

Slovak University of Technology

Faculty of informatics and information Technology
Ilkovičova 2, 842 16 Bratislava 4

Web Technologies

Sultan Numyalai

Supervisor: Ing. Róbert Móro, PhD

Study Field: INFO3

Year: 3. Bc

Academic Year: 2018/2019

Semester: Winter

This document delivers the specifications needed for our eCommerce website project.

This Project was build for the Undergraduate course "Web-Technologies"

In Slovak University of Technologies Faculty of Informatics and Information Technologies.

Project Manager and Developer – Sultan Numyalai

Email _numyalai@gmail.com

2) RELEVANT TOOLS AND TECHNOLOGIES:

This chapter presents some discussions about the relevant tools and technologies used to develop the e-commerce web application. Some of the tools and technologies are HTML, CSS(bootstrap) and PHP(Laravel), Javascript (Vue Js), PostgreSQL. PhpStorm Ide.

The front end of the website is developed in using html, and css.

The backend is in Php and Javascript using Laravel and Vue js frameworks.

Using relational database PostgreSQL for data manipulation.

HTML stands for Hyper Text Markup Language. It is used as the standard markup language for building web applications and web pages. It was originally developed by Tim Berners-Lee in 1991. HTML5 is the latest version of HTML. /8/ CSS stands for Cascading Style Sheet. It is used to style web pages for different kinds of devices and screen sizes. It also saves a lot of time and stress since it can be used to style multiple web pages simultaneously. Its latest version is CSS3

Php storm:

JetBrains PhpStorm is a commercial, cross-platform IDE for PHP built on JetBrains' IntelliJ IDEA platform. PhpStorm provides an editor for PHP, HTML and JavaScript with on-the-fly code analysis, error prevention and automated refactorings for PHP and JavaScript code.

PostgreSQL

PostgreSQL, often simply Postgres, is an object-relational database management system (ORDBMS) with an emphasis on extensibility and standards compliance. It can handle workloads ranging from small single-machine applications to large Internet-

facing applications (or for data warehousing) with many concurrent users; on macOS Server, PostgreSQL is the default database;[9][10][11] and it is also available for Microsoft Windows and Linux (supplied in most distributions).

Application Description:

This application is divided into two parts –The admin part and the client part.

The client part consists of The home page is where customers (buyers) can order and pay for products, and optionally subscribe to an email list while the admin page is where the admin can carry out administrative tasks. The admin page is restricted and can only be accessed through authentication .This means that all the web resources in the admin page can only be accessed by an authorized user.

Normal Requirements

1. The home page of the application should display available products whose quantity is not less than one.
2. Customers should be able to add products to a shopping cart.
3. Customers should be able to view products in the shopping cart.
4. Customers should be able to update product quantity in the cart.
5. Customers should be able to remove any product from the cart.
6. Customer should be able to empty all the products in the cart.
7. Customers should have an option to subscribe to an email list.
9. Customers should be able to view order confirmation after a successful order completion.
10. The admin should be authenticated in order to have access to the admin page of the application to perform any administrative task.
11. The admin should be able to manage (add, update and delete) products and their categories.
12. The admin should be able to view the lists of products and categories.
13. The admin should be able to view the email subscribers' list.
14. The admin should be able to view payment and order details.
15. The admin should be able to update order status.

16 The application should save all customer, product, order, payment and admin data on postgresSQL database.

The use case diagrams for this application illustrate the interactions that exist between users (actors) and use cases (actions) within the application. There are two actors identified for this application – administrator (admin) and customer actors. As a result, there are two use case diagrams for the software application – admin use case diagram and customer use case diagram. The admin is the owner of the e-commerce store who performs various administrative tasks such as add products, view orders, and update order status while the customer is any individual who buys a product or products from the online store.

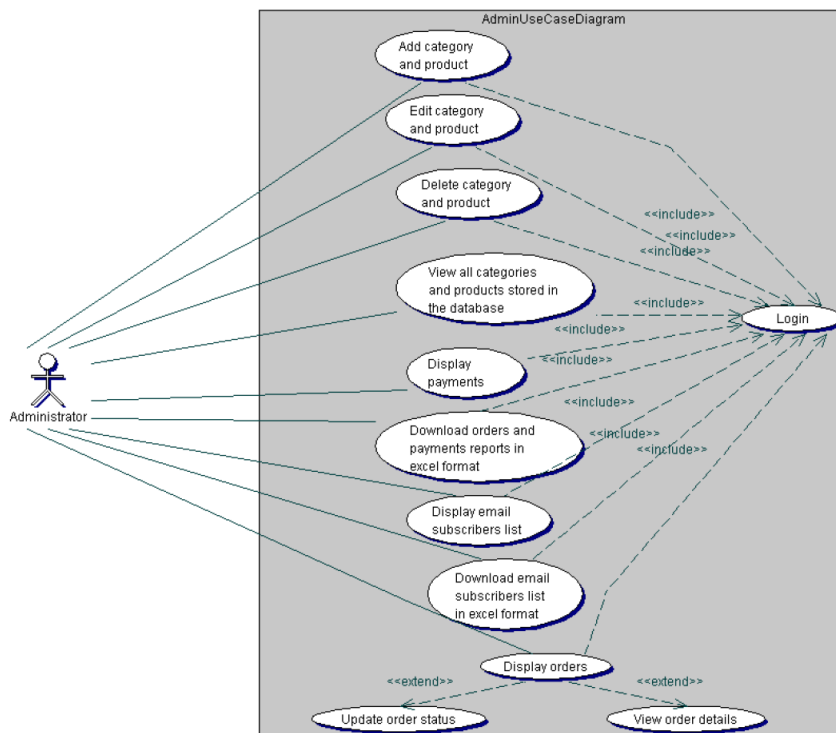
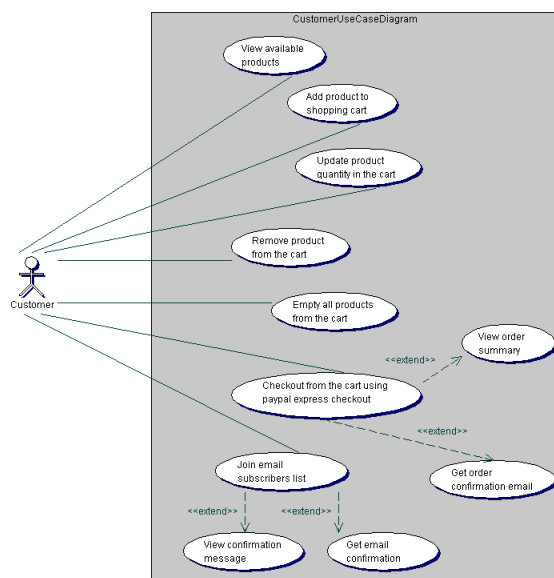
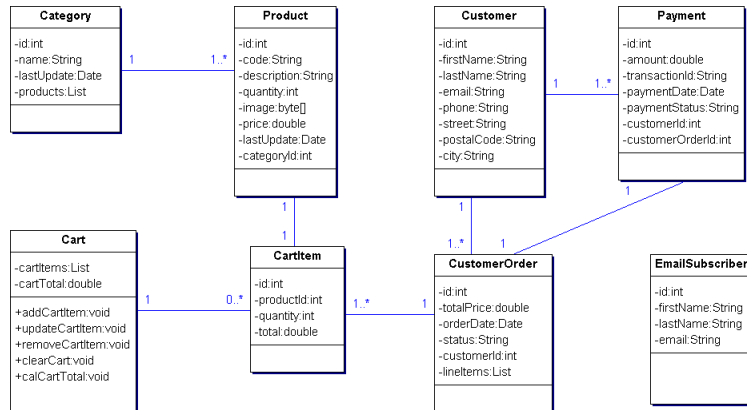


Figure 3 shows the customer use case diagram. It describes the different use cases that can be executed by the customer on the e-commerce application.



A class diagram depicts the classes in a software system and how they interact with each other. Also, the class attributes and functions are illustrated in a class diagram. Figure 4 shows the class diagram for this application. It shows the relationships between classes in the application and constraints applied to these relationships.



DATABASE AND GUI DESIGN

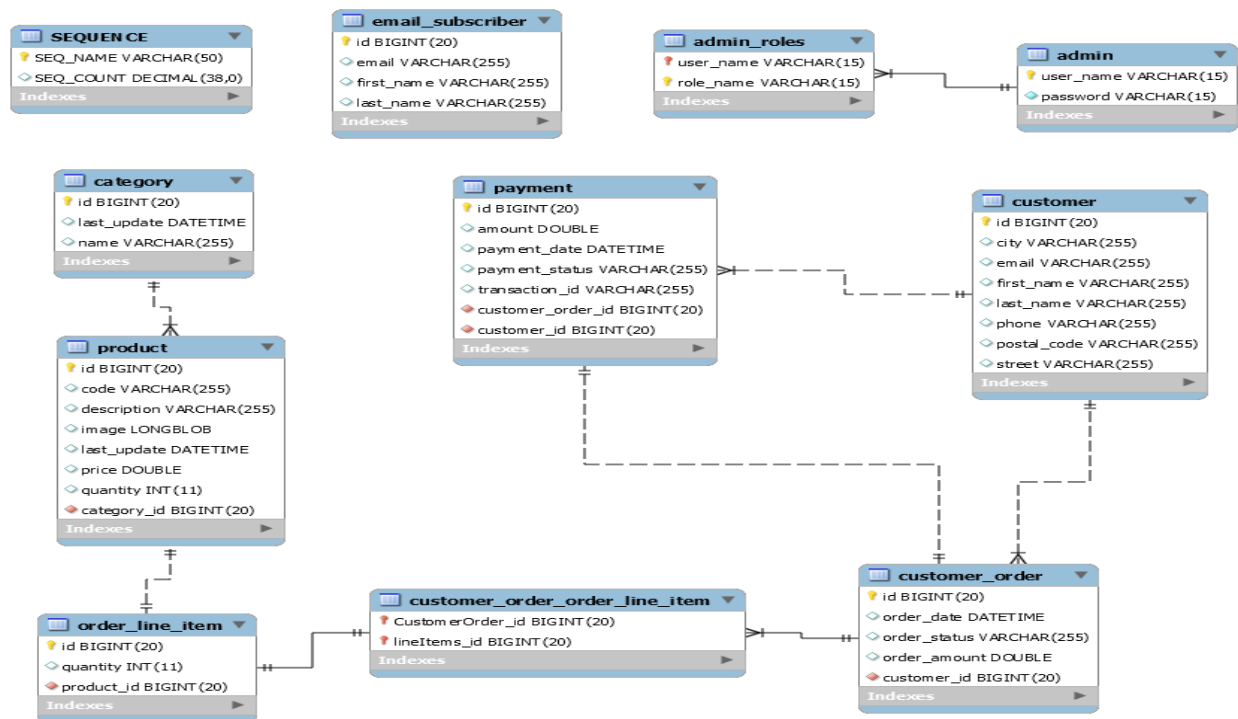
Every web application needs to have an operational database to store its generated data. More so, a simple and interactive Graphical User Interface (GUI) is one of the success indicators of any web application project. This chapter presents the database and GUI design for this e-commerce application.

postgresql database management system is the most popular database system for Web applications because of its speed, reliability, and flexibility. All the data generated by this application are managed on PostgreSQL database system. Figure 9 shows the Entity Relationship Diagram of the application database. All the tables (except admin and admin_roles) were generated by migrations based on the relationships that exist among the entities defined for the application, and these relationships are clearly evidenced in the ER diagram. The admin and admin_roles tables were defined for authentication purpose. The following numbered list gives a brief explanation of these tables.

1. Category – Contains category data for the products.
2. Product – Contains product data.
3. Customer – Contains customer data.
4. Customer_order – Contains customer order information.
5. Order_line_item – Contains order line items information.
6. Customer_order_order_line_item – This is a bridge table automatically generated as a result of the one-to-many relationship that exists between customer_order and order_line_item tables.
7. Payment – This contains order payment data.
8. Sequence – Contains data used to automatically generate primary key values.
9. Email_subscriber – Contains email subscribers information.

10. Admin – Contains the administrator credentials for login (authentication) purpose.

11. Admin_roles – Contains roles data of admin.



ER: Diagram

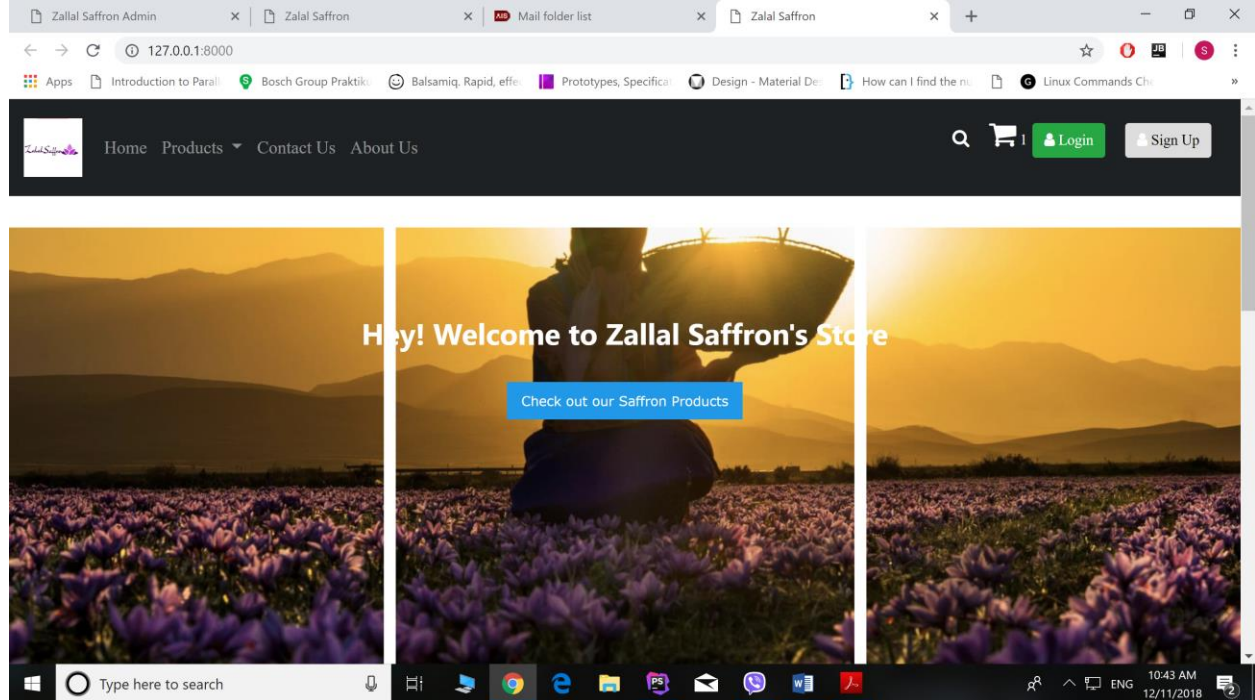
GUI Design

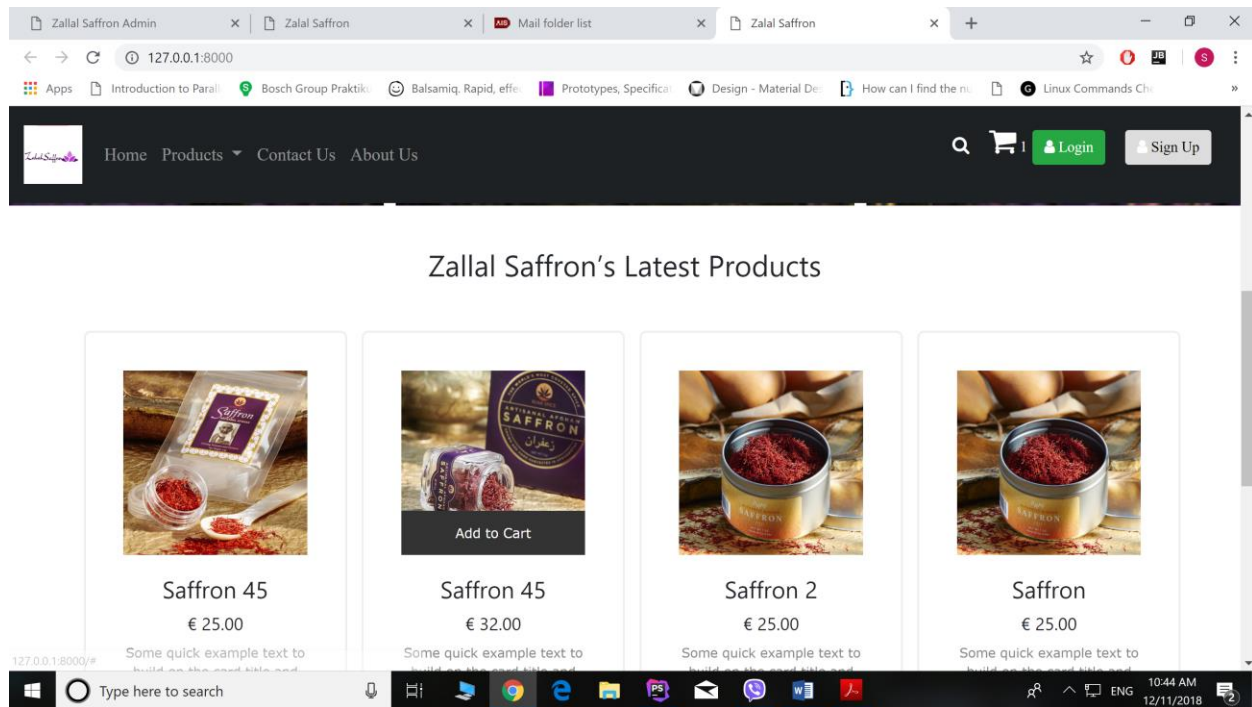
The user interfaces for this e-commerce web application were designed using HTML and CSS. Also, some elements of HTML5 were used in designing the interfaces. The following subsections present the descriptions of these interfaces.

Home Page

The home page of this application is shown in Figure 10. It is the start page of the application where all available products with a quantity greater than zero are displayed and less than four. Also, customers or visitors to the e-commerce store can browse available products by category. On this page, customers can add products to the shopping cart, and there is a link provided to view products added to the shopping cart. More so, a link is provided 31

for customers and visitors to display and fill the email subscription form in order to subscribe to an email list for special announcements and offers





Shopping Cart Page

Zallal Saffron Admin


Zalal Saffron



Mail folder list

Zalal Saffron

127.0.0.1:8000/cart

AppsIntroduction to Parallel ComputingBosch Group PraktikumBalsamiq, Rapid, effective PrototypingDesign - Material DesignHow can I find the number of Linux Commands Check

HomeProductsContact UsAbout Us

[Login](#)[Sign Up](#)

Cart Items

Name	Price	qty	size	Action
dasdasd	12	<input type="text" value="1"/>		Ok Delete
Saffron 45	32	<input type="text" value="1"/>		Ok Delete
Saffron 2	25	<input type="text" value="1"/>		Ok Delete
Tax: \$14.49		Items: 3		
Sub Total: \$ 69.00				
Grand Total: \$ 83.49				


[Checkout](#)



Type here to search


Zallal Saffron AdminZalal SaffronMail folder listHerbs

127.0.0.1:8000/herbs


AppsIntroduction to Parallel ComputingBosch Group PraktikumBalsamiq, Rapid, effective PrototypingDesign - Material DesignHow can I find the number of Linux Commands Check

HomeProductsContact UsAbout Us


[Login](#)[Sign Up](#)




Saffron -Net
Wt(0.2 grams)
€ 19.99
Lorem ipsum dolor sit amet,
consectetur adipiscing elit.



Saffron -Net
Wt(0.2 grams)
€ 19.99
Lorem ipsum dolor sit amet,
consectetur adipiscing elit.



[Saffron -Net
Wt\(0.2 grams\)](#)
€ 19.99
Lorem ipsum dolor sit amet,
consectetur adipiscing elit.




Saffron -Net
Wt(0.2 grams)
€ 19.99
Lorem ipsum dolor sit amet,
consectetur adipiscing elit.



Type here to search

Zallal Saffron AdminZalal SaffronMail folder listHerbs

127.0.0.1:8000/herbs

AppsIntroduction to Parallel ComputingBosch Group PraktikumBalsamiq, Rapid, effective PrototypingDesign - Material DesignHow can I find the number of Linux Commands Check

HomeProductsContact UsAbout Us

[Login](#)[Sign Up](#)

Shipping Formular

The screenshot shows a web browser window with the URL `127.0.0.1:8000/shipping-info`. The page has a dark header with navigation links: Home, Products, Contact Us, and About Us. On the right of the header are a search icon, a shopping cart icon with '3' items, and buttons for 'Login' and 'Sign Up'. The main content area is titled 'Shipping Info' and contains a form with the following fields: Address Line, City, State, Zip, Country, and Phone. Each field is represented by a white input box. Below the form is a blue button labeled 'Proceed to Payment'.

Admin Panel

The screenshot shows the 'Zallal Saffron Admin' interface. The left sidebar contains a menu with the following items: Dashboard, User management, Product management (expanded), Categories, Products, Change password, and Logout. The main content area is titled 'Products' and shows a 'List' of products. At the top of the list are buttons for '+ Add new' and 'Refresh'. Below the buttons is a table with the following columns: #, Product name, Description, Price, Category, Photo, and Actions. The table contains four rows of product data. At the bottom of the table, it says 'Total 4, 10 items / page'.

#	Product name	Description	Price	Category	Photo	Actions
22	Saffron 45	Some quick example text to build on the card title and make up the bulk of the card's content.	25.00		HalfGram_1920x1920.jpg	View Edit Delete
21	Saffron 45	Some quick example text to build on the card title and make up the bulk of the card's content.	32.00		TwoGrams_1920x1920---Copy.jpg	View Edit Delete
20	Saffron 2	Some quick example text to build on the card title and make up the bulk of the card's content.	25.00		halfgram.jpg	View Edit Delete
18	Saffron	Some quick example text to build on the card title and make up the bulk of the card's content.	25.00		halfgram.jpg	View Edit Delete

Adding new Product,

The screenshot shows a web browser window with the URL `localhost:8000/admin/products/create`. The interface has a dark sidebar on the left with the following menu items: User management, Product management (selected), Categories, Products, Change password, and Logout. The main content area is titled 'Create' and contains a 'Back' button. The form fields are: Product name * (text input), Description (text input), Price * (text input), Category (dropdown menu), and Photo (file upload button labeled 'Choose file' with 'No file chosen' text). A 'Save' button is at the bottom of the form. The Windows taskbar at the bottom shows the search bar and several application icons.

Adding Categories for Products

The screenshot shows a web browser window with the URL `localhost:8000/admin/product-categories/create`. The interface has a dark sidebar on the left with the following menu items: Dashboard, User management, Product management (selected), Categories, Products, Change password, and Logout. The main content area is titled 'Categories' and contains a 'Create' section with a 'Back' button. The form fields are: Category Name * (text input), Description (text input), and Photo (max 8mb) (file upload button labeled 'Choose file' with 'No file chosen' text). A 'Save' button is at the bottom of the form. The Windows taskbar at the bottom shows the search bar and several application icons.