



CST 2120

Coursework 2

21 February 2023

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Introduction and Brief Description:

Our e-commerce, KartFlip, is based on the sale of electronic products such as televisions, phones and speakers. The customer will be able to view our products, select the quantity needed, add to cart and check out. Once the order has been placed, information about the order and the customer is stored in the database. Customers can register on the website and view past transactions.

The CMS (Content Management System) allows the employees to view all the products, add products, delete products and view the order details.

The front end is written in HTML, CSS and PHP.

The methodology used to store data on a site is called a database. Databases can be queried to fetch and return information on-demand to be displayed by the front end. Information obtained from the front end will be stored in the database. Our choice of database program is MongoDB.

MongoDB will add utility to the front-end functionality. Through MongoDB, we will be able to validate and exchange information such as login IDs and passwords.

In other words, the back end is made up of a primary key element which is the database.

Screenshots of functionalities:

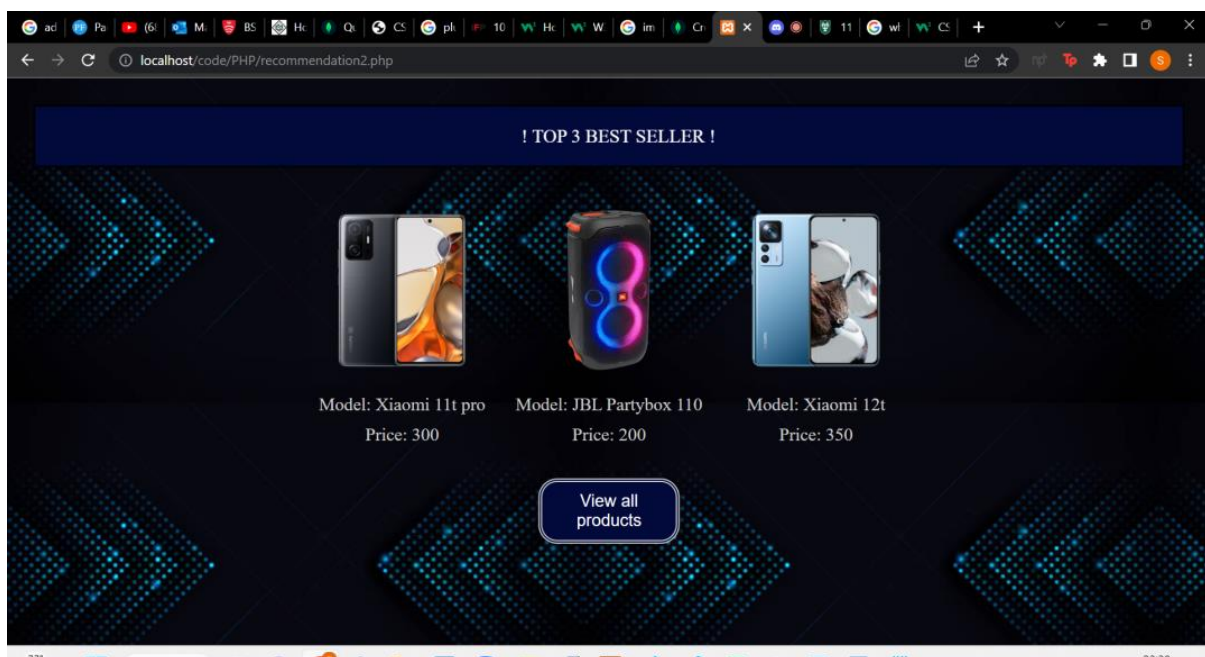


Figure 1: Tracking and Recommendation

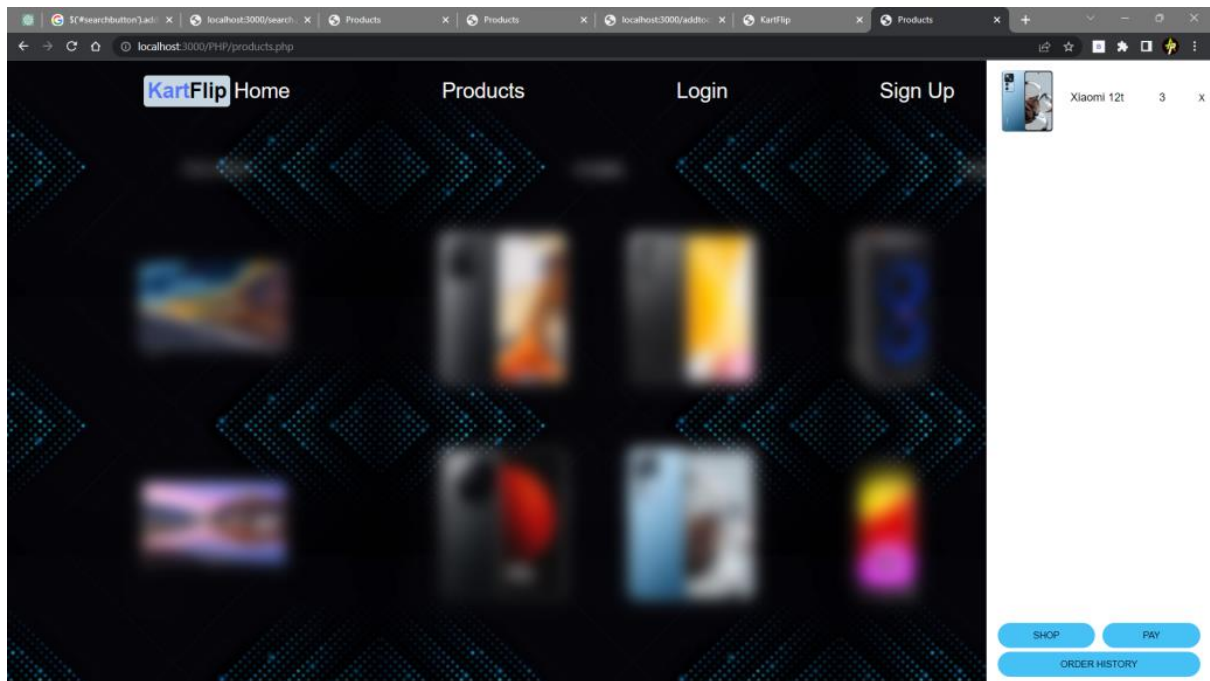


Figure 2: Cart Functionality

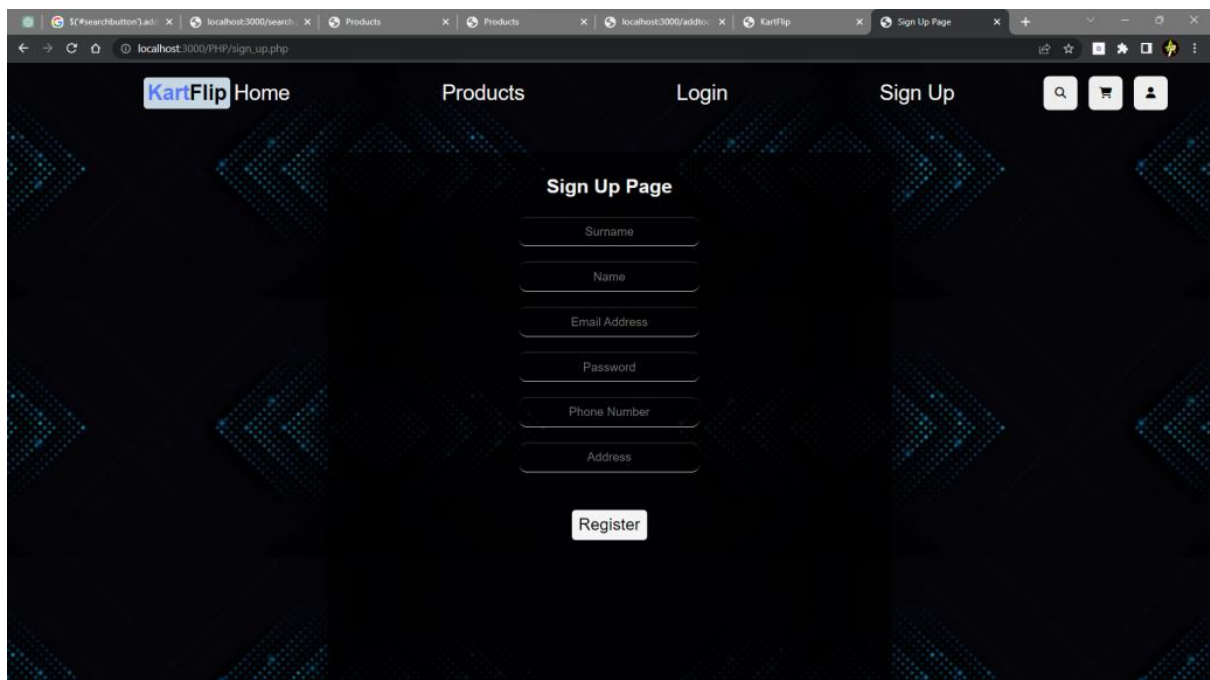


Figure 3: SignUp functionality

```
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

PS C:\Program Files\MongoDB\Server\5.0\bin> mongodump --host localhost --port 27017 -d Details -o C:\xampp\htdocs\COURSEWORK-2\Database
2023-02-22T01:09:31.058+0400    writing Details.Employees to C:\xampp\htdocs\COURSEWORK-2\Database\Details\Employees.bson
2023-02-22T01:09:31.060+0400    writing Details.Products to C:\xampp\htdocs\COURSEWORK-2\Database\Details\Products.bson
2023-02-22T01:09:31.060+0400    writing Details.Order to C:\xampp\htdocs\COURSEWORK-2\Database\Details\Order.bson
2023-02-22T01:09:31.063+0400    writing Details.Customers to C:\xampp\htdocs\COURSEWORK-2\Database\Details\Customers.bson
2023-02-22T01:09:31.065+0400    done dumping Details.Employees (2 documents)
2023-02-22T01:09:31.065+0400    done dumping Details.Products (10 documents)
2023-02-22T01:09:31.066+0400    done dumping Details.Order (2 documents)
2023-02-22T01:09:31.066+0400    done dumping Details.Customers (2 documents)
PS C:\Program Files\MongoDB\Server\5.0\bin>
```

Figure 4: Database dump.

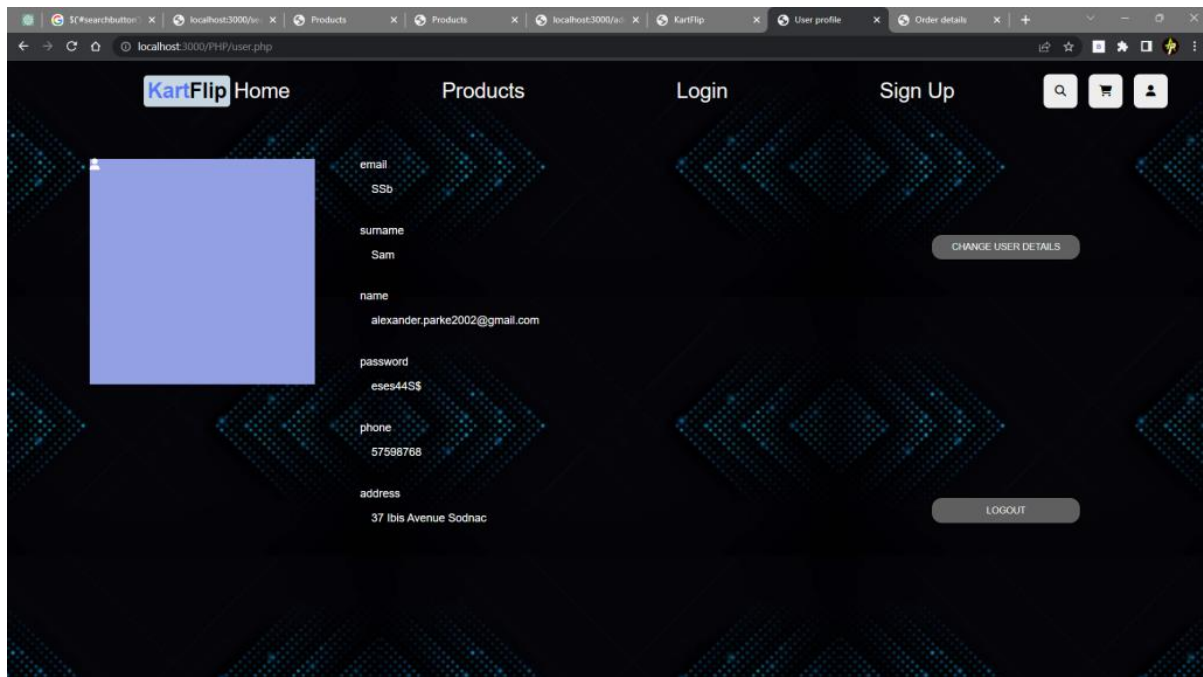


Figure 5: Editing of customer details.

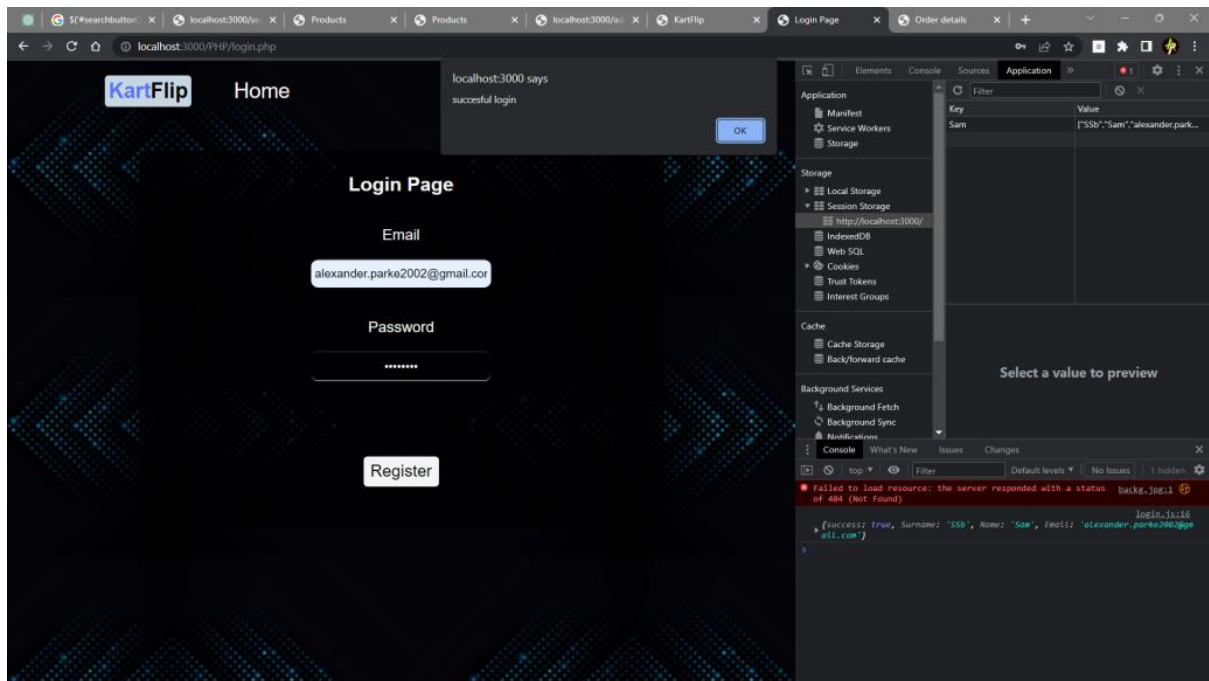


Figure 6: Login functionality (usage of sessionStorage)

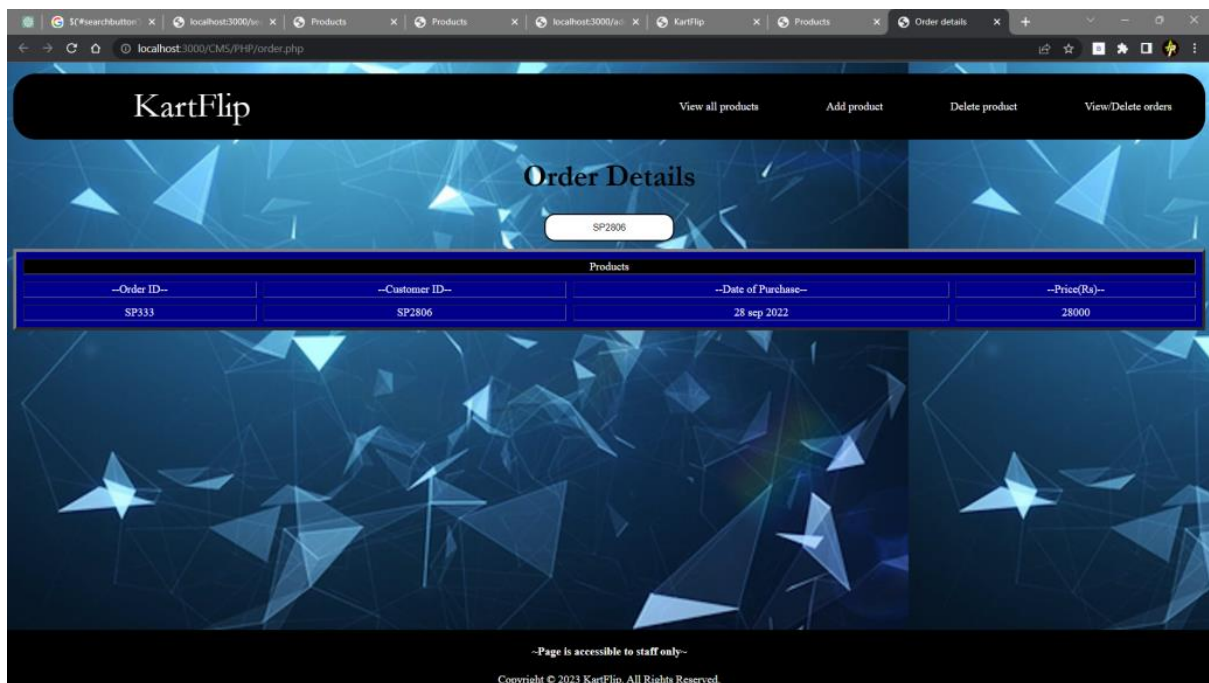


Figure 7: CMS (order details search)

Product ID	Section	Model	Stock	Price
XQ2	Television	Xiaomi Q2	10	400
XP1e	Television	Xiaomi P1e	14	600
X11TP	Phone	Xiaomi 11t pro	10	300
X12L	Phone	Xiaomi 12 lite	10	250
X12SU	Phone	Xiaomi 12s ultra	10	400
X12T	Phone	Xiaomi 12t	10	350
JP310	Speaker	JBL Partybox 310	10	500
JP110	Speaker	JBL Partybox 110	10	200
JP710	Speaker	JBL Partybox 710	10	600
JP5	Speaker	JBL Pulse 5	10	120

Figure 8: CMS (View all Products)

Security, Privacy and Legal issues:

Personal data at risk (Security threat)

Users may hesitate to share their personal data if they think that their privacy can be at risk or shared with third parties without their permission.

Proper security measures can be used to safeguard the personal data of customers. This involves determining who should have access to the data, and sufficiently securing ecommerce database and website. Moreover, the website could use encryption standards relevant to the website needs while storing or transmitting any sensitive data. Use of firewalls could be made to keep unauthorized users out and protected information in.

Privacy threats

A privacy threat to e-commerce is password and identity theft. The e-commerce website must enforce strong passwords or advanced authentication methods and raise awareness to customers about best practices when first creating passwords. Otherwise, hackers may discover patterns and thus finding user passwords thereby leading to the theft of their personal data.

Copyright (Legal issue)

Copyright is used to forbid other websites from copying a work, publicly displaying a work, or distributing a work. For instance, it is usually a violation of copyright law to appropriate scripting or programming from someone else without permission. However, there are many websites which allow copying their work but on condition that any requirements set forth by the website owner are followed.

Copyrights are usually written at the bottom of websites to prevent content theft.

Domain Name concerns (Legal issue)

Selecting a domain name for the website is an important detail when creating a web site. You have to make sure the name is not taken and is not infringing on another party's trademark.

Domain Hijacking is an illegal activity where an organization's web address is stolen by another party. Domain hijacking can result in significant financial and reputational damage to the website.

Tracking cookies (Privacy issue)

Tracking cookies are usually used for legitimate marketing and advertising purposes. They are not harmful and can even be helpful as they collect your browsing information and allow websites to remember your login, preferences, language settings, and other details. However, cookies become a concern when it comes to vast amounts of data collected without user consent.

One such example includes: In December 2020, France's data protection regulator, the Commission Nationale de l'informatique et des libertés (CNIL), ordered Google to pay 100 million euros (\$121 million) and Amazon to pay 35 million euros. The CNIL (Commission Nationale de l'informatique et des libertés) said both companies had breached Article 82 of the French Data Protection Act, with Google committing three offences and Amazon committing two.

The companies were fined for placing tracking cookies on their user's computers in France "without obtaining prior consent and without providing adequate information." Google was also fined for tracking users who had specifically deactivated ad personalization.

References:

Sam Shear (THU, DEC 10 2020) CNBC- "Google and Amazon fined for cookies breach by French privacy regulator" Available at: [https://www.cnbc.com/2020/12/10/google-and-amazon-fined-for-cookies-breach-by-french-privacy-regulator.html#:~:text=The%20watchdog%20ordered%20Google%20to%20pay%20100%20million%20euros%20\(%24,offences%20and%20Amazon%20committing%20two.](https://www.cnbc.com/2020/12/10/google-and-amazon-fined-for-cookies-breach-by-french-privacy-regulator.html#:~:text=The%20watchdog%20ordered%20Google%20to%20pay%20100%20million%20euros%20(%24,offences%20and%20Amazon%20committing%20two.)

Respecting the privacy of the user is what will gain the trust of the customers and enhance the reputation as well as growth in the website.