
Project for the Degree of B.Sc Engineering

GreatMart | Online e-Commerce Platform

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Declaration

The project work entitled “**GreatMart | Online e-Commerce Platform**” has been carried out in the Department of Computer Science and Engineering, Bangabandhu Sheikh Mujibur Rahman Science and Technology University is original and conforms the regulations of this University.

I understand the University’s policy on plagiarism and declare that no part of this project has been copied from other sources or been previously submitted elsewhere for the award of any degree or diploma.

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1.1. Abstract:

The business to consumer aspect of electronic commerce (e-commerce) is the most visible business use of the World Wide Web. The primary goal of an e-commerce site is to sell goods and services online. This project deals with developing an e-commerce website for daily accessories, groceries, fashion, Electronic devices. The system is implemented using a backend database, a middle tier of Microsoft Internet Information Services (IIS) and a web browser as the front end client. In order to develop an e-commerce website, a number of Technologies must be studied and understood. These include multi-tiered architecture, server and client side scripting techniques such as programming language (such as python), relational databases (such as PostgreSQL). In this project, the aim is to demonstrate that with better interaction features in e-commerce web sites could improve sales over the net.

1.2. Acknowledgement:

In this very special moment, first and foremost I would like to express my heartiest gratitude to the almighty. God for allowing me to accomplish this project successfully. Then I like to give many thanks to my project supervisor **Dr. Mrinal Kanti Baowaly**, Associate Professor, Department of Computer Science and Engineering, who encouraged, supervised and supplied necessary requirements and guideline in performing this work. In achieving the gigantic goal, I have gone through the interactions with and help from internet and would like to extend my deepest appreciation to those who have contributed to this dissertation itself in an essential way.

1.3. Introduction:

Now we are living in the ocean of science and technology. This is possible for the purposes of programming. The main purpose of this project is to make an e-commerce platform where all the user can buy their daily needs within a second without hustle.

In our web application there will be two different user.

1. Customer
2. Admin

The customer needs to register and sign up for get into the web application and buy products. The web application has different categories of products. User can browse through and then they can add products to the cart. There is a payment gateway so the user can easily make their payment within a minute. They can also track their order and update their profile. There is also a search box for making a customer find their product easily. Customer can post their review and rating after buying products.

The admin also needs to get registered and signed up for accessing the web application. Basically, Admin can see all the events happening in the application and handled them. Admin can add, delete, modify or remove products. They can change order status.

Both user can't get to the web application if they failed to give correct credentials. By using this project users can build their own e-commerce platform.

Chapter 2

Motivation

2.1. Motivation:

The motivations comes to me online marketplace because a few days ago I seen few e-commerce business holders start their business in locally that time I decided to start my new business through online, I think about my career if I start online business I can reduce time-consuming for setting new live shop business. Online business is awesome for everyone you can buy the product through online and I can sell product through online.

3.1. Related Works:

Remotely order like an e-commerce Electronic commerce is like of e-commerce. This is not important to denote how website product is selling. Facebook like an e-commerce as I see most of the people are buying their product using Facebook. Like this project there are a lot of project available. There are some projects with different activities. They are

- Daraz
- Picaboo
- Monarch Mart

Chapter 4

Methodology and Features

4.1. Specification:

Hardware specifications:

- Processor : Dual core, core i3 , core i5
- Hard Disk : 512 GB
- RAM : 2 GB

Software specifications:

- Operating System : Windows 7, 8, 10 or Linux
- Software : Visual Studio, PyCharm

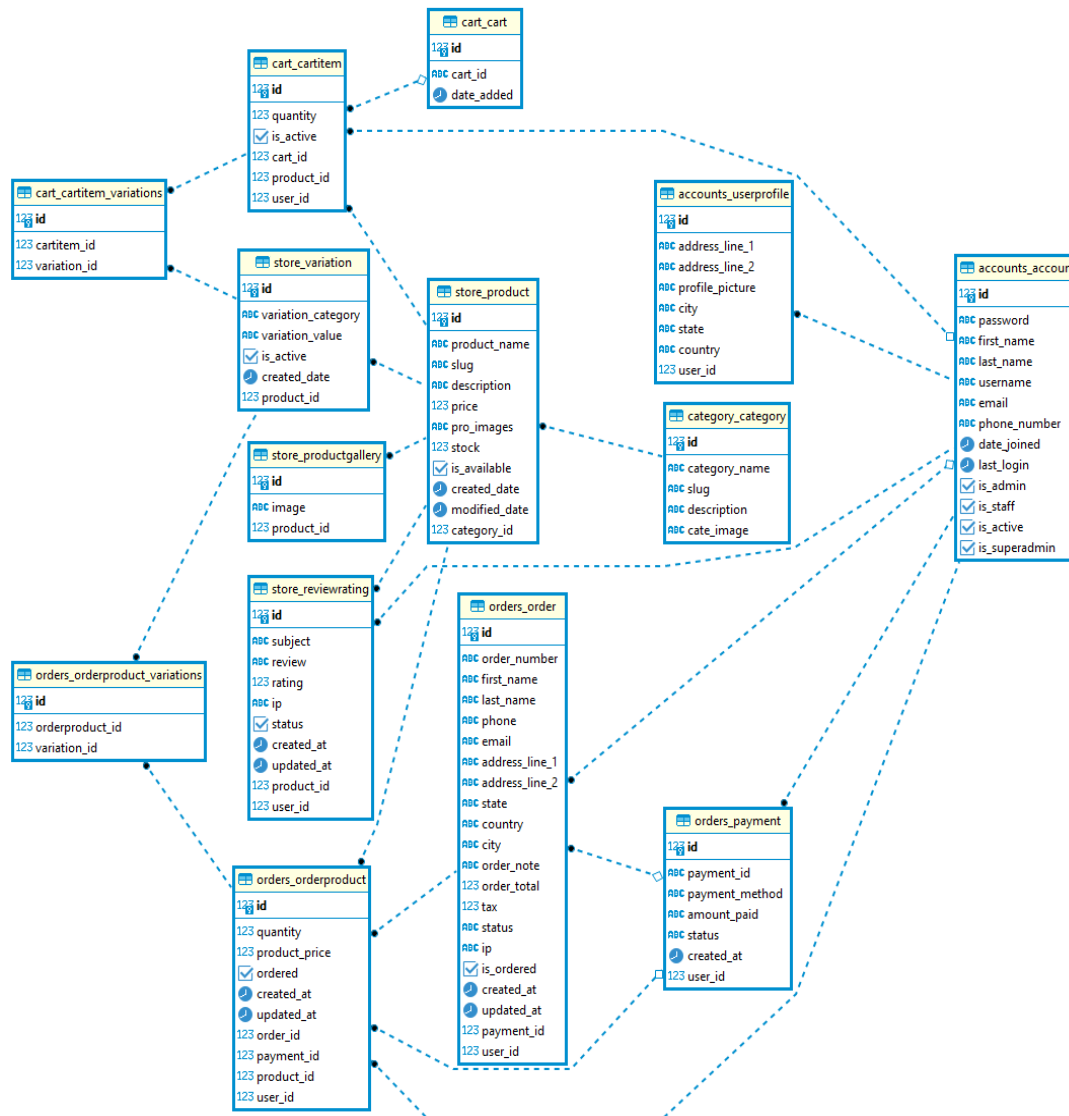
Technical specifications:

- Programming Language : Python, JavaScript
- Frontend : HTML, CSS, Bootstrap
- Version Control : Git
- Framework : Django
- Payment Gateway : Paypal Sandbox API
- Email Server : Gmail Smtplib server
- Database : PostgreSQL
- Chatbot : DialogueFlow, Kommunicate

4.2. Design:

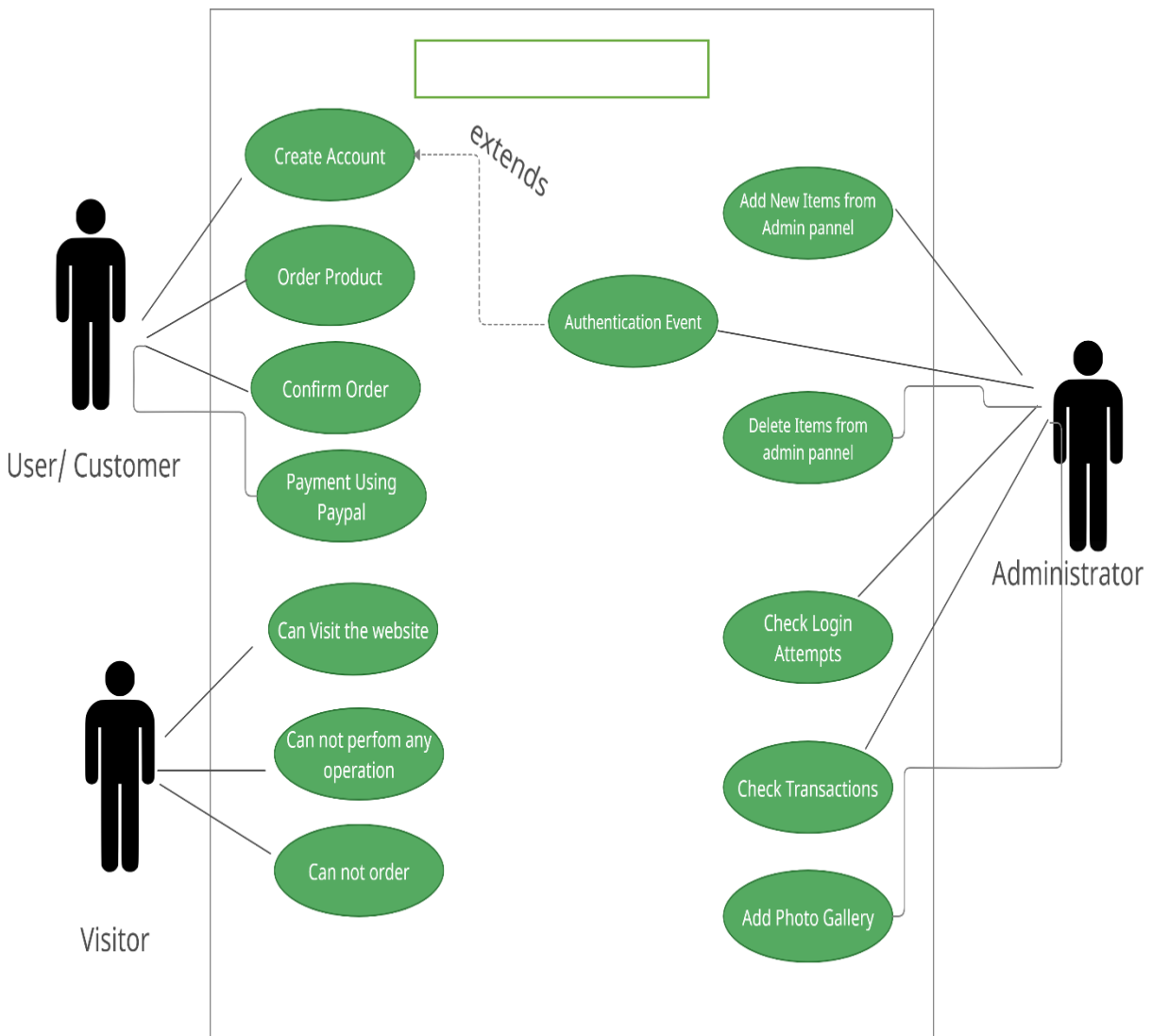
To develop my web application at first I design my database using ER-Diagram and then I design the use case diagram of this project also. They are

ER- Diagram:



This is the ER diagram of **GreatMart | Online e-Commerce platform**. There is shown how the database should be design and how the relation should be in between various entities.

Use Case Diagram:



This is the use case diagram of **GreatMart | Online e-Commerce platform**. This shows how admin interact with user and how user can get through the website.

4.3. Features:

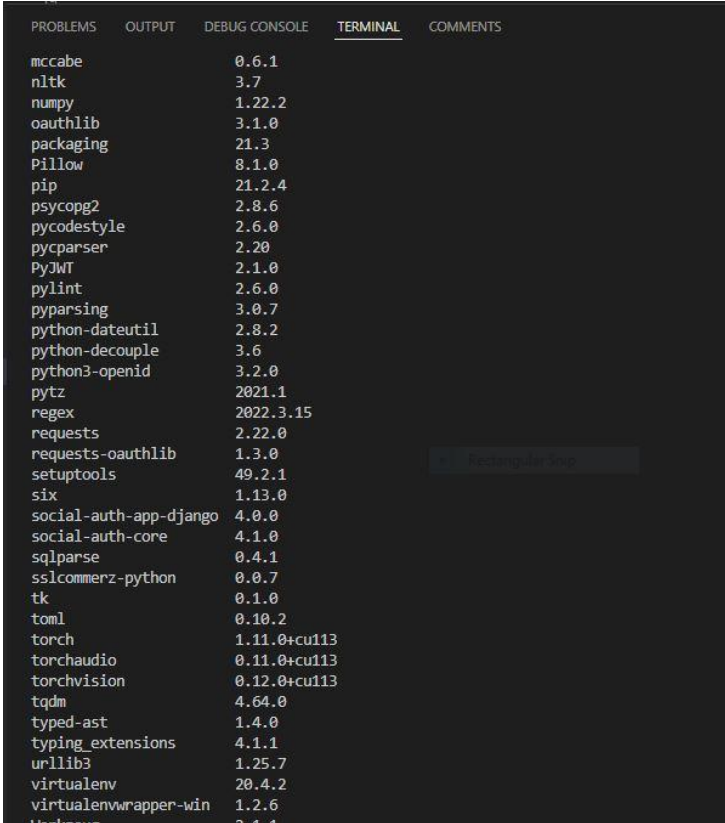
- Registration, Email Verification and Login
- Forget Password
- User Dashboard
- Admin Dashboard
- Payment Gateway
- Searching Product
- Admin Control
- Different Products Based on Categories
- Showing User about Best Selling Products
- Showing User about Top Rated Products

Chapter 5

Implementation and User Manuals

5.1. Implementation:

Implementing this project is not a very short time project. It is created by python language using Django Framework. It takes a long time to make this project. It needs some tools to complete this project such as Visual Studio, PyCharm. Here is the full project details. The version of python should be higher than 3.7 and Django version should be higher than 3.0. There are some library and packages which needs to be installed.

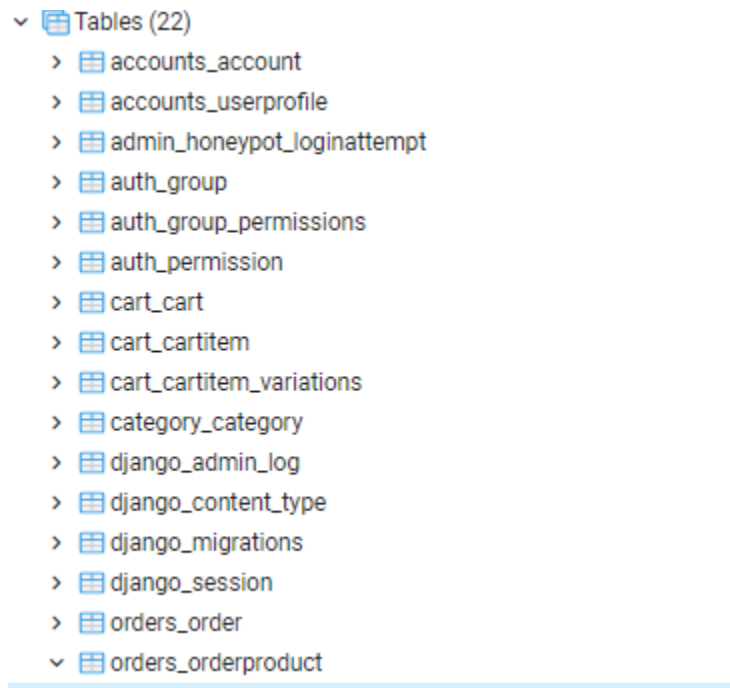


PROBLEMS	OUTPUT	DEBUG CONSOLE	TERMINAL	COMMENTS
			mccabe	0.6.1
			nltk	3.7
			numpy	1.22.2
			oauthlib	3.1.0
			packaging	21.3
			Pillow	8.1.0
			pip	21.2.4
			psycopg2	2.8.6
			pycodestyle	2.6.0
			pycparser	2.20
			PyJWT	2.1.0
			pylint	2.6.0
			pyarsing	3.0.7
			python-dateutil	2.8.2
			python-decouple	3.6
			python3-openid	3.2.0
			pytz	2021.1
			regex	2022.3.15
			requests	2.22.0
			requests-oauthlib	1.3.0
			setuptools	49.2.1
			six	1.13.0
			social-auth-app-django	4.0.0
			social-auth-core	4.1.0
			sqlparse	0.4.1
			sslcommerz-python	0.0.7
			tk	0.1.0
			toml	0.10.2
			torch	1.11.0+cu113
			torchaudio	0.11.0+cu113
			torchvision	0.12.0+cu113
			tqdm	4.64.0
			typed-ast	1.4.0
			typing_extensions	4.1.1
			urllib3	1.25.7
			virtualenv	20.4.2
			virtualenvwrapper-win	1.2.6
			black	2.1.1

These library and packages showed in the above picture are needed for this project to run. Some of these are python library and some of these are django packages.

5.1. Implementation

I use postgresql database for this project. Here is the picture of the database.



These are the tables created in this project.

5.2. User Manuals:

So User Manual section can be divided into multiple section like:

- i. Registration, Email Verification and Login
- ii. Homepage
- iii. Store Page
- iv. Product Details Page
- v. Cart Page
- vi. Checkout Page and Place Order Page
- vii. Payment Gateway
- viii. Email sent on Orders
- ix. User Dashboard
- x. Order Details
- xi. Chatbot
- xii. Admin Login
- xiii. Admin Dashboard

These are the user manuals of my web application. I provide how a user can register in my site to placing an order.

i. Registration, Email Verification and Login:

Here is the picture of registration form how anyone can register to the website. The user needs to give his/her name, email, phone number and password.

Sign up

First name

Last name

Email

We'll never share your email with anyone else.

Phone Number

Create password

Confirm password

Register

Have an account? [Log In](#)

Email Verification:

After registration, there will be generated link in users email. The mail looks like this in the picture.

Hi Girish

Please click on below link to confirm your registration.

<http://127.0.0.1:8000/accounts/activate/NQ/b5kqbd-2b242773f585065c60a97e2f9c598524/>

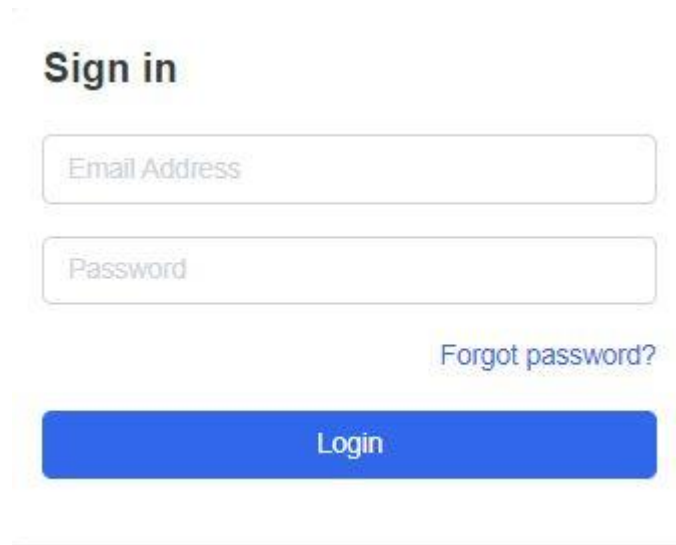
If you think it's not you , please ignore this email.

← Reply

➡ Forward

Login:

And the login looks like this picture in below. User has to give their mail and password in which they are registered and verified.



Sign in

Email Address

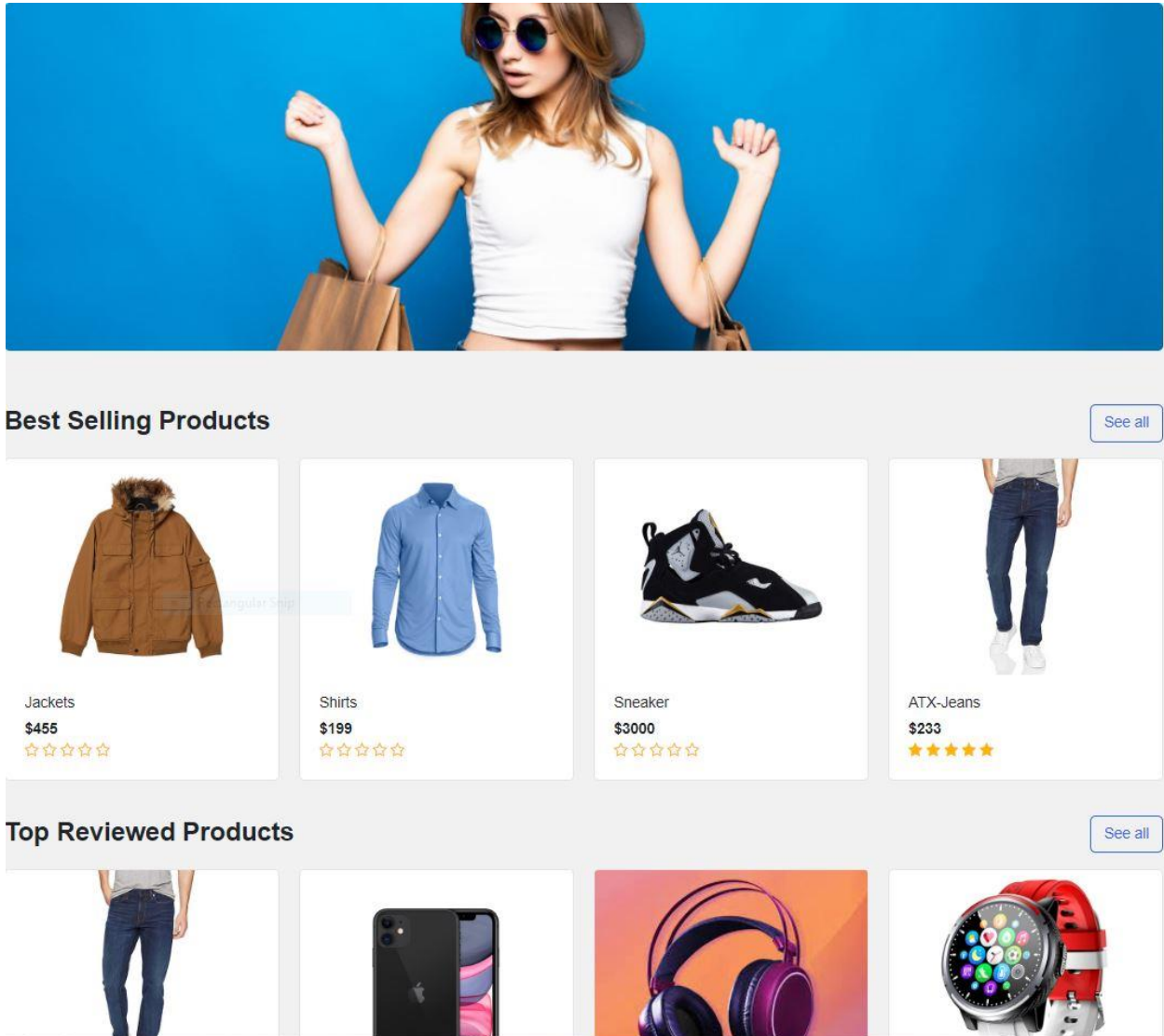
Password

[Forgot password?](#)

Login

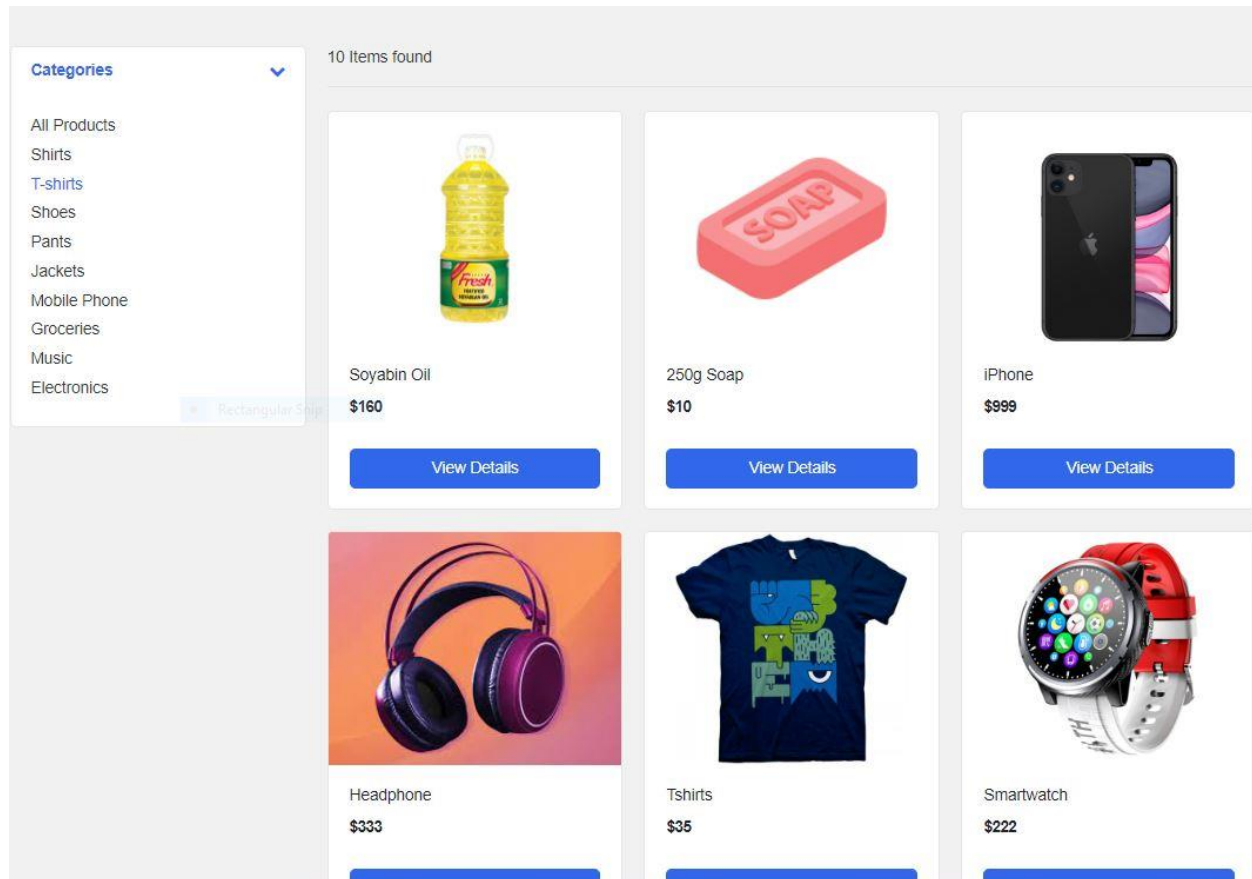
ii. Homepage:

After successfully registered and login the user can see the homepage or landing page of the website. Although they can visit the site but can't order anything.



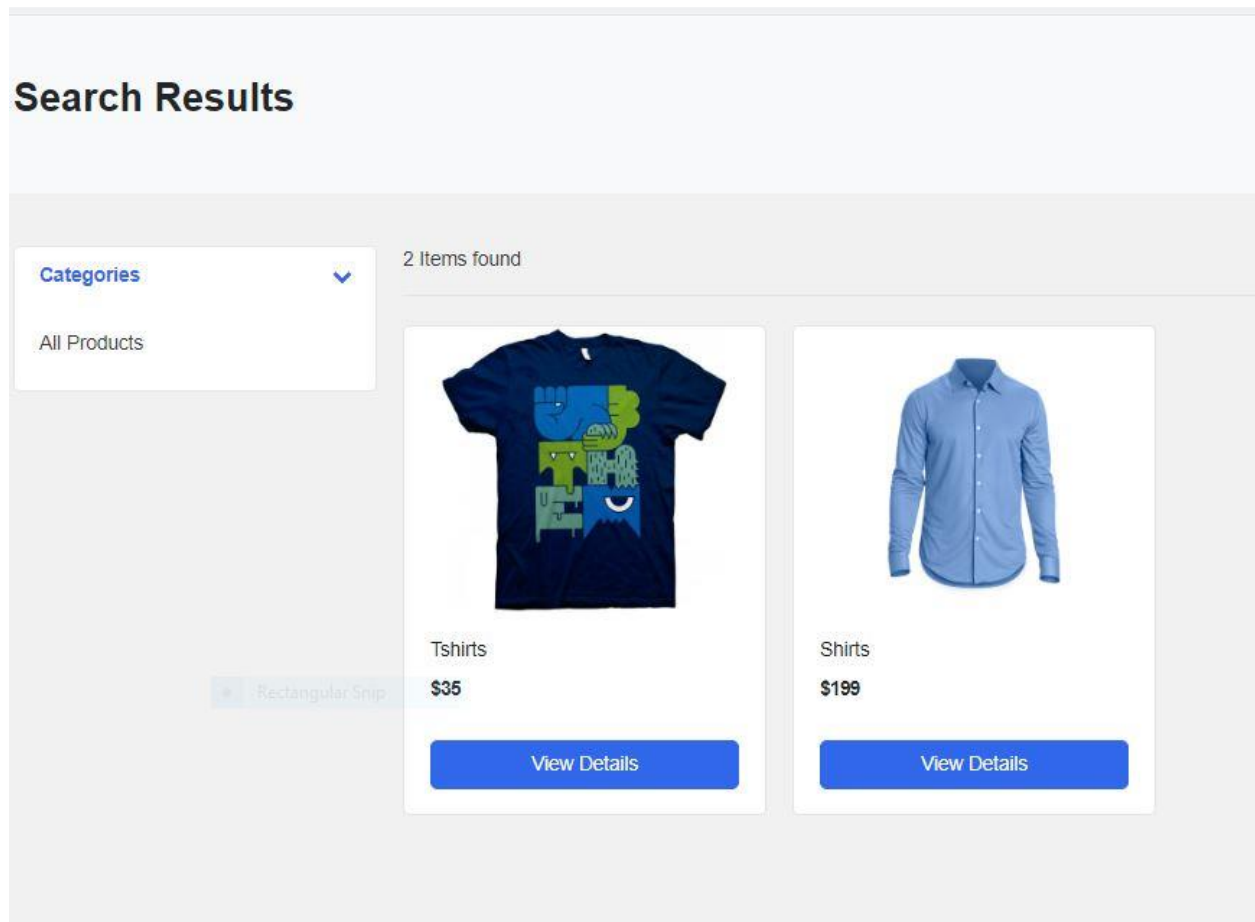
iii. Store Page:

Store page is where all the products you can see and all categories are available.




iv. Search:




The user can search any product which are available in the database of the site. Here is the example of it.



v. Product Details Page:

Here the details of a product are shown like what kind of product it is, what variation it has, what description it has and review and comments of that product.





Tshirts

☆☆☆☆ 0 reviews

\$35

This is tshirt made with gsm 35 grade fiber

Choose Color

Select

Choose Size

Select

Add to cart

Write Your Reviews

Rectangular Snip

How do you rate this product?

★★★★★


Review Title:

Review:

Submit Review

vi. Cart Page:

Here all products available which are added by the user. They can go to checkout page through this.

PRODUCT	QUANTITY	PRICE	
 <div>Tshirts Color:Red Size:XL</div>	<div>- 1 +</div>	\$35 \$35 each	<div>Remove</div>

Total price: \$35
Tax: \$0.7
Total: **\$35.7**

PayPal VISA Mastercard American Express

Checkout

Continue Shopping

© 2019 Company name info@pixsellz.io +879-332-9375 Street name 123, Avenue abc

VISA PayPal

Back to Shop

vii. Checkout Page:

The user needs to fill up the form to get the payment page. Here is the picture below.

Billing Address

First Name

Last Name

Email

Phone Number

Address Line 1

Address Line 2


City

State

Country

Order Note

Back to my order

PRODUCT	QUANTITY	PRICE
 Tshirts Color: Red Size: XL	1	\$35 \$35 each

Place Order

Continue Shopping




© 2019 Company name

info@pixsellz.io +879-332-9375 Street name 123, Avaneue abc



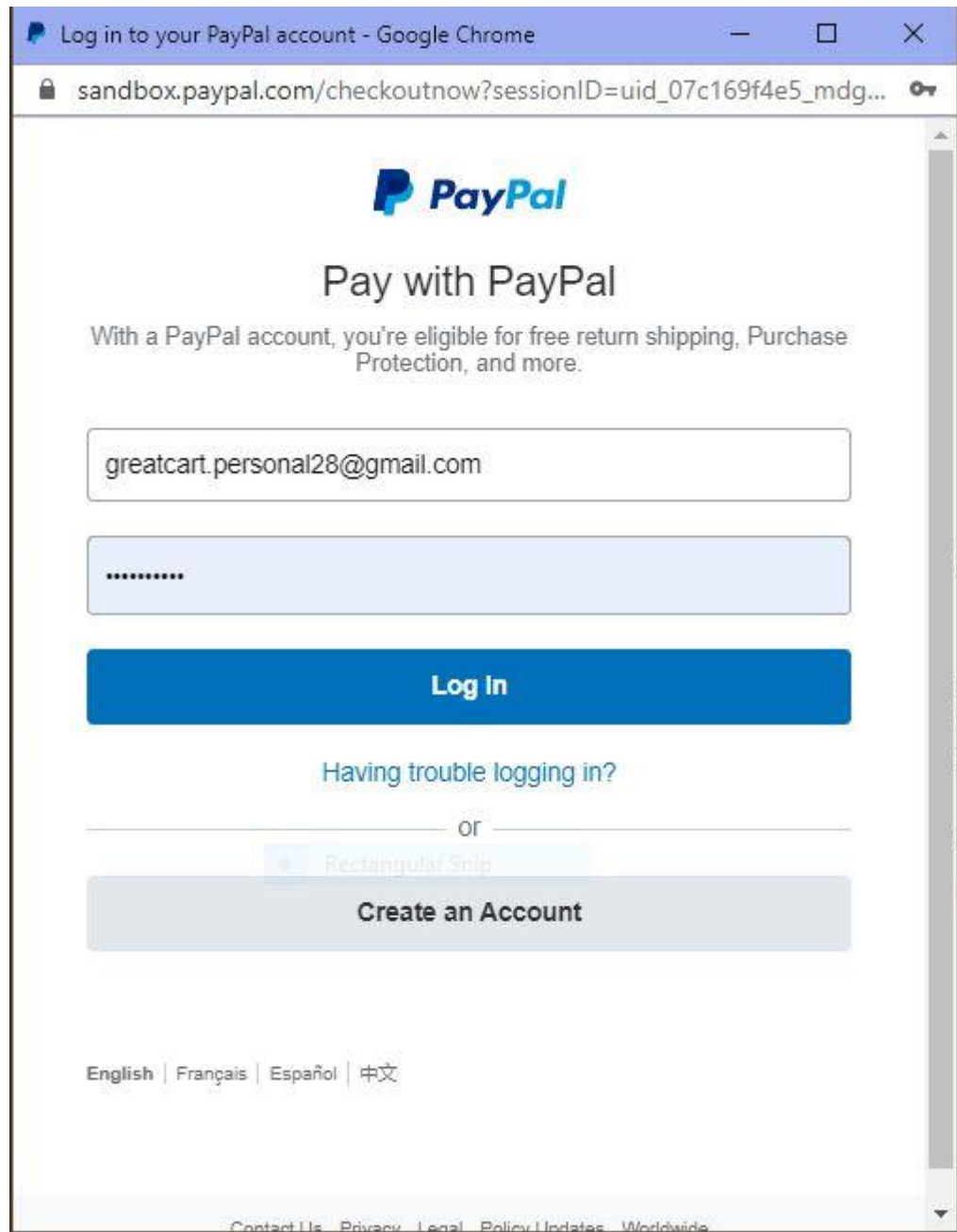
viii. Place Order Page:

The user needs to place the order and make payment. Here is the example.

Billing Address	Total price: \$35						
Girish Mondal	Tax: \$0.7						
Gopalganj sadar	Total: \$35.7						
Gopalganj , Gopalganj							
Bangladesh							
girishmondal.28@gmail.com							
01957574565							
Payment Method							
PayPal							
Review Products							
<table><thead><tr><th>PRODUCT</th><th>QUANTITY</th><th>PRICE</th></tr></thead><tbody><tr><td> Tshirts Color:Red Size:XL</td><td>1</td><td>\$35 \$35 each</td></tr></tbody></table>	PRODUCT	QUANTITY	PRICE	 Tshirts Color:Red Size:XL	1	\$35 \$35 each	
PRODUCT	QUANTITY	PRICE					
 Tshirts Color:Red Size:XL	1	\$35 \$35 each					

ix. Payment Gateway Page:

Here I use paypal sandbox for payment gateway. This is open source and gives developer dummy money to work with.



The screenshot shows a web browser window titled "Log in to your PayPal account - Google Chrome". The address bar displays the URL "sandbox.paypal.com/checkoutnow?sessionID=uid_07c169f4e5_mdg...". The main content area features the PayPal logo at the top, followed by the heading "Pay with PayPal". Below this, a message states: "With a PayPal account, you're eligible for free return shipping, Purchase Protection, and more." The login form consists of two input fields: the first contains the email address "greatcart.personal28@gmail.com", and the second is a password field represented by a series of dots. A prominent blue "Log In" button is positioned below the password field. A link labeled "Having trouble logging in?" is located beneath the "Log In" button. Below this link, the word "or" is centered, followed by a light blue button labeled "Rectangular Snip". At the bottom of the login section is a grey button labeled "Create an Account". The footer of the page includes language options: "English | Français | Español | 中文", and a row of links: "Contact Us | Privacy | Legal | Policy Updates | Worldwide".

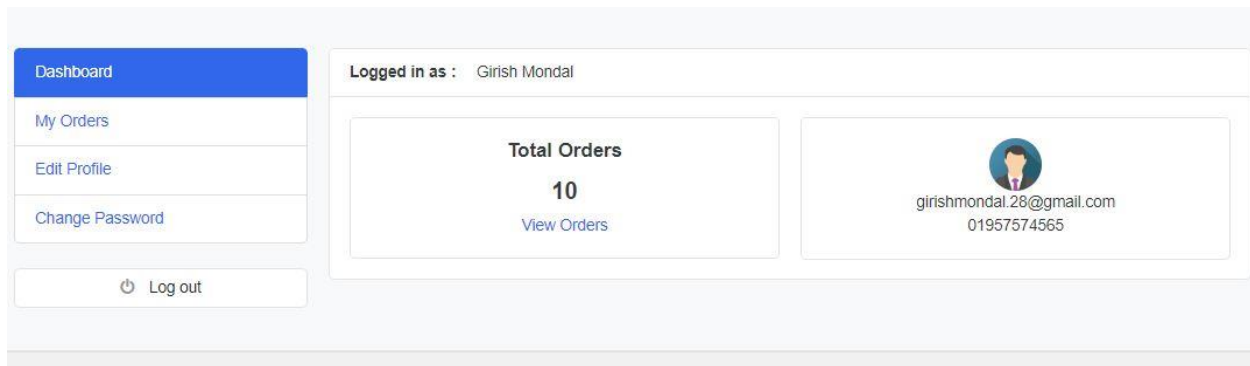
x. Email sent on orders:

An email sent to the users gmail account after successful order. The email looks likes in the picture below.




xi. User Dashboard:

The user dashboard looks like these in the picture. The user can see how many orders they have, and track them. They can change password from here and modify their information.



xii. Admin Login:

To create an admin, the creator needs to run a command: **python manage.py createsuperuser** and then gives username, email and password. Then registered admin can login to the admin panel.



The image shows a web browser window displaying the 'GreatMart Administration' login page. The page has a dark blue header with the text 'GreatMart Administration'. Below the header, there is a white form area. The form contains two input fields: 'Email:' and 'Password:'. The 'Email:' field has a cursor inside it. Below the 'Password:' field, there is a blue button labeled 'Log in'. The background of the browser window is light gray.

xii. Admin Dashboard:

In admin dashboard they can see all the events happening to the website. They can change the events or create events. They can see user profile, they can add products, edit products details, delete them. They can add product gallery.

GreatMart Administration

Welcome to GreatMart Admin Pannel

ACCOUNTS

Accounts	+ Add	Change
User profiles	+ Add	Change

ADMIN_HONEYPOT

Login attempts	Change
----------------	--------

AUTHENTICATION AND AUTHORIZATION

Groups	+ Add	Change
--------	-------	--------

CART

Cart items	+ Add	Change
Carts	+ Add	Change

CATEGORY

Categories	+ Add	Change
------------	-------	--------

ORDERS

Order products	+ Add	Change
Orders	+ Add	Change
Payments	+ Add	Change

STORE

Photo Gallery	+ Add	Change
Products	+ Add	Change
Review ratings	+ Add	Change
Variations	+ Add	Change

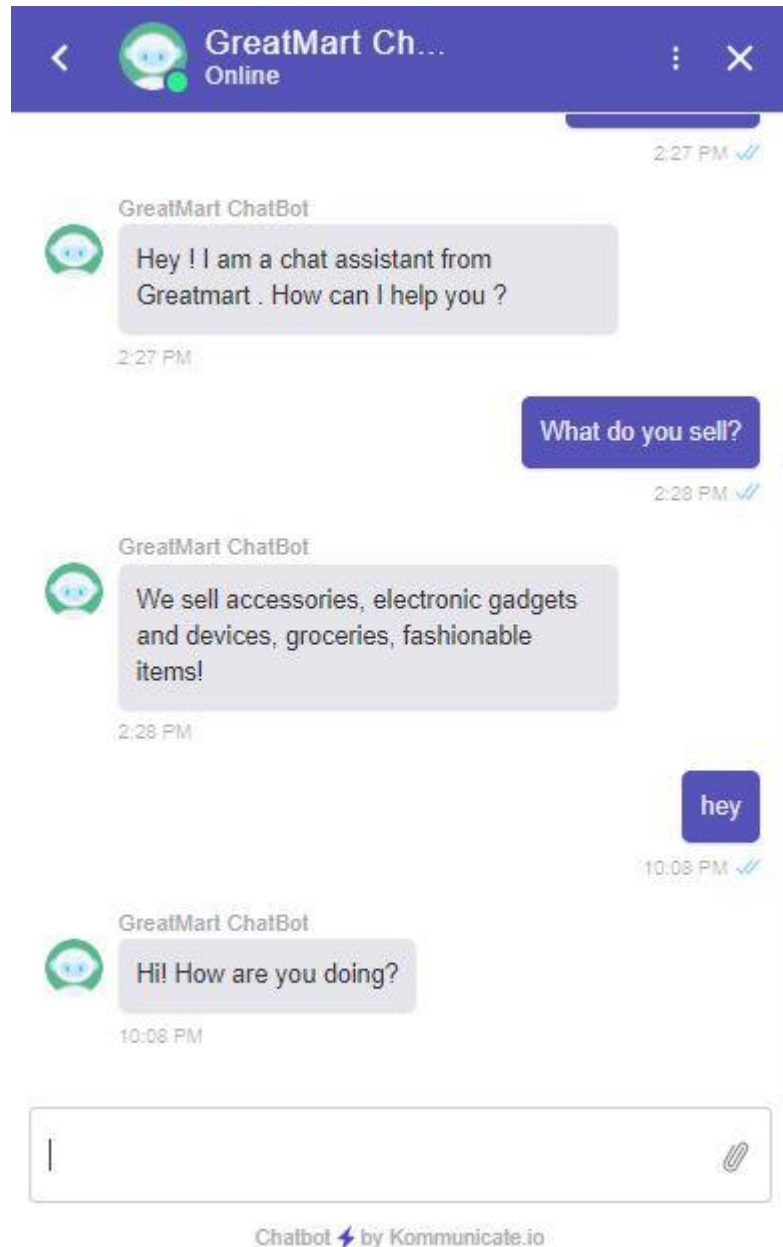
Recent actions

My actions

- + 45mm
Variation
- + Red
Variation
- + Smartwatch
Product
- + Electronics
Category
- + Red
Variation
- + Headphone
Product
- + Music
Category
- + 250g Soap
Product
- + 5
Variation
- + 2
Variation

xiii. Chatbot:

I create a chatbot for my web application using Google's DialogueFlow and Kommunicate. This will help the user to better understand the user interface and services we provide.



6.1. Future Work:

No project is at its best. Every project in this world gets its upgrade. So I thought I would also develop this project in the future. I want to add machine learning and Natural Language Processing to make it more user friendly and more optimized. I also add a Chatbot for my website for supporting the user in future. I will improve the design of this project because technology gets upgraded day by day. I will also develop a mobile application for this.

7.1. Conclusion:

E-commerce still represents one of the business methods that take advantage if done the right way, even if the stock market and commodities fell, but E-Commerce still able to survive and receive high transaction. E-commerce has a tremendous opportunity in the course of or business in Bangladesh. In addition, it is also to introducing new techniques and styles in a transaction. Use the extensive E-Commerce in the Internet world is actually much better to bring the goodness of the individual or the state.

Commerce has undeniably become an important part of our society. The successful companies of the future will be those that take E-Commerce seriously, dedicating sufficient resources to its development. E-Commerce is not an IT issue but a whole business undertaking. Companies that use it as a reason for completely re-designing their business processes are likely to reap the greatest benefits. Moreover, E-Commerce is a helpful technology that gives the consumer access to business and companies all over the world.

8.1. References:

- <https://www.google.com>
- <https://docs.python.org/3/>
- <https://docs.djangoproject.com/en/3.0/>
- <https://developer.paypal.com/developer>
- <https://www.stackflow.com>
- <https://www.wikipedia.org>
- <https://www.postgresql.org/docs/>
- <https://dialogflow.cloud.google.com/>
- <https://dashboard.kommunicate.io/>