiry type and choose to subscribe to the newsletter before sending their message.

Contact Us

If you have any questions, please feel free to [contact us](#). Our customer service is working for you 24/7

Name
Enter Your Name

Email
Enter Your Email

Subject
Enter Your Subject

Message
Enter Your Message

Enquiry Type
— Select a Enquiry Type —

☒ Subscribe to Newsletter

[Send Message](#)

Figure 4.5-7 Communication Page

4.6 Summary

In summary, this chapter outlines the key components of our system design, emphasizing the architectural layout, object-oriented principles, database structure, and user interface considerations. Each aspect has been carefully crafted to create a cohesive and functional platform that empowers individuals with disabilities to showcase their artistic talents effectively. Through this design framework, we are poised to create a meaningful impact within our community.

Chapter 5: Implementation and Results

5.1 Introduction

This chapter provides an overview of the technology infrastructure and tools that underpinned the development, implementation, and testing of our web-based system for selling artistic paintings. We detail the methodologies employed, the tools selected, and the results of our testing processes. This systematic approach ensured that the platform not only met technical specifications but also served its purpose effectively in empowering artists with special needs.

5.2 Tools and Technologies used

5.2.1.1 5.2 Tools and Technologies Used

Our project utilized a carefully chosen set of tools and technologies to ensure a robust and user-friendly platform:

- **Programming Languages:**
 - **HTML, CSS, JavaScript:** These languages formed the backbone of our frontend development, enabling us to create a responsive and engaging user interface tailored for our target audience.
 - **PHP:** This server-side scripting language was instrumental in managing dynamic content, processing user requests, and facilitating communication between the frontend and the database.
 - **MySQL:** We employed this relational database management system to store and retrieve data efficiently, ensuring that user profiles, artwork submissions, and transactions were securely managed.
- **Frameworks and Libraries:**
 - **Bootstrap:** This framework was utilized to enhance the visual appeal and responsiveness of our web application, allowing users to navigate seamlessly on various devices.
 - **jQuery:** We integrated this library to simplify DOM manipulation and streamline the implementation of interactive features.
- **Development Tools:**
 - **XAMPP:** This software package provided a local server environment, enabling us to test our application before deployment.

- **Visual Studio Code:** Our primary code editor, equipped with useful extensions, facilitated efficient coding, debugging, and version control.

5.3 Implementation

The implementation phase of our project focused on developing the web-based system for selling artistic paintings for people with special needs. This stage involved several key steps:

For the frontend development, we utilized HTML, CSS, and JavaScript to build an interactive and visually appealing user interface. We designed the web pages to be responsive and adaptive to various devices and screen sizes, with a strong emphasis on ensuring usability and accessibility for users with special needs. We also integrated the jQuery library to simplify DOM manipulation and enhance the interactive features.

On the backend side, we employed the PHP programming language to develop the system's core components. This included managing dynamic content, processing user requests, and facilitating communication between the frontend and the database. We designed and integrated the necessary application programming interfaces (APIs) to achieve seamless integration between the frontend and backend components.

Regarding the database setup, we used the MySQL relational database management system to store and retrieve data efficiently. We designed the database schema to accommodate the requirements of the system, ensuring the organized storage of user profiles, artwork submissions, and financial transactions.

Finally, for the deployment process, we initially hosted the system on a local XAMPP environment during the development and testing phases. After thoroughly testing the system and ensuring its stability, we deployed the application to a suitable web hosting environment, making it accessible to the end-users.

Through these structured steps, we were able to successfully implement and launch the web-based system, enabling us to achieve the desired objectives of supporting artists with special needs.

5.4 Testing Case

✓ Testing User Profile Access

After the user logs in (Figure 5.4-1), they will have the ability to view and edit their profile information. The page also displays the type of disability and offers navigation options for managing account settings.

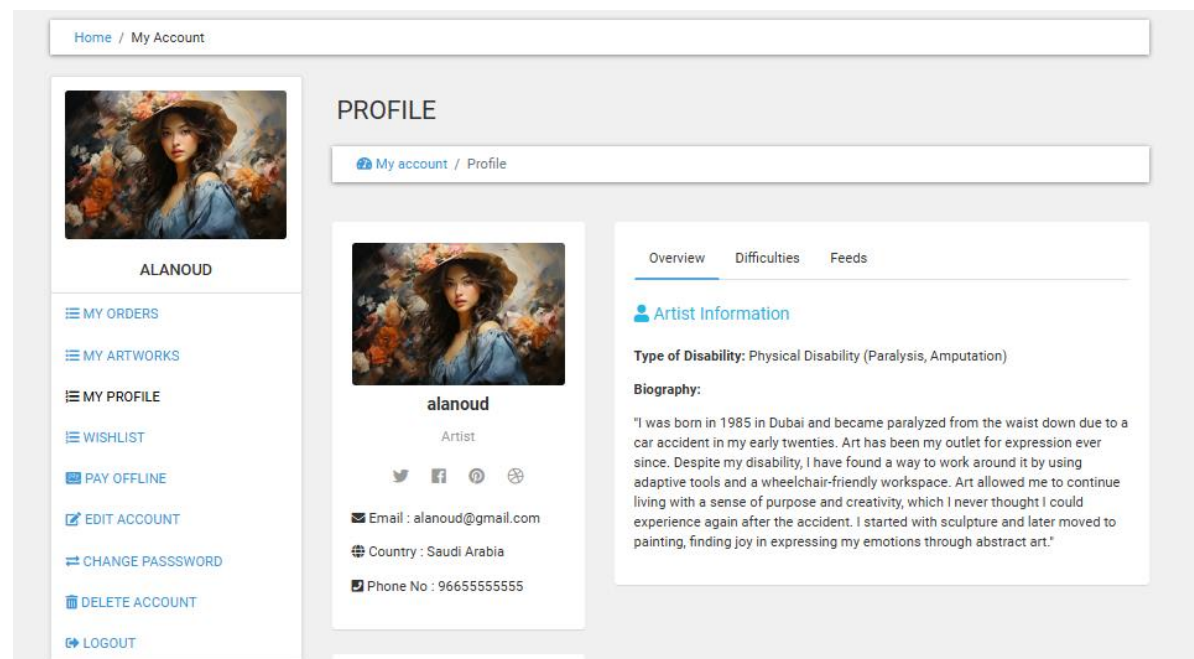


Figure 5.4-1 Testing User Profile Access

Shop Page

This image (Figure 5.4-2) illustrates the shop page, allowing users to view featured artworks. It highlights new items with their titles and prices. Options to view details or add items to the cart are available, enhancing the shopping experience.

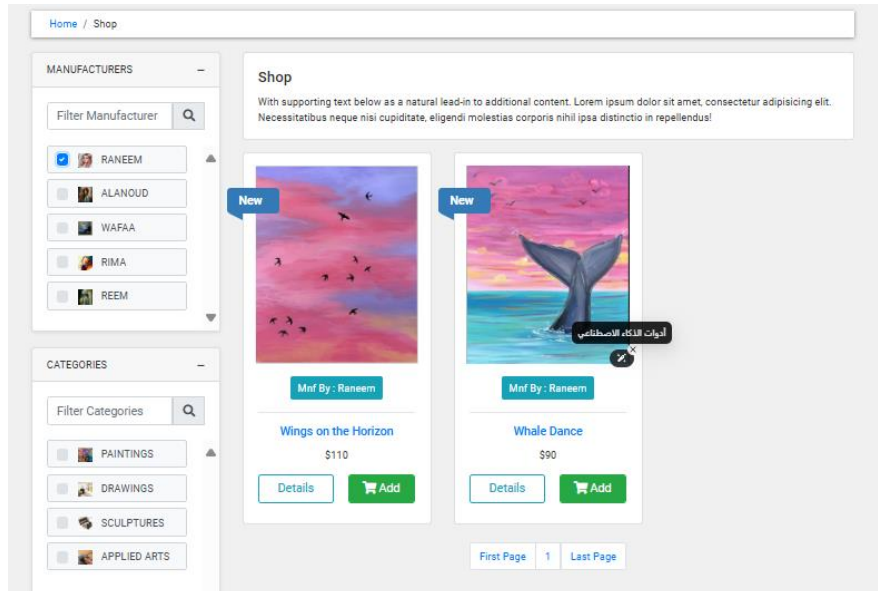


Figure 5.4-2 Testing Shop Page

Artwork Detail Page

This image (Figure 5.4-3) showcases the artwork detail page for It features a large image of the artwork, options to select quantity, and buttons to add to the cart or wishlist. The page includes details about the manufacturer and a description that highlights the artwork's thematic elements.

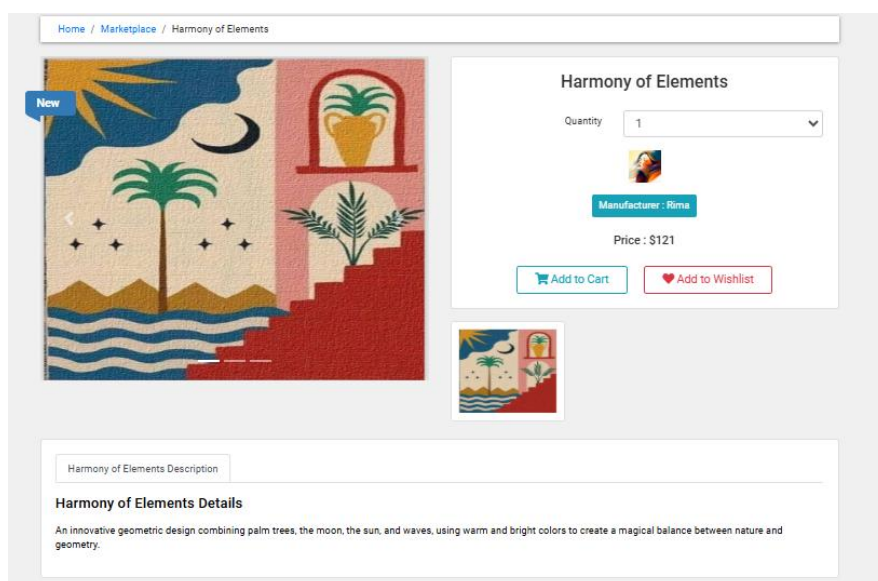


Figure 5.4-3 Artwork Detail Page

Shopping Cart Page

This image (Figure 5.4-4) illustrates the shopping cart page where users can review their selected items. It displays the product along with quantity, unit price, and total cost. Users can apply coupon codes, update their cart, or proceed to checkout. The order summary section provides a clear breakdown of costs, enhancing user clarity.

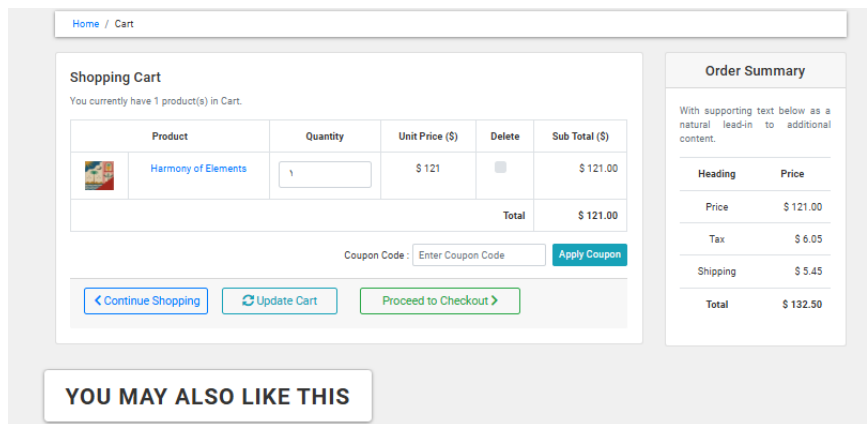


Figure 5.4-4 Shopping Cart Page

Checkout Page

This image (Figure 5.4-5) showcases the checkout page, where users can choose their payment options. It prominently features the PayPal logo, along with icons for major credit cards such as MasterCard, Visa, American Express, and Discover. The page is designed for a straightforward user experience, allowing customers to finalize their purchases easily.

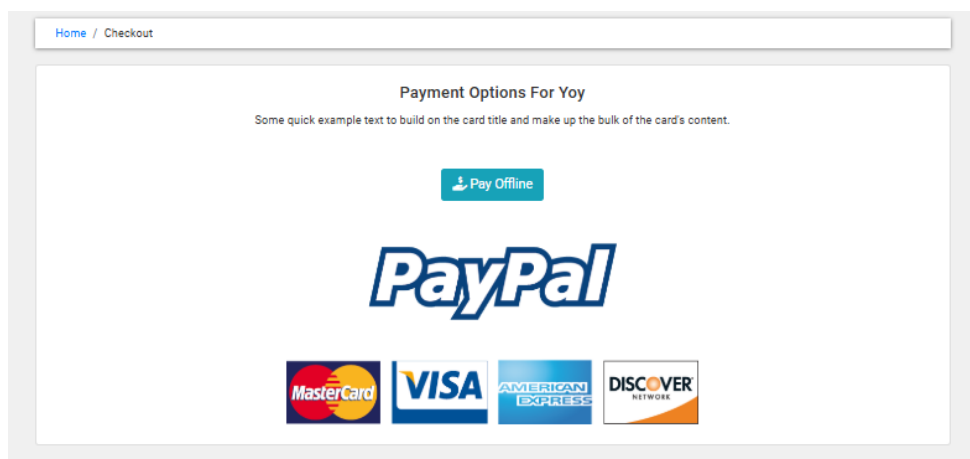
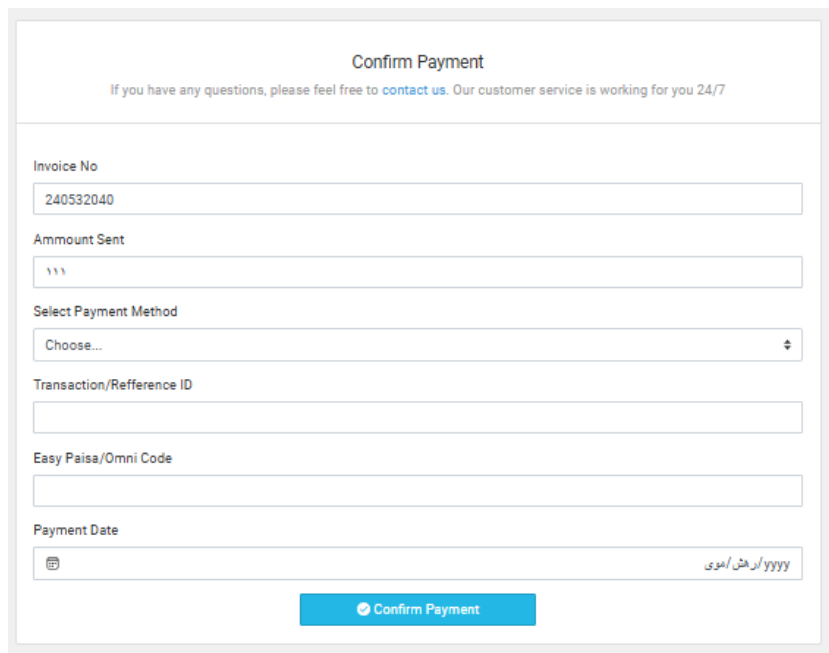


Figure 5.4-5 Checkout Page

Payment Confirmation Page

This image (Figure 5.4-6) illustrates the payment confirmation page. It includes fields for the invoice number, amount sent, payment method selection, transaction/reference ID, and an Easy Paisa/Omni code. Users can confirm their payment by clicking the "Confirm Payment" button. The design emphasizes clarity and ease of use, ensuring users can complete their transactions smoothly.

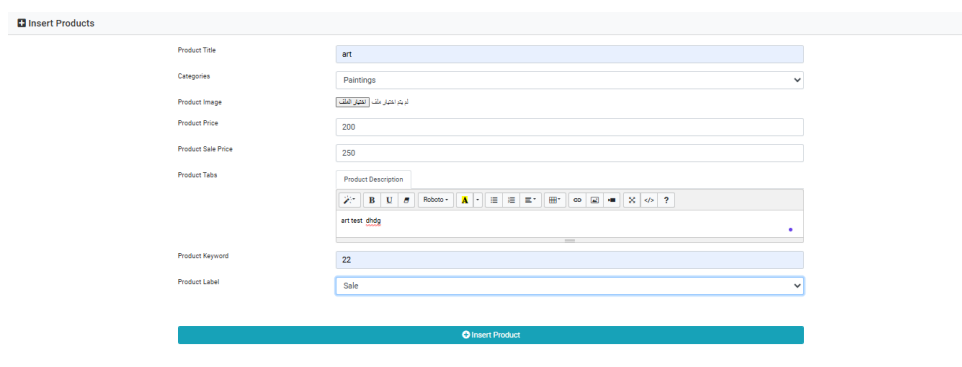


The screenshot shows a web form titled "Confirm Payment". At the top, there is a message: "If you have any questions, please feel free to [contact us](#). Our customer service is working for you 24/7". The form contains several input fields: "Invoice No" with the value "240532040", "Amount Sent" with the value "۱۱۱", "Select Payment Method" with a dropdown menu showing "Choose...", "Transaction/Reference ID" (empty), "Easy Paisa/Omni Code" (empty), and "Payment Date" with a calendar icon and the text "yyyy/ار هشت/اموی". At the bottom, there is a blue button labeled "Confirm Payment".

Figure 5.4-6 Payment Confirmation Page

Artwork Insertion Page

This screen (Figure 5.4-8) allows artists to insert their artworks into the platform. It includes fields for the product title, category selection (e.g., Paintings), price, sale price, and a comprehensive product description. Artists can also enter keywords and labels for better organization before submitting their artwork to the inventory.



The screenshot shows a web form titled "Insert Products". The form has a sidebar on the left with labels for "Product Title", "Categories", "Product Image", "Product Price", "Product Sale Price", "Product Title", "Product Keyword", and "Product Label". The main form area contains: "Product Title" with the value "art", "Categories" with a dropdown menu showing "Paintings", "Product Image" with a text input field containing "آر تیکست", "Product Price" with the value "200", "Product Sale Price" with the value "250", "Product Description" with a rich text editor containing "art test dhdg", "Product Keyword" with the value "22", and "Product Label" with a dropdown menu showing "Sale". At the bottom, there is a blue button labeled "Insert Product".

Figure 5.4-7 Artwork Insertion Page

✓ Testing Product Detail Functionality

Upon selecting a product (Figure), users can view detailed information including the product title, quantity selector, manufacturer, price, and options to add the item to the cart or wishlist. The product image is prominently displayed, enhancing the shopping experience.

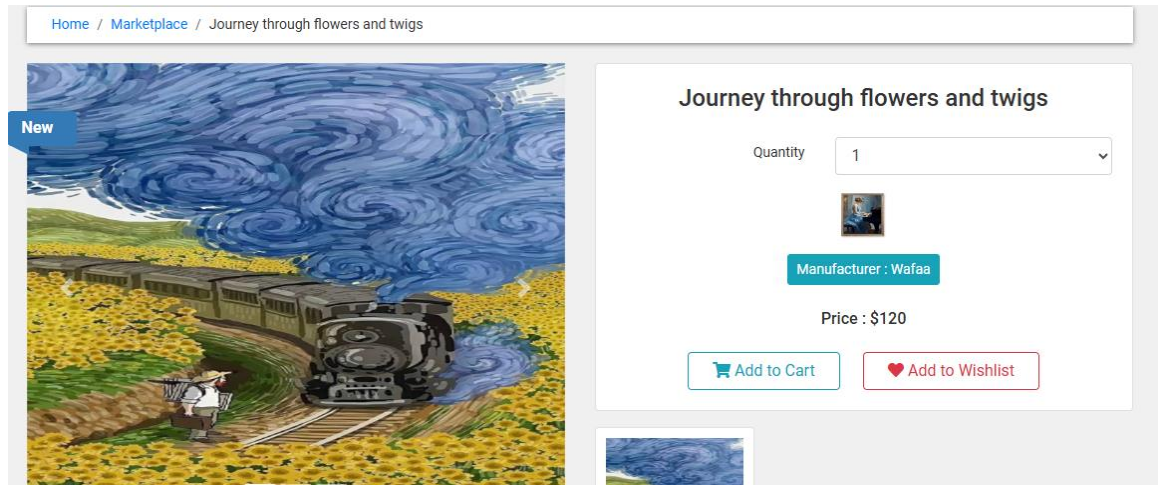


Figure 5.4-8 ✓ Testing Product Detail Functionality

✓ Testing Wishlist Functionality

In the "My Account" section (Figure), users can view their wishlist. It displays a list of saved items, including the product title, image, and an option to delete items. This feature allows users to easily manage and revisit desired products.

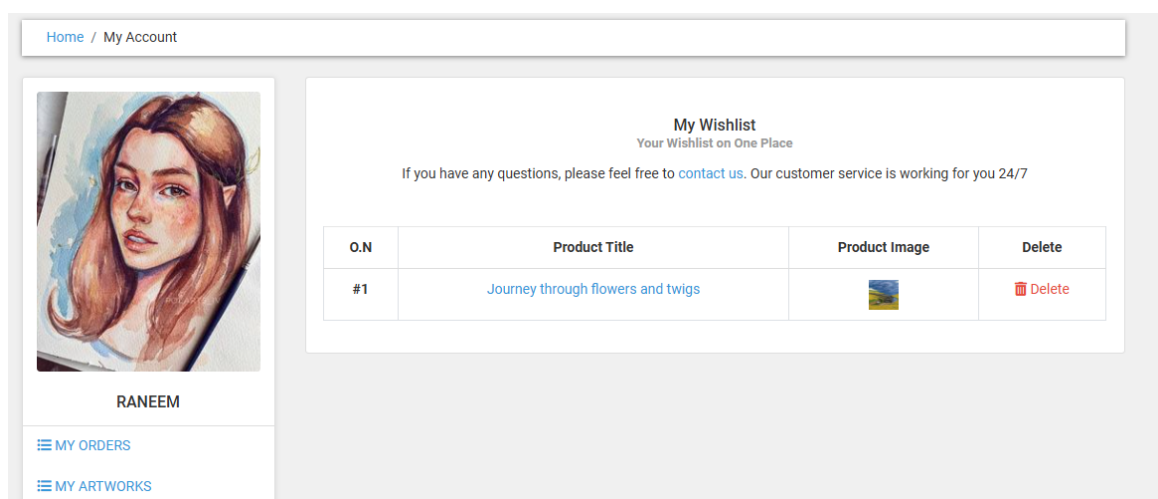
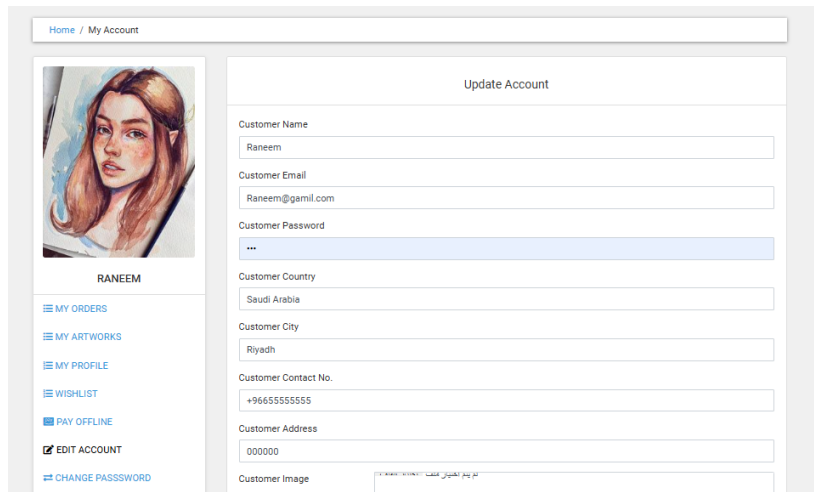


Figure 5.4-9 Testing Wishlist Functionality

✓ Testing Account Update Functionality

The "Update Account" section (Figure) allows users to modify their personal information. Users can update their name, email, password, country, city, contact number, and address.

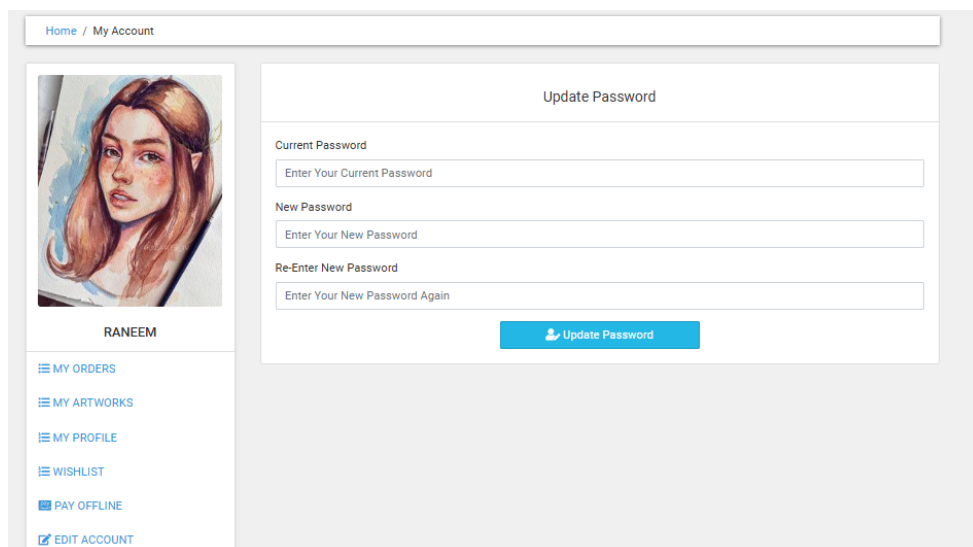


The screenshot shows a user profile page for 'RANEEM'. On the left is a sidebar with navigation links: MY ORDERS, MY ARTWORKS, MY PROFILE, WISHLIST, PAY OFFLINE, EDIT ACCOUNT (highlighted), and CHANGE PASSWORD. The main content area is titled 'Update Account' and contains several input fields: Customer Name (Raneem), Customer Email (Raneem@gmail.com), Customer Password (masked with dots), Customer Country (Saudi Arabia), Customer City (Riyadh), Customer Contact No. (+96655555555), Customer Address (000000), and Customer Image (a placeholder for a profile picture).

Figure 5.4-10 Testing Account Update Functionality

✓ Testing Password Update Functionality

The "Update Password" section (Figure) enables users to change their password securely. Users must enter their current password, followed by the new password and a confirmation of the new password.



The screenshot shows the 'Update Password' section of the user profile page. It features three input fields: Current Password (labeled 'Enter Your Current Password'), New Password (labeled 'Enter Your New Password'), and Re-Enter New Password (labeled 'Enter Your New Password Again'). A blue button labeled 'Update Password' is positioned below the fields. The sidebar and navigation links are consistent with the previous screenshot.

Figure 5.4-11 Testing Password Update Functionality

✓ Testing Account Deletion Confirmation

The "Delete Account" section (Figure) prompts users with a confirmation message before proceeding with account deletion. Users are given the option to confirm with "Yes, I want to Delete" or cancel with "No, I don't want to Delete."

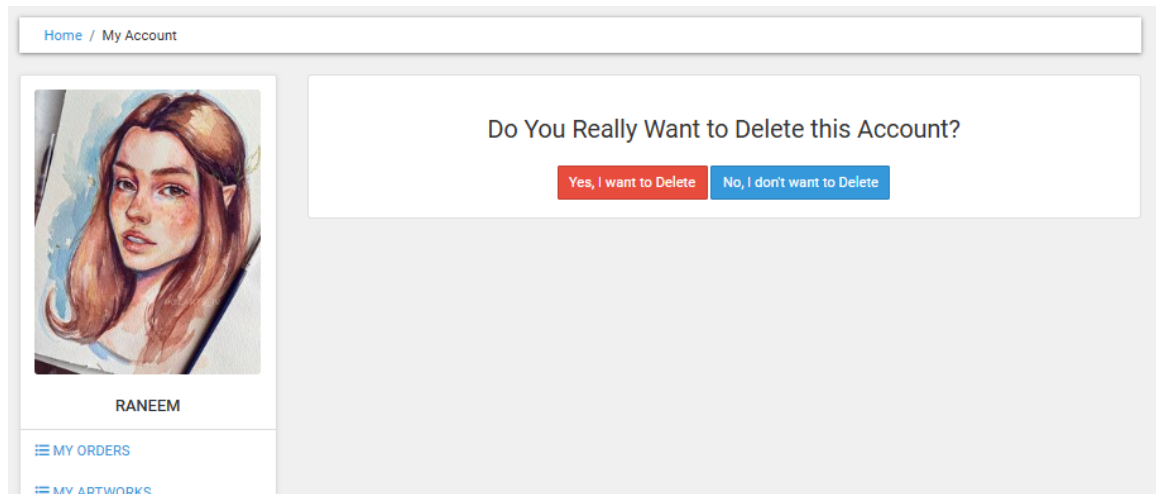


Figure 5.4-12 Testing Account Deletion Confirmation

✓ Testing Product Management in Account Settings

The "View Products" section (Figure) allows users to manage their artworks effectively. Users can see a list of their products, including details such as the product title, image, price, and sale price. The search functionality enables quick filtering of products, enhancing user experience. Options to edit entries ensure that users can update their listings as needed.

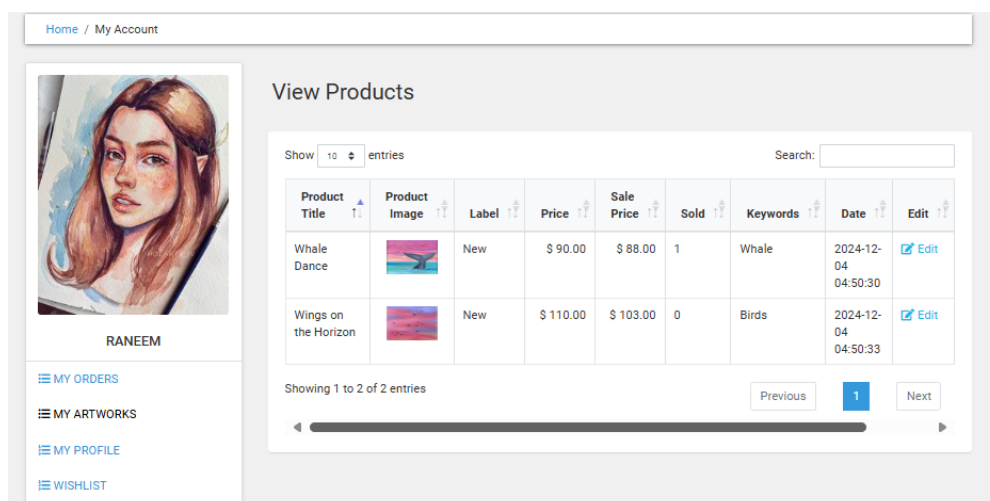
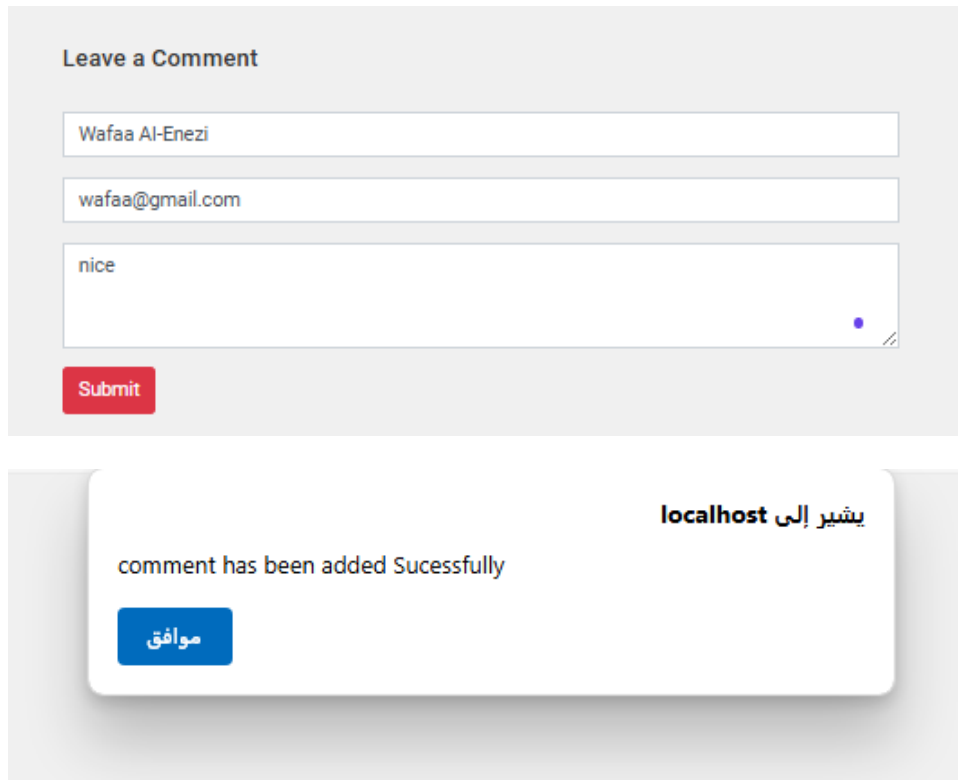


Figure 5.4-13 Testing Product Management in

✓ Comment Submission Example

This screenshot (Figure) shows a completed comment form. The user, Wafaa Al-Enzi, has entered their email address and comment. After filling out the fields, the user can click the "Submit" button to send their feedback.

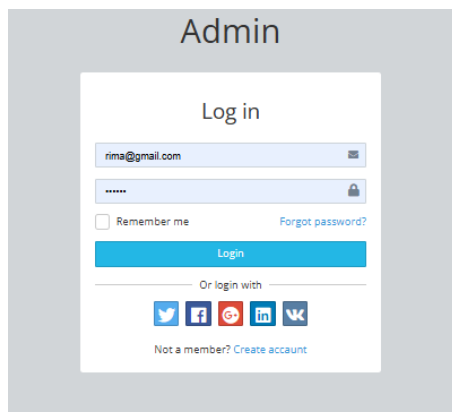


The image shows two parts of a web interface. The top part is a 'Leave a Comment' form with three input fields: the first contains 'Wafaa Al-Enezi', the second contains 'wafaa@gmail.com', and the third contains 'nice'. Below the fields is a red 'Submit' button. The bottom part is a white success message box with the text 'comment has been added Sucessfully' (note the typo) and a blue button with the Arabic word 'موافق' (Agree/OK). The message box also contains the text 'يشير إلى localhost' (points to localhost) in Arabic.

Figure 5.4-14 Comment Submission Example

✓ Admin Login Interface

This screenshot (Figure) depicts the admin login form. The admin can enter their email address and password to access their account. There is also an option to remember the login details and alternative login methods via social media.



The image shows an 'Admin' login interface. It features a 'Log in' section with an email input field containing 'rima@gmail.com', a password input field with masked characters, a 'Remember me' checkbox, and a 'Forgot password?' link. Below these is a blue 'Login' button. Underneath the login button is a section for social media login with the text 'Or login with' and icons for Twitter, Facebook, Google+, LinkedIn, and VK. At the bottom, there is a link that says 'Not a member? Create account'.

Figure 5.4-15 Admin Login Interface

✓ Admin Dashboard Interface

This screenshot (Figure) shows the admin dashboard. It provides an overview of key metrics, including the number of customers, products, and categories. The latest orders section displays order details such as order ID, customer name, invoice number, product ID, quantity, and status.

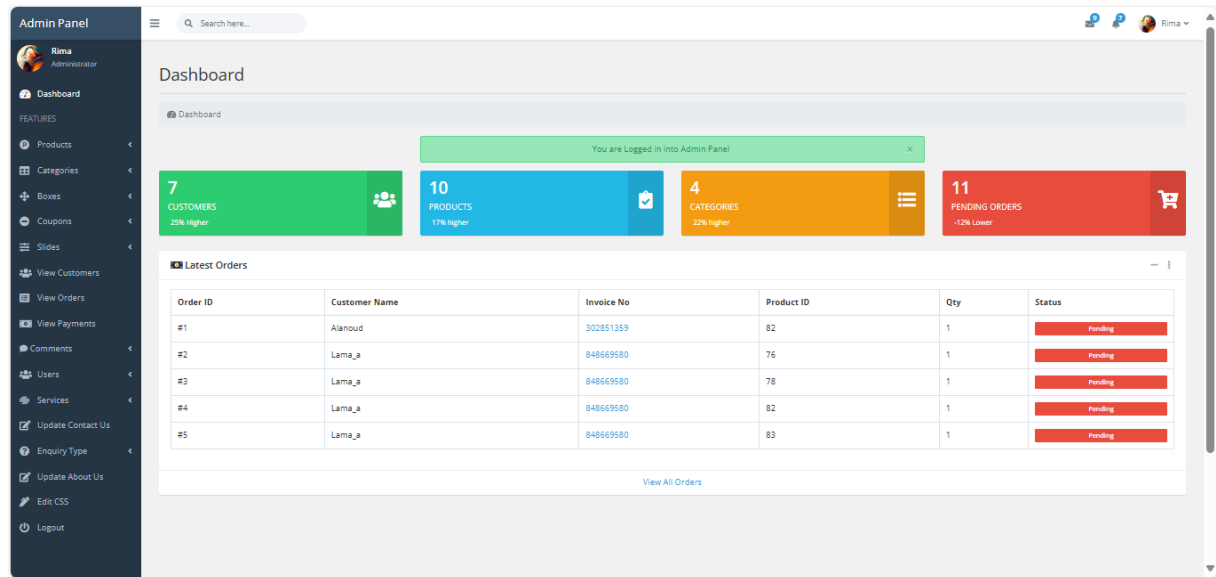


Figure 5.4-16 Admin Dashboard Interface

✓ Admin Panel Navigation Interface

This screenshot (Figure) displays the left-side navigation menu of the admin panel. It includes sections for products, categories, customers, orders, and more. The dashboard also shows a summary of customers and the latest orders with their corresponding order IDs.

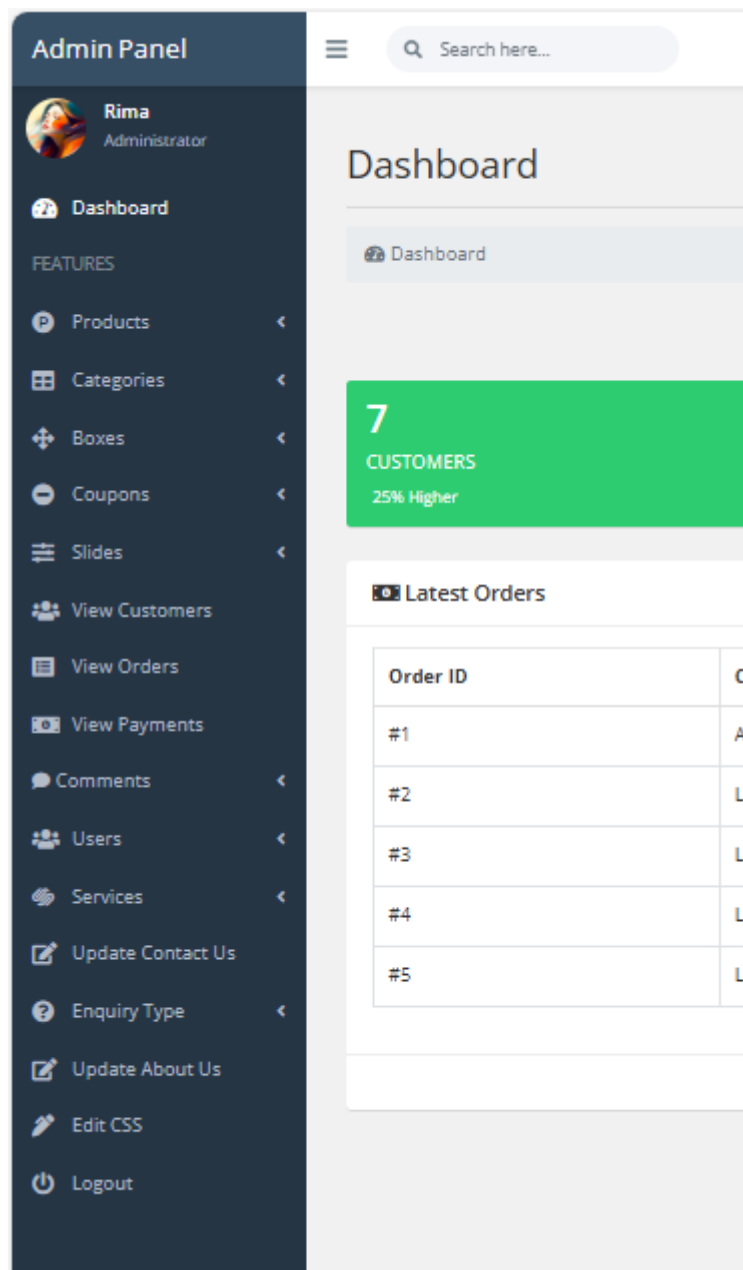


Figure 5.4-17 Admin Panel Navigation Interface

✓ Testing Comments Function (Admin)

After the admin logs in (Figure), he will be able to view and manage comments on products. In the comments section, the admin can see a list of comments, including details such as comment ID, commenter name, date, email, and options to delete comments.

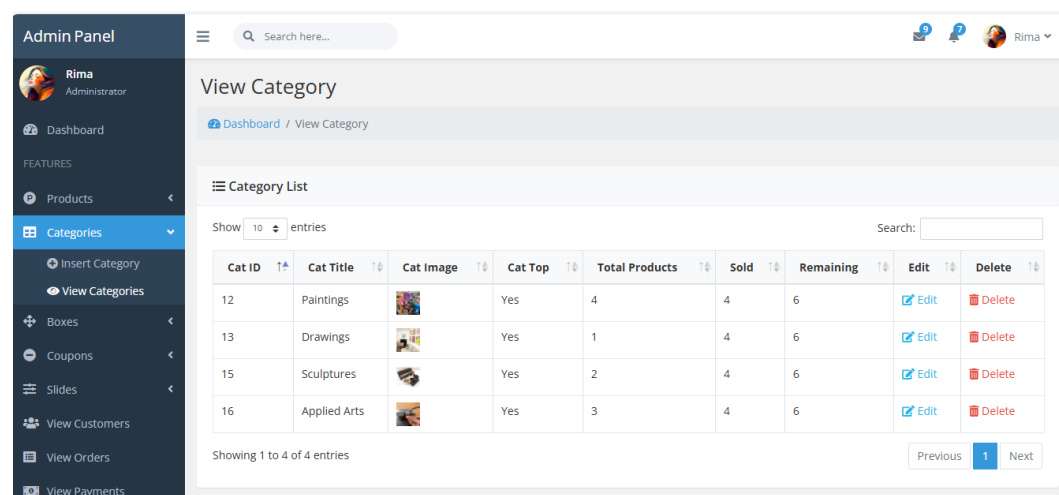


comment ID	name	comment	date	email	Status	Delete
8	reem_r	لوحه رائده استعري في ايداعك	2024-12-05 04:38:44	reem23@gmail.com	1	Delete
9	Lama_a	لوحه جميله ومميزه	2024-12-05 04:53:03	Lama231@gmail.com	1	Delete

Figure 5.4-18 Testing Comments Function (Admin)

✓ Testing View Category Function (Admin)

After the admin navigates to the "View Category" section (Figure), he can see the list of categories along with options to edit or delete them.







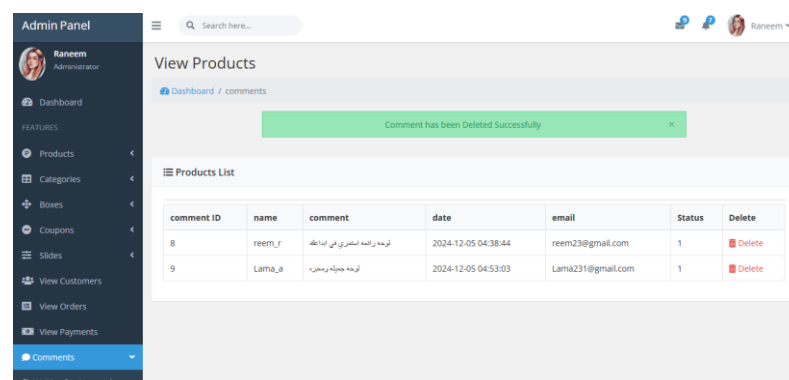
Cat ID	Cat Title	Cat Image	Cat Top	Total Products	Sold	Remaining	Edit	Delete
12	Paintings		Yes	4	4	6	Edit	Delete
13	Drawings		Yes	1	4	6	Edit	Delete
15	Sculptures		Yes	2	4	6	Edit	Delete
16	Applied Arts		Yes	3	4	6	Edit	Delete

Figure 5.4-19 Testing View Category Function (Admin)



comment ID	name	comment	date	email	Status	Delete
8	reem_r	لوحه رائده استعري في ايداعك	2024-12-05 04:38:44	reem23@gmail.com	1	Delete
9	Lama_a	لوحه جميله ومميزه	2024-12-05 04:53:03	Lama231@gmail.com	1	Delete

Figure 5.4-20 Testing delete Comments Function (Admin)

✓ Viewing Users List (Admin)

After the admin navigates to the "View Users" section (Figure 4.13), he can access a list of all users, including their details such as email, contact number, and job title. The admin has options to edit or delete user entries.

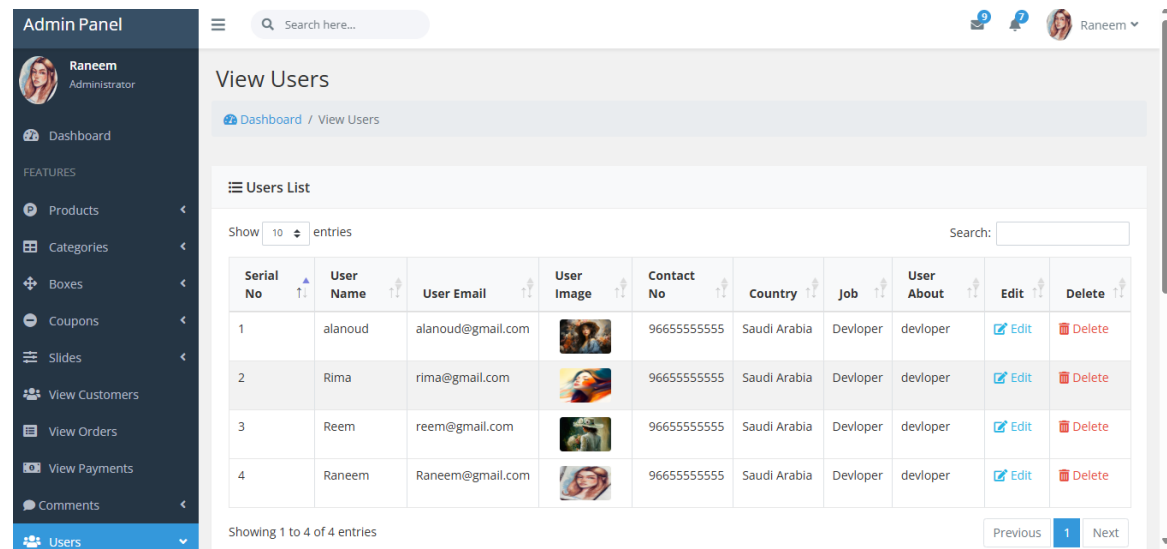


Figure 5.4-21 Viewing Users List (Admin)

✓ View Products Section

This screenshot (Figure) illustrates the "View Products" section of the admin panel. It lists various products along with details such as product ID, title, price, sale price, and status. The interface allows administrators to manage product information efficiently.

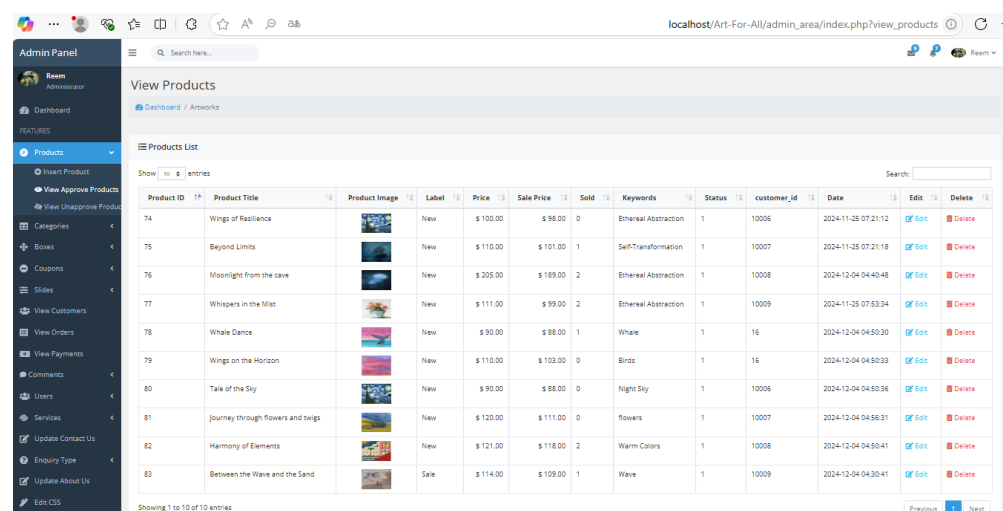
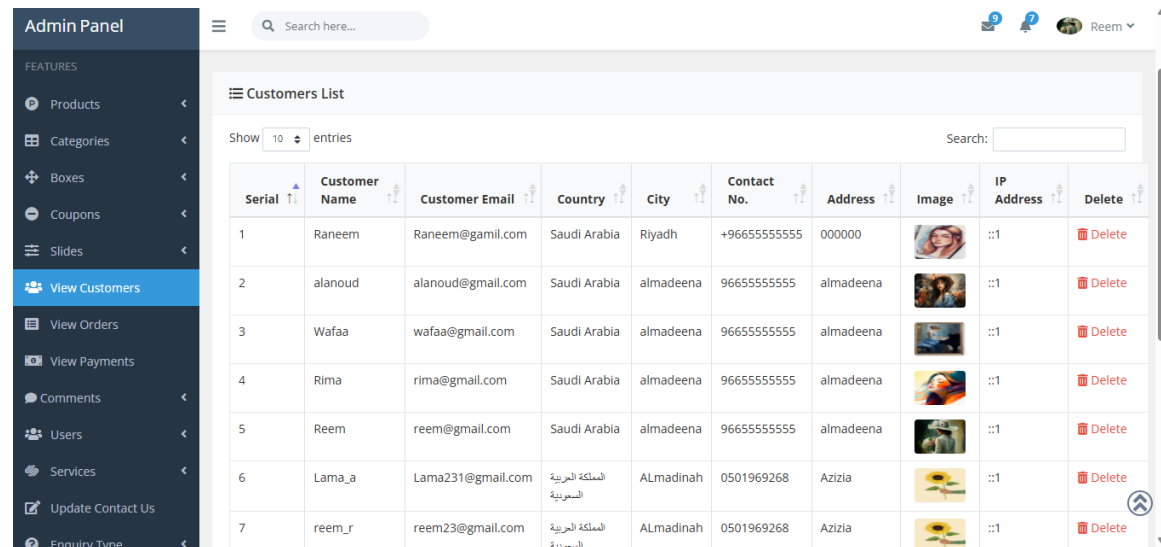


Figure 5.4-22 View Products Section

✓ View Customers Section

This screenshot (Figure) showcases the "View Customers" section of the admin panel. It provides a detailed list of customers, including their serial number, name, email, contact number, address, and IP address. This interface enables administrators to manage customer information effectively.










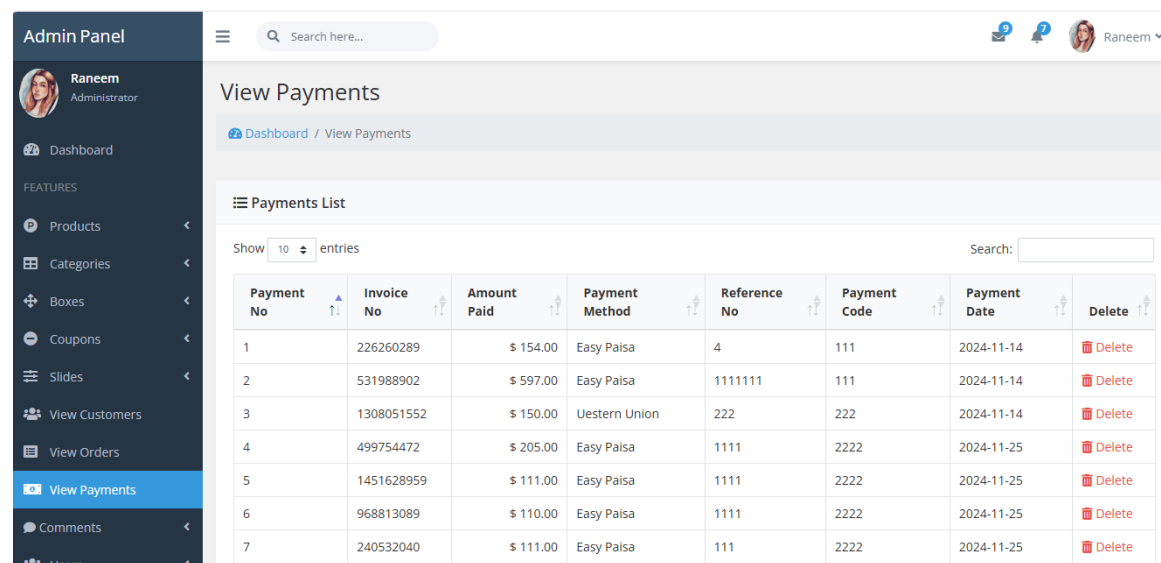
Serial	Customer Name	Customer Email	Country	City	Contact No.	Address	Image	IP Address	Delete
1	Raneem	Raneem@gamil.com	Saudi Arabia	Riyadh	+96655555555	000000		::1	Delete
2	alanoud	alanoud@gmail.com	Saudi Arabia	almadeena	96655555555	almadeena		::1	Delete
3	Wafaa	wafaa@gmail.com	Saudi Arabia	almadeena	96655555555	almadeena		::1	Delete
4	Rima	rima@gmail.com	Saudi Arabia	almadeena	96655555555	almadeena		::1	Delete
5	Reem	reem@gmail.com	Saudi Arabia	almadeena	96655555555	almadeena		::1	Delete
6	Lama_a	Lama231@gmail.com	المملكة العربية السعودية	ALmadinah	0501969268	Azizia		::1	Delete
7	reem_r	reem23@gmail.com	المملكة العربية السعودية	ALmadinah	0501969268	Azizia		::1	Delete

Figure 5.4-23 View Customers Section

✓ Testing Payment Overview (Admin)

After the admin navigates to the "View Payments" section (Figure 4.13), he will be able to see a detailed list of all payments, including payment numbers, amounts, methods, and status.



Payment No	Invoice No	Amount Paid	Payment Method	Reference No	Payment Code	Payment Date	Delete
1	226260289	\$ 154.00	Easy Paisa	4	111	2024-11-14	Delete
2	531988902	\$ 597.00	Easy Paisa	1111111	111	2024-11-14	Delete
3	1308051552	\$ 150.00	Uestern Union	222	222	2024-11-14	Delete
4	499754472	\$ 205.00	Easy Paisa	1111	2222	2024-11-25	Delete
5	1451628959	\$ 111.00	Easy Paisa	1111	2222	2024-11-25	Delete
6	968813089	\$ 110.00	Easy Paisa	1111	2222	2024-11-25	Delete
7	240532040	\$ 111.00	Easy Paisa	111	2222	2024-11-25	Delete

Figure 5.4-24 Testing Payment Overview (Admin)

5.5 Results

The implementation and testing of our web-based system for selling artistic paintings for people with special needs have yielded positive results. The platform successfully provides a user-friendly and accessible interface for artists to showcase their work, connect with potential buyers, and generate income. The integration of secure payment processing and comprehensive order management has enabled seamless transactions, enhancing the overall user experience. The testing phase has validated the system's functionality, performance, and adherence to accessibility guidelines, ensuring that individuals with disabilities can navigate and utilize the platform effectively. Overall, the implementation and testing processes have demonstrated the viability and effectiveness of our web-based solution in empowering artists with special needs and promoting their artistic talents within the community.

Chapter 6: Conclusion and Future Work

6.1 Conclusion

Embarking on the creation of our online platform for selling artistic paintings crafted by individuals with special needs, we've triumphantly met our primary objectives. This platform provides a dedicated space for artists with disabilities to showcase their creations, generate income, and foster social inclusion. By harnessing modern web technologies, we've developed an accessible, user-friendly marketplace tailored to the unique needs of this underserved community. Essential features such as effortless artwork submission, personalized artist profiles, and secure payment processing effectively tackle the barriers artists with disabilities face in traditional sales channels.

6.2 Limitations

The platform encountered a variety of constraints:

1. **Limited Integration:** Functioning autonomously, the system lacks connections to external platforms or galleries, thus restricting artist audience reach.
2. **Scalability Challenges:** The existing infrastructure may falter under a surge of new users, potentially degrading performance.
3. **Basic Analytics:** Offering only rudimentary reporting, the platform limits insights into sales trends and user behaviors.
4. **Language Accessibility:** With availability restricted to a single local language, non-native speakers face accessibility barriers.

6.3 Future Work

Prospective enhancements encompass:

1. **Integration with External Platforms:** Establishing links with other art or social service platforms to amplify exposure and sales opportunities.
2. **Enhanced Scalability:** Transitioning to scalable cloud hosting solutions to ensure performance stability amidst user growth.
3. **Advanced Analytics:** Introducing features for comprehensive sales and engagement tracking to guide strategic decisions.
4. **Multilingual Support:** Expanding language offerings to broaden accessibility and market reach.

References

- [1] P. Likarish, E. Jung, D. Dunbar, T. E. Hansen, and J. P. Hourcade, "B-APT: Bayesian Anti-Phishing Toolbar," 2008 IEEE International Conference on Communications, 2008, pp. 1745-1749, doi: 10.1109/ICC.2008.335.
- [2] Phishing website dataset available at <https://www.kaggle.com/>
- [3] <http://s3.amazonaws.com/alexa-static/top-1m.csv.zip>
- [4] . <https://github.com/mitchellkrogza/Phishing.Database/blob/master/phishing-domains-ACTIVE.txt>

