

## FPT ACADEMY INTERNATIONAL

FPT – APTECH COMPUTER EDUCATION

## **ROCK PARADISE**

**Center Name** FPT – Aptech – HCM2

Address: 21Bis Hậu Giang, Phường Tân Sơn

Nhất, TP. HCM.

**Instructor** Ms. Le Mong Thuy

**Class** T3.2502.E0

Group 3

Group members Name Student ID

Tang Thien TanStudent1634690Phan Minh HuyStudent1634681Pham Quoc TuanStudent1634695

**Duration** Start date 23-Jul-2025

End date **23-Aug-2025** 

Mr.:	
	Tang Thien
Tan	
	Phan Minh
Huy	
	Pham Quoc
Tuan	
wehsite	eProject: Rock Paradise
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website	eProject: Rock Paradise
	eProject: Rock Paradise  d Signature:
website  Authorize	

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## Acknowledgments

We would like to express our sincere gratitude to FPT Aptech and the eProject team for providing a dynamic, creative, and inspiring learning environment that gave our team the opportunity to carry out this project.

Throughout the working process, we received valuable support from our lecturers and school staff — those who not only imparted professional knowledge but also inspired and motivated us to overcome every challenge. Their dedication and seriousness were a great source of encouragement that helped us complete the project effectively and practically.

We also deeply appreciate the serious, united, and enthusiastic working spirit of each team member. Everyone contributed effort, time, and creative ideas to build a complete product together. Despite facing technical difficulties, time constraints, and pressure, we all strived continuously, showing strong determination toward this project.

This eProject is not just an academic assignment, but a real-world experience that helped us grow in mindset, skills, and teamwork spirit. It marks an important milestone in our learning journey at FPT Aptech — one that we will always remember and cherish.

Once again, we sincerely thank everyone who accompanied and supported us throughout the project.

# **Project Summary**

The goal of this eProject is to design and develop a **Single-Page Application (SPA)** and **responsive website** for **Rock Paradise** — a leading online retailer specializing in crystals and gemstones sourced ethically from around the world.

The website will showcase Rock Paradise's diverse product offerings, including **tumbled gemstones**, **healing crystals**, **clusters**, **rough and raw stones**, **towers**, **spheres**, and more. It will serve both collectors and individuals seeking spiritual or wellness benefits from natural stones.

Key features of the website include:

- A visually appealing and user-friendly interface.
- Compatibility across all major browsers (Chrome, Internet Explorer, Firefox, etc.).
- Responsive design for optimal viewing on desktops, tablets, and mobile devices.
- Clear presentation of product categories and ethical sourcing values.
- Seamless navigation and engaging content to enhance user experience.

This project aims to reflect Rock Paradise's brand identity, commitment to sustainability, and passion for high-quality natural stone products — offering customers an immersive and trustworthy online shopping experience.

# **Project Requirement Analysis**

## 1. Project Objective

The goal is to design a Single Page Application (SPA) that is visually appealing, responsive across devices, and provides smooth navigation. The portal will showcase various jewelry items made from precious crystals and offer interactive features for users.

### 2. Website Structure and Content

### Header Section.

- Display a logo representing the brand.
- Include images of diamonds, crystals, and gemstones.
- Show a visitor counter at the top-right corner beside the logo.

## Main Navigation Menu.

- Categories: Diamond, Quartz, Ruby, Sapphire, Emerald.
- Top Selling Items: A separate section for bestsellers.
- Gallery: A visual showcase of jewelry images.
- Offers: Promotions and discounts with detailed descriptions.
- About Us, Contact Us, FAQ, Site Map.

## Product Listing Page.

- Display jewelry items under each crystal category.
- Provide filters for:
  - Brand (e.g., Swarovski, Tiffany, Pandora).
  - Color.
  - Size.
  - Price.
  - User Ratings.
- Allow users to submit ratings and filter by rating score.

### Footer Section.

- Implement a scrolling ticker showing current date, time, and user location (using HTML5 Geolocation).
- Include links to About Us, Contact Us, FAQ, and Site Map.

## 3. Design Requirements

Component	Design Specification
Fonts	Elegant, readable, and consistent across pages
Color Scheme	Uniform and harmonious throughout the website
Visual Effects	Hover and click color changes on menu items; fade in/out transitions
Responsiveness	Fully responsive layout for desktop, tablet, and mobile
Imagery	High-quality visuals of gemstones and jewelry

## 4. Advanced Functionalities

- Visitor Counter: Display number of site visitors.
- Scrolling Ticker: Show live date, time, and location.

- Interactive Menus: Color change on hover/click; fade animations.
- **Smart Filtering**: Filter products by brand, color, size, and rating.
- User Ratings: Allow rating input and filtering by rating.

## 5. Additional Pages

- About Us: Includes company description, email, address, and contact number.
- Contact Us: Contact form or direct contact details.
- **FAQ**: Frequently asked questions.
- Site Map: Overview of website structure.

# **Project Design**

After reviewing the project analysis, our team decided to design the website as following pages:

- **1.** *Homepage*: There is a search bar to search for products, display promotional information, best-selling products and introduce.
- **2.** *Product*: Displays all available products based on the Category category (Diamond, Quartz, Ruby, Sapphire, Emerald). In the above categories, products can be filtered by name, brand, color, user rating, size and price.
- 3. Blog: Display articles, news, promotion,...
- **4.** About Us: Display the information of the company, client's review and about us.
- **5.** *Contact Us*: Display the address of the company, Map and allow customers to request any information they want to Rock Paradise.
- **6.** *Shopping Cart*: Users can select multiple products and add them to the cart, review them before checkout, make adjustments directly in the cart, enter promotional codes before payment, and choose payment methods and delivery addresses.

## Task sheet review 1

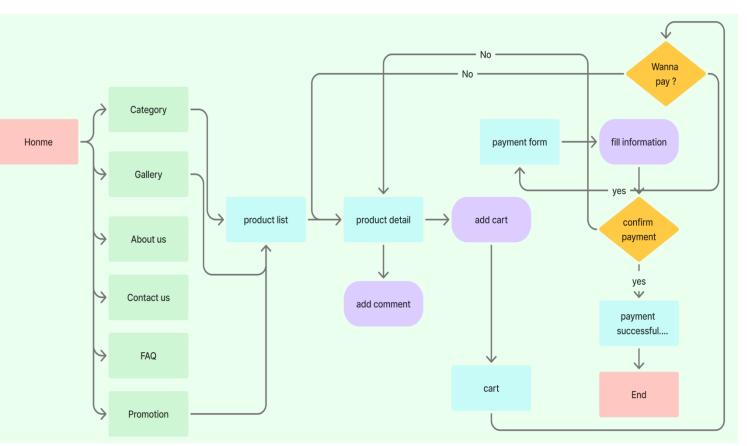
Project Ref. No.:			
eP/Advertisement Portal Management System/01	Project Title:	Activity Plan Prepared	Date of Preparation of Activity Plan:

Sr. No.	Task		By:	Actual Start Date	Actual Days	Team Mate Names	Status
1	Problem Statement			25-July-25	2	Tan	Completed
2	Analysis Project requirements about the website.			25-July-25	2	Tan	Completed
3	The scope of the work	ROCK PARADISE	Thien Tan	25-July-25	2	Huy	Completed
4	Architecture and design of the system			25-July-25	2	Huy	Completed
5	Diagram of the website			25-July-25	2	Tuan	Completed
6	Task Sheet			25-July-25	2	Tuan	Completed

Date:				
Signature of Instructor:	Signature of Team Leader:			
Ms. Le Mong Thuy	Tang Thien Tan			

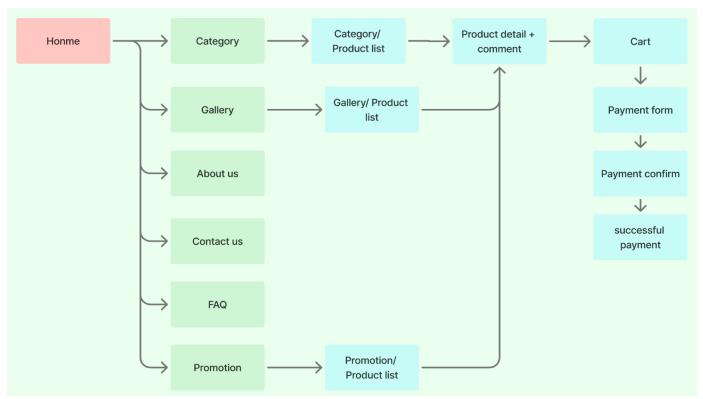
# **User Flow**

## Rock Paradise



Picture 1. Figma UserFlow Diagram.

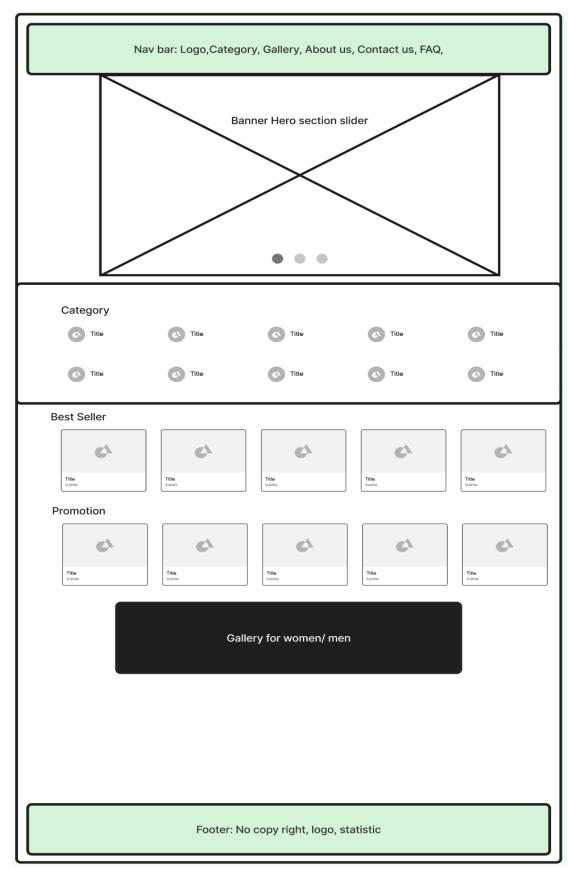
# Site Map



Picture 2. Figma SiteMap Diagram.

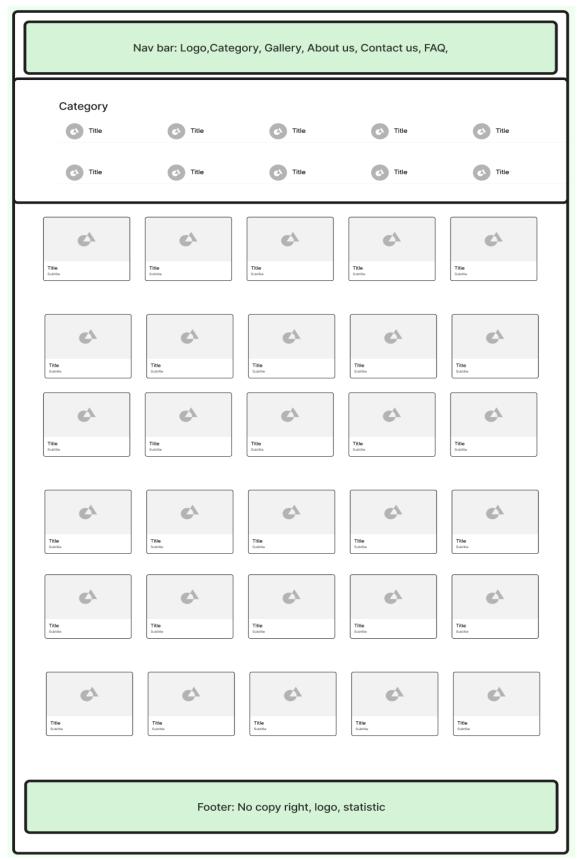
# **Wire Frame**

1. Home pages.



Picture 3. Figma Design HomePage.

## 2. Product list.



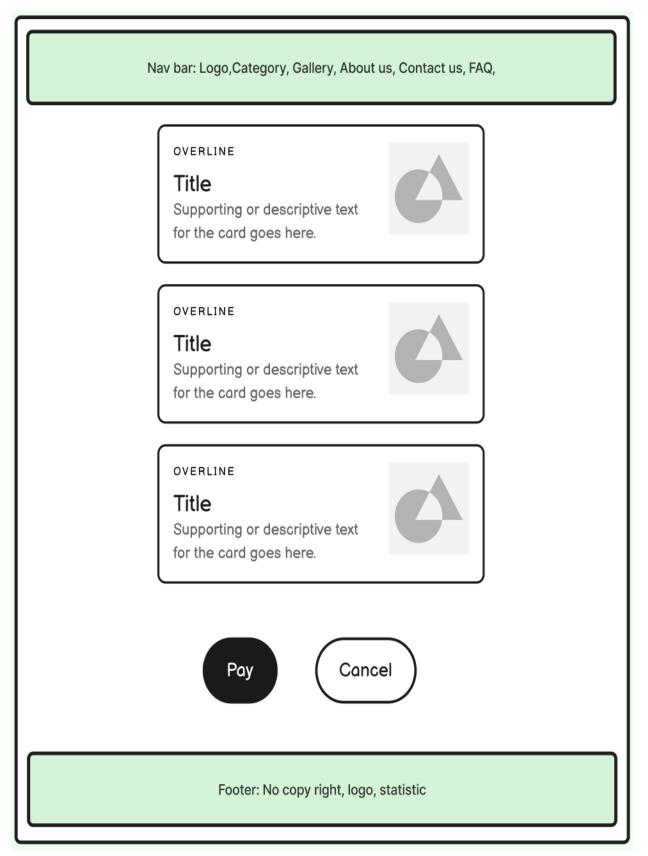
Picture 4. Figma Design ProductList.

## 3. Product detail

Nav bar: Logo,Category, Gallery, About us, Contact us, FAQ,
OVERLINE  Title Supporting or descriptive text for the card goes here.  BUTTON  BUTTON  BUTTON  AND
Title
Title
Title
Title
Footer: No copy right, logo, statistic

Picture 5. Figma Design ProductDetail.

4. Shopping cart



Picture 6. Figma Design ShoppingCart.

## Task sheet review 2

]	Project Ref. No.: eP/Advertisement Portal Management System/01	Project Title:	Activity Plan	ivity		eparation of Activity Plan:	
Sr. No.	Task		Prepared By:	Actual Start Date	Actual Days	Team Mate Names	Status
1	User Flow			31-July-25	1	Tan	Completed
2	Site Map	ROCK PARADISE	Thien Tan	31-July-25	2	Huy	Completed
3	Wire Frame			31-July-5	2	Tuan	Completed

Date:	
Signature of Instructor:	Signature of Team Leader:
Ms. Le Mong Thuy	Tang Thien Tan

# **Website Description**

## 1. Home Page

**Design Style:** The website has a modern, luxurious design with a neutral color palette (brown, white, gray) as the primary theme, highlighting the beauty of the jewelry products. The layout is clear and easy to navigate.

## **Homepage Content:**

### • Header:

- The "ROCKPARADISE" brand logo is in the top-left corner.
- The main navigation menu includes: About Us, Contact Us, FAQ, Gallery, and Category.
- A shopping cart icon is in the top-right corner.

## • Main Banner (Hero Section):

- A large banner with a refined jewelry image and the text: "Discover Rare Gemstones Elegant. Timeless. Unique."
- An "Explore" button invites users to learn more.

## • Product Categories:

- This section introduces the types of gemstones and jewelry brands offered by Rockparadise.
- The categories are presented as buttons, including: Diamond, Quartz, Ruby, Sapphire, Emerald, Topaz, Amethyst, Opal, Tiffany, Swarovski, and Pandora.

### • "Best Seller" Section:

- Displays four of the most popular products, each with a clear image, product name, price, and a "Detail" button to view specific information.
- Product examples:
  - o Tiffany White Diamond VVS1 (\$5,300 USD)
  - o Pandora Red Ruby Oval (\$3,200 USD)
  - o Swarovski Royal Blue Sapphire Emerald Cut (\$4,890.75 USD)
  - o Tiffany Princess Cut Diamond (\$3,950 USD)

## • "Promotion" Section:

- Displays four products currently on promotion.
- Product examples:
  - o Swarovski Blue Sapphire Sri Lanka (\$2,750.5 USD)
  - o Tiffany G Color Diamond Round (\$2,100 USD)
  - o Pandora Deep Red Burmese Ruby (\$5,600 USD)
  - o Swarovski Teal Sapphire Oval Cut (\$2,400 USD)

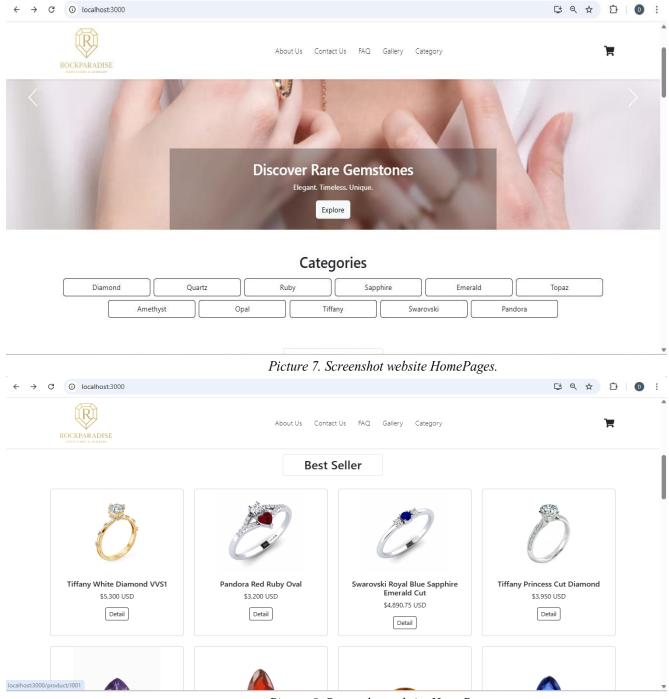
## • "Explore Our Gallery" Section:

- Presents a large image gallery featuring the main gemstones: Diamond, Quartz, Ruby, and Sapphire.
- Each gemstone has a brief description of its notable characteristics. For example,

Ruby is called the "King of Gems."

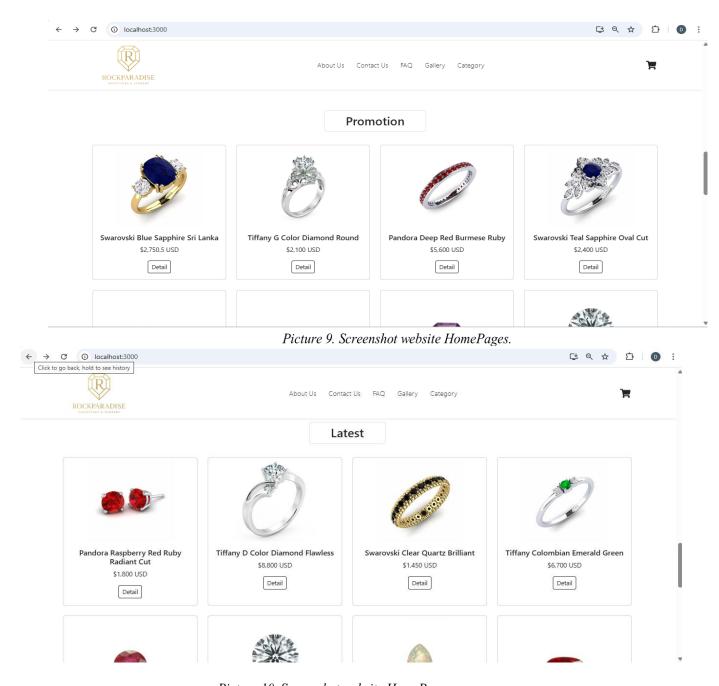
## • Footer:

- **Brand logo** in the bottom-left corner.
- **Social media icons:** Facebook, Twitter, Instagram, and LinkedIn.
- **Contact Information:** Address, phone number, and email. The detailed address is: 88 Lê Lợi, District 1, HCMC, with a Google Map link.
- Navigation menu: Contact Us, About Us, FAQ, Category, and Gallery.
- Other information: Current date and time, and visitor count.

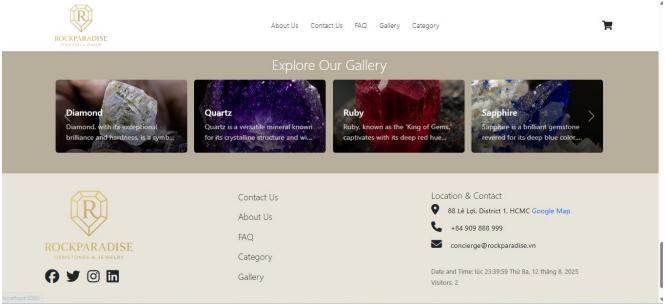


Picture 8. Screenshot website HomePages.

## **Rock Paradise**



Picture 10. Screenshot website HomePages.



Picture 11. Screenshot website HomePages.

## 2. Category

**Design Style:** The page has a clean, minimalist layout, making it easy for users to find and view products.

## **Structure:**

## Category Navigation Bar:

- Located on the left side of the page.
- Displays the main product categories as buttons.
- The currently selected category (in this case, "Diamond") is highlighted, showing the user their current location.
- Other categories include: Quartz, Ruby, Sapphire, Emerald, Topaz, Amethyst, Opal, Tiffany, Swarovski, and Pandora.

## Product Display Area:

- Occupies the majority of the page on the right.
- The title "Products in Diamond" displays the name of the current category.
- A "Default Sort" dropdown menu allows users to sort the products.
- Products are presented in a grid layout with basic information:
  - o Product image.
  - o Product name (e.g., Tiffany White Diamond VVS1).
  - o Product price (e.g., \$5,300 USD).
  - o A "Detail" button to view more specific information about the product.

## **Function of the "Detail" Button (Product Detail Page)**

When a user clicks the "Detail" button on any product from the category page, they are directed to the Product Detail Page.

**Specific Example:** Clicking "Detail" on the "Tiffany White Diamond VVS1" product displays the following:

## **Page Structure:**

- **Back Button:** A "Back" button at the top-left corner allows the user to return to the previous category page.
- Main Product Display Area:

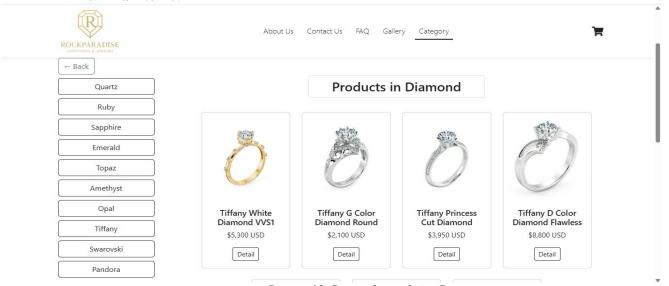
- **Large Image:** A high-resolution image of the product is displayed.
- **Thumbnails:** A series of smaller images below the main one allows users to view the product from different angles.

## • Detailed Product Information:

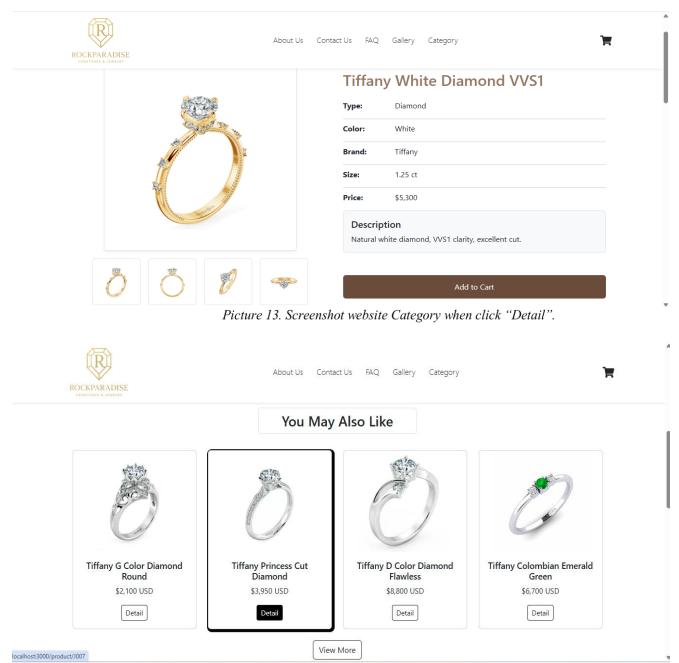
- **Product Name:** "Tiffany White Diamond VVS1"
- Attributes:
  - Type: Diamond
    Color: White
    Brand: Tiffany
    Size: 1.25 ct
    Price: \$5,300
- **Description:** A short text block describing the product, for example: "Natural white diamond, VVS1 clarity, excellent cut."
- Purchase Button: A dark brown "Add to Cart" button for purchasing the product.

## "You May Also Like" Section:

- Located at the bottom of the page.
- Displays a list of other related or recommended products based on the one the user is viewing.
- Each suggested product also includes an image, name, price, and a "Detail" button.
- "View More" Button: Located below the suggested products, allowing users to see more similar items.



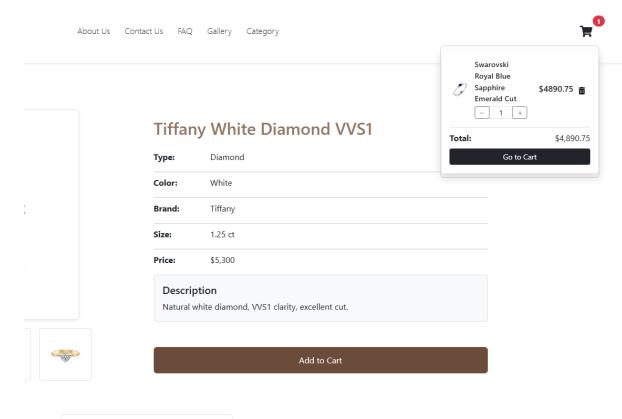
Picture 12. Screenshot website Category.



Picture 13. Screenshot website Category when click "Detail".

## • Click the basket to show the mini cart:

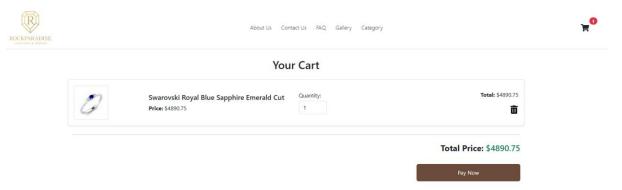
You can adjust products in mini cart, can remove from cart, adjust product quantity



Picture 14. Screenshot website click the basket.

## • Cart:

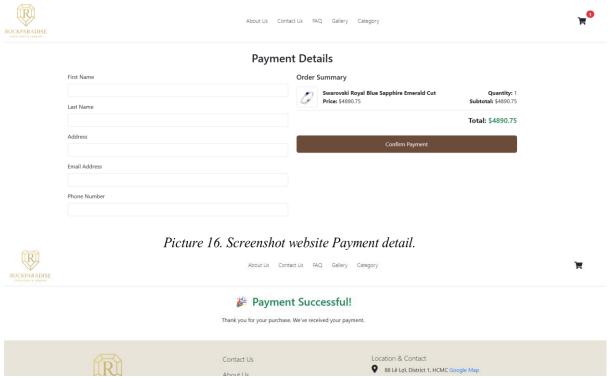
Click "Go to Cart" to relocate the Cart.



Picture 15. Screenshot website click "Go to Cart"

## • Payment detail:

Fill the form then click "Confirm Payment"
After Confirm you will receive a Successful notification

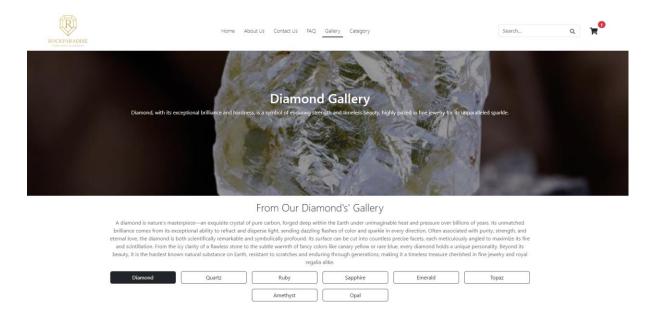


Picture 17. Screenshot website Payment Successful

## 3. Gallery:

## Describe:

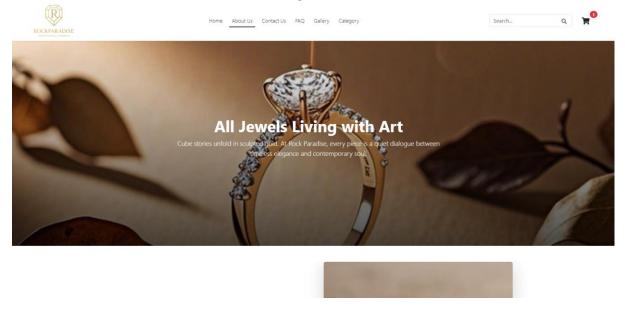
While click "Gallery" on Navbar or click in the "Explore our Gallery" section will redirect to the Gallery page. The Gallery page features a main banner image, along with the gemstone gallery categories and a main description. This is followed by a detailed description of the page and a classification section, where the current category you are viewing will be highlighted. Next comes the full set of images displayed in a gallery grid, where you can click on each image to view it in a larger size.



## 5. About Us

### • Describe:

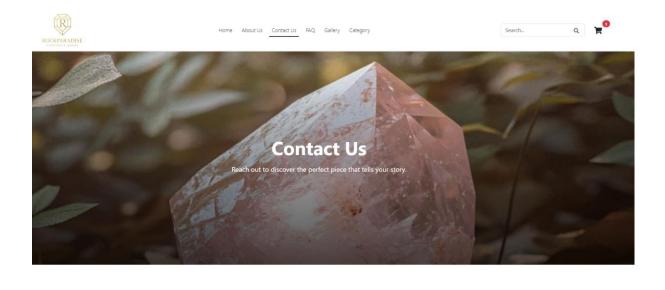
The About Us page includes a banner image with a headline and a short description. The body contains two sections: one titled "Our Story" accompanied by an image, and the next titled "Swiss Essence" with another image.



## 6. Contact Us

## • Describe:

The Contact Us page includes a banner with a headline and a short description inside. The body contains a "Get in Touch" section with contact information, and on the right side, a "Send Message" section with a form for users to fill out and send a message if they have any questions. Following that, there is a frame displaying a Google Map showing the store's location.



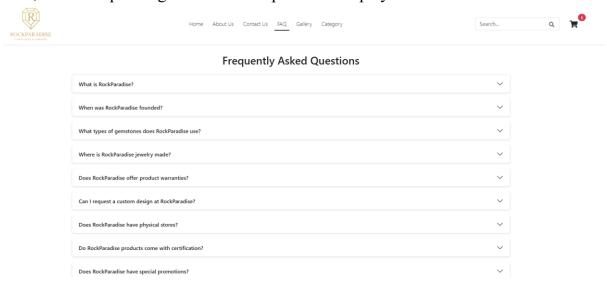
## 7. FAQ

## • Describe:

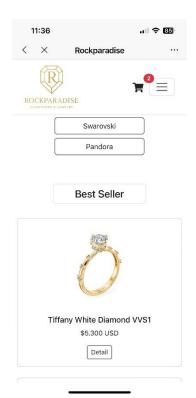
Get in Touch

The FAQ page includes a header and 10 questions. When you click on the downward arrow icon, the corresponding answer will expand and display.

Send a Message



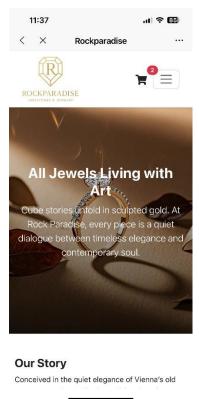
## • Responsive:



Picture 18. Screenshot website mobile version



Picture 19. Screenshot website mobile version



Picture 20. Screenshot website mobile version

## **JAVASCRIPT**

## • Cart

To create a shopping cart and allow user interaction, I used React libraries and functions such as createContext, useContext, useState, and useEffect, then wrapped everything inside a CartProvider component. By wrapping App.jsx with CartProvider, I can simply call the useCart hook to access the functions cartItems, addToCart, updateQuantity, removeFromCart, clearCart, totalPrice, totalQuantity, and removePaidItems.

In addition, I used **useEffect** to save **cartItems** into **localStorage**, and **useState** to parse the cart data from **localStorage**.

```
import { createContext, useContext, useState, useEffect } from "react"; 5.1k (gzipped: 2.1k)
const CartContext = createContext();
export function useCart() {
 return useContext(CartContext);
export function CartProvider({ children }) {
const [cartItems, setCartItems] = useState(() => {
    const localData = localStorage.getItem("cartItems");
     return localData ? JSON.parse(localData) : [];
     console.error("Failed to parse cart data from localStorage", error);
 useEffect(() => {
    localStorage.setItem("cartItems", JSON.stringify(cartItems));
    } catch (error) { | console.error("Failed to save cart data to localStorage", error);
 const addToCart = (item) => {
   setCartItems((prevItems) => {
     const existing = prevItems.find((p) => p.id === item.id);
       return prevItems.map((p) =>
         p.id === item.id ? { ...p, quantity: p.quantity + 1 } : p
       return [...prevItems, { ...item, quantity: 1 }];
 const updateQuantity = (id, qty) => {
   setCartItems((prev) =>
     prev.map((item) =>
       item.id === id ? { ...item, quantity: qty } : item
 const totalQuantity = cartItems.reduce(
 (sum, item) => sum + item.quantity,
 const totalPrice = cartItems.reduce(
  (sum, item) => sum + item.price * item.quantity,
```

Picture 21. VSCode's screenshot

```
import Navbar from "./Components/Navbar";
import Footer from "./Components/Footer";
import ProductDetail from "./pages/Productdetail";
import Cart from "./pages/Cart";
import { CartProvider } from "./context/CartContext";
import PaymentDetail from "./pages/PaymentDetail";
import PaymentCongrat from "./pages/PaymentCongrat";
import Productlist from "./pages/Productlist";
import ViewmoreList from "./pages/ViewmoreList";
import Searchlist from "./pages/Searchlist";
function App() {
      <CartProvider>
      <main style={{backgroundColor: " #fffff"}}>
          <Route path="/" element={<Home />} />
          <Route path="/about" element={<About />} />
          <Route path="/contact" element={<Contact />} />
          <Route path="/faq" element={<Faq />} />
          <Route path="/gallery/:type" element={<Gallery />} />
          <Route path="/category" element={<Category />} />
          <Route path="/product/:id" element={<ProductDetail/>} />
          <Route path="/cart" element={<Cart />} />
          <Route path="/payment" element={<PaymentDetail/>} />
          <Route path="/payment-success" element={<PaymentCongrat />} />
          <Route path="/productlist/:category" element={<Productlist />} />
          <Route path="/viewmore/:title" element={<ViewmoreList />} />
           <Route path="/searchlist/:query" element={<Searchlist />} />
           <Route path="*" element={<Home />} />
        </Routes>
    </CartProvider>
export default App;
```

Picture 22. VSCode's screenshot

#### Confirm

The **ConfirmationModal** component will appear when the user clicks the button to delete a product from the cart or the **"Confirm Payment"** button.

```
import React from 'react'; 7.9k (gzipped: 3.1k)
function ConfirmationModal({ show, handleClose, handleConfirm, title, message }) {
 if (!show) {
     className="modal d-block"
     tabIndex="-1"
     role="dialog"
     style={{
       backgroundColor: '□rgba(0,0,0,0.5)',
       display: 'block'
     <div className="modal-dialog modal-dialog-centered" role="document">
       <div className="modal-content">
         <div className="modal-header">
           <h5 className="modal-title">{title}</h5>
           button
             type="button"
             className="btn-close"
             aria-label="Close"
             onClick={handleClose}
           ></button>
          </div>
         <div className="modal-body">
           {p>{message}
         <div className="modal-footer">
             type="button"
             className="btn btn-secondary"
             onClick={handleClose}
             Cancel
             type="button"
             className="btn btn-addtocart"
             onClick={handleConfirm}
             Confirm
```

Picture 23. VSCode's screenshot

## • Smallcart

The **Smallcart** inside **SellSection** retrieves the product ID and navigates to **Productdetail** whenever it is clicked.

```
import React from "react"; 7.9k (gzipped: 3.1k)
import { Link } from "react-router-dom"; 186k (gzipped: 59.2k)
import "../../src/index.css";
function SmallCard({ product }) {
   <div className="col-12 col-sm-6 col-md-4 col-lg-3 mb-4">
     <Link
       to={`/product/${product.id}`}
       className="text-decoration-none"
       style={{ color: "inherit" }}
       <div className="card h-100 custom-card-hover">
          src={product.mainImage}
          alt={`${product.type} ${product.brand}`}
          className="card-img-top"
          style={{ height: "200px", objectFit: "contain" }}
         <div className="card-body text-center">
          <h5 className="card-title" style={{ fontSize: "1.1rem" }}>
            {product.name}
          ${product.price.toLocaleString()} USD
          <div className="btn btn-outline-dark btn-sm mt-2 btn-detail">
            Detail
     </Link>
export default SmallCard;
```

Picture 24. VSCode's screenshot

### SellSection

The container holding **Smallcart** receives props such as **title**, **ids**, **filter**, **and products** (**from rock.json**), and also controls the toggle for the "**View More**" button.

```
import React from "react"; 7.9k (gzipped: 3
import rockData from "../../data/rock.json";
import SmallCard from "./Smallcard";
import { Link } from "react-router-dom"; 186k (gzipped: 59.2k)
function SellSection({ title, ids, filter, products, showViewMoreButton = true }) {
 let itemsToShow = [];
  if (products) {
   itemsToShow = products;
    itemsToShow = rockData.filter((item) => ids.includes(item.id));
   itemsToShow = rockData.filter(filter).slice(0, 8);
    <section className="container my-5 text-center">
      <h3 className="border rounded p-2 d-inline-block px-5 mt-3">{title}</h3>
      <div className="row justify-content-center mt-4">
       {itemsToShow.map((item) => (
          <SmallCard key={item.id} product={item} />
       to={`/viewmore/${title}`}
className="btn btn-outline-dark"
            View More
```

Picture 25. VSCode's screenshot

## • Hero (hero section from Homepage)

I used the attributes **carousel slide**, **carousel-inner**, and **carousel-item active** in **Bootstrap 5** to run the banner slider.

```
import Meach, (useffect) from "react"; 7.5% (gripped: 3.16)
import (Ad Few Your pre-incoder-day; 100 (gripped: 50.26)
import "sex/dist/mos_cas";

function NervO) {

function NervO) {

function NervO) {

function NervO} {
```

Picture 26. VSCode's screenshot

• Fade up, Fade right, Fade left effect:

I installed the **AOS** library and used **useEffect** to apply the fade effect on each div where I wanted the animation.

Picture 27. VSCode's screenshot

# Task sheet review 3

	Project Ref. No.:  eP/Advertisement Portal Management System/01 Project Title:		Activity Plan	Date of Preparation of Activity Plan:			
Sr. No.	Task		Prepared By:	Actual Start Date	Actual Days	Team Mate Names	Status
1	Homepage			02/08/2025		Tan	Completed
2	Category	ROCK PARADISE	Thien Tan	02/08/2025		Tan	Completed
3	Viewmore			02/08/2025		Tan	Completed
4	Payment			02/08/2025		Tan	Completed
5	Cart			02/08/2025		Tan	Completed
6	About us			02/08/2025		Huy	Completed
7	Contact us			02/08/2025		Huy	Completed
8	Faq			02/08/2025		Huy	Completed
9	Gallery			02/08/2025		Tuan	Completed
10	Java Script			02/08/2025		Tan	Completed
11	Responsive			02/08/2025		Tan	Completed
12	Json			02/08/2025		Tuan	Completed

Date:		

## Rock Paradise

Signature of Instructor:	Signature of Team Leader:
Ms. Le Mong Thuy	Tang Thien Tan