American International University-Bangladesh (AIUB)

Software Project 2

Tech Gear : Online E-commerce System

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PROJECT SUMMARY

Tech Gear is an e-commerce application by which computer products and accessories can be purchased and sold. This has a simple user interface with traditional features and some extra features like category wise search, video review, compare products with different category, question & answer. The system supports almost all types of payment method available in Bangladesh. Products can be shipped all over Bangladesh. The system has three types of user those are guest user, registered user, and admin. The guest user can use some basic functionalities like see all products, filter products, compare product, see product details, add product to cart, ask question, see related product, see question answer, video review, and registration. If the guest user wants to place an order, then s/he must need a registration. The registered use only can rate and review of delivered products. They can keep track of order and see the order history. Only a registered user can use the wish-list feature. Admin can add user, add category, enable or disable category, add new products, add data to SCS, delete data of SCS, delete data of category, track orders and change order status, see questions and give reply, also delete a user.

KEYWORDS

- E-Commerce Application
- Online Shopping
- Computer Accessories
- Product Comparison
- Review Products

Chapter 1

PROJECT INITIATION

1.1 Background to the problem

Money is valuable. But time is more valuable than money. Now in these busy days, people cannot afford enough time to go to the physical shop for purchasing products. People like to purchase products sitting at home. But in Bangladesh, people got frustrated when they visit an online shopping site to purchase a product. They face problems regarding lack of user-friendly web design or transaction issue as well as the quality of the products delivered to them. To solve these problems, we decided to develop a user-friendly, secure transaction provider and high-quality product supplier e-commerce system.

1.2 Objective of this project

The Tech Gear sells different types of computer products to customer living in any part of the country. The website will show all products in categorized manner. Customers can browse any product for its price and other details and can order the product. Products can be managed by admin panel. Admin can keep track of orders through admin panel. These are the common features of most e-commerce sites. We have some extra features like 'video review', 'category wise searching', 'compare products with different category', 'question & answer about product'. But the main purpose of the system is to enable customers to browse and order from any part of the country and hence increasing business scope.

1.3 Literature Review of Existing studies

There are already some e-commerce services running in Bangladesh. They are now providing various kind of services to the customers. But their services have some issues like

Take much time to load e-commerce website for its bulky design
The database is not strong enough
Searching methods are not that much effective
Based on only Dhaka city
Unattractive design and poor creativity in it
Lack of understanding the customers of Bangladesh

So, there are some chances to overcome the issues and opportunities to get more people to get involved into our e-commerce system.

Chapter 2

ELICITATION

2.1 Product Perspective

Tech-Gear is a new and self-contained product. Tech-Gear is aimed to reach the maximum numbers of customers and common people who can be potential users to us. The project ensures the bridging the gaps between us and customers. Tech Gear is a user friendly and 'easy to learn' system for this purpose. Tech Gear is a standalone product and requires only third-party payment service like ‘sslcommerz’. It should be run on the UNIX and windows-based platform. This system makes the whole shopping system a lot more easier and time saving in our busy life. The customers can choose and pay online or cash on delivery if the product is available.

2.2 User Classes and Characteristics

The users of the Tech Gear system are simply anyone who have access to the Internet and a web browser. It is assumed that the users are familiar enough to use the internet through any of the web browser.

The users are categorized in three different types:

1. Guest users
2. Registered users
3. Admin users

Guest users can visit the web portal and see the products. The registered users can buy and make the payment. They are also eligible to see the shipment. Admin is the person who manage the system. Admin can add, delete, edit users as well as the products list. Admin can see sells report, orders and much more.

2.3 Operating Environment

The resources required from the Server Side are:

OS: Linux/Windows Server
CPU: Xenon E7
RAM: 40 GB or Higher
Storage: 20 TB or More

The resources required from the Client Side are:

OS: Any operating system with web page browsing accessibility
CPU: Intel Pentium or Higher
RAM: 512 MB or Higher

2.4 Design and Implementation Constraints

Most of the projects have some design and implementation constraints. We also have some constraints. We decided to use 'sslcommerz' (a third-party payment service) for online payment process. But as the 'sslcommerz' needs trade license and a business bank account for registering an account, so we cannot register an account and cannot include the actual payment process to our system.

This system is provisioned to be built on the Laravel framework which is highly flexible. Decision regarding which database to use is taken considering the fact that data being exchanged or stored is large and the appropriate data management system will yield efficient performance. Security is not a concern for this system. The database may save the passwords in plain text. The system may not work correctly where security is an issue. Real life credit card feature is not supported in this system. Multilingual service is not added in this system and language is only English.

Chapter 3

REQUIREMENT SPECIFICATION

3.1 User Story

The user story has been written according to the guideline by Easy Agile (2019) & Mountain Goat Software (2019).

User Stories	Acceptance Criteria
As a user, I want to get signed up and login.	Registration Login
As a customer, I want to see product list	See images of items Select products to purchase View details Add to cart the product Search for an item View items by filter
As a customer, I want to review my cart and edit	View quantities View total cost Remove or add items
As a customer, I want to login and get the item shifted to me	See total with shipping Enter shipping address Get confirmation text Logout
As a customer, I want to see previous order history	View the order list View order information

As an admin, I want to modify the products list	Add or remove items Modify item image Modify a category
As an admin, I want to see order list and sales report	See order list See sales report
As an admin, I want to see and modify customer details	See customer details Edit customer details

3.2 Business Requirement

Tech Gear system will be working as a bridge between the customers and the seller. It will help the seller to operate with the vast number of distant users. This system will make shopping a lot easier. People will be more interested to buy different products and they will get to know about a lot of more different products that the companies offer. The vendor always expects to communicate with its customers. This system will fulfill this need and build a strong business communication system between the customers and the seller. This opportunity will reflect on the economy of the overall retails business.

3.3 System Requirements Functionalities

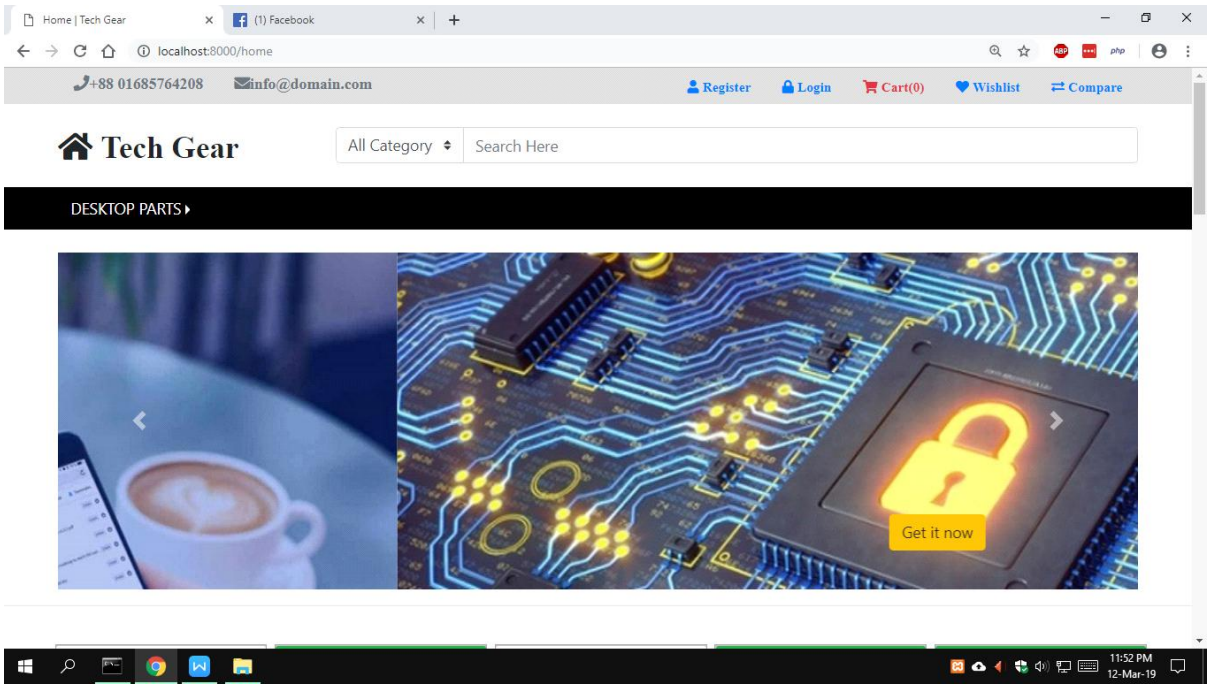


Figure 1: The Home Page

Users can land to this page and get themselves started. They can login to the system with their email and password after the registration. Users can see the slider, collection, static. Existing item can be linked the slider. Users can search for different products and filter the products by properties. Users can also compare between products. Users can keep the track of items they have inserted in add to cart list.

Functionalities of Guest Users

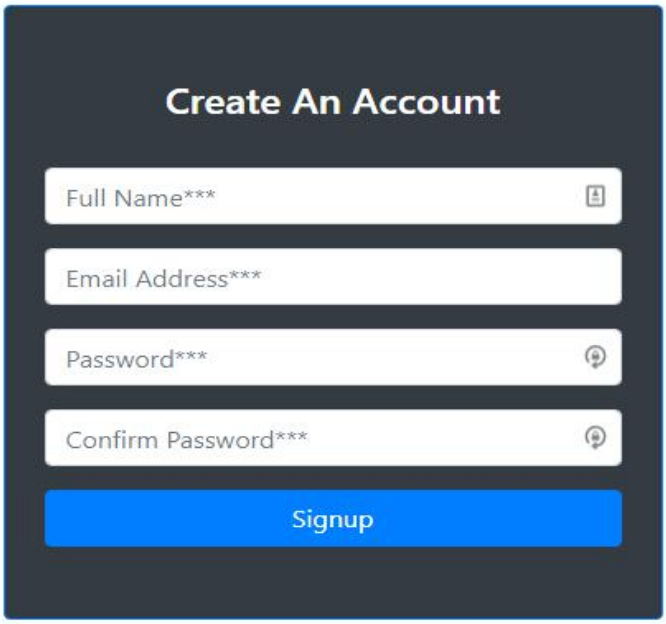


Figure 2: Registration

First of all, the guest users can get themselves registered to become a registered user. There are 4 fields. Full Name, Email Address, Password, Confirm Password. All of the fields must to be fill-upped to create an account. The length of Password must be 5-15. Password and Confirm Password must match.

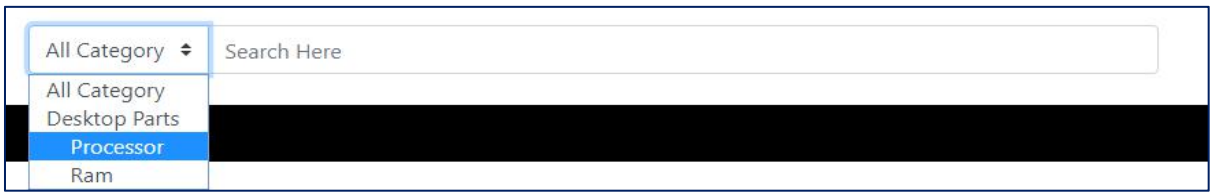


Figure 3: Search

They can search for the desired items category-wish. Select filed can have 3 types of categories. All Category, Parent Category & Child Category. Here Parent Category is Desktop Parts and Child Categories are Processor, Ram. The search program starts search when the length of Search field will be greater than 2.

Figure 4: Question & Answer

They can also ask anything about the product. Tech Gear Admin will answer them all. The question will not be shown, if Tech Gear Admin deletes the question or doesn't answer.

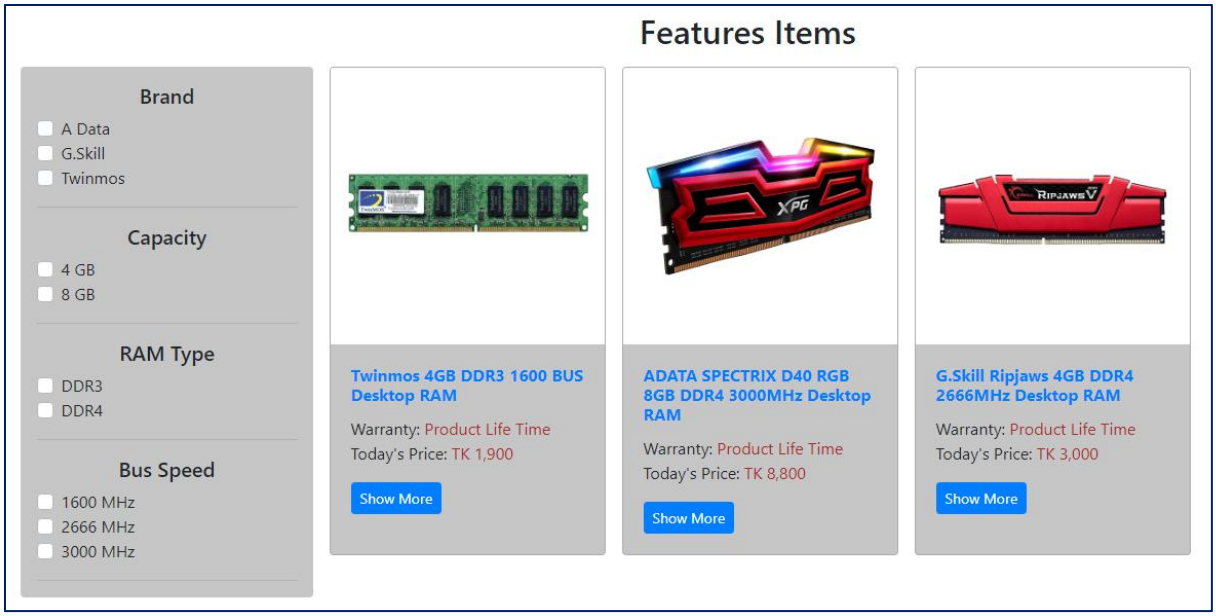


Figure 5: Product List with Filters

They can see the product list and filter properties. The filter properties are assigned by admin in the time of creating category. Here the filter properties are Brand, Capacity, RAM Type, Bus Speed. The values of each property come from the specifications of products. User will click on the title or 'Show More' to see the details of a products or to perform any action regrading a product like Add To cart, Add To Compare, Add to Wishlist.

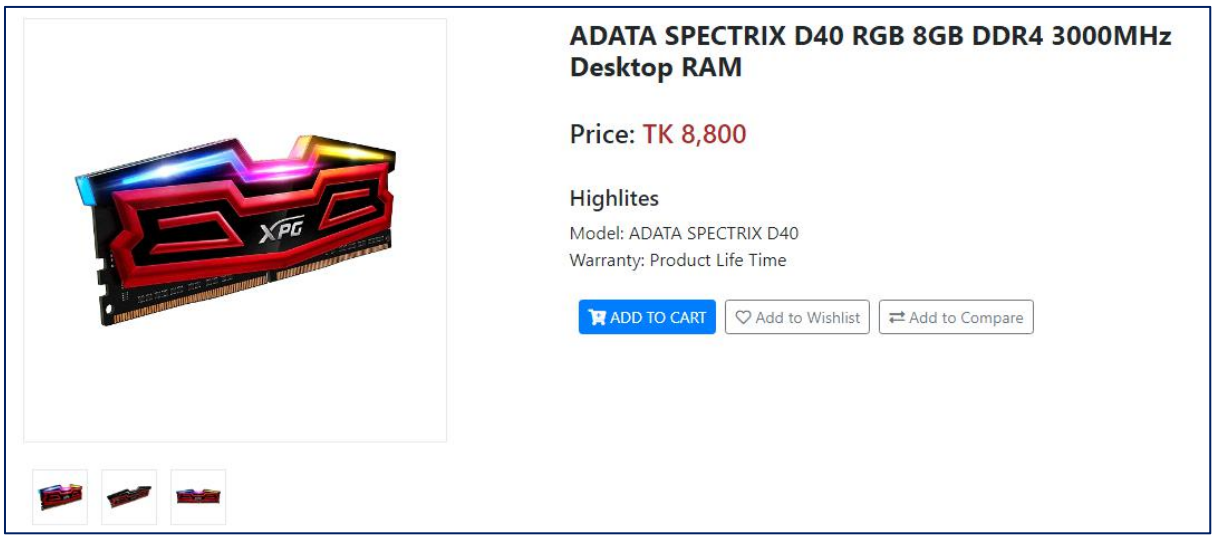


Figure 6: Product Details

They can see the product details. They can add product into cart or compare. But if they click on 'Add to Wishlist', then a login page will be shown. After a successful login, an user will be able to add product into wishlist. Some highlighted properties like 'Model', 'Warranty' and the 'Price' are shown. To see the full specifications, a silly scroll is needed.

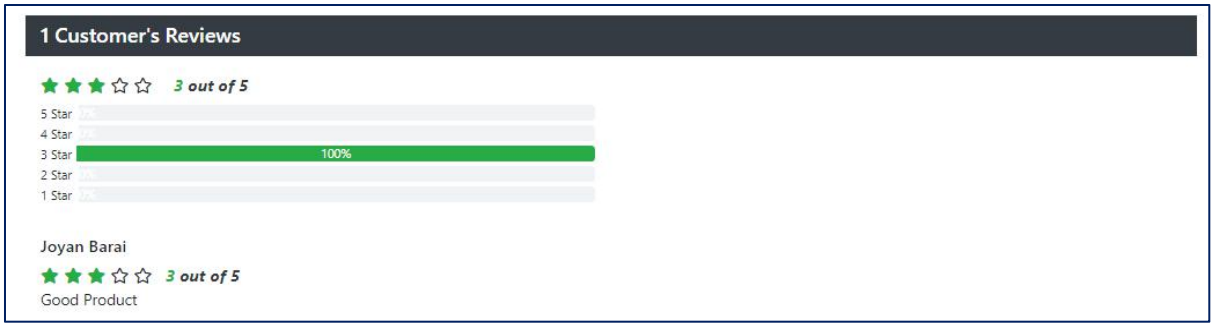


Figure 7: Product Rating & Review

A product has an overall rating and also individual user's rating and comment. The rating is denoted by stars. 5 stars are used for rating. The number of starts filled with green color is the rating value. There are also individuals percentage for the stars. The percentage of each star indicates the number of rating provider out of 100.

Figure 8: Video Review

Users can view the video review of the products they are about to buy. This will give them a better idea about the product. The admin add a video link in the time of adding a product. But in further the link can be changed by the admin. This is not mandatory to add a link when a product to be added.

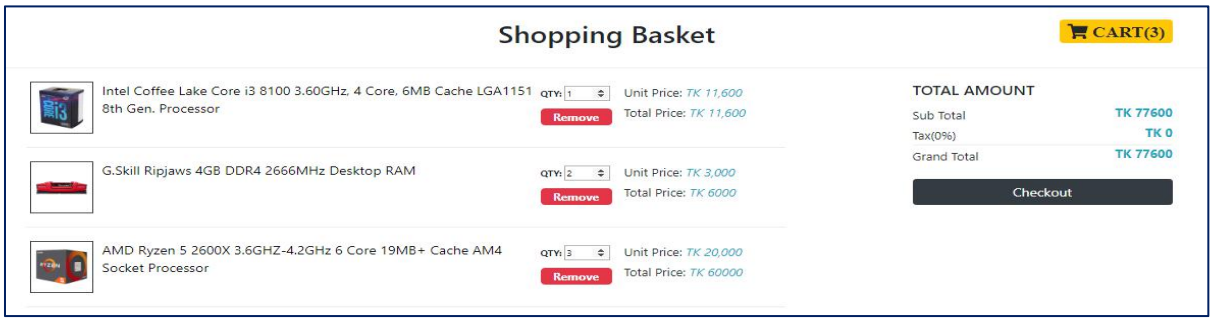


Figure 9: Shopping Cart

Last of all they can add items into cart, modify quantity, remove products from cart. But guest users can not place order without login into an account. The total amount with tax is shown at the right side of Shopping Basket page. The cart will be automatically destroyed at the time of closing the browser.

Figure 10: Related Products

They can also see the products suggestion. When they see the details of a product, then the related products section is found at the bottom of the page. The related product are shown on the basis of the current product. Maximum 10 products are suggested for a product. Guest user can also add these related products into compare section directly.

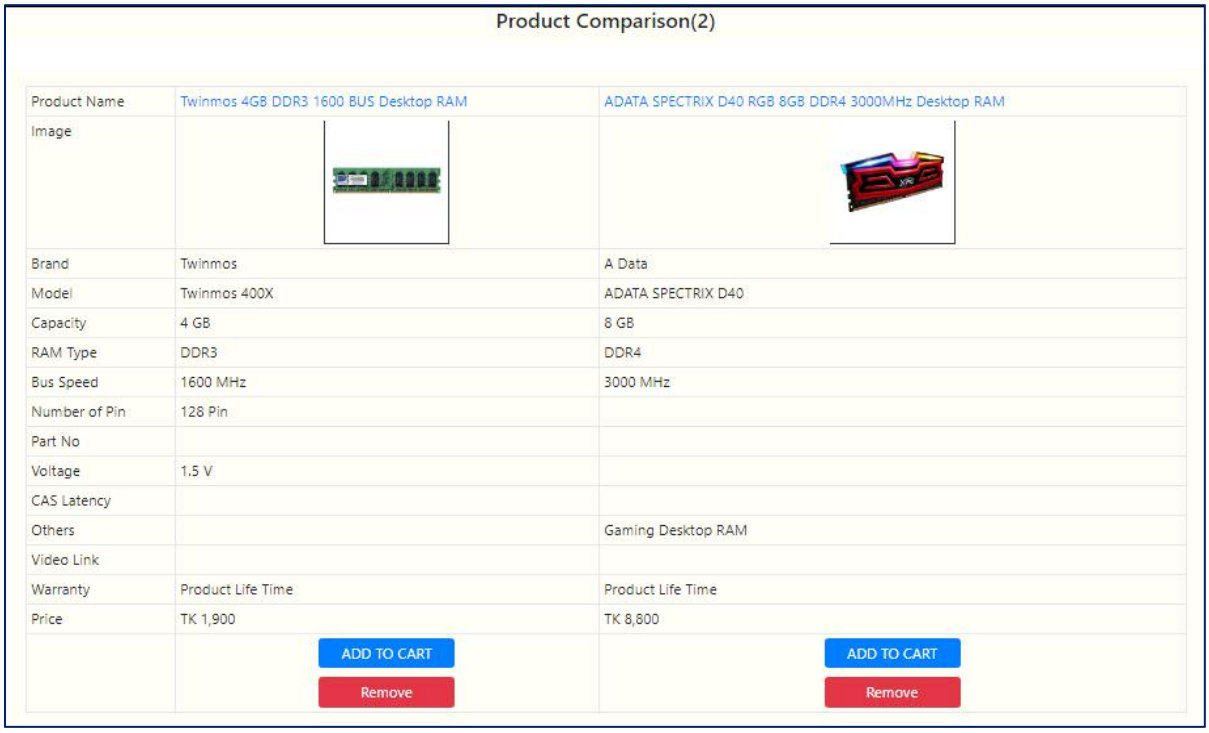


Figure 11: Compare Products

The user can use the most important feature comparing the items. This feature helps the best to choose one item. Guest users can use this feature. Products of different categories can be compared. At max 4 items can be added into compare. The user can add a product to cart directly from here. If they want to remove a product from compare, then just click on remove. The products of compare will be automatically removed at the time of closing the browser.

Functionalities of Registered Users

Registered users have all the capabilities as the guest users as well as some more features that they can use.

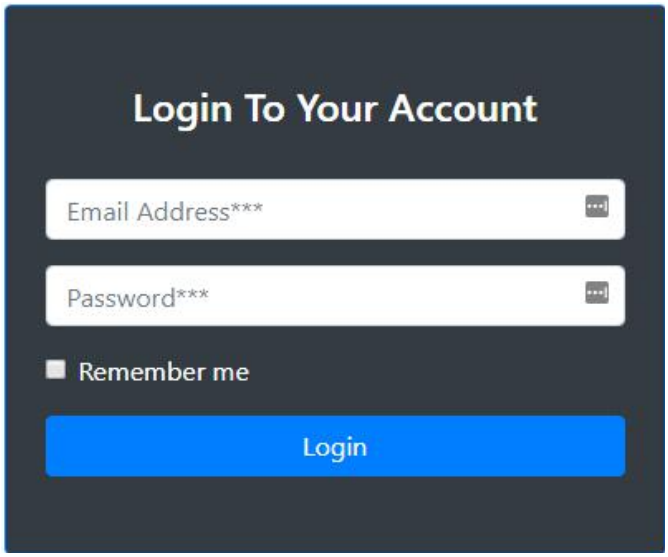


Figure 12: Login To Account

The registered users can login to their accounts to get everything started. There are two fields needed to be fill-upped to login into an account. One is Email Address & another is Password. The input length of email address is maximum 30 and password is 5-15. If the login information are not matched with the database information, then an error message will be displayed.

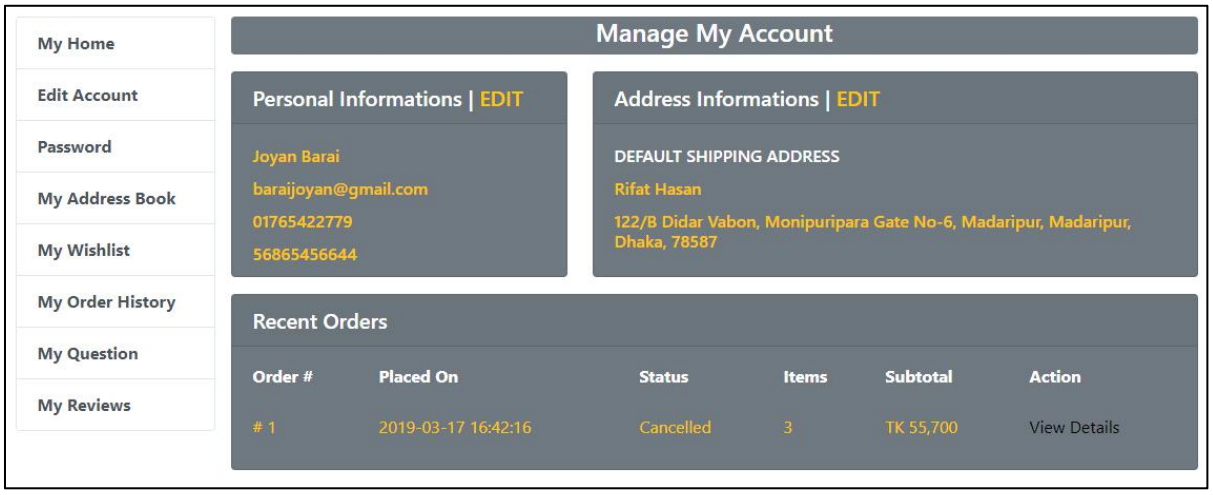


Figure 13: User Home Page

Every registered user will have a user home to manage their account. At the left section, they find a quick menu section. At the right section, they find some personal information about them and the recent order highlights. Personal information means name, email, phone, fax and default shipping address. The users find edit options to edit their personal information. Recent orders contain order id, order placed date, current status, number of items, order subtotal 'View Details' button to see the details of an order.

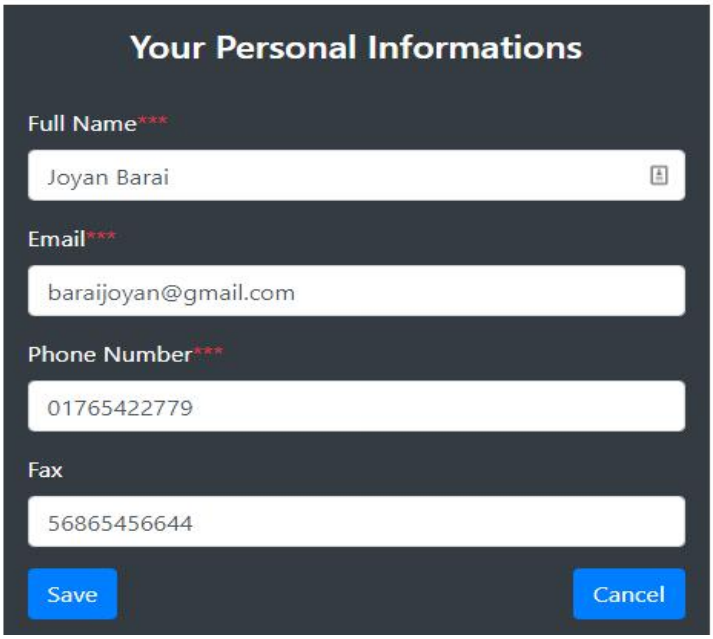


Figure 14: View & Edit Account Information

They can view and edit their information. The edit section has four fields. Name, Email, Phone, Fax. Name, Email & Phone need to be filled up when the user edits the personal information. Fax is the optional one. The maximum length for the name field is 20 and for the email is 30. No need to add +88 or 0088 when a phone number is inputted. Just fill the 11 digits phone number. The length of fax is 9.

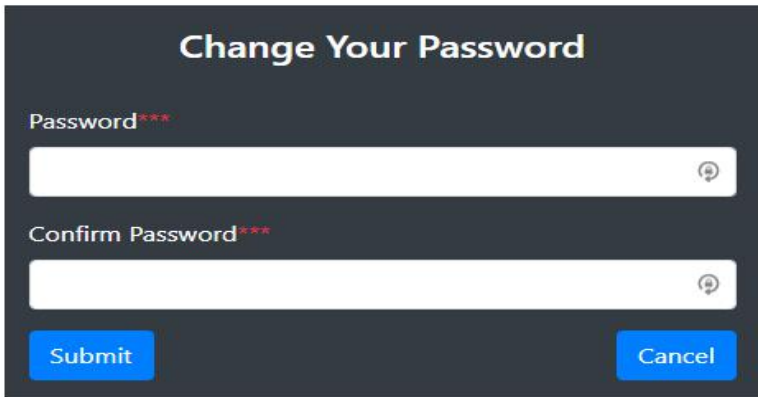


Figure 15: Change Password

User can also change their password for safety reason. There are two fields for in password changing section. One is Password and another is Confirm Password. Password and Confirm Password must match. The length of password is 5-15.

Figure 16: Address Book

User can add new address, edit an address, delete an address. They can have multiple address. The default address will be shown at order shipping address section. Only one address can be assigned as default address.

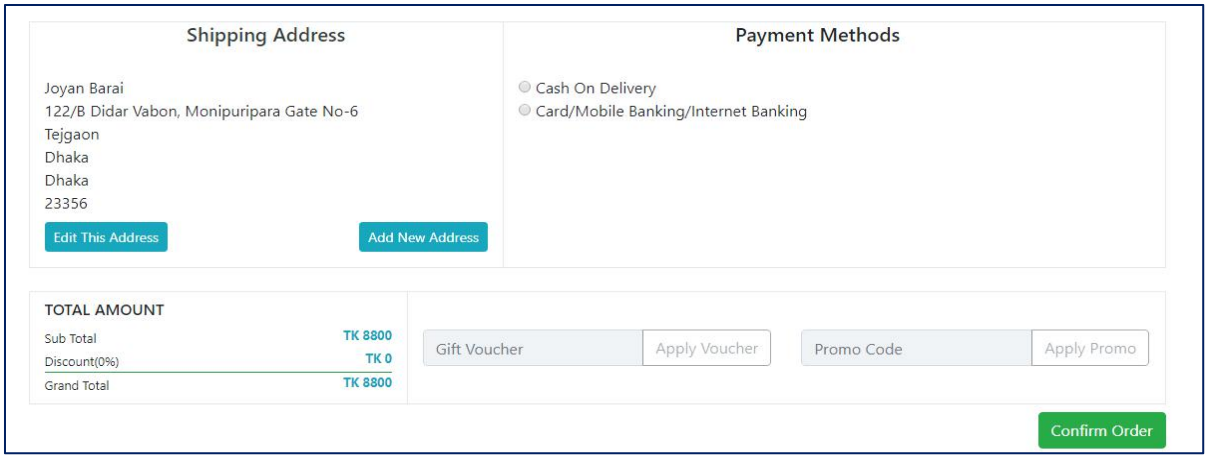


Figure 17: Place Order

Registered user can place order. The default address of user is considered as shipping address. But it can be changed. User can also add new address. There are two payment methods “cash on delivery” and “Card/Mobile Banking/Internet Banking”. Third party payment process company will handle the second payment method. The total amount with discount will be displayed here.

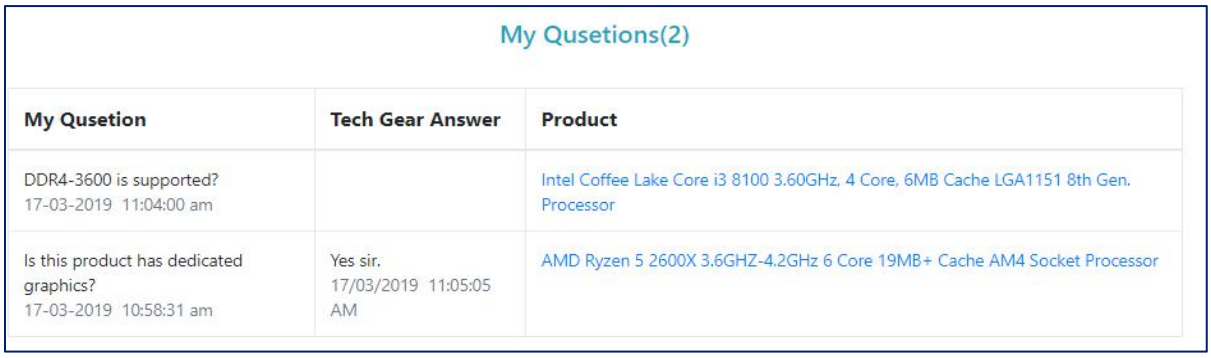


Figure 18: My Questions

User can see his/her questions and Tech Gear answer. They can also the date time of questions as well as answers. Every question has it's product title. If admin deletes the question, then it will be not shown.

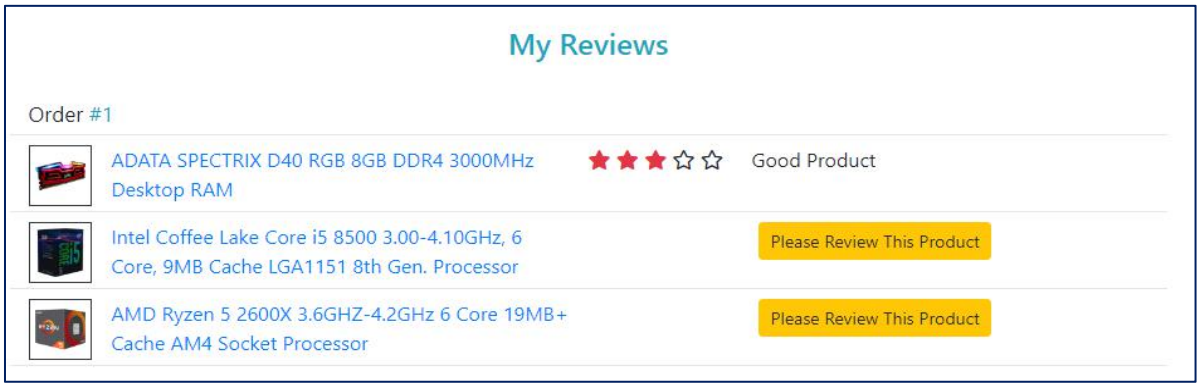


Figure 19: My Review

Registered user can give rating and comment of delivered product. They just click on 'Please Review This Product' to add a rating and a comment. If users add rating review, they will be not able to change their decision further. The 'Please Review This Product' button will be replaced with stars and comment after giving rating review.

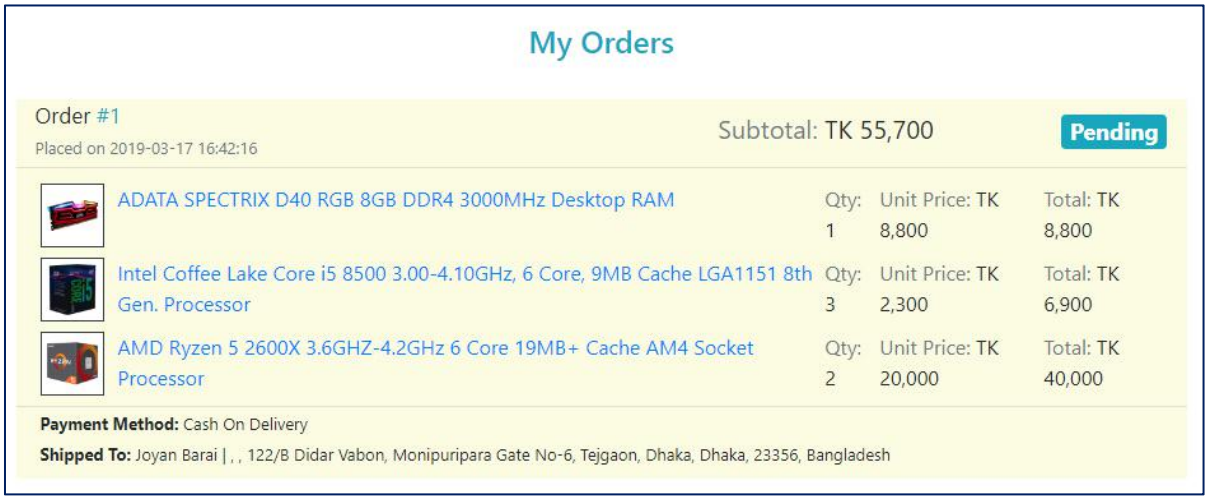


Figure 20: Order History

Users can see their order history. Order id, order placed date, total amount and current status are displayed at the top. Products title, image, order quantity, unit price and total price will be shown at the middle. At the bottom, shipping method and shipping address are found.

Figure 21: My Wishlist

Registered Users can also make their wish-list. A wishlist contains a bunch of products. Image, title, model, unit price of products are displayed. The user can add product to cart directly from wishlist. A product will be removed automatically after adding from wishlist to cart. User can also delete products from wishlist.

Functionalities of Admin

Admin has all the capabilities as the guest users as well as administrative features that he/she can use.

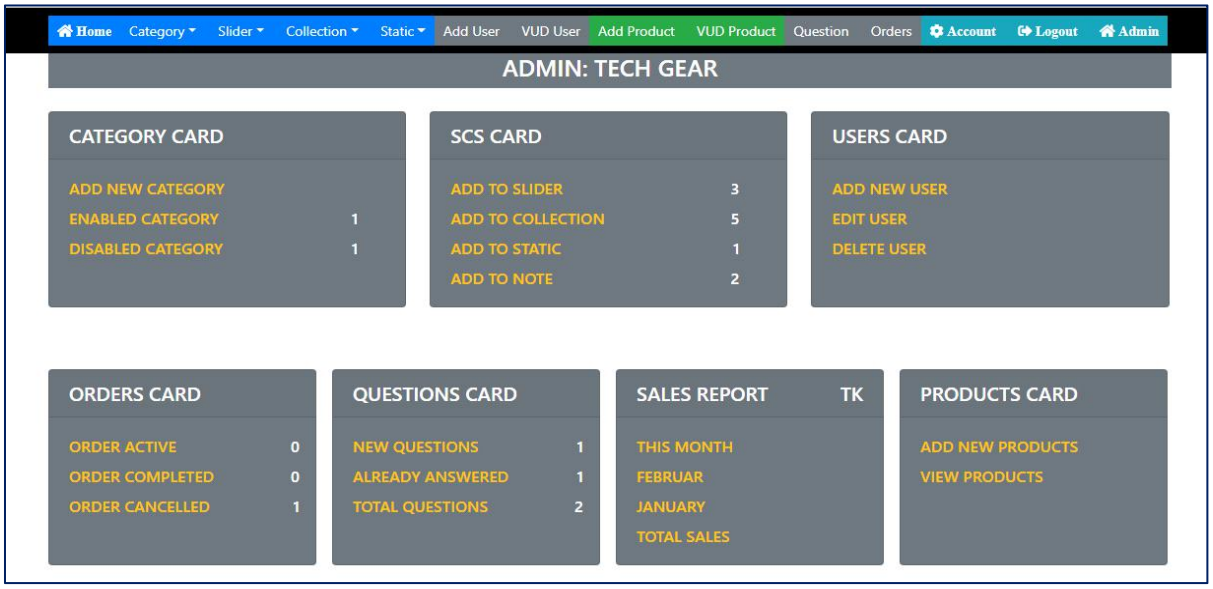


Figure 22: Admin Home Page

Admin will have a home to manage the whole system. The admin home has two section. One is quick menu, and another is card menu. The top row contains the quick menu. The quick menu is found into another page, but the card menu is only for admin home. Card menu also has count value of its corresponding row. Sales report is a part of card menu. Last three months sales report is displayed.

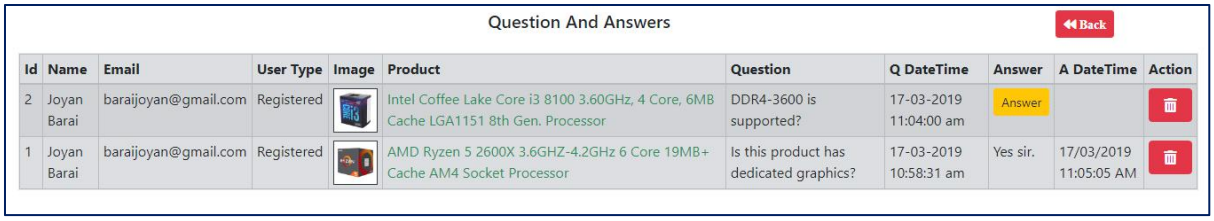


Figure 23: Manage Questions & Answers

Admin can see the questions and give answer or delete. If admin deletes questions or doesn't answer, then the question will not be shown. The question & answer section contains the name of questioner, email, question date time, questioned product. After providing an answer the 'Answer' button is replaced with given answer.

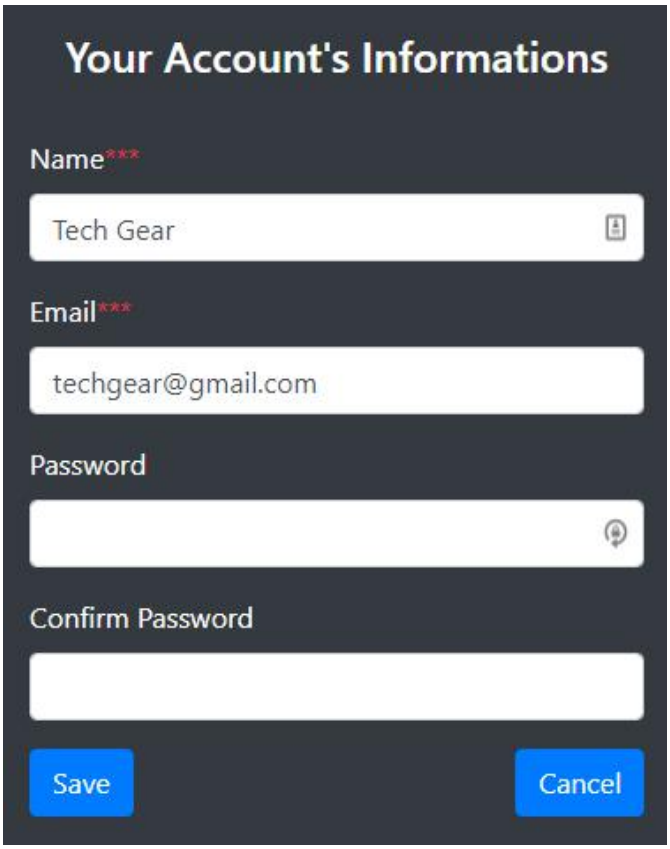
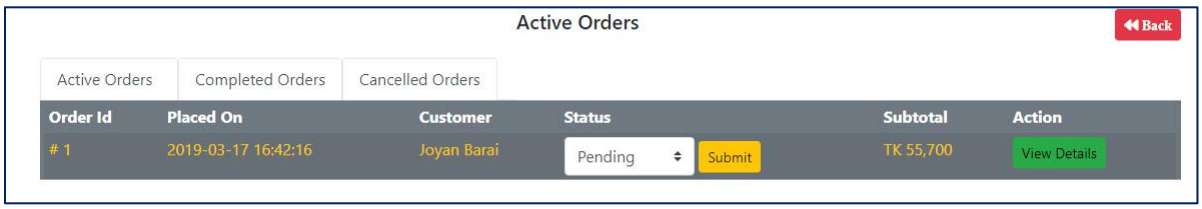


Figure 24: Admin Account Information

Admin can view and edit own information. Account information contains four fields. They are Name, Email, Password, Confirm Password. Name and email are the mandatory fields. They are must to be filled. Password is not mandatory field when editing information. Password and Confirm Password must match. The length of password is 5-10.



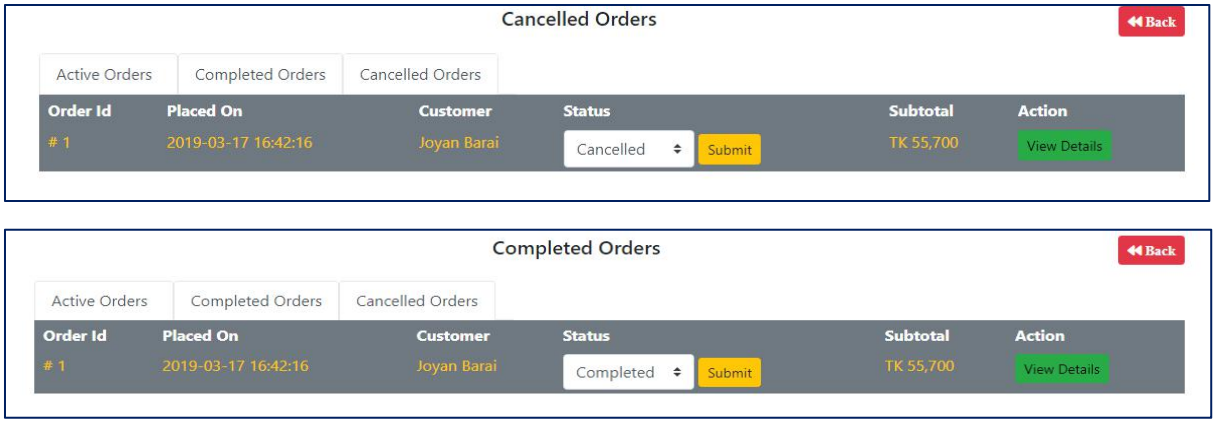


Figure 25: Manage Orders

Admin can see and change the order status. Manage order section has three parts. Active orders, cancelled orders, Completed orders. Each section contains s order id, date of placed order, customer name, current status, subtotal and a 'View Details' button. Active order has several statuses such as Pending, Shipped, Delivered, Completed, Cancelled. Completed orders are found in Completed section and Cancelled orders are found in Cancelled section.

Figure 26: Enable Disable Category

Admin can make a category public or private. ‘Disable’ means public and ‘Enable’ means private. Admin can only show the private categories data. But admin can add, edit, delete data of a private category.

Figure 27: Add Note to Static

Admin can add any note. Note contains any kind of information. The none length is 10-2000. An image is mandatory to be uploaded for posting a note.

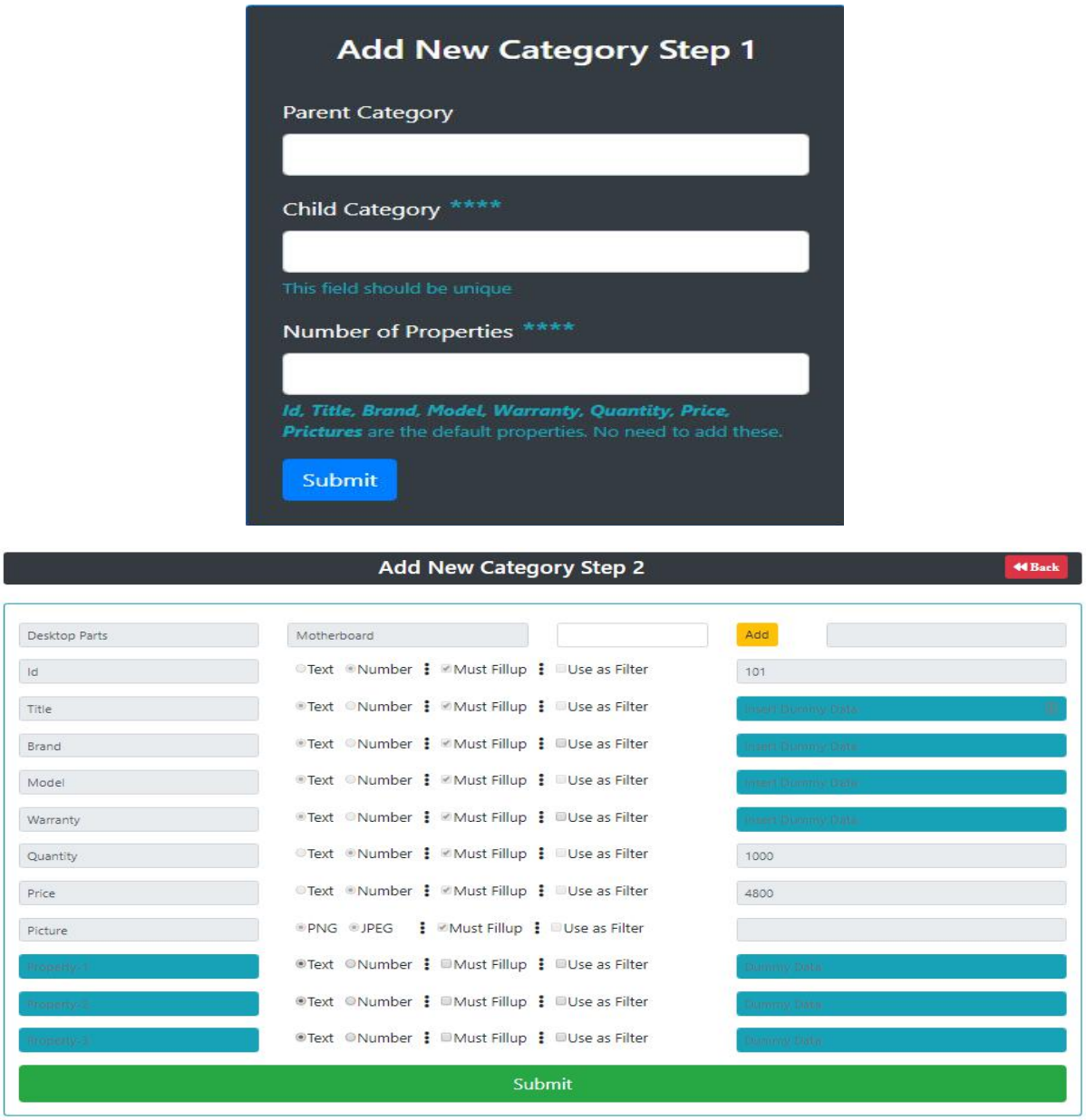


Figure 28: Add New Category

Admin can add new products by creating new category. Two steps are needed to be completed to create a new category. The first step has 3 fields. Parent Category, Child Category and Number of properties. Child category and number of properties are the mandatory fields. Parent Category is optional. If a parent Category doesn't exist, then the parent category will be created. A parent category can have multiple child, but a child cannot have multiple parents. The max value for Number of Properties is 30. Id, title, brand, model, warranty, price, pictures are the default properties for any category. The second step has dynamical fields. At the top left field is only readable field which contains the 'Parent Category' inputted in the first step. Next right field is also a readable field which contains the 'Child Category' inputted in the first step. The left side fields are used to input the properties name. The right-side fields are used to input dummy data. The radio buttons are the types of data which will be inputted for a property. The two checkboxes are 'Must Fillup' and 'Use as Filter'.

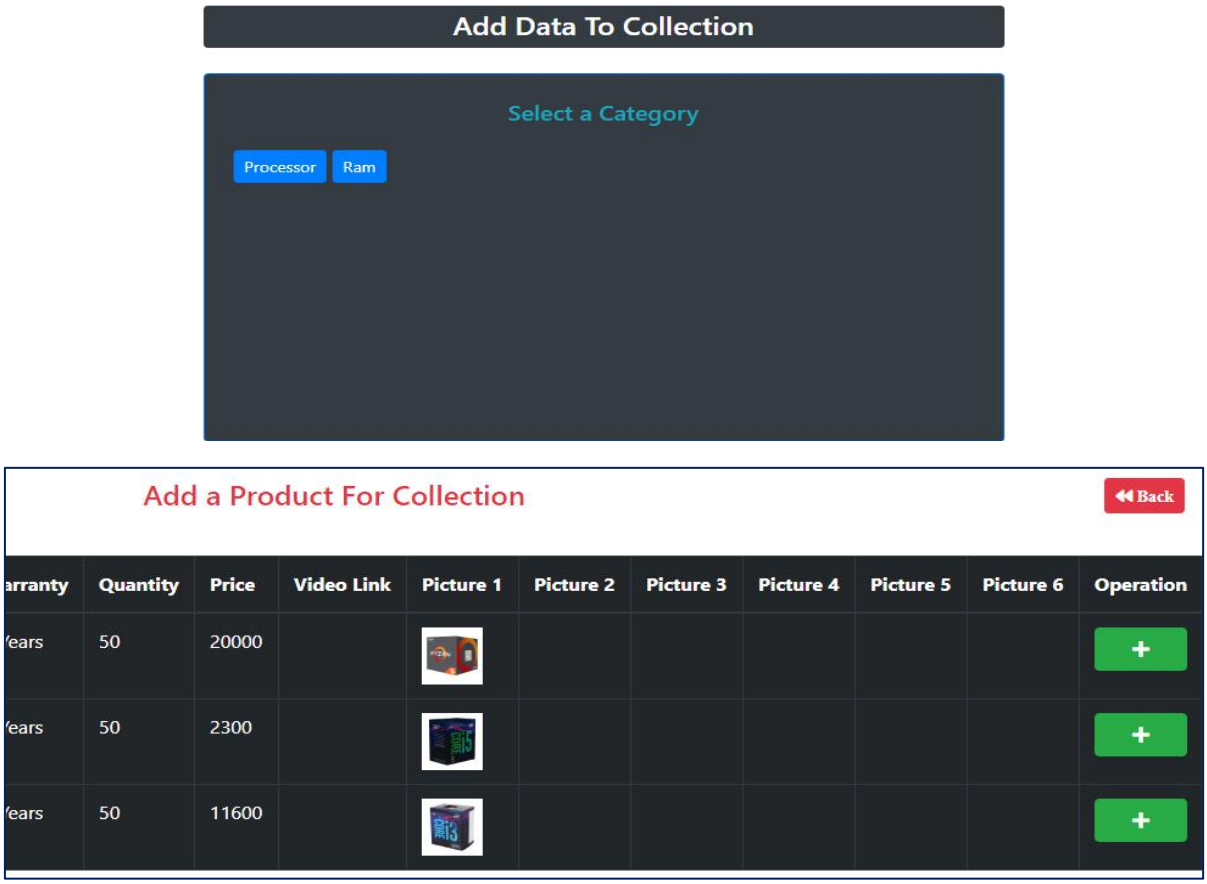


Figure 29: Add Data to Collection

Admin can add data to collection. Collection is a bunch of products which is shown on public home page. To add data into collection, two steps are followed. First one is select a category like processor, ram, monitor. The second step is to add a product of selected category into collection.

Figure 30: Add New User

Admin can add new user. There are four fields in add new user section. Full Name, Email, Password, Address. First three are the mandatory fields. The forth one 'Address' is optional. Max length of 'Full Name' is 20 and 'Email' is 30 and 'Password' is 5-15. Address length cannot be greater than 50.

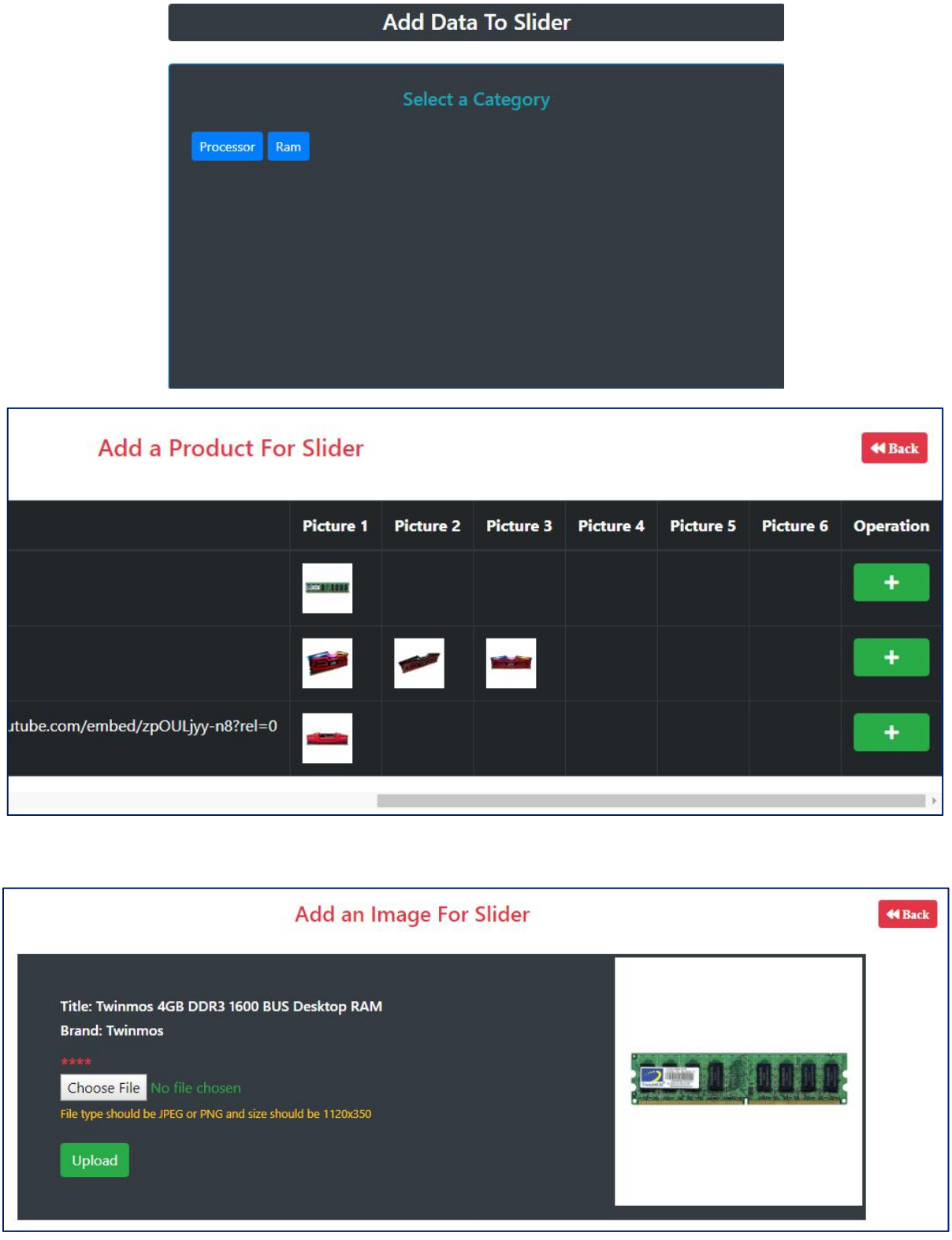


Figure 31: Add Data to Slider

Admin can add data to slider where the user will see first after landing on the website. To add data into slider, three steps are followed. First step is select a category like processor, ram, monitor. The second step is to add a product of selected category for slider. And the third step is to add an image of size 1120x150. The image is used for the attractive view of slider.

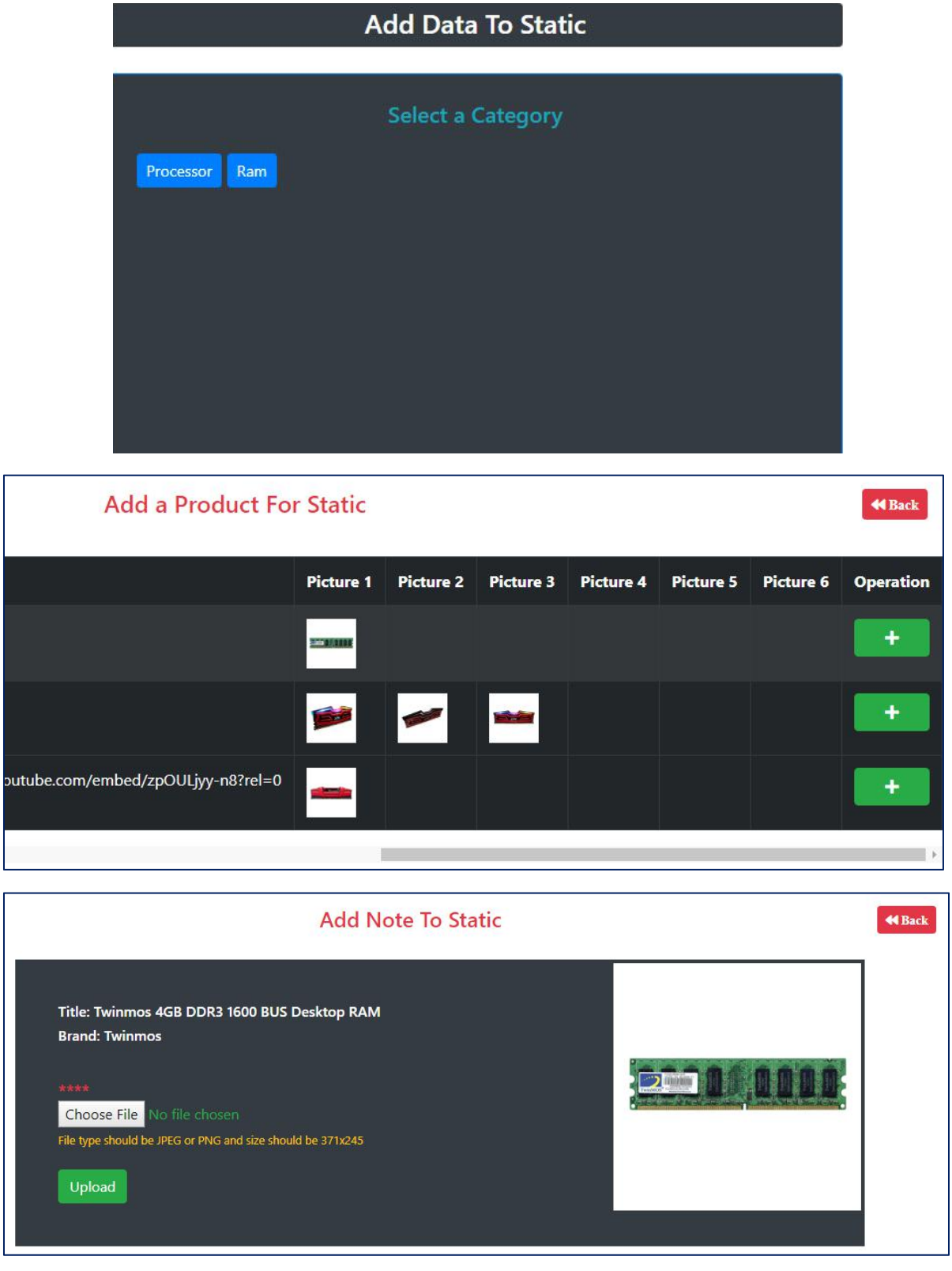


Figure 32: Add Data to Static

Admin can add data to static. To add data into static, three steps are followed. First step is select a category like processor, ram, monitor. The second step is to add a product of selected category for static. And the third step is to add an image of size 371x245. The image is used for the attractive view of static section.

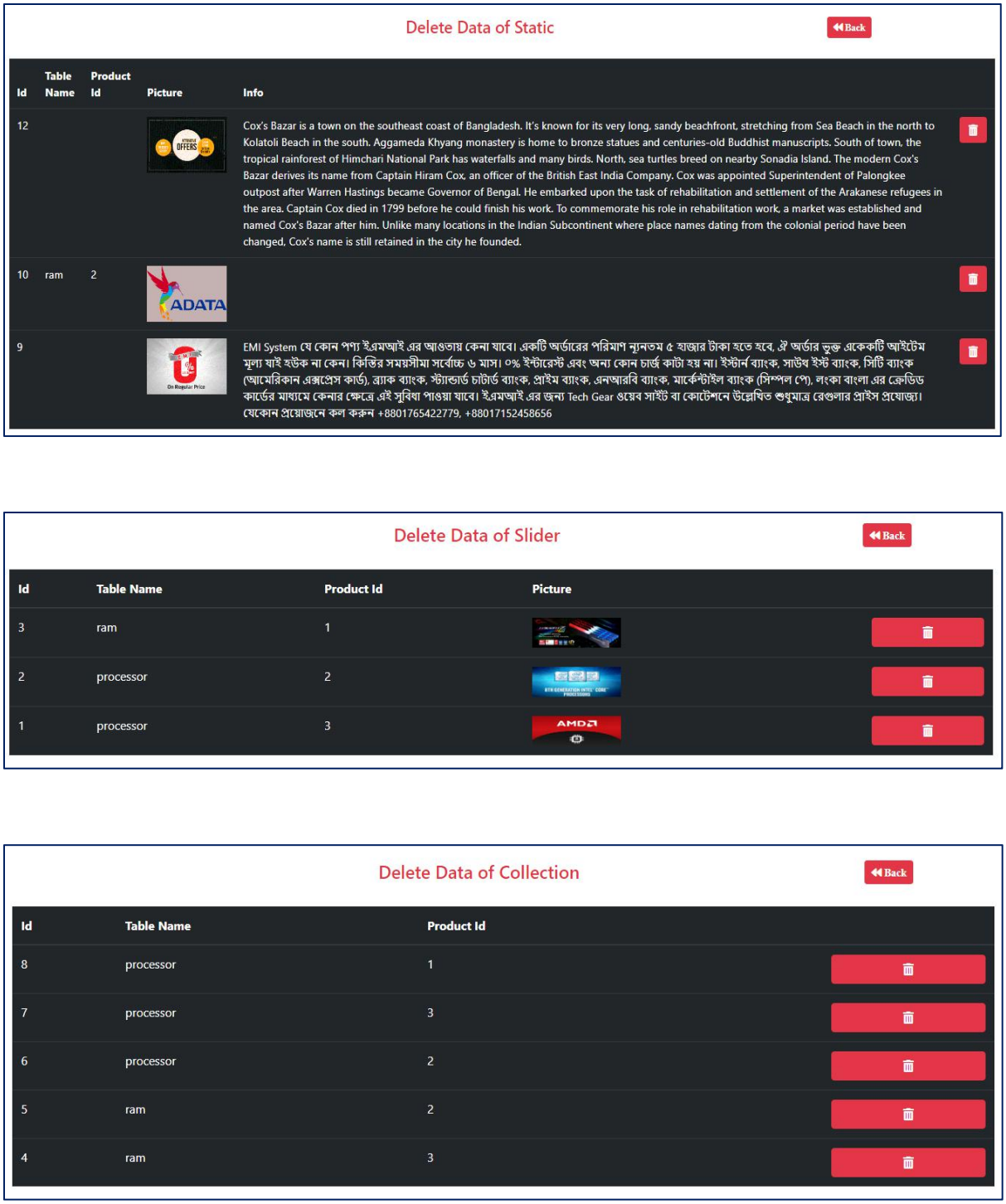


Figure 33: Delete Data of SCS(Slider, Collection, Static)

Admin can delete anything from slider, static or collection. Once a data is deleted, it can not be undone. Delete data of static contains note as well as products link.

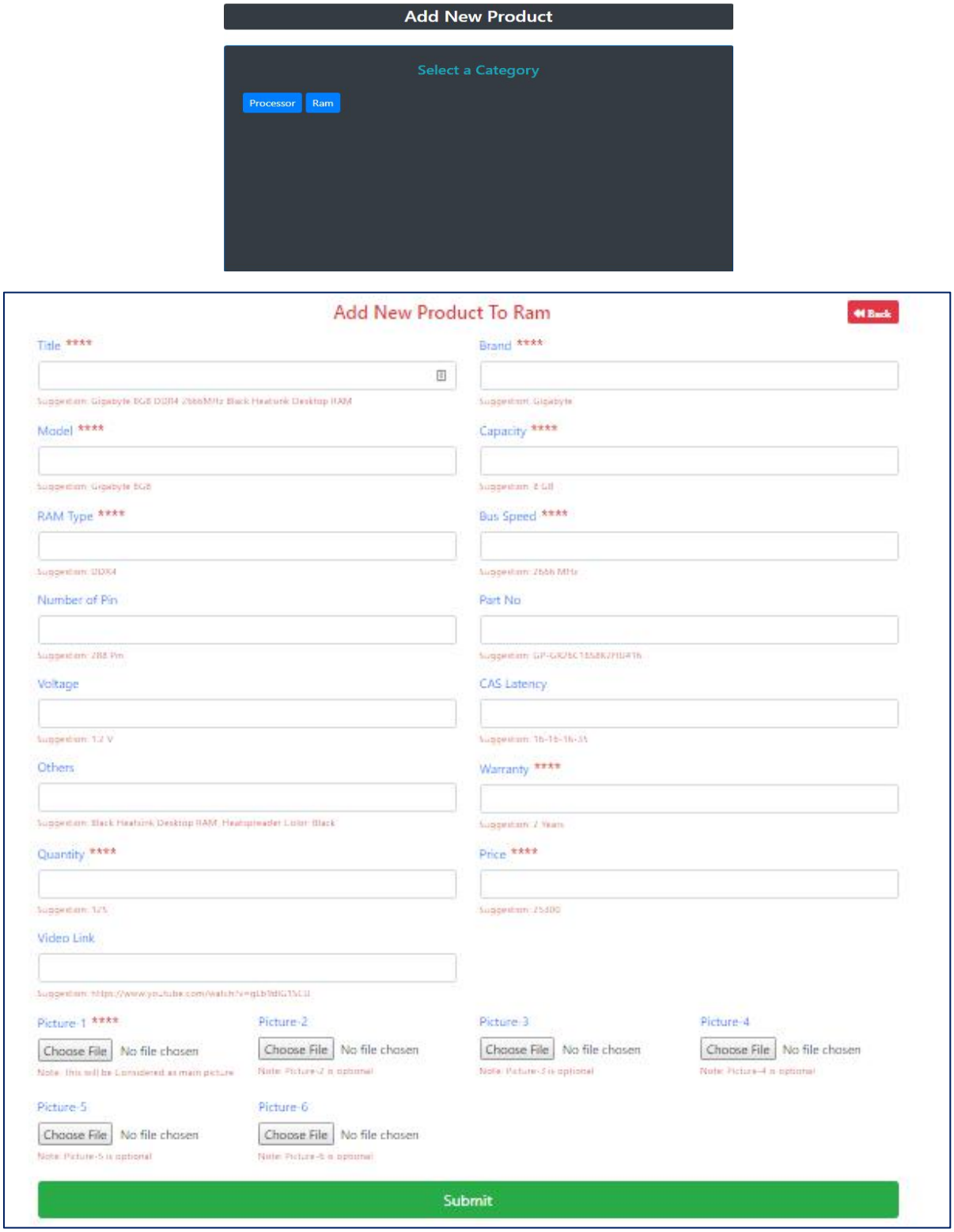


Figure 34: Add New Product

Admin can add product. Two steps are followed to add new product into a category. Admin selects a category like ram, processor, motherboard in the first step. The second step is used for adding a product. Stars marked fields are the mandatory fields. Admin can add maximum 6 images for a product. Picture-1 is the mandatory one. Others are optional. Picture-1 is used as primary picture of a product.

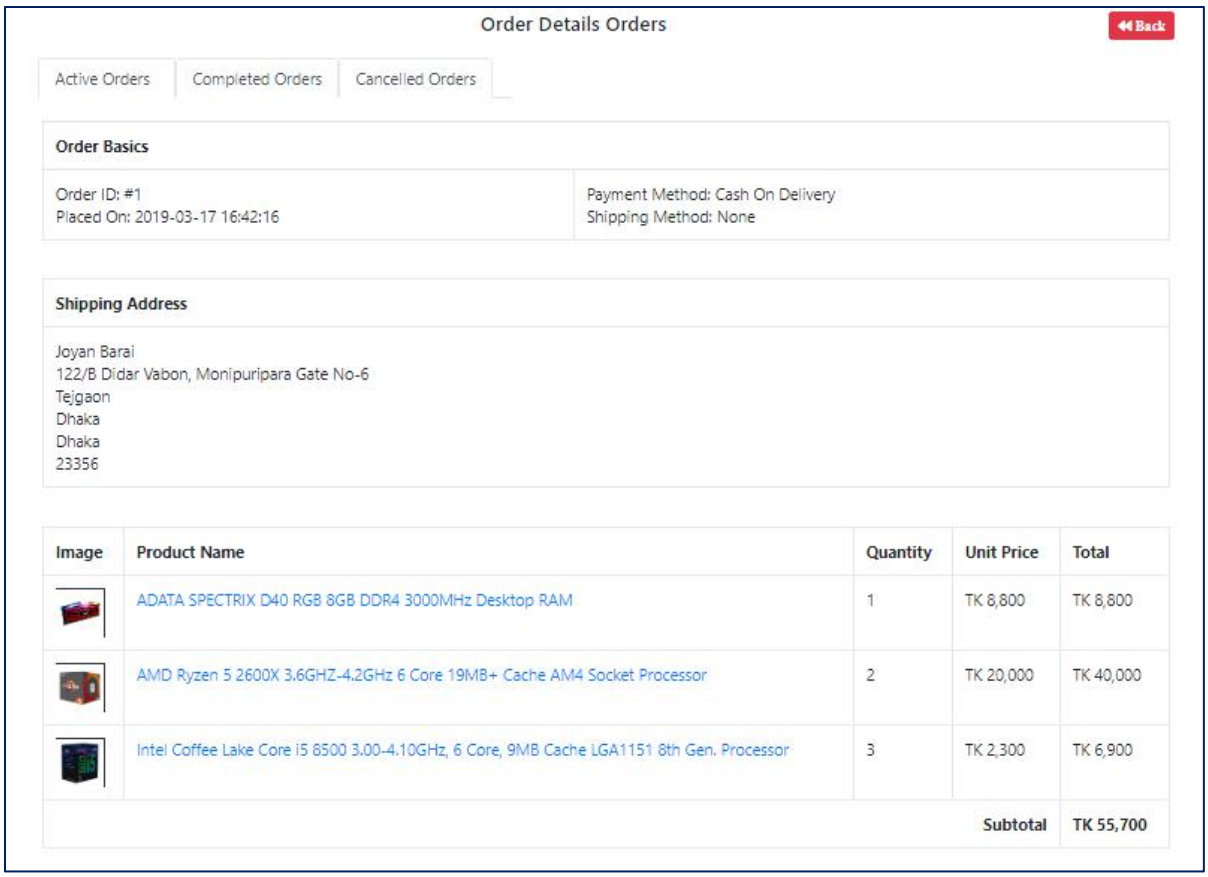


Figure 35: View Order Details

Admin can view order details. The order details contain the order id, order placed date time, shipping method, payment method as well as shipping address. All the ordered products are displayed with current images, quantity, unit price, total and subtotal.

3.4 Non-Functional Requirements

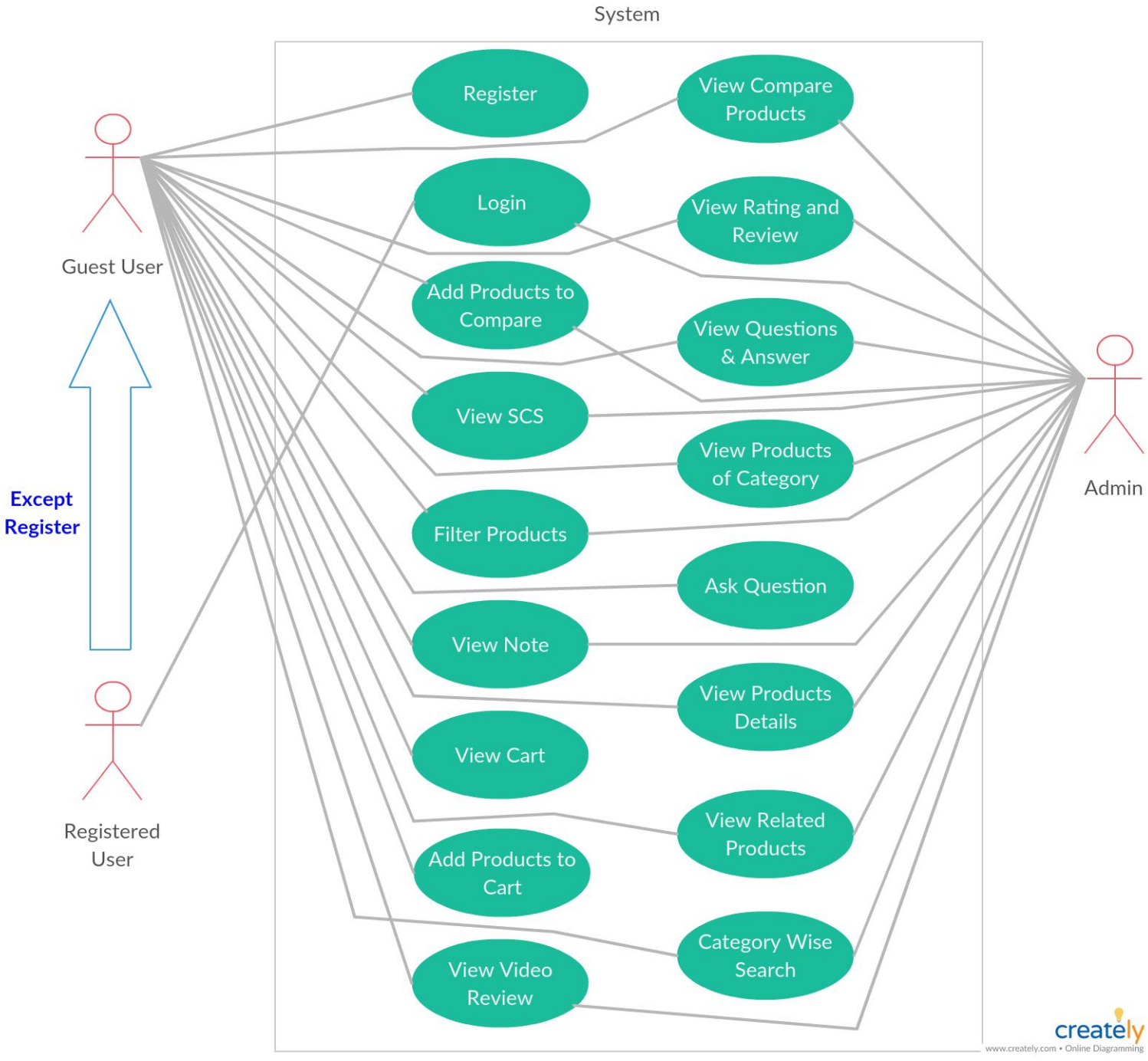
The system will accommodate high numbers of items and users without any error. Response to view information will take no longer than 5 seconds to appear on the screen. This system will not harm any users by any means. This system will use secure database system. Normal users can only edit only their own information. Users and admin have different login constraints. This system will handle expected and non-expected error in such a way that prevent loss in data and long downtime period.

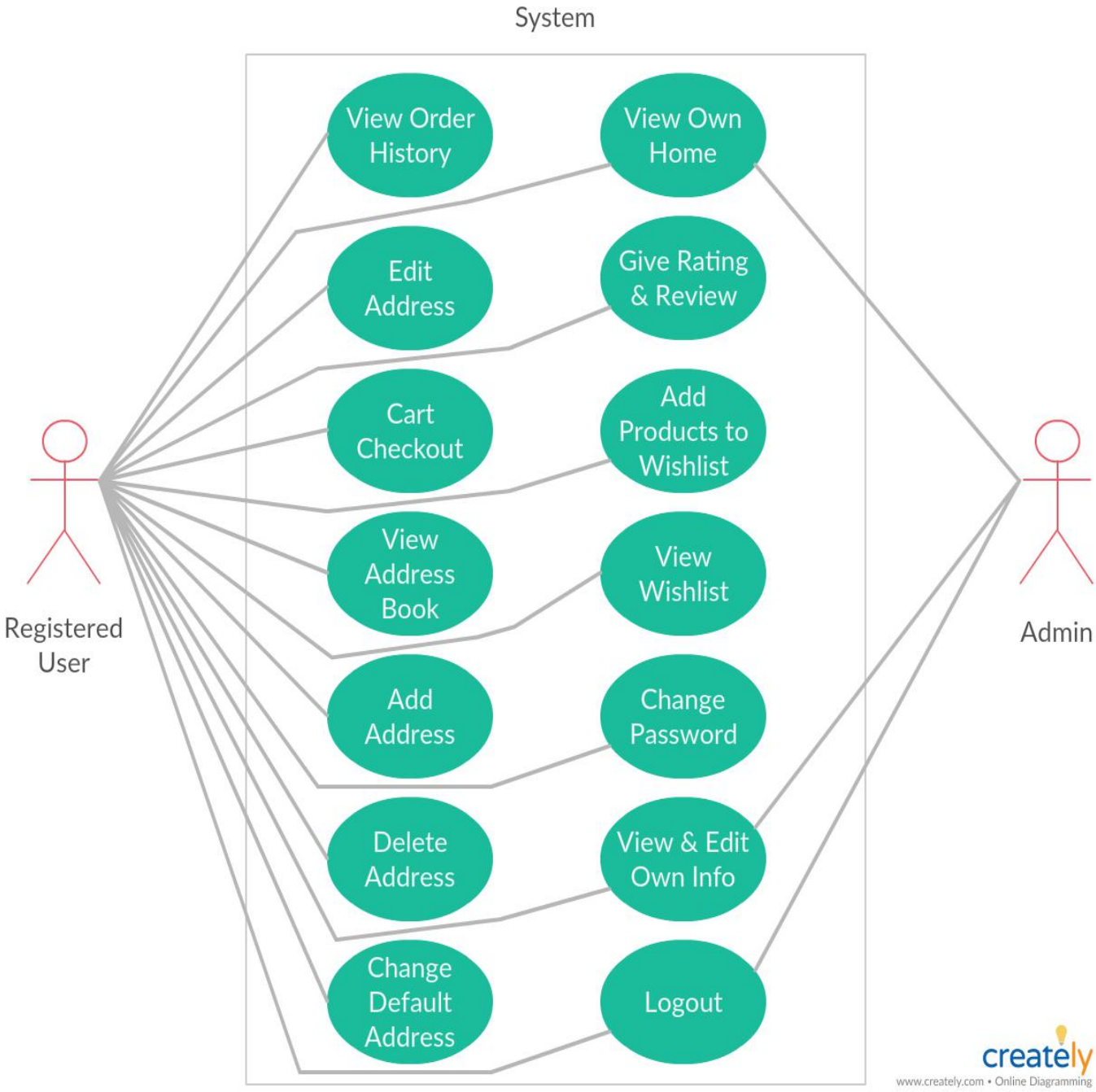
Chapter 4

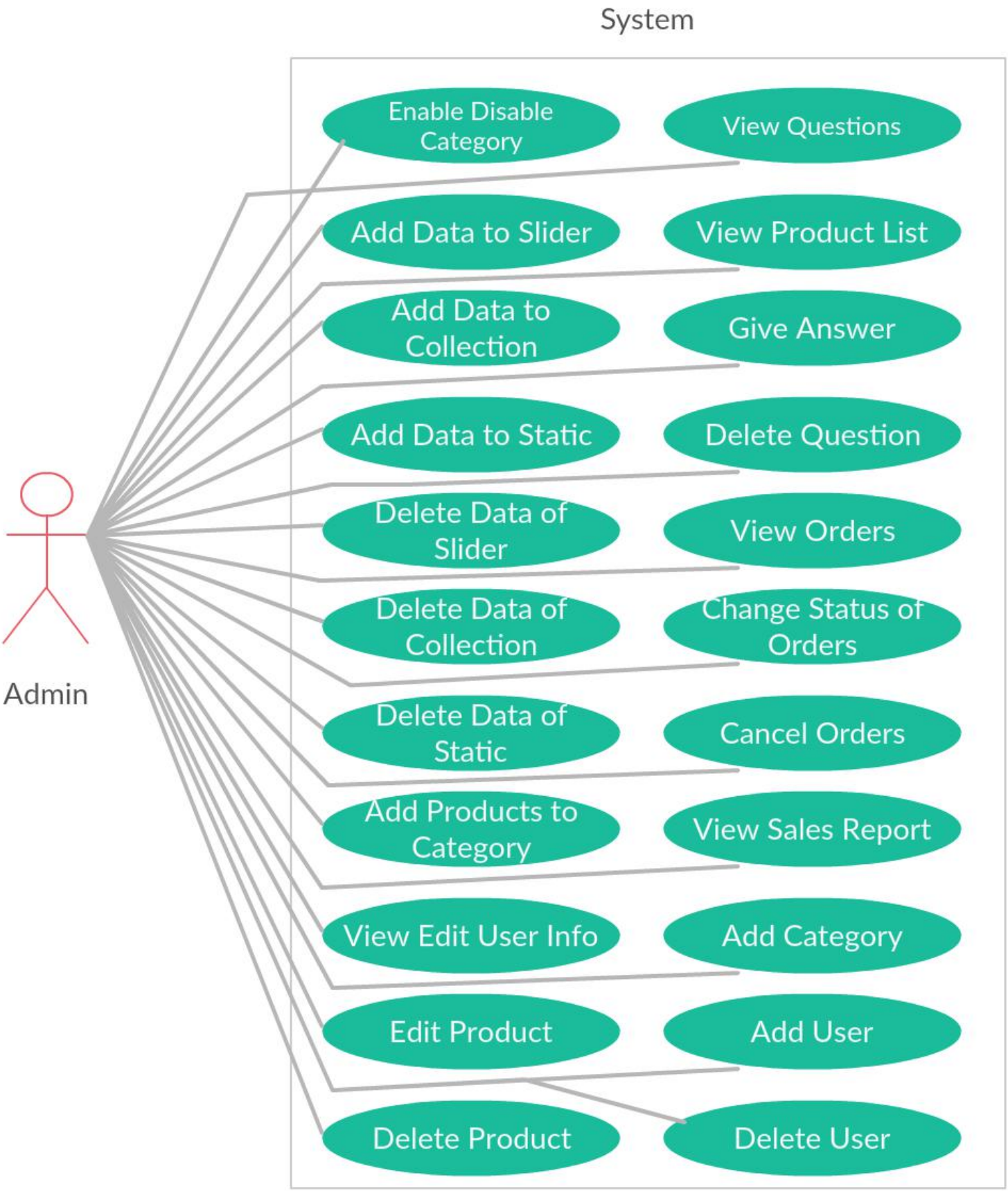
REQUIREMENT DESIGN SPECIFICATION

The UML diagram has been designed according to the guideline by OMG (2019) & USE (2007) & SourceForge (2019) & Metu (2019).

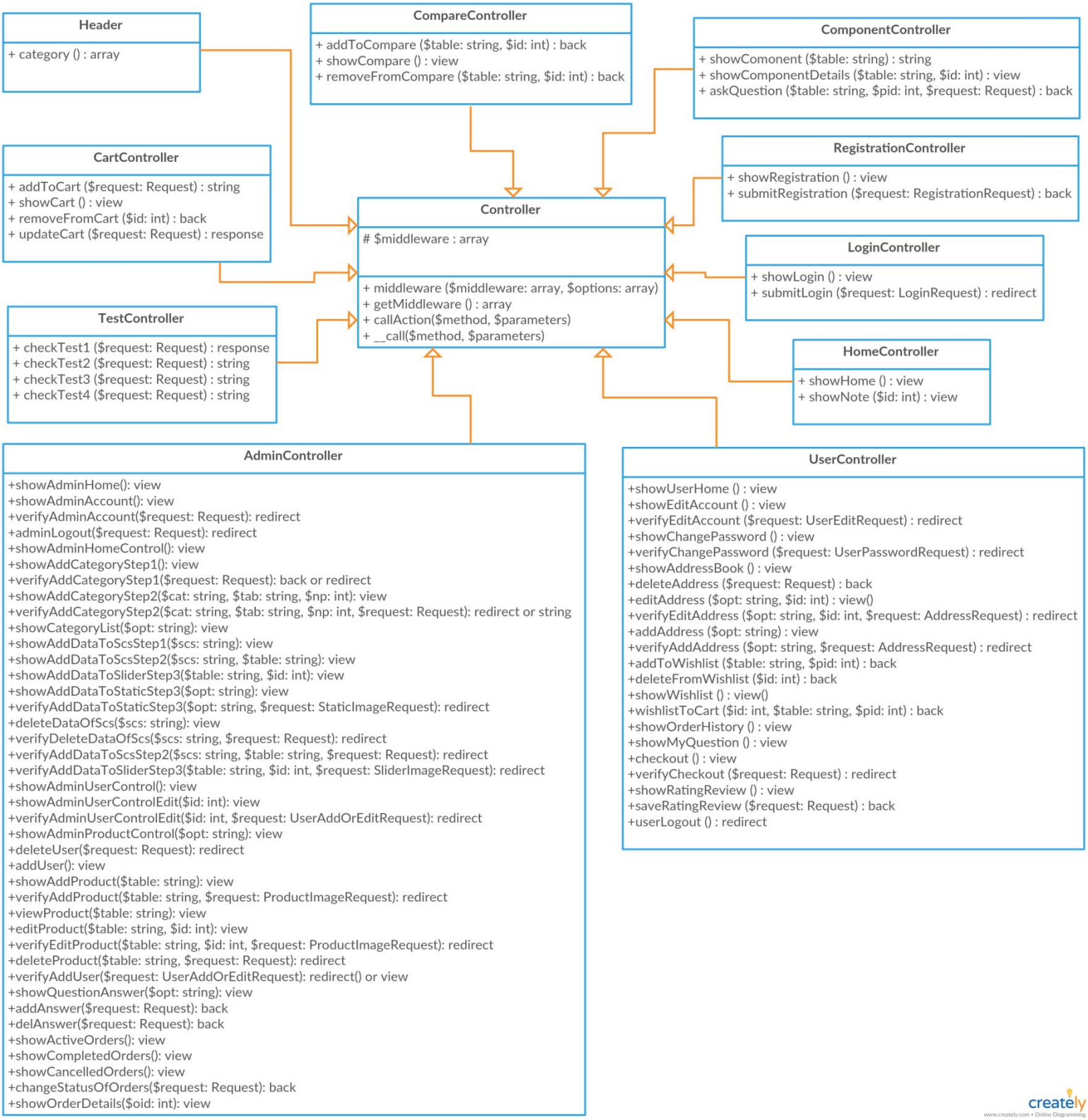
4.1 Use Case Diagram



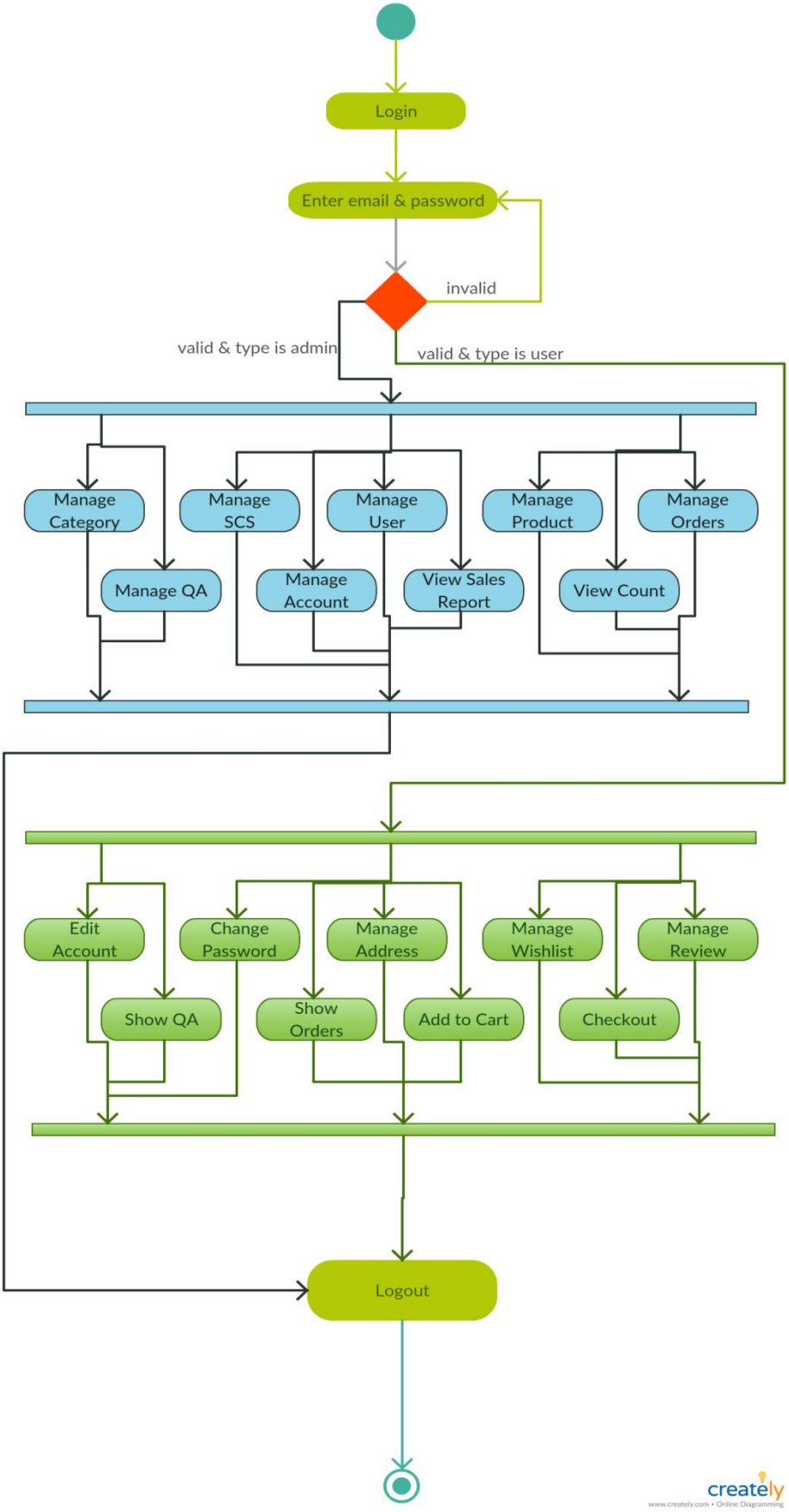

System
View Order History
View Own Home
Edit Address
Give Rating & Review
Cart Checkout
Add Products to Wishlist
View Address Book
View Wishlist
Add Address
Change Password
Delete Address
View & Edit Own Info
Change Default Address
Logout
Registered User
Admin
creately
www.creately.com • Online Diagramming


System
Enable Disable Category
View Questions
Add Data to Slider
View Product List
Add Data to Collection
Give Answer
Add Data to Static
Delete Question
Delete Data of Slider
View Orders
Delete Data of Collection
Change Status of Orders
Delete Data of Static
Cancel Orders
Add Products to Category
View Sales Report
View Edit User Info
Add Category
Edit Product
Add User
Delete Product
Delete User
Admin

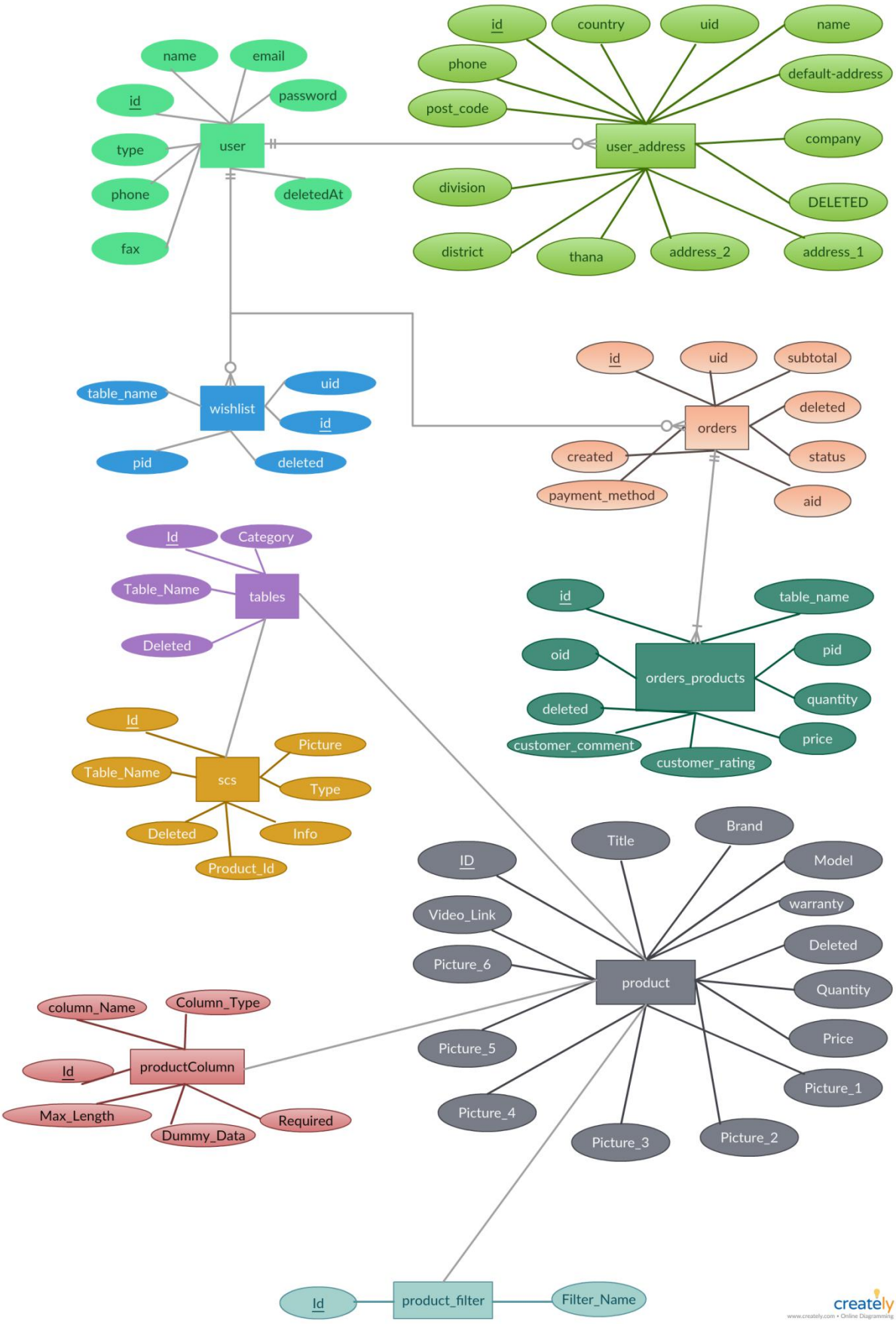
4.2 Class Diagram



4.3 Activity Diagram



4.4 E-R Diagram



Chapter 5

SYSTEM VALIDATION

5.1 Test Cases

The test case has been written according to the guideline by Guru99 (2019) & ReQtest(2019) & Software Testing Help (2019).

Project Name: Tech Gear: An Online E-commerce System	
Test Designed By: Sourav Samad	**Test Designed date:** 12-03-2019
Test Executed by: Sourav Samad	**Test Execution date:** 15-03-2018

Test Case ID & Name	Test Steps & Test Data	Expected Result	Actual Result	Status
ID: TC-01 Name: Register	1. Open chrome & go to "localhost:8000" 2. Click on "Register" 3. Fill up the form with Full Name: Joyan Barai Email: baraijoyan@gmail.com Password: 12345 Confirm Password: 12345 4. Click on "Signup"	A successful message should be shown	As expected	Pass
ID: TC-02 Name: Login as User	1. Open chrome & go to "localhost:8000" 2. Click on "Login" 3. Fill up the form with 4. Email: baraijoyan@gmail.com 5. Password: 12345 6. Click on "Login"	User Home should be shown	As expected	Pass
ID: TC-03 Name: Cart	1. Open chrome & go to "localhost:8000" 2. Click on "Cart"	Cart should be shown	As expected	Pass

ID: TC-04 Name: Wishlist	1. Open chrome & go to “localhost:8000” 2. Click on “Wishlist”	Login page should be appeared	As expected	Pass
ID: TC-05 Name: Wishlist	1. Execute TC-02 2. Click on “Wishlist”	Wishlist should be appeared.	As expected	Pass
ID: TC-06 Name: Compare	1. Open chrome & go to “localhost:8000” 1. Click on “Compare”	Products added into compare should be shown with details	As expected	Pass
ID: TC-07 Name: Search	1. Open chrome & go to “localhost:8000” 2. Select “ram” 3. Type “corsair” into search-box	Products of ram with name “Corsair” should be appeared	As expected	Pass
ID: TC-08 Name: Products List	1. Open chrome & go to “localhost:8000” 2. Place mouse on “DESKTOP PARTS” 3. Click on “Processor”	A processor list with filters should be shown	As expected	Pass
ID: TC-09 Name: Slider	1. Open chrome & go to “localhost:8000” 2. Click on “Get it now” appeared on slider	A product details should be appeared	As expected	Pass
ID: TC-10 Name: Products Details	1. Open chrome & go to “localhost:8000” 2. Place mouse on “DESKTOP PARTS” 3. Click on “Processor” 4. Click on a title named “Intel Core i7 8775K”	Details of “Intel Core i7 8775K” should be appeared	As expected	Pass
ID: TC-11 Name: ADD TO CART	1. Execute TC-10 2. Click on “ADD TO CART”	The product should be added into cart	As expected	Pass
ID: TC-12	1. Execute TC-10	The product should be	As	Pass

Name: Add to Compare	2. Click on “Add to Compare”	added into compare	expected	
ID: TC-13 Name: Add to Wishlist	1. Execute TC-10 2. Click on “Add to Wishlist”	Login page should be shown	As expected	Pass
ID: TC-14 Name: Question Answer	1. Execute TC-10 2. Scroll down and go to “Question & Answer” 3. Fill up the form with Name: Samad Email: samad@yahoo.com Question: Is this product? 4. Click on “Continue”	A successful message should be appeared	As expected	Pass
ID: TC-15 Name: Edit Account	1. Execute TC-02 2. Click on “Edit Account” 3. Fill up the from with Name: Barai Joyan Email: baraijoyan@yahoo.com Phone: 01765422779 Fax: 254689545 4. Click on “Save”	Redirect to “My Home” with changed information	As expected	Pass
ID: TC-16 Name: Change Password	1. Execute TC-02 2. Click on “Password” 3. Fill up the form with Password: 12xx12 Confirm Password: 12xx12 4. Click on “Submit”	Redirect to “My Home” with no validation errors	As expected	Pass
ID: TC-17 Name: Add New Address	1. Execute TC-02 2. Click on “My Address Book” 3. Click on “New Address” 4. Fill up the form with	Redirect to “My Address Book” and added address should be	As expected	Pass

	Full Name: Joy Address 1: 112/B Airport Road Thana: Tejgaon District: Dhaka Division: Dhaka Post Code: 1111 5. Click on “Add”	shown		
ID: TC-18 Name: Delete Address	1. Execute TC-02 2. Click on “My Address Book” 3. Click on “Delete” for recently added address	The address should be deleted	As expected	Pass
ID: TC-19 Name: My Order History	1. Execute TC-02 2. Click on “My Order History”	Order History should be appeared with status	As expected	Pass
ID: TC-20 Name: My Question	1. Execute TC-02 2. Click on “My Question”	Question answer should be appeared	As expected	Pass
ID: TC-21 Name: My Reviews	1. Execute TC-02 2. Click on “My Reviews”	Reviews with rating should be appeared.	As expected	Pass
ID: TC-22 Name: Logout	1. Execute TC-0 2. Click on “Logout”	Current user session should be destroyed	As expected	Pass
ID: TC-23 Name: Login as Admin	1. Open chrome & go to “localhost:8000” 2. Click on “Login” 3. Fill up the form with Email: techgear@gmail.com Password: 12345 4. Click on “Login”	Admin Home should be shown	As expected	Pass
ID: TC-24 Name: Add Category Step 1	1. Execute TC-23 2. Place mouse on “Category” drop-down	The mandatory properties with 2 new properties	As expected	Pass

	3. Click on “Add Category” 4. Fill up the form with Parent Category: Storage Child Category: SSD Number of Properties: 2 5. Click on “Submit”	input box should be shown		
ID: TC-25 Name: Add Category Step 2	1. Execute TC-24 2. Fill up the form with Property 1: Capacity Property 2: Type All checkbox-s of theses 2 properties is checked and select text for radio buttons. Dummy Data: This is dummy 3. Click on “Submit”	A successful message should be appeared	As expected	Pass
ID: TC-26 Name: Enable Disable Category	1. Execute TC-23 2. Place mouse on “Category” drop-down 3. Click on “Category List” 4. Click on 1st “Disable” button 5. Click on 2nd “Enable” button	Disable button should be changed to Enable. Enable button should be changed to Disable	As expected	Pass
ID: TC-27 Name: Add Data to Slider	1. Execute TC-23 2. Place mouse on “Slider” drop-down 3. Click on “Add Data to Slider” 4. Click on “Ram” 5. Click on “+” button titled “Team 1995” 6. Click on “Choose File” 7. Open an image of size 1120x350	A successful added message should be shown	As expected	Pass

	8. Click on “Upload”			
ID: TC-28 Name: Delete Data of Slider	1. Execute TC-23 2. Place mouse on “Slider” drop-down 3. Click on “Delete Data of Slider” 4. Click on “Delete” button of 1st row 5. Click on “Yes, Delete”	Redirect to same page without deleted row	As expected	Pass
ID: TC-29 Name: Add Data to Collection	1. Execute TC-23 2. Place mouse on “Collection” drop-down 3. Click on “Add Data to Collection” 4. Click on “Ram” 5. Click on “+” button titled “Team 1995”	A successful added message should be shown	As expected	Pass
ID: TC-30 Name: Delete Data of Collection	1. Execute TC-23 2. Place mouse on “Collection” drop-down 3. Click on “Delete Data of Collection” 4. Click on “Delete” button of 1st row 5. Click on “Yes, Delete”	Redirect to same page without deleted row	As expected	Pass
ID: TC-31 Name: Add Data to Static	1. Execute TC-23 2. Place mouse on “Static” drop-down 3. Click on “Add Data to Static” 4. Click on “Ram” 5. Click on “+” button titled “Team 1995”	A successful added message should be shown	As expected	Pass

	6. Click on “Choose File” 7. Open an image of size 371x245 8. Click on “Upload”			
ID: TC-32 Name: Delete Data of Static	1. Execute TC-23 2. Place mouse on “Static” drop-down 3. Click on “Delete Data of Static” 4. Click on “Delete” button of 1st row 5. Click on “Yes, Delete”	Redirect to same page without deleted row	As expected	Pass
ID: TC-33 Name: Add Note to Static	1. Execute TC-23 2. Place mouse on “Static” drop-down 3. Click on “Add Note to Static” 4. Type a note “This is my first note” 5. Click on “Choose File” 6. Open an image of size 371x245 7. Click on “Upload”	A successful added message should be shown	As expected	Pass
ID: TC-34 Name: Add User	1. Execute TC-23 2. Click on “Add User” 3. Fill up the form with Full Name: Rifat Hasan Email: rifat31@outlook.com Password: 12345xx95 4. Click on “Submit”	A successful added message should be shown	As expected	Pass
ID: TC-35 Name: Edit User	1. Execute TC-23 2. Click on “VUD User” 3. Click on “Edit” button of 1st row	Redirect to “Data of Users” page with changed info of 1st row.	As expected.	Pass

	4. Fill u the form with Password: +r225r+ Address: I am address 5. Click on “Submit”			
ID: TC-36 Name: Delete User	1. Execute TC-23 2. Click on “VUD User” 3. Click on “Delete” button of 1st row 4. Click on “Yes, Delete”	Redirect to same page without deleted row.	As expected.	Pass
ID: TC-37 Name: Add Product	1. Execute TC-23 2. Click on “Add Product” 3. Click on “Ram” 4. Fill up the form with Title: GSkill 175r 16GB DDR4 RAM Brand: GSkill Model: 175r Capacity: 16GB RAM Type: DDR4 Bus Speed: 2600MHz Warranty: 3 Years Quantity: 200 Price: 8650 Picture 1: Open an image of size 600x600 5. Click on “Submit”	A successful added message should be shown.	As expected.	Pass
ID: TC-38 Name: Edit Product	1. Execute TC-23 2. Click on “VUD Product” 3. Click on “Ram” 4. Click on “Edit” button titled “GSkill 175r 16GB DDR4 RAM”	Redirect to “Products of Ram” page with changed info of 1st row.	As expected.	Pass

	5. Change the form with Price: 10000 Voltage: 1.2V 6. Click on “Submit”			
ID: TC-39 Name: Delete Product	1. Execute TC-23 2. Click on “VUD Product” 3. Click on “Ram” 4. Click on “Delete” button titled “GSkill 175r 16GB DDR4 RAM” 7. Click on “Yes, Delete”	Redirect to same page without deleted row.	As expected.	Pass
ID: TC-40 Name: Give Answer	1. Execute TC-23 2. Click on “Question” 3. Click on 1st “Answer” button 4. Write answer: This is answer 5. Click on “Submit”	Redirect to same page with given answer.	As expected.	Pass
ID: TC-41 Name: Delete Question	1. Execute TC-23 2. Click on “Question” 3. Click on 1st “Delete” button 4. Click on “Yes, Delete”	Redirect to same page without deleted row.	As expected.	Pass
ID: TC-42 Name: Change Status of Active Orders	1. Execute TC-23 2. Click on “Orders” 3. Change the status to “Completed” of 1st row 4. Click on “Submit”	The order should be gone to “Completed Orders” section.	As expected.	Pass
ID: TC-43 Name: Change Admin Info	1. Execute TC-23 2. Click on “Account” 3. Change the form with Name: Shorov, Samad Email: samad@yahoo.com Password: xx95y+	A successful change message should be shown.	As expected.	Pass

	4. Click on “Save”			
ID: TC-44 Name: Logout	1. Execute TC-23 2. Click on “Logout”	The current session should be destroyed.	As expected.	Pass

Conclusion

The future of e-commerce will drastically progress over the years as the amount of internet users among businesses and consumers grows drastically every year. By the grace of almighty Allah, we have finished our project. We hope the project will serve its purpose. We thank to our honorable faculty M. Mahmudul Hasan for giving us the proper guideline. As all of the projects have some limitations, we have also some limitations. All of them, two limitations are the most severe. One is third party payment service, and another is ‘no hosting server’. But we will fill the limitations in future. We will also update our functionalities and processing speed in near future.

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