



Java Institute for Advanced Technology

UNIT NAME – Web Programming

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EXAM ID – H7DT 04/EX/02

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BRANCH – Bandarawela (Moose Batch)



Software Requirements Specification

For

< Diamond Store >

Version <1.0.0>

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Batch: Moose Batch – Bandarawela Branch

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Contents

| | |
|---|----|
| 1. Introduction | 4 |
| 1.1 Purpose..... | 4 |
| 1.2 Scope..... | 4 |
| 1.3 Definitions, Acronyms, and Abbreviations..... | 4 |
| 2. Overall Description..... | 4 |
| 2.1 Product Perspective | 4 |
| Activity Diagram..... | 4 |
| 2.2 Product Features | 5 |
| User Side Features: | 5 |
| Admin Side Features: | 5 |
| 2.3 User Classes and Characteristics | 5 |
| 2.4 Operating Environment | 5 |
| 3. Specific Requirements | 5 |
| 3.1 External Interface Requirements..... | 5 |
| User Interfaces | 5 |
| Hardware Interfaces..... | 18 |
| 3.2 Functional Requirements | 20 |
| 3.3 Non-Functional Requirements | 21 |
| Performance Requirements..... | 21 |
| Security Requirements..... | 21 |
| Usability Requirements | 22 |
| Compatibility Requirements..... | 22 |
| 3.4 System Requirements | 22 |
| Hardware Requirements | 22 |
| Software Requirements..... | 22 |
| Database Requirements..... | 22 |
| Use case View | 23 |

1. Introduction

1.1 Purpose

The purpose of this document is to outline the requirements for the Diamond Store web application. It details the functionalities, interfaces and graphs of the system to guide its development and deployment.

1.2 Scope

The Diamond Store web application provides a platform for users to buy and sell gemstones. It includes separate interfaces and functionalities for Users and administrators. Users can perform actions such as signing up, signing in, purchasing items, managing their cart and wish list, providing feedback, and maintaining their profiles. After Sign in to the system, Users also can sell products. Administrators have additional capabilities including managing products, managing users, and managing sales history details.

1.3 Definitions, Acronyms, and Abbreviations

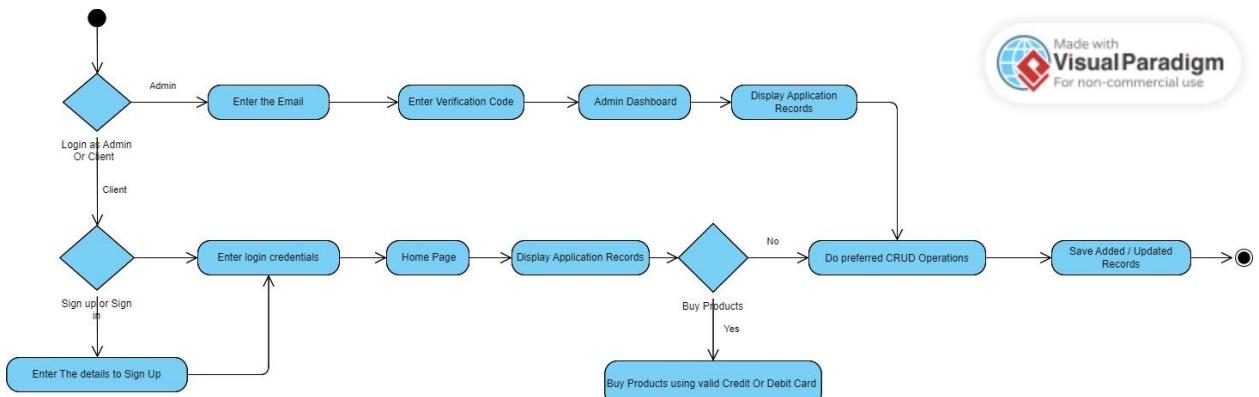
- SRS: Software Requirements Specification
- UI: User Interface

2. Overall Description

2.1 Product Perspective

This web application currently runs on localhost environment. It interacts with MySQL server to store and retrieve products, users, and transaction data. External systems integration includes the PayHere Sandbox environment for simulating payment processing.

Activity Diagram



2.2 Product Features

User Side Features:

- User Registration and Authentication
- Profile Management
- Product Browsing and Searching
- Adding Items to Cart and Wishlist
- Checkout ,Payment Processing and print Invoice
- See Purchasing History
- Feedback Submission
- Add / update / delete products from their store

Admin Side Features:

- Secure Login via Verification Code sent to Admin Email (simulated)
- Product Management (Add, Edit, Delete, Add new product categories)
- User Management (View, Edit, Delete, Block/Unblock users)
- Manage Sales History Details

2.3 User Classes and Characteristics

- **Users:** Regular users who browse and purchase various gemstones.
- **Administrators:** System managers with privileges to oversee and manage the application.

2.4 Operating Environment

The Diamond Store web application is currently hosted locally accessible via localhost. It is accessed through web browsers.

3. Specific Requirements

3.1 External Interface Requirements

User Interfaces

Client Interfaces

SignUp



Welcome To Diamond Store!

Create New account

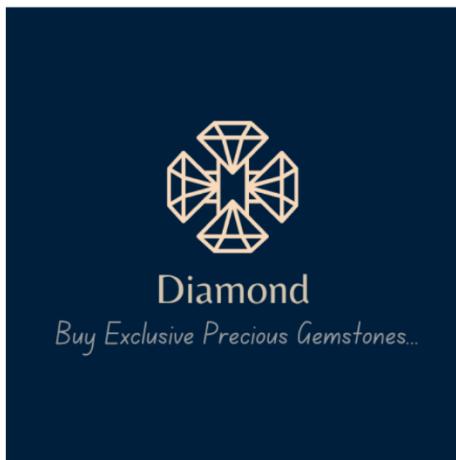
| | |
|--------------------------|--|
| First Name | Last Name |
| <input type="text"/> | <input type="text"/> |
| Email | |
| <input type="text"/> | |
| Password | |
| <input type="password"/> | |
| Mobile | Gender |
| <input type="text"/> | <input type="text"/> male <input type="button" value="▼"/> |

[Sign Up](#)

[Sign In to Current Account](#)

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[SignIn](#)



Welcome To Diamond Store!

Sign In

| | |
|--------------------------------------|---------------------------------|
| Email | |
| <input type="text"/> | |
| Password | |
| <input type="password"/> | |
| <input type="checkbox"/> Remember Me | Forgot Password |

[Sign In](#)

[Join Now](#)

[Sign In as Admin?](#)

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[Home](#)



Preciously Exclusive Gems...

Welcome Piyumi Premachandra

[Sign Out](#)

[Home](#)

[Sell](#)

[My Account ▾](#)

Select Category



Diamond

Buy Exclusive Precious Gemstones...

All Categories



Diamond
[See All](#)



Sapphire
[See All](#)



Garnet
[See All](#)



Ruby
[See All](#)



Emarald
[See All](#)



Pearl
[See All](#)



Tourmaline
[See All](#)



Topaz
[See All](#)



Jade
[See All](#)



Quartz
[See All](#)



Spinel
[See All](#)



Aquamarine
[See All](#)

MyProfile page

Preciously Exclusive Gems...

Welcome Piyumi Premachandra [Sign Out](#) Home Sell My Account ▾

My Profile

| | |
|--|---|
| First Name <input type="text" value="Piyumi"/> | Last Name <input type="text" value="Premachandra"/> |
| Mobile <input type="text" value="0787909995"/> | |
| Password ***** | |
| Email <input type="text" value="piyumi@gagod@gmail.com"/> | Registered Date <input type="text" value="2022-11-07 00:30:55"/> |
| Address Line 1 Petmaladulla | |
| Address Line 2 Ratnapura | |
| Province Western | District Colombo |
| City Colombo | Postal Code <input type="text"/> |
| Gender female | |

[Update My Profile](#)

WatchList

Preciously Exclusive Gems...

Welcome Piyumi Premachandra [Sign Out](#) Home Sell My Account ▾

[Home](#) / Watchlist

Search in watchlist... [Search](#)

[My Watchlist](#) [My Cart](#)

#3


5cts natural unheated garnet

Rs: 20000 .00

(l)(v)(d)

Found in : Sri Lanka Shape : oval
condition : cut & polish
8 Items in Stock

[Buy](#)
[Cart](#)
[Remove](#)

#35


Clean Garnet Found in Sri Lanka

Rs: 30000 .00

[Buy](#)

Cart

 **Preciously Exclusive Gems...**

Welcome Piyumi Premachandra [Sign Out](#) [Home](#) [Sell](#) [My Account ▾](#)

🛒 Cart

[Home](#) / Cart

[🛒 My Cart](#) [My watchlist](#)

Search in Cart... [Search](#)

| Cart Total Price | items (3) | Rs. 50000 .00 |
|------------------|--------------|----------------------|
| | Shipping | Rs. 7800 .00 |
| | Total | Rs. 57800 .00 |

8 Seller : Piyumi Premachandra # 1 Seller : Piyumi Premachandra

Purchasing History

 **Preciously Exclusive Gems...**

Welcome Piyumi Premachandra [Sign Out](#) [Home](#) [Sell](#) [My Account ▾](#)

Purchasing History

| ID | Order Details | Qty | Amount | Purchase Date & Time | Action |
|----|--|-----|----------|----------------------|--------------------------|
| 17 |  # 11 35.5 natural sky blue topaz Seller : Piyumi Premachandra Price : Rs. 25000.00 | 1 | 26500.00 | 2023-03-25 09:02:24 | Feedback |
| 18 |  # 12 120cts natural tourmaline Seller : Piyumi Premachandra | 1 | 26000.00 | 2023-03-25 09:09:54 | Feedback |

Product page

Search in Detail

🔍

Price

From
To

Sort Price

Dimensions (mm)

length
width

depth

Region

Select Region

Shape

Select Shape

#3



5cts natural unheated garnet

Dimensions(mm) : (l) * (w) * (d)
Found in : Sri Lanka | Shape : oval
Condition : cut & polish

Rs: 20000.00
8 Items in Stock

Buy
 Cart
 Watchlist

#28



Golden Garnet

Dimensions(mm) : 21(l) * 13(w) * 10(d)
Found in : Sri Lanka | Shape : rough
Condition : rough

Rs: 40000.00
10 Items in Stock

Buy
 Cart
 Watchlist

#35



Clean Garnet Found in Sri Lanka

Dimensions(mm) : 14.00 * 10.00 * 0.75

Buy

SingleProduct page



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Home Sell My Account ▾

[Home](#) / 40cts natural quartz

40cts natural quartz

Rs. 10000.00
In stock : 10 items available
Seller : Piyumi Premachandra

Return Policy : You can get 14 days to cancel your order with us. This two week period starts from the day after you receive your order (or from the day after you receive the last item of your order).
Email us: diamond.store@gmail.com

Quantity : **1**

Buy
 Cart
 Watchlist

Item Details

Item Details

| | |
|-----------------|--|
| Dimensions (mm) | 20mm * 15mm * 8mm |
| Weight (cts) | 55 |
| Colour |  blue |
| Tone |  blue (2) |
| Clarity | VS |
| Certificate | Download Certificate |
| Region | Sri Lanka |
| Shape | cushion |

Item Description

Aquamarine (55cts)

Invoice



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[Print](#)

DIAMOND STORE
Niwithigala, Ratnapura, Sri Lanka
+94 112 785694
diamond.store@gmail.com

INVOICE TO :
Piyumi Premachandra
Pelmanadula, Ratnapura
piyumigayagd@gmail.com

INVOICE 23
Date & Time of invoice :
2024-06-30 09:17:17

| # | Order ID & Product | Unit Price | Quantity | Price |
|----|---|--------------|----------|--|
| 23 | ORDER ID : 6680d5207dff9 Aquamarine (55cts) | Rs. 25000.00 | 1 | Sub Total Delivery Fee Rs. 25000.00 Rs. 1200.00 |

| # | Order ID & Product | Unit Price | Quantity | Price |
|----|--|--------------|----------|---|
| 24 | ORDER ID : 6681199adba06 Aquamarine (55cts) | Rs. 25000.00 | 1 | SUB TOTAL Delivery Fee <u>GRAND TOTAL</u> Rs. 25000.00 Rs. 1200.00 <u>Rs. 26200.00</u> |

Thank You For Dealing With Us!

NOTICE :

Purchased Items can Return Before 14 Days of Delivery.Terms and Conditions Apply.

Invoice was created on a computer and it is valid without the signature and Seal.

Add Feedbacks

Add New feedback

User email
piyumigayagd@gmail.com

Feedback

Add Images

urn
char
urn
char





Upload Images

| Feedbacks | |
|------------------------|---|
| piyumigayagd@gmail.com | abcd |
| |  |
| |  |
| hasini@gmail.com | 2023-03-24 15:35:29 |

MyProducts Page



Preciously Exclusive Gems...

Welcome Piyumi Premachandra

[Sign Out](#)

[Home](#)

[Sell](#)

[My Account ▾](#)

[+ Add New](#)

Sort Products

Search by keyword...

Price

Region

Shape

By Condition

| | |
|--|---|
|  #5 <input checked="" type="checkbox"/> Make Your Product Deactive 10cts natural jade Rs: 20000 .00 1 Items in Stock <input type="button" value="Update"/> <input type="button" value="Delete"/> |  #6 <input checked="" type="checkbox"/> Make Your Product Deactive 5cts natural offwhite pearl Rs: 20000 .00 4 Items in Stock <input type="button" value="Update"/> <input type="button" value="Delete"/> |
|  #7 <input checked="" type="checkbox"/> Make Your Product Deactive 5 cts natural pearl Rs: 20000 .00 4 Items in Stock <input type="button" value="Update"/> <input type="button" value="Delete"/> |  #8 <input checked="" type="checkbox"/> Make Your Product Deactive 40cts natural quartz Rs: 10000 .00 2 Items in Stock <input type="button" value="Update"/> <input type="button" value="Delete"/> |

Add / Update Product

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Sign Out

Home Sell My Account ▾

Update Gemstone

Select Category: Jade | Select Condition: rough | Select Shape: oval | Found in: brazil

Add Images

Upload Images

Gem Laboratory Certificate

Upload Certificate

Preciously Exclusive Gems...

Welcome Piyumi Premachandra

Sign Out

Home Sell My Account ▾

Add Gemstone

Select Category: Select Category | Select Condition: Select Condition | Select Shape: Select Shape | Found in: Select Region

Add Images

Upload Images

Gem Laboratory Certificate

Upload Certificate

Admin Interfaces:

Login



Welcome To Diamond Auctions!

Sign In

Email

Send Verification Code

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Admin Dashboard

Welcome Admin
Piyumi Premachandra

[Dashboard](#)
[Manage Users](#)
[Manage Products](#)
[Selling History](#)
[Sign Out](#)

Your Total Active Time
02Years 5Months 2Days
10Hours | 17Minutes | 6Seconds

Dashboard

Most Successful Seller So Far
(Rs. 41000.00 Earned Recently)



Piyumi Premachandra
piyumigayagd@gmail.com
0787909995

Total Users
4

Daily Earnings
Rs. 67200.00

Monthly Earnings
Rs. 67200.00

Today Sellings
5 items

Monthly Sellings
5 items

Total Sellings
10 items

Manage Users

Manage Users

Search by product name

Search

| Email | Password | Profile Picture | Full Name | Contact Number | Registered Date | Block / Unblock |
|------------------------|-----------|-----------------|---------------------|----------------|---------------------|------------------------|
| hasini@gmail.com | hasini123 | | Hasini Balasooriya | 0754678790 | 2023-01-26 10:11:34 | Unblock |
| janu@gmail.com | abcdefg | | Janaki Perera | 0787909954 | 2022-11-07 10:21:19 | <button>Block</button> |
| piyumi@gmail.com | 123abc123 | | Piyumi Premachandra | 0787909976 | 2022-11-07 09:59:48 | <button>Block</button> |
| piyumigayagd@gmail.com | 1234abcd | | Piyumi Premachandra | 0787909995 | 2022-11-07 00:30:55 | <button>Block</button> |

« 1 »

Piyumi Premachandra

X



User Name : Piyumi Premachandra
Email : Rs.piyumigayagd@gmail.com
Mobile : 0787909995

Search

Close

« 1 »

Manage Products

Manage Products

Search by product name

Search

| Product_ID | Image | Title | Price | Qty | Registered Date | Block/ Unblock |
|------------|-------|---------------------------------|-------|-----|---------------------|------------------------|
| 1 | | 6.5cts natural blue sapphire | 10000 | 199 | 2022-11-11 21:27:55 | <button>Block</button> |
| 2 | | 3.5cts natural unheated diamond | 75000 | 1 | 2022-11-12 07:58:56 | <button>Block</button> |
| 3 | | 5cts natural unheated garnet | 20000 | 1 | 2022-11-12 08:18:48 | <button>Block</button> |
| 4 | | 3.5cts natural emerald | 90000 | 1 | 2022-11-12 08:21:03 | <button>Block</button> |
| 5 | | 10cts natural jade | 20000 | 1 | 2022-11-12 08:25:07 | <button>Block</button> |
| 6 | | 5cts natural offwhite pearl | 20000 | 4 | 2022-11-12 08:28:32 | <button>Block</button> |
| 7 | | 5 cts natural pearl | 20000 | 4 | 2022-11-12 08:30:59 | <button>Block</button> |
| 8 | | 40cts natural quartz | 10000 | 2 | 2022-11-12 08:33:17 | <button>Block</button> |
| 5 | | 10cts natural jade | 20000 | 1 | 2022-11-12 08:25:07 | <button>Block</button> |
| 6 | | 5cts natural offwhite pearl | 20000 | 4 | 2022-11-12 08:28:32 | <button>Block</button> |
| 7 | | 5 cts natural pearl | 20000 | 4 | 2022-11-12 08:30:59 | <button>Block</button> |
| 8 | | 40cts natural quartz | 10000 | 2 | 2022-11-12 08:33:17 | <button>Block</button> |

« 1 2 3 4 »

Manage Categories

| | | | | | |
|------------|--|----------|--|------------|--|
| Diamond | | Sapphire | | Garnet | |
| Ruby | | Emarald | | Pearl | |
| Tourmaline | | Topaz | | Jade | |
| Quartz | | Spinel | | Aquamarine | |

Star Sapphire



Add New



Selling History

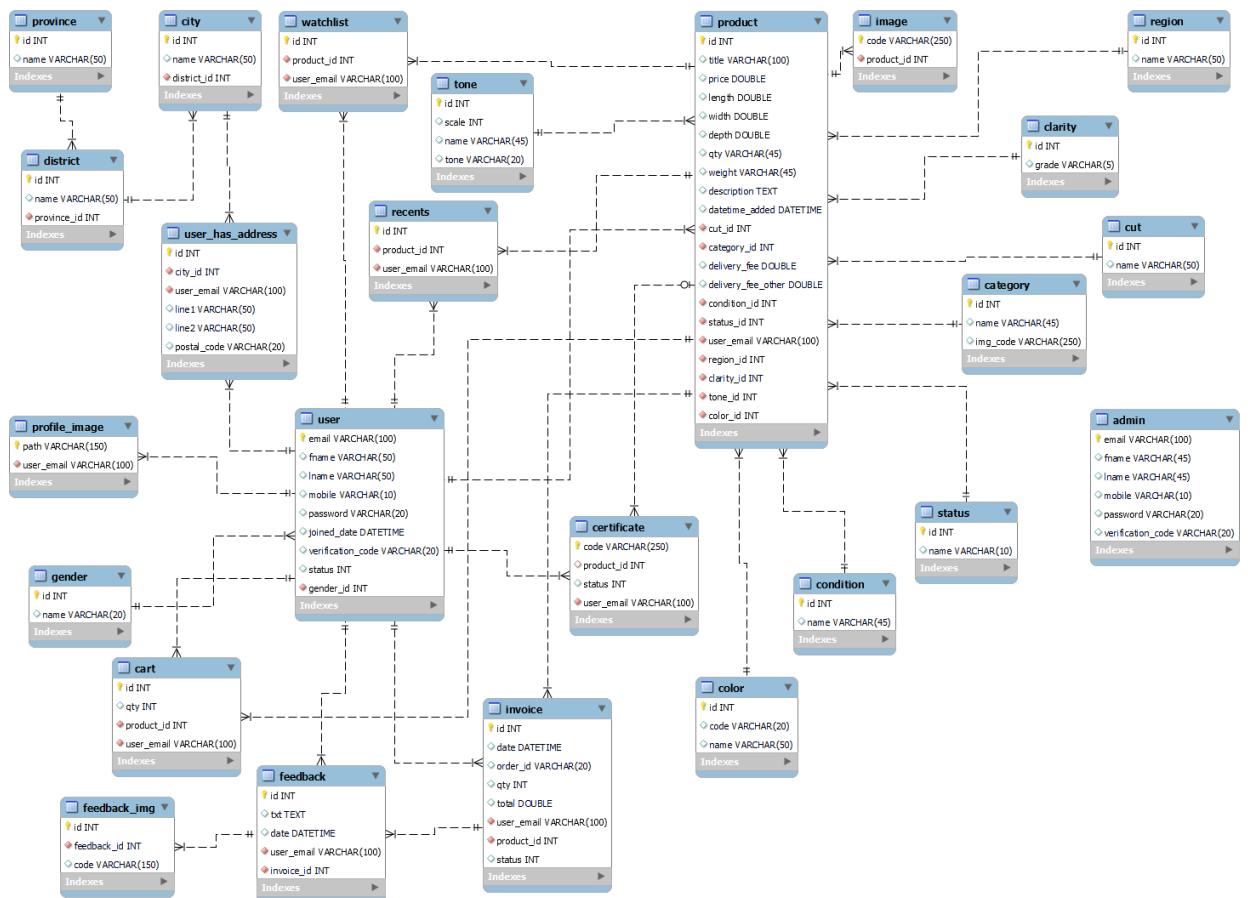
| Selling History | | | | | | | | |
|------------------------|------------------------------|---------------------|--------------|------------|---------------------------------|---------------------------------|--|--|
| Search by Invoice ID : | | From Date : | | To Date : | | | | |
| <input type="text"/> | | | | mm/dd/yyyy | <input type="button" value=""/> | mm/dd/yyyy | | |
| Find Selling | | | | | | | | |
| Invoice ID | Product | Buyer | Amount | Qty | Status | | | |
| 17 | 35.5 natural sky blue topaz | Piyumi Premachandra | Rs. 26500.00 | 1 | Dispatch | <input type="button" value=""/> | | |
| 18 | 120cts natural tourmaline | Piyumi Premachandra | Rs. 26000.00 | 1 | Delivered | <input type="button" value=""/> | | |
| 19 | 6.5cts natural blue sapphire | Piyumi Premachandra | Rs. 15000.00 | 1 | Confirm Order | <input type="button" value=""/> | | |

Hardware Interfaces

No specific hardware interfaces are required beyond these development environment setups.

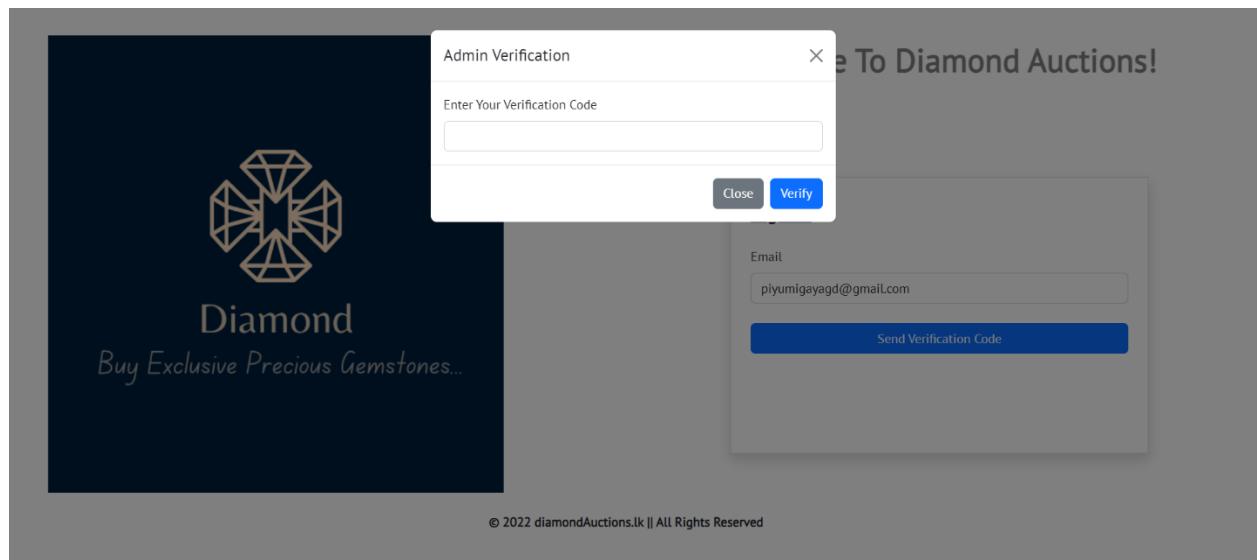
Software Interfaces

- **Database:** MySQL database

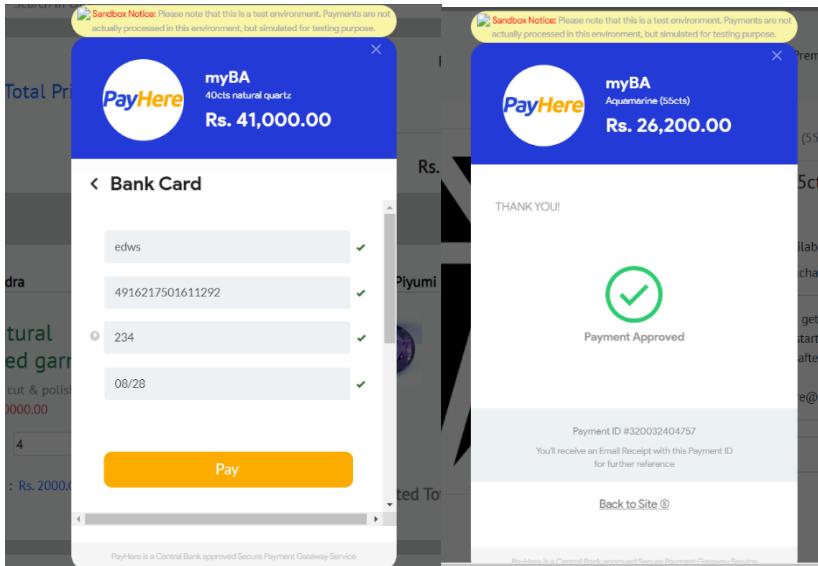


- **Email Service:** Used PHP Mailer and SMTP protocol to send Emails.

Admin Verification Process (There should be an email sent to the admin email with the verification code)



- **Payment Gateway:** Integration with PayHere Sandbox for simulating checkout and payment processes.



3.2 Functional Requirements

User Side Functional Requirements

Registration:

Users can create an account by providing details including name, username, email, and password, mobile and gender. After login to the system, they can update their profile details.

Login:

Users can log in using their email and password.

Product Purchase (via PayHere Sandbox):

Users can browse products, add items to the cart, and proceed to checkout for simulated payment via PayHere Sandbox.

Cart Management:

Users can add, remove, search or update items in their shopping cart.

Wishlist Management:

Users can add, search and remove items from their wishlist.

Feedback Submission:

Users can provide feedback on purchased products.

Profile Management:

Users can update their profile information such as name, address, and contact details.
sell products

Users can add, search and remove products they published.

Admin Side Functional Requirements

Secure Login (simulated):

Administrators can log in using a simulated verification code sent to their registered email address.

Product Management:

Administrators can add, edit, and delete product listings.

Admin can block / unblock products

Admin can add new categories or delete existing categories

User Management:

Administrators can view user profiles, edit user details, and deactivate user accounts.

Sales History:

Administrators can view sales transactions, including details of products sold.

Admin can change the sold product status

3.3 Non-Functional Requirements

Performance Requirements

- AJAX used for the development of this application. Therefore the web pages seem more responsive since they don't refresh every time a user modifies input and instead, little data packets are transferred with the server.

Security Requirements

- User passwords securely stored.
- Remember me option added in the User's sign in form therefore, the user's login details will be automatically filled in the next time they visit the page.
- Forgot password option added to client's sign in page
- Simulated admin verification codes for admin login

Usability Requirements

- The responsive UI development all over the web pages.
- Error messages through web browser alerts and different kinds of bootstrap models used to input user data.

Compatibility Requirements

- The application compatible with the latest versions of major web browsers including Chrome, Firefox and Microsoft Edge.

3.4 System Requirements

Hardware Requirements

- Development Machine: Minimum 4 CPU cores, 16 GB RAM
- Local Database Server: Minimum 4 CPU cores, 8 GB RAM
- Storage: Minimum 500 GB HDD/SSD

Software Requirements

- Operating System: Windows 11
- Web Server: Apache
- Database: MySQL Server
- Backend Framework: AJAX used for smooth running of the application
- Frontend Framework: Bootstrap for UI designs

Database Requirements

- Schema: Normalized schema design by using MySQL workbench for local database testing.

Use case View

