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INTRODUCTION

ArtMuse: Unleashing Creativity and Inspiring Art Enthusiasts

ArtMuse is a thriving community and a platform dedicated to fostering creativity and connecting art enthusiasts from all walks of life. Through its vibrant online presence, ArtMuse strives to provide a comprehensive and immersive art experience that showcases diverse artworks, promotes artists, and educates visitors about the rich tapestry of artistic expression

FUNCTIONAL REQUIREMENTS

In a world where art is constantly evolving and artists seek new ways to share their creations, having a website for an art gallery has become a necessity. Here are a few reasons why a website is essential for an art gallery like ArtMuse:

1. **Global Reach:** A website offers an art gallery the opportunity to transcend physical boundaries and reach a global audience. ArtMuse can showcase artworks from various artists, enabling individuals from different parts of the world to appreciate and acquire their favorite pieces, regardless of their geographical location.
2. **Enhanced Accessibility:** With a website, ArtMuse ensures that art is accessible to everyone, including those who might face physical limitations or geographical constraints that prevent them from visiting a physical gallery. People can explore artworks, learn about artists, and even make purchases from the comfort of their homes, making art more inclusive and readily available.
3. **Curated Collections:** ArtMuse can curate collections based on different themes, styles, or artists, creating a cohesive and engaging experience for its visitors. Through a website, these collections can be meticulously displayed, accompanied by detailed descriptions and insights that enhance the viewers' understanding and appreciation of the artworks.
4. **Artist Promotion:** A website offers an excellent platform for ArtMuse to promote emerging and established artists. Artists can showcase their portfolios, provide background information about their work, and gain exposure to a wider audience. This exposure can lead to potential collaborations, commissions, and recognition within the art community.
5. **Art Education:** ArtMuse can utilize its website to educate and engage visitors in the world of art. By incorporating informative articles, artist interviews, virtual exhibitions, and interactive features, the website becomes a valuable resource for art enthusiasts to deepen their knowledge and understanding of various art forms.
6. **Community Building:** A website serves as a hub for art enthusiasts to connect, share their thoughts, and engage in discussions. ArtMuse can incorporate features such as forums, blogs, and social media integration, fostering a vibrant community of artists, collectors, and art lovers who can interact, inspire one another, and support the gallery's mission

NON-FUNCTIONAL REQUIREMENTS

Non-functional requirements for the ArtMuse website focus on the qualities and characteristics that contribute to its overall performance, usability, security, and scalability. These requirements highlight the advantages of using the website and ensure a positive user experience. Here are some key non-functional requirements for ArtMuse:

1. Performance:

- **Responsiveness:** The website should load quickly and provide a smooth browsing experience to users, ensuring minimal latency and fast page rendering.
- **Scalability:** The website should be able to handle increased traffic and accommodate a growing number of users without experiencing performance degradation.
- **Efficiency:** The website's code and database should be optimized to ensure efficient data retrieval and processing, contributing to faster response times.

2. Usability:

- **Intuitive Interface:** The website should have a user-friendly interface, with clear navigation and intuitive interactions, making it easy for users to explore artworks, search for information, and make purchases.
- **Accessibility:** The website should be designed and developed following accessibility standards, ensuring that people with disabilities can access and use the site effectively.

3. Security:

- **Data Protection:** Implement robust security measures to protect user data, including secure transmission of sensitive information during transactions and proper storage of user account details.
- **Secure Payments:** Utilize secure payment gateways to ensure the confidentiality and integrity of financial transactions, protecting users' payment information.
- **User Authentication:** Implement a secure user authentication system to prevent unauthorized access to user accounts and protect personal information.

4. Reliability:

- **Availability:** The website should have high availability, ensuring that it is accessible to users at all times, with minimal downtime for maintenance or updates.
- **Error Handling:** The website should effectively handle errors and exceptions, providing meaningful error messages to users and gracefully recovering from failures.

5. Design and Aesthetics:

- **Visual Appeal:** The website should have an aesthetically pleasing design that showcases artworks effectively and enhances the overall user experience.

- Consistency: Maintain a consistent design language throughout the website, ensuring that the visual elements, typography, and color schemes create a cohesive and visually appealing interface.

By fulfilling these non-functional requirements, the ArtMuse website ensures optimal performance, usability, security, and reliability. This, in turn, enhances the advantages of using the website, such as seamless browsing, secure transactions, accessibility, and an engaging user experience that encourages users to explore and appreciate art to the fullest extent.

PROJECT PLAN

Week 1:

Day 1-2:

1. Project Setup:

- Set up the development environment with the required tools and IDE.
- Initialize a Maven project with the necessary dependencies for Spring, Thymeleaf, and MySQL integration.

Day 3-4:

2. Database Design and Setup:

- Design the database schema to accommodate artworks, artists, users, and other relevant entities.
- Set up the MySQL database and create the necessary tables based on the design.

Day 5-6:

3. Backend Development:

- Implement the necessary backend functionality using Spring MVC:
 - Create models and repositories for entities such as artworks, artists, and users.
 - Set up data access and implement CRUD operations.
 - Implement authentication and authorization for user accounts.

Week 2:

Day 7:

4. Frontend Development:

- Set up the basic structure of the website using Thymeleaf templates and CSS styles.
- Implement the necessary frontend views for displaying artworks, artist profiles, and user authentication.

Day 8-9:

5. Artwork and Artist Management:

- Develop functionality for adding, editing, and deleting artworks and artist profiles through appropriate forms and controllers.
- Implement image upload functionality for artworks and artists.

Day 10-11:

6. User Interface Enhancements:

- Improve the user interface and visual design of the website using CSS and Thymeleaf.
- Implement features such as search functionality, sorting and filtering of artworks, and pagination.

Day 12-13:

7. Testing and Bug Fixes:

- Perform comprehensive testing to ensure proper functionality and identify and fix any issues or bugs.
- Conduct user testing to gather feedback and make necessary improvements.

Day 14:

8. Deployment and Documentation:

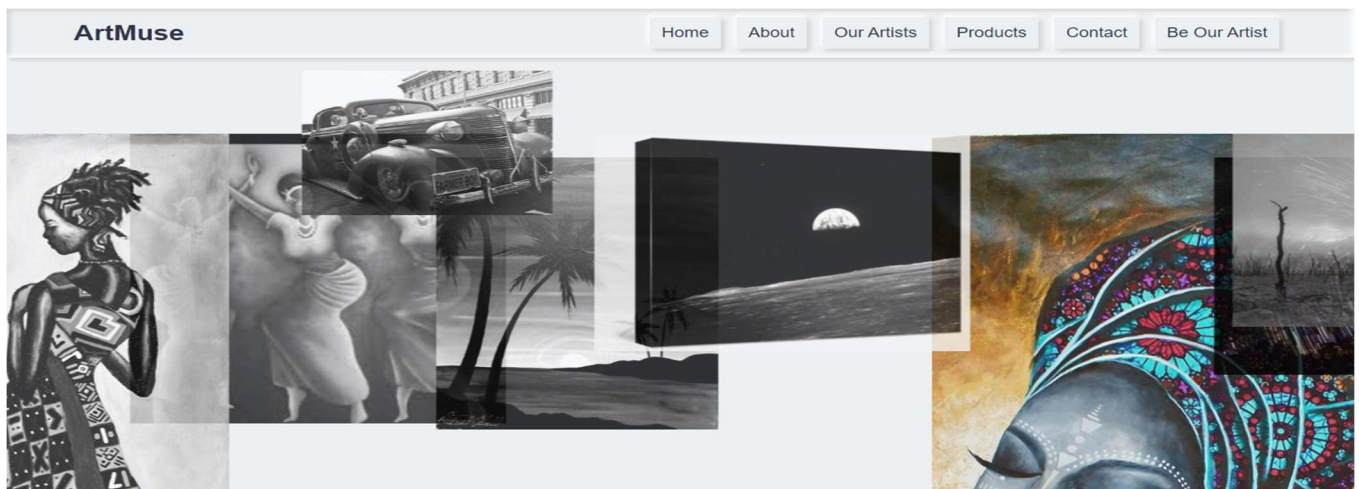
- Prepare the website for deployment on a web server.
- Write documentation, including setup instructions, database schema, and any other relevant information

User Documentation: ArtMuse

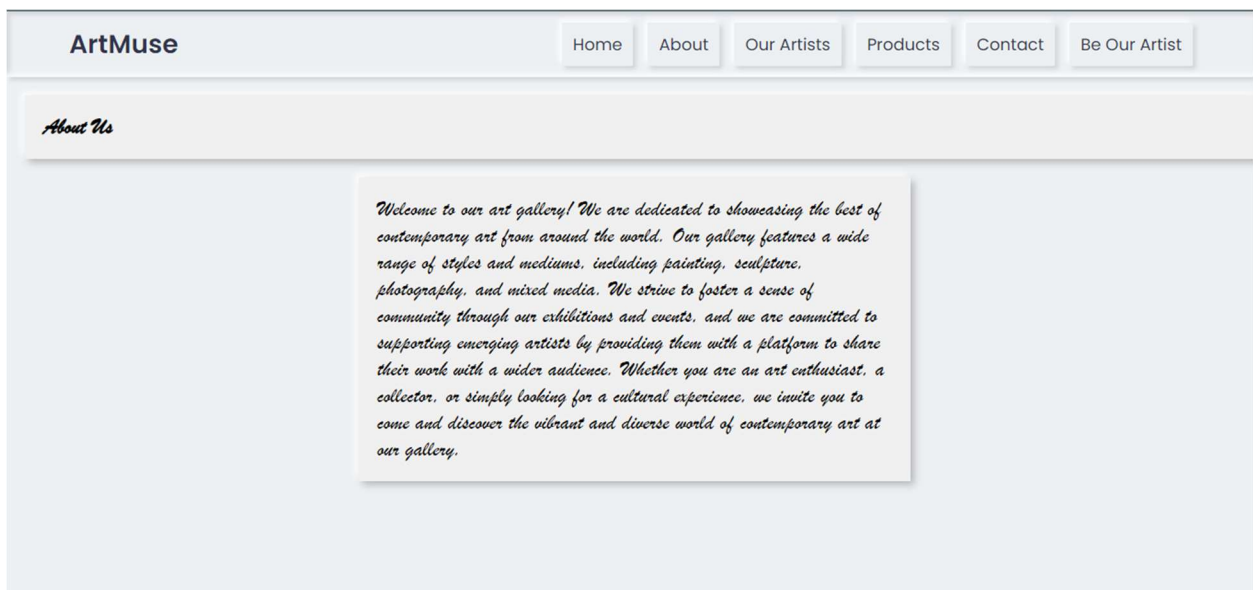
Welcome to the user documentation for the ArtMuse website. This guide will walk you through the various features and functionalities of the website, including navigation, user registration and login, interacting with artists, contacting us, and exploring the products. Additionally, it will explain the differences between regular users and administrators, highlighting the admin's additional capabilities.

Navigation:

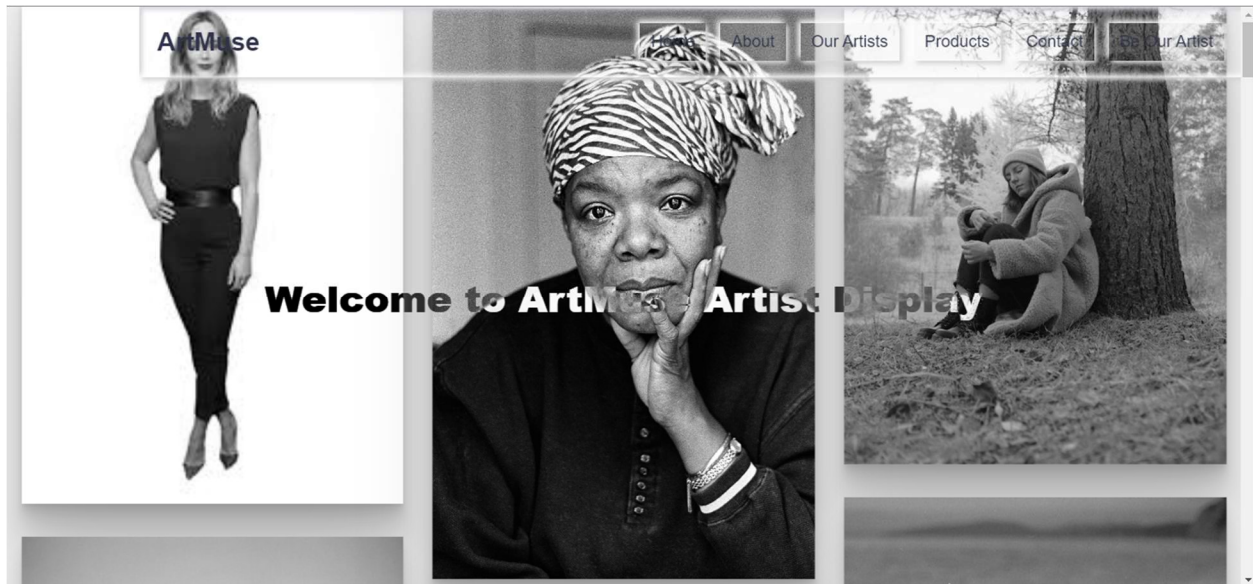
- **Home:** Click on the "Home" link in the navigation menu to return to the homepage you can use the mouse to slide to different artwork showcased



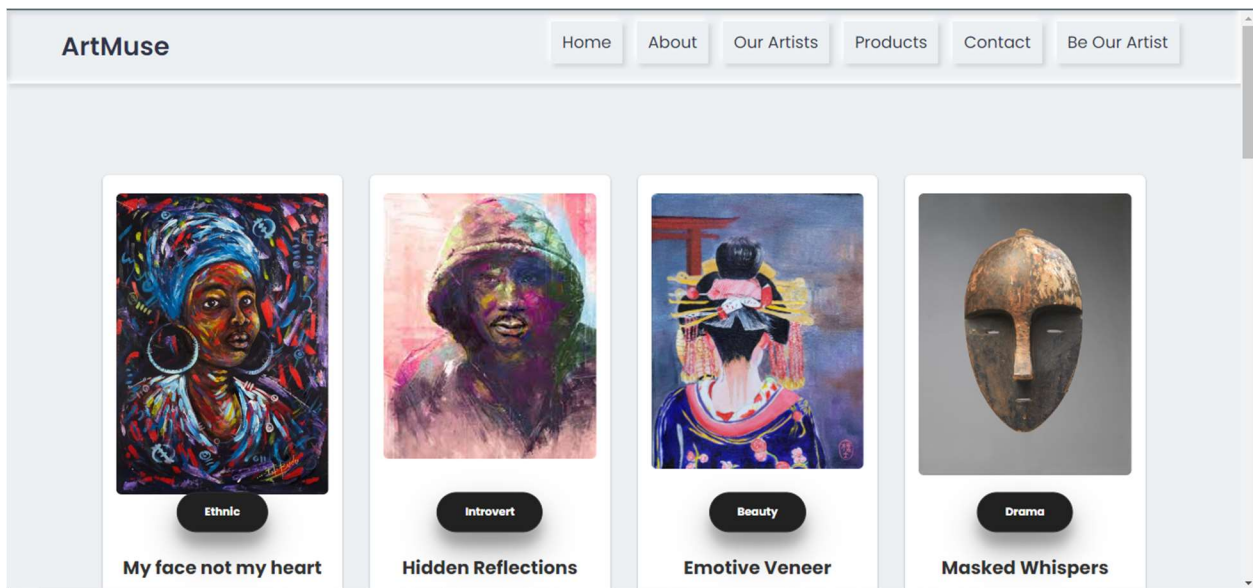
About Us: Access information about the ArtMuse, our mission, and values by clicking on the "About Us" link



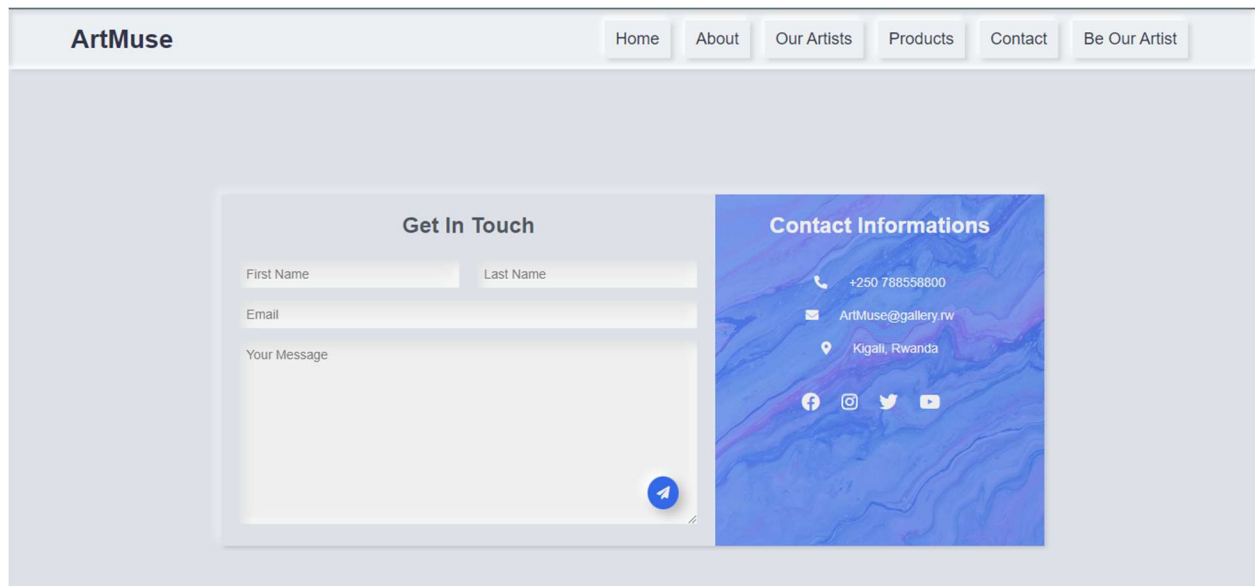
Artists: Explore the profiles of talented artists by selecting the "Artists" option. View their slideshow presentation of their pictures



Products: Browse through our diverse collection of artworks and products by clicking on the "Products" section



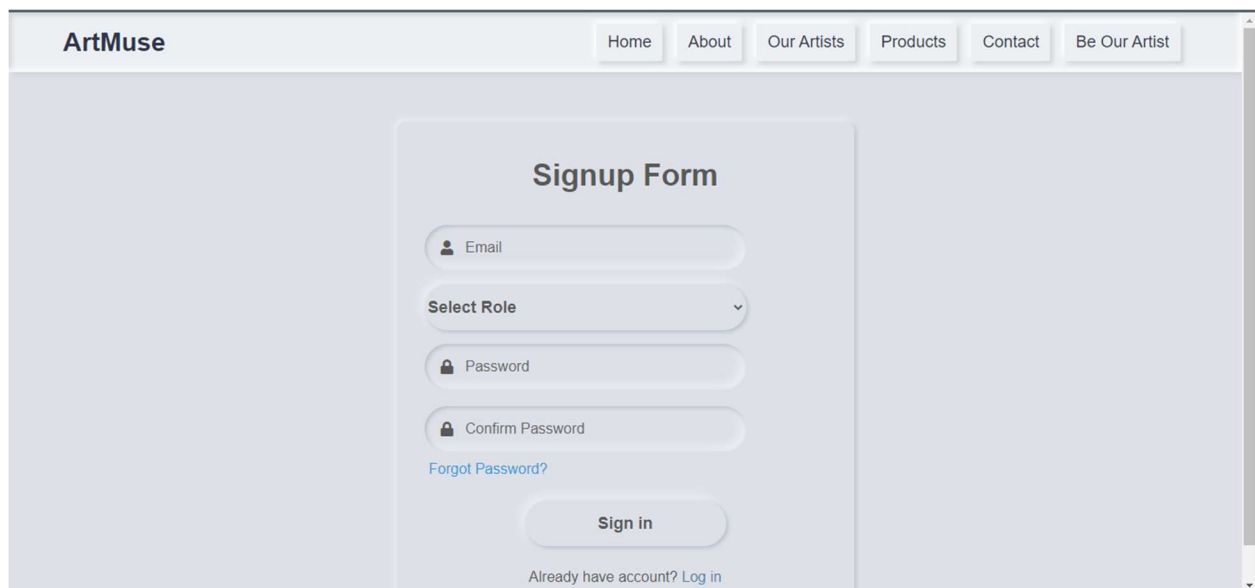
Contact Us: Connect with us by clicking on the "Contact Us" link. Fill out the contact form to send us your inquiries, feedback, or suggestions



The image shows the 'Contact Us' page of the ArtMuse website. The header features the 'ArtMuse' logo on the left and a navigation menu with links: 'Home', 'About', 'Our Artists', 'Products', 'Contact', and 'Be Our Artist'. The main content area is divided into two sections. On the left, titled 'Get In Touch', there is a form with fields for 'First Name', 'Last Name', 'Email', and a large text area for 'Your Message'. A blue circular button with a white paper plane icon is positioned at the bottom right of the message field. On the right, titled 'Contact Informations', there is a blue background with white text and icons. It lists a phone number '+250 788556800', an email 'ArtMuse@gallery.rw', and a location 'Kigali, Rwanda'. Below this, there are icons for Facebook, Instagram, Twitter, and YouTube.

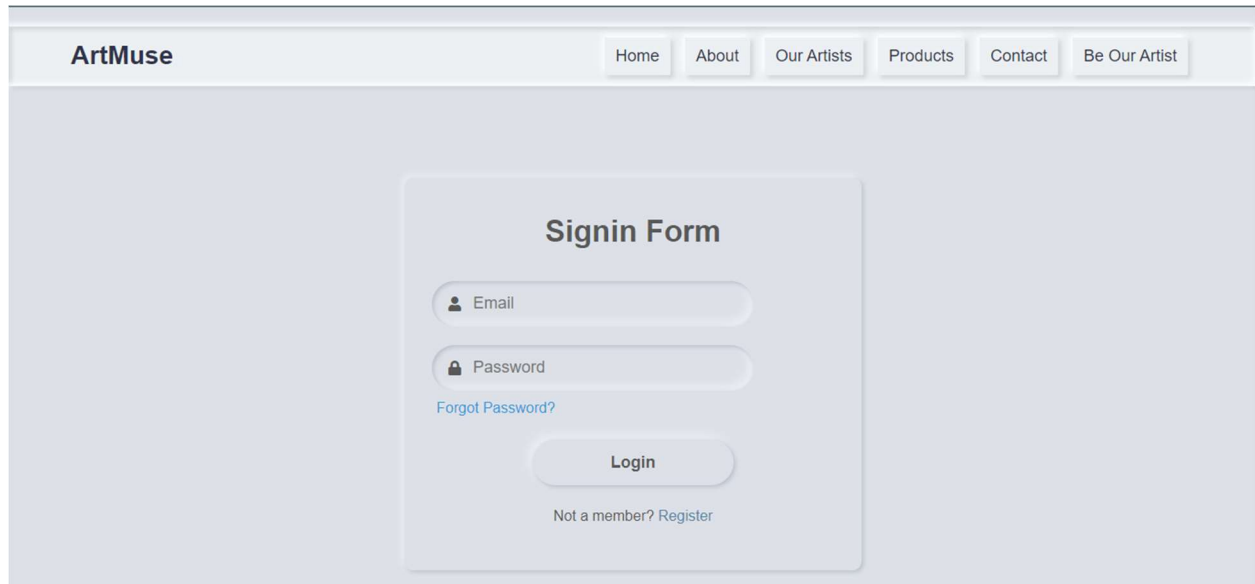
User Registration and Login

Sign Up: To create an account, click on the "Sign Up" button. Fill out the required information, such as your name, email address, and password. Submit the form to register your account. You will choose your role so that you can learn how an admin differ from a simple user



The image shows the 'Signup Form' page of the ArtMuse website. The header is identical to the previous page, with the 'ArtMuse' logo and the same navigation menu. The main content area features a central 'Signup Form' box. This form includes input fields for 'Email', 'Password', and 'Confirm Password', each preceded by a small icon (a person for email, a lock for passwords). A 'Select Role' dropdown menu is located between the email and password fields. Below the password fields, there is a blue link that says 'Forgot Password?'. At the bottom of the form is a 'Sign in' button. Below the button, there is a link that says 'Already have account? Log in'.

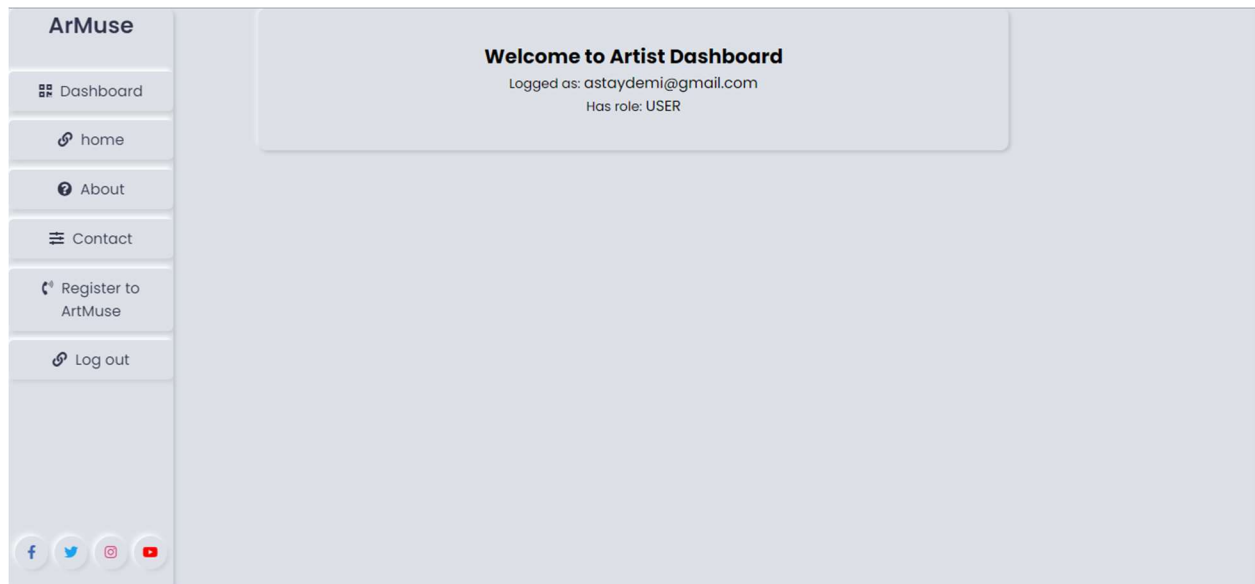
Sign In: If you already have an account, click on the "Sign In" button. Enter your credentials (email and password) to log in to your account.



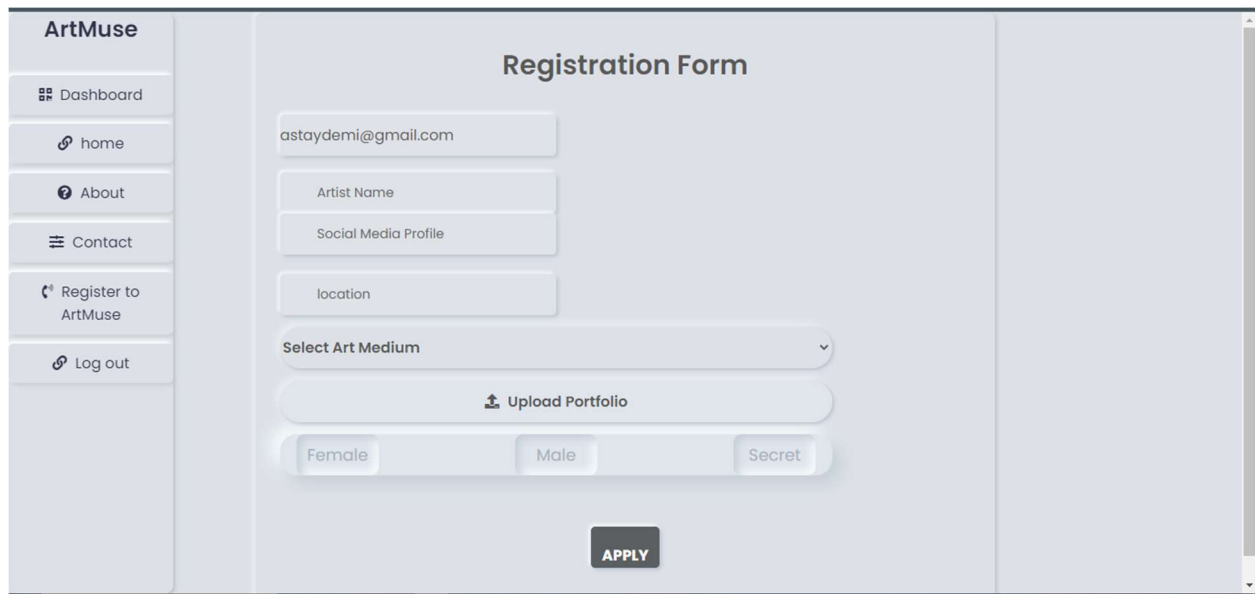
The image shows a web page for ArtMuse with a navigation bar at the top containing links: Home, About, Our Artists, Products, Contact, and Be Our Artist. The main content area features a central 'Signin Form' box. Inside this box, there are two input fields: 'Email' with a person icon and 'Password' with a lock icon. Below the password field is a blue link 'Forgot Password?'. At the bottom of the form is a 'Login' button and a link 'Not a member? Register'.

USER Account

Once signed in, you can access your account dashboard, where you can manage your profile and interact with the website.



OTHER LINKS ARE NORMAL BUT THE REGISTER TO ARTMUSE GETS YOU AN A REGISTRATION FORM

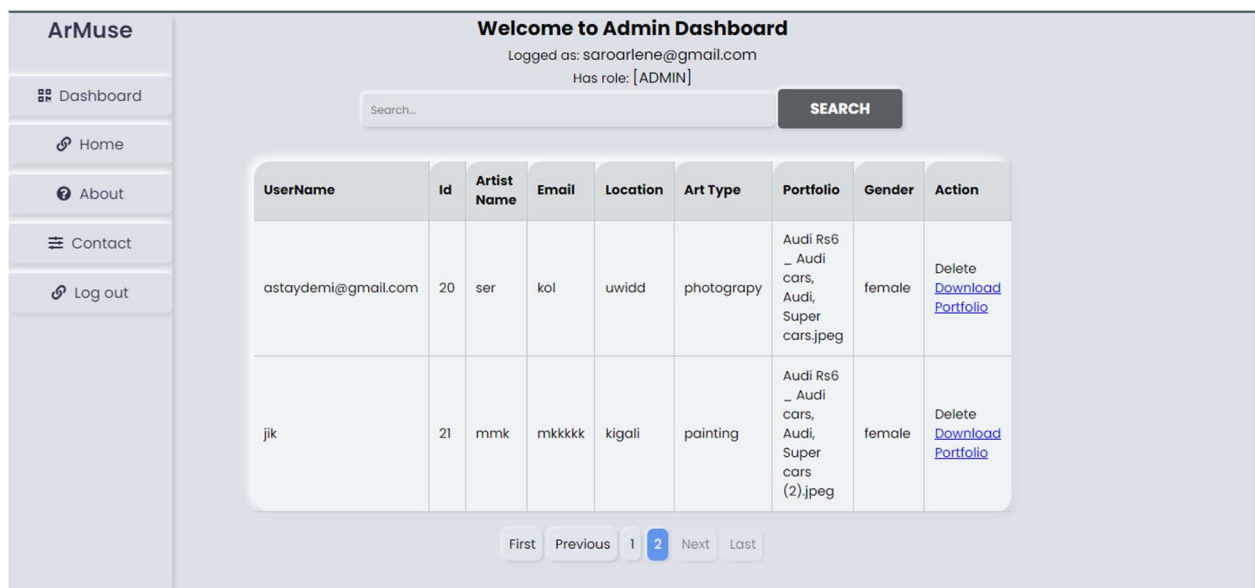


The registration form for ArtMuse is displayed on a light blue background. On the left is a sidebar with the 'ArtMuse' logo and navigation links: Dashboard, home, About, Contact, Register to ArtMuse, and Log out. The main area is titled 'Registration Form' and contains several input fields: an email field with 'astaydemi@gmail.com', an 'Artist Name' field, a 'Social Media Profile' field, a 'location' field, and a 'Select Art Medium' dropdown menu. Below these is an 'Upload Portfolio' button with a file icon. At the bottom are three radio buttons for 'Female', 'Male', and 'Secret', followed by an 'APPLY' button.

Administrator Account:

Dashboard: Administrators have access to a dedicated dashboard with additional functionalities.

Search, Delete, and Download: Admins can perform advanced searches across artists, artworks, and products. They have the ability to delete and download artworks and product data



The Admin Dashboard for ArtMuse shows a 'Welcome to Admin Dashboard' message with login details: 'Logged as: saroarlene@gmail.com' and 'Has role: [ADMIN]'. Below this is a search bar and a 'SEARCH' button. The main content is a table with 9 columns: UserName, Id, Artist Name, Email, Location, Art Type, Portfolio, Gender, and Action. It lists two artists. The first artist has the email 'astaydemi@gmail.com' and the second has 'jik'. The 'Action' column contains 'Delete' and 'Download Portfolio' links for each artist. At the bottom are pagination controls: 'First', 'Previous', '1', '2' (selected), 'Next', and 'Last'.

UserName	Id	Artist Name	Email	Location	Art Type	Portfolio	Gender	Action
astaydemi@gmail.com	20	ser	kol	uwidd	photograpy	Audi Rs6 _ Audi cars, Audi, Super cars.jpeg	female	Delete Download Portfolio
jik	21	mmk	mkkkkk	kigali	painting	Audi Rs6 _ Audi cars, Audi, Super cars (2).jpeg	female	Delete Download Portfolio

Technical Documentation: ArtMuse

This technical documentation provides an overview of the ArtMuse website, its architecture, technologies used, and instructions for developers to understand and contribute to the project.

1. Architecture:

- ArtMuse follows a three-tier architecture, consisting of the presentation layer, business logic layer, and data persistence layer.
- The presentation layer utilizes the Model-View-Controller (MVC) design pattern to separate concerns and handle user interactions.
- The business logic layer handles application logic, including authentication, artwork management, and artist profiles.
- The data persistence layer manages data storage and retrieval using a MySQL relational database.

2. Technologies Used:

- Java: The primary programming language used for backend development.
- Spring Framework: Provides dependency injection, inversion of control, and other features for developing robust and scalable web applications.
- Maven: Used as a build and dependency management tool.
- Spring MVC: Handles the web layer, routing user requests, and managing HTTP responses.
- Thymeleaf: A server-side Java templating engine used for rendering dynamic views.
- MySQL: A relational database management system for data storage and retrieval.
- HTML, CSS, and JavaScript: Frontend technologies for building the user interface and enhancing user experience.

3. Project Structure:

- `src/main/java`: Contains Java source code for backend development.
 - Config: Configuration classes for Spring and database connection setup.
 - Controllers: Handles HTTP requests and defines request mappings.
 - Models: Contains entity classes representing database tables.
 - Repositories: Data access interfaces for interacting with the database.
 - Services: Implements business logic and provides services to controllers.
- `src/main/resources`: Contains configuration files and static resources.

- `application.properties`: Configuration file for setting up database connection, Spring-related configurations, and other application properties.
- `templates`: Thymeleaf templates for rendering views.
- `static`: Static resources such as CSS, JavaScript, and image files.

4. Development Setup:

- Clone the ArtMuse repository from the version control system.
- Set up the development environment with Java and Maven.
- Configure the database connection in the `application.properties` file.
- Import the project into an IDE (e.g., IntelliJ IDEA) and resolve dependencies using Maven.
- Run the application using the IDE or by executing the appropriate Maven command.

5. Contributions and Guidelines:

- Fork the ArtMuse repository and create a new branch for your contributions.
- Follow coding conventions and best practices to maintain code quality and consistency.
- Write unit tests to ensure proper functionality and minimize regressions.
- Make your changes, commit them, and create a pull request for review.
- Provide clear and concise documentation for any new features or modifications.

6. Dependencies:

- **Spring Boot**: Provides a simplified and opinionated setup for Spring-based applications.
- **Spring Security**: Handles authentication and authorization for secure user access.
- **Spring Data JPA**: Simplifies database interactions and data persistence.
- **Thymeleaf**: Enables server-side rendering of dynamic views.
- **MySQL Connector/J**: Provides the JDBC driver for MySQL database connectivity.
- **Maven Plugins**: Various plugins for building, testing, and packaging the application.

7. APIs and Libraries:

- **Java Servlet API**: Used for handling HTTP requests and responses.
- **Java Persistence API (JPA)**: Standardizes object-relational mapping for data persistence.
- **Hibernate ORM**: Provides the JPA implementation for database interactions.
- **Apache Commons FileUpload**: Assists with file upload functionality.

This technical documentation provides a comprehensive overview of the ArtMuse website's architecture, technologies used, project structure, development setup, and guidelines for contribution. It serves