Full Stack Website Projet: GamePortal

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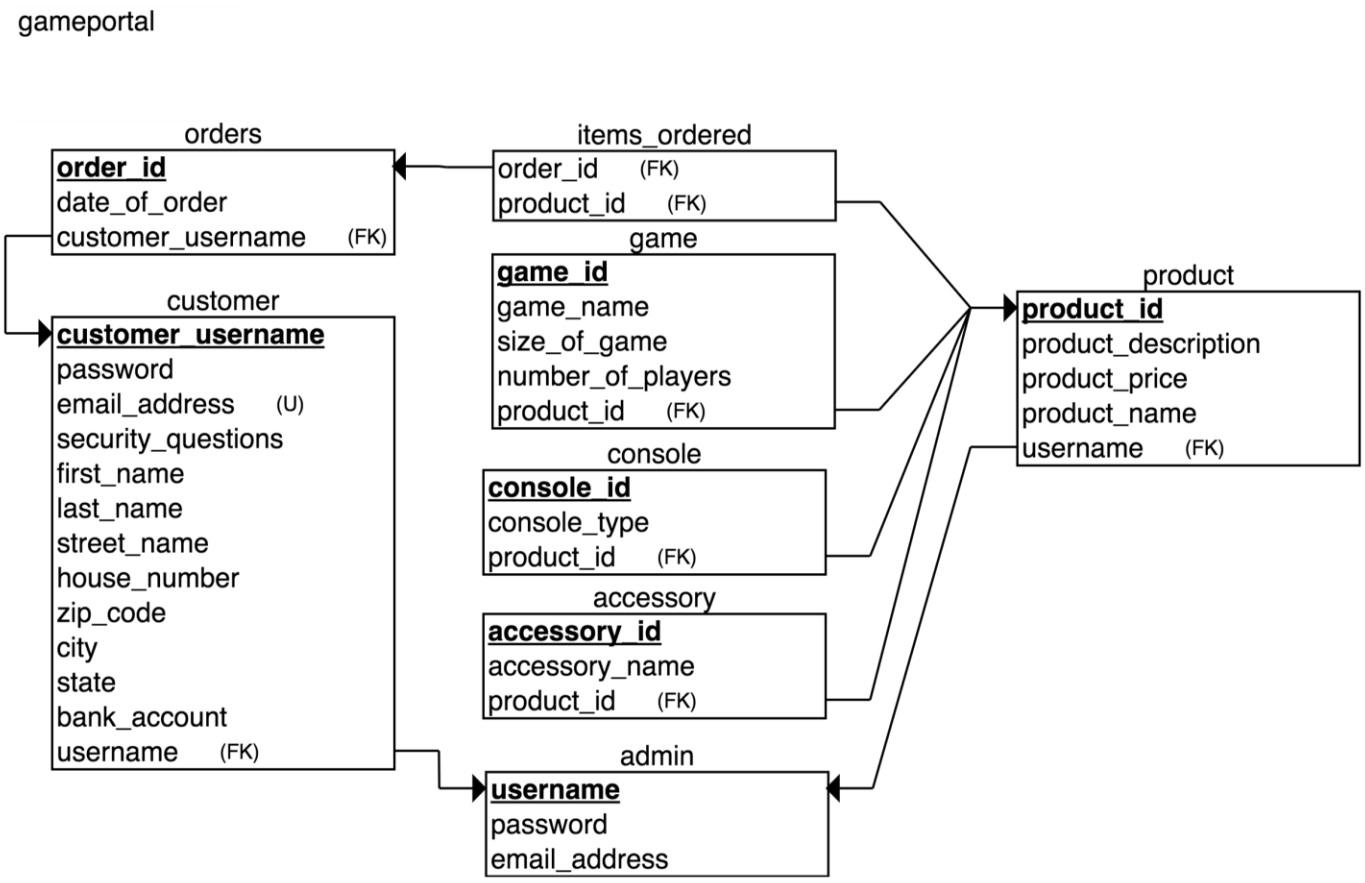
Index:

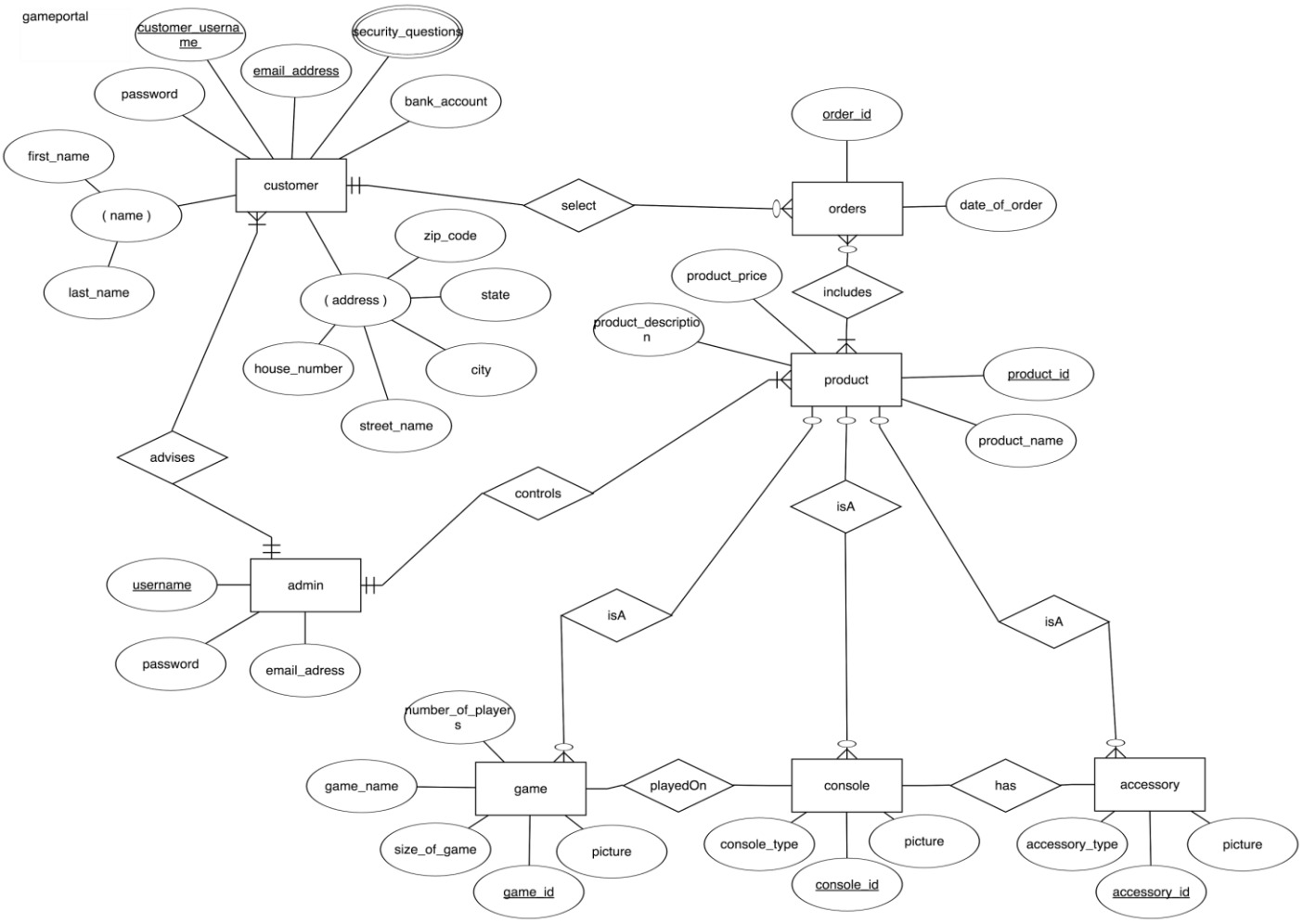
The database we have come to build, is a game store database. It is made for the gamer in us. With a wide variety of games, for a various amounts of consoles those games apply to, such as XBOX, PC or PlayStation, and a copious amount of genres that these games fall into, whether it be a simulation game, sport game, or even a strategic game; these games may apply to all the gamers, everywhere. This database is designed for a customer to sign up with his or her's unique username, unique email address followed by a password and other attributes. Admin is one who oversees all the actions being taken. Example being, an administrator may be able to add or remove a game, and also add or remove a customer. Once a customer purchases a game, they will automatically be charged the price of the product they desired to have – game, accessory, or console. The user is required to sign up for an account. The

information the administrators need is the customer's name, both first and last, an address, which provides a street name, number, city, state and zip code, a unique email address is also needed as well as a unique account username. Once user is signed up, he/she may log in and will not have to sign up any more due to the customer's information is stored in the game store database. This database is designed by 8 tables: customer, orders, items_ordered, product, admin, game, console, and accessory.

Below, you will see both the Relational Model and ERD, respectively.

The Relational Model is as followed:





The ERD is as followed:

When it came to the Index Selection, we know that the index selection is a method in which several useful traits are selected simultaneously. We used index selection in the search part, where we created an index selection by using the name of the product to make it more convenient and efficient for the user for his or hers needs. This is an example of index selection queries that we have used in the project:

$index = "CREATE INDEX g_name ON game (game_name)";

$index2 = "CREATE INDEX c_type ON console (console_type)";

$index3 = "CREATE INDEX a_name ON accessory (accessory_name)";

For making the SQL for creating and populating the tables, below you will see a an example of our code pasted so you will be able to see how the code was designed as well as the links to the file with all of the code:

```
-- Table structure for table `accessory`--
CREATE TABLE `accessory` (
 `accessory_name` varchar(100) NOT NULL,
 `image_name` varchar(100) NOT NULL,
```

```
  `image` longblob NOT NULL,
  `product_id` varchar(100) NOT NULL,
   `accessory_id` int(11) NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=latin1;
```

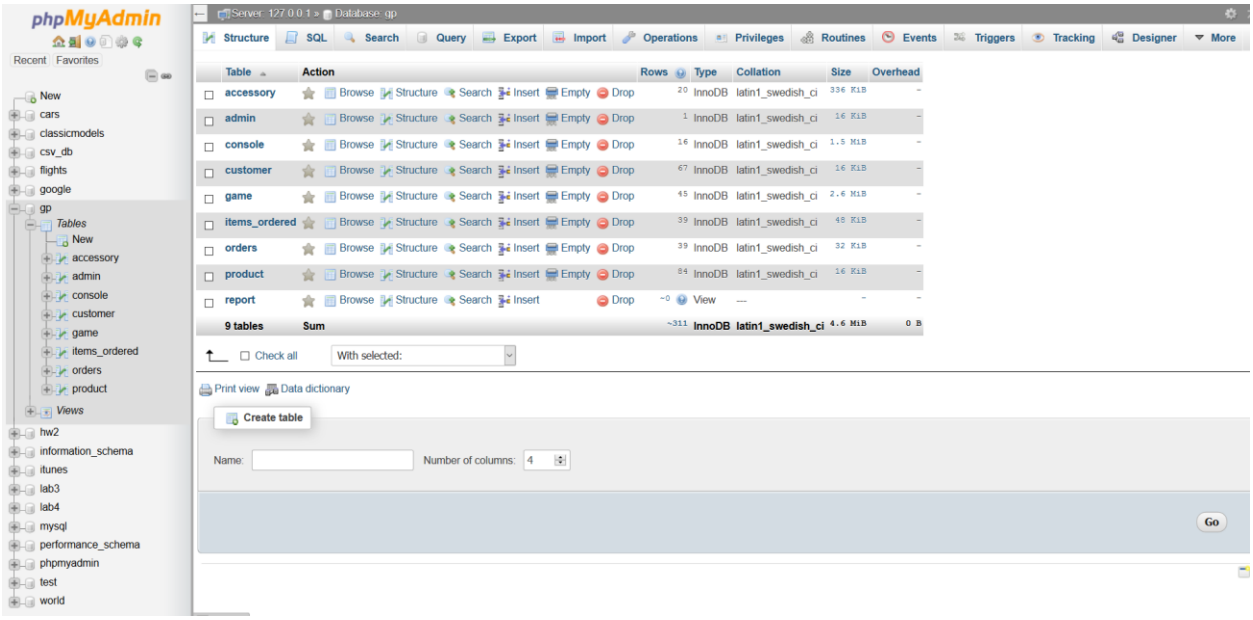
Here are the links to our database to view all of our codes:

https://github.com/hamalis/DB_Project

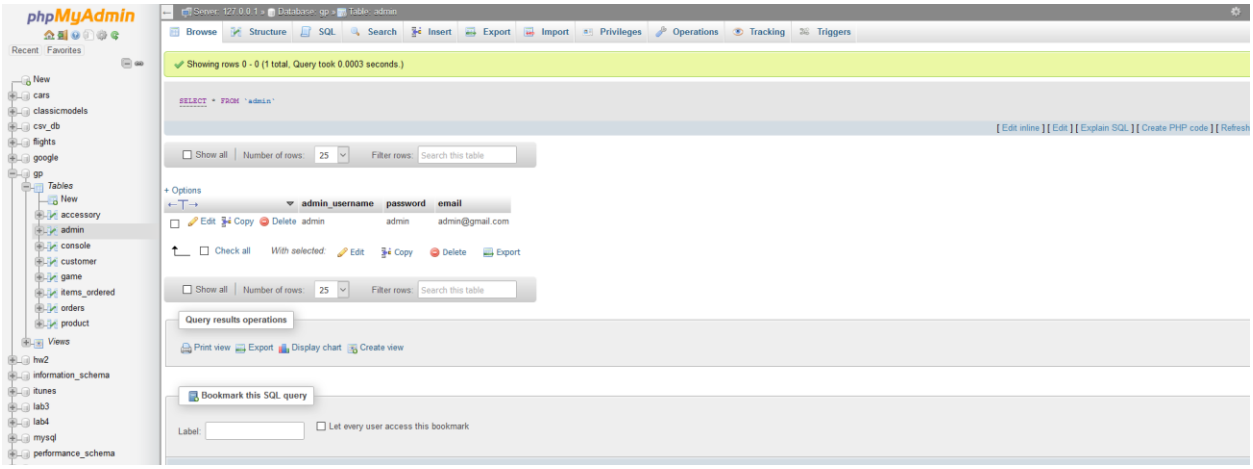
https://github.com/sjuDB/hello-git-hamalis

Below you will find screen shots of our database for your benefit:

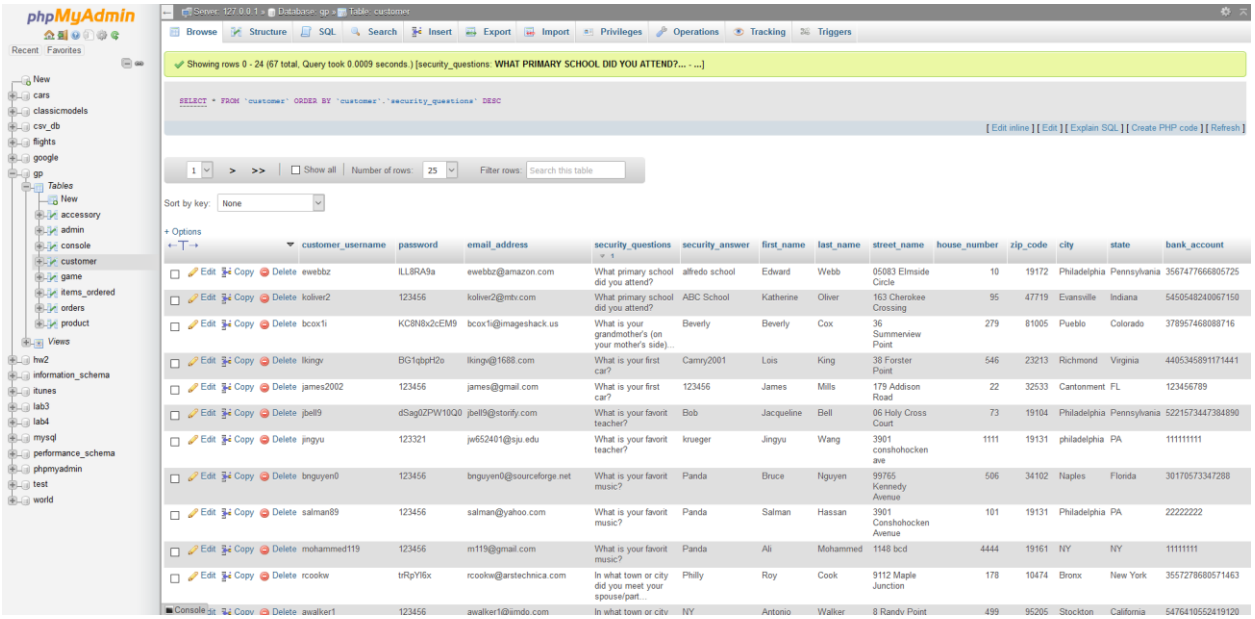
Screenshot of GamePortal database:



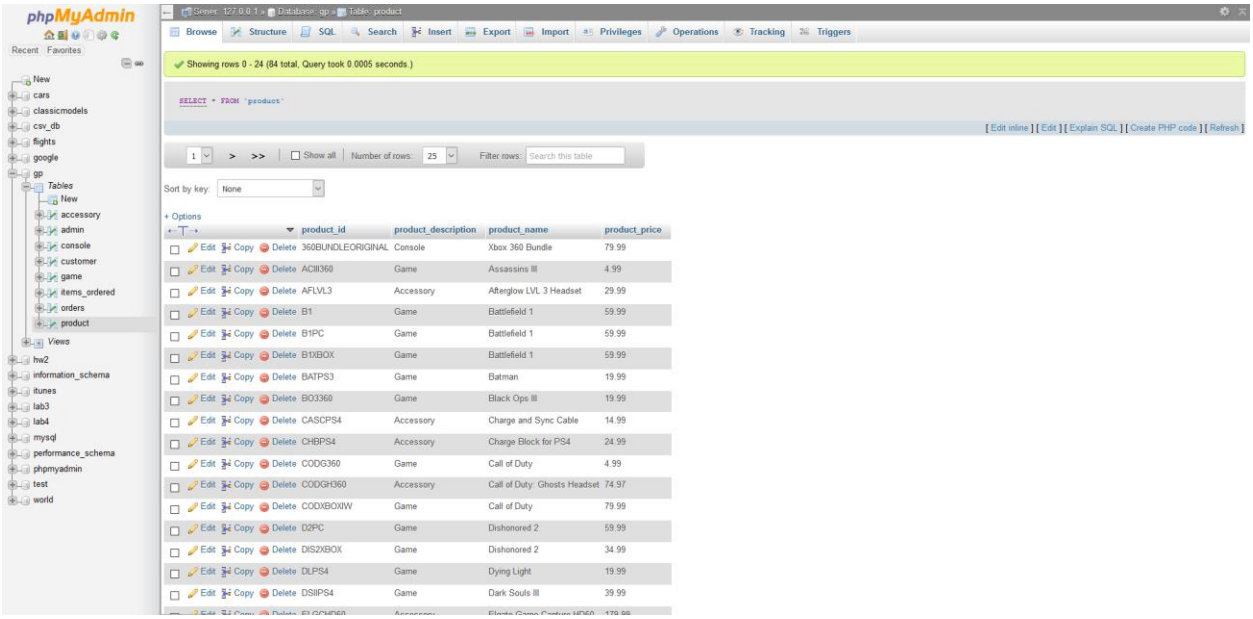
Admin table:



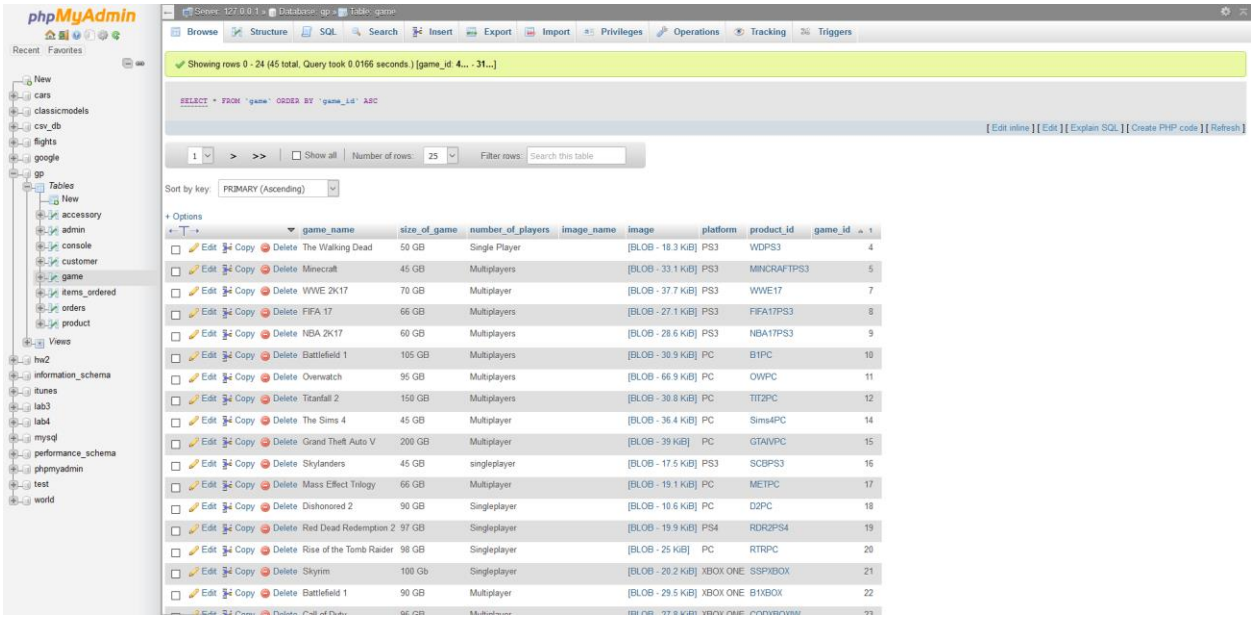
Customer table:



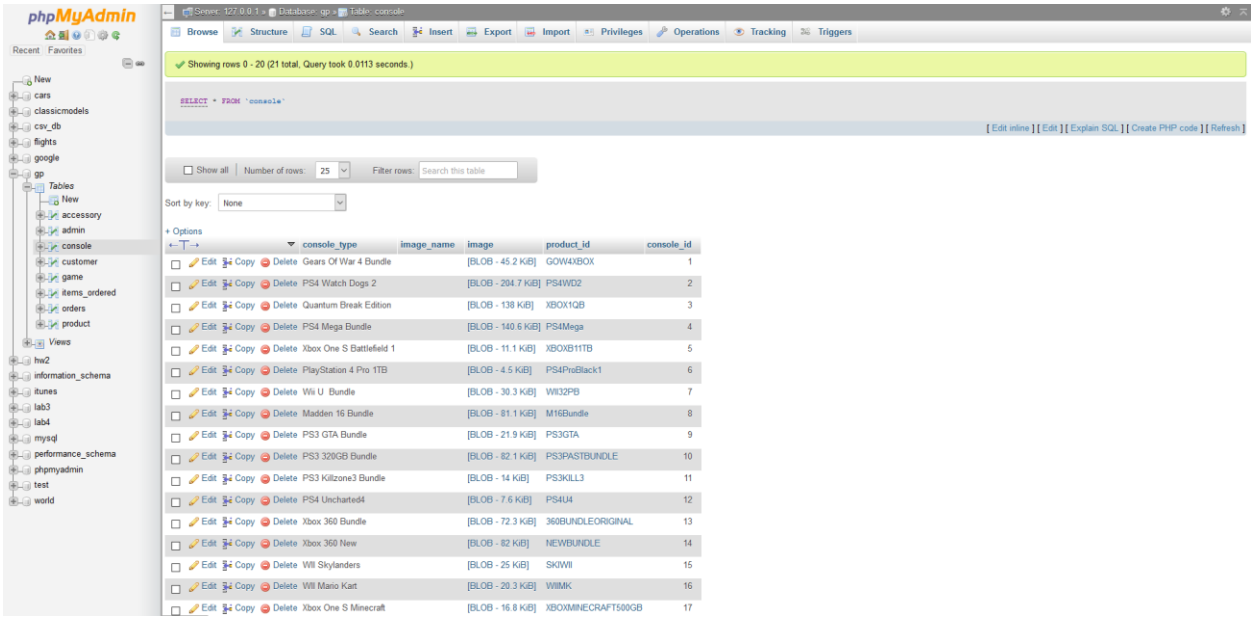
Product table:



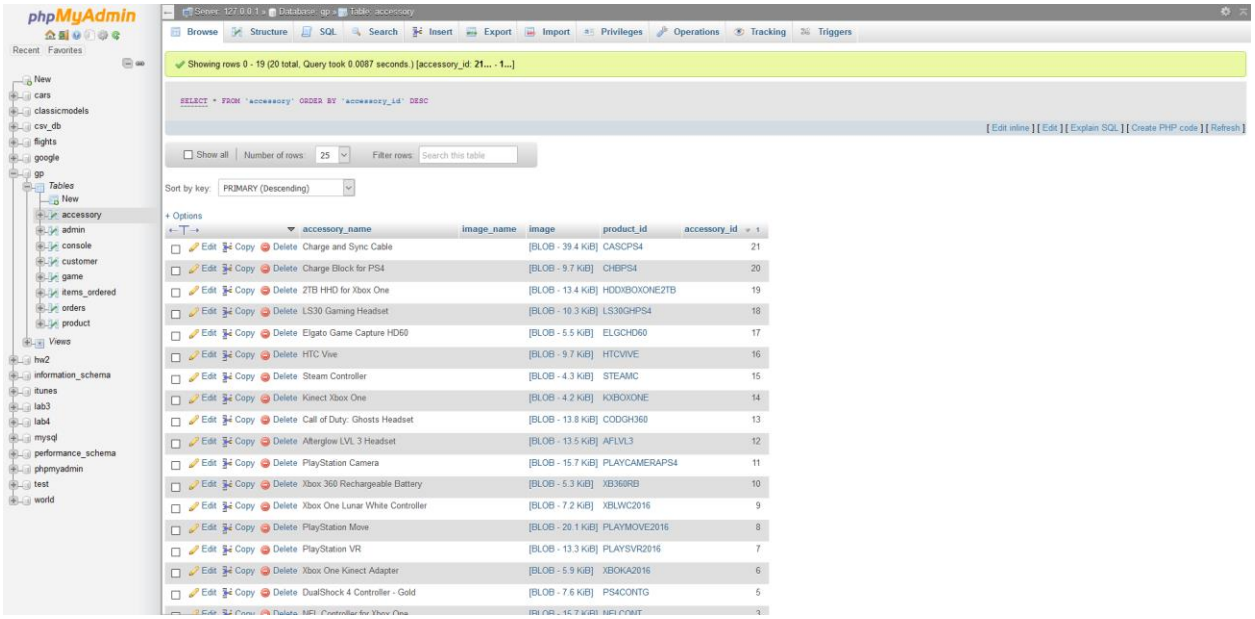
Game table:



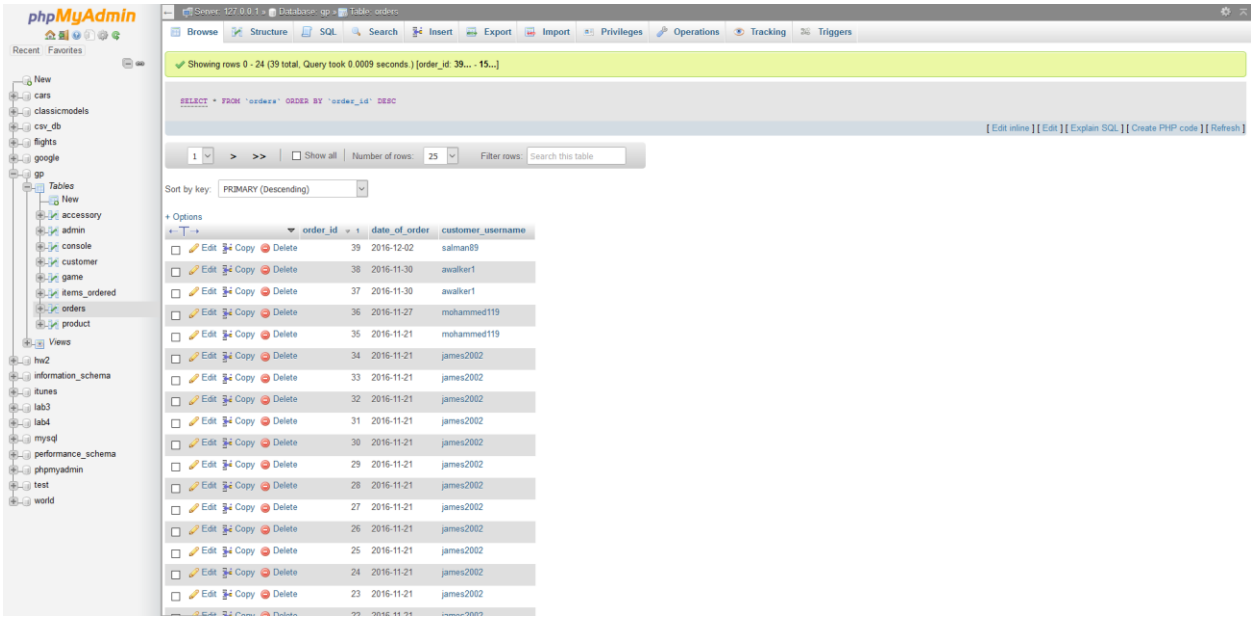
Console table:



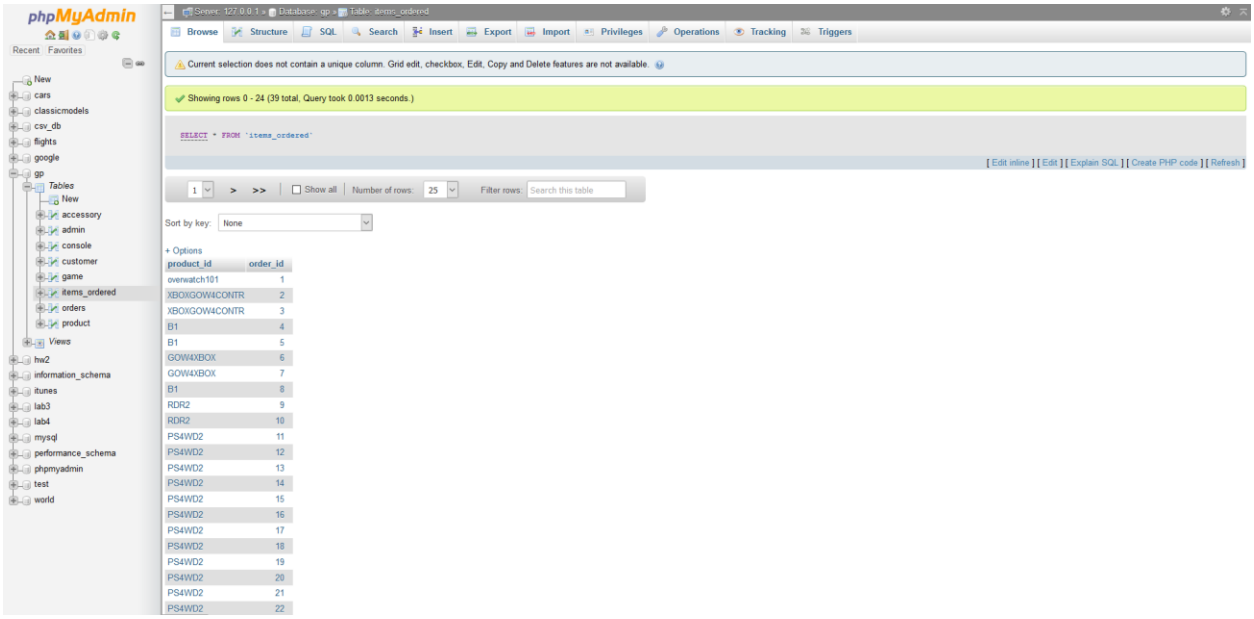
Accessory table:



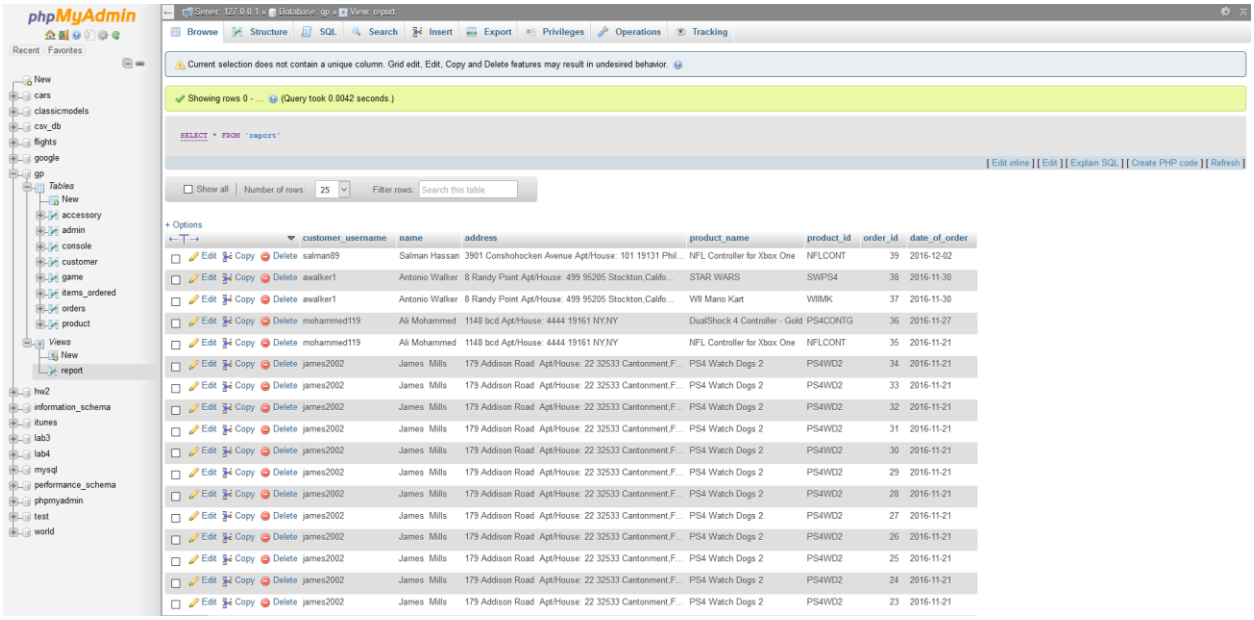
Orders table:



Items ordered table:



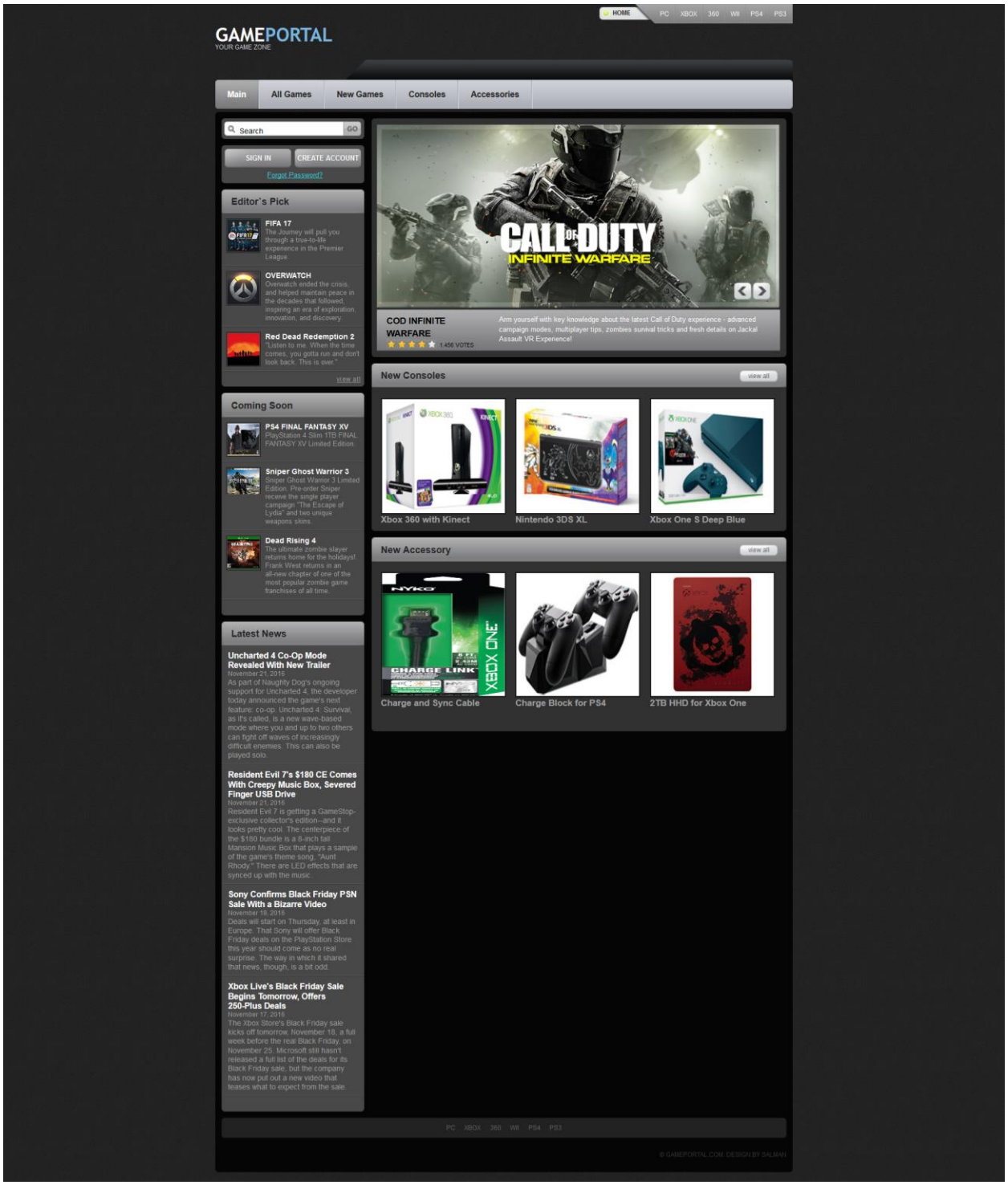
Report view table:



In the beginning, we anticipated for the application to be used as if it were an online game store, where a user can buy a game whenever he/she wants to. This drove us to expand our initial idea from just games to consoles, and also, accessories. We have designed the most convenient and quickest way to be a gamer. We deliver a product once the user purchases the item. We are super convenient, whereas, a user does not have to go anywhere to get whatever they need to in order to improve their gaming experience, but only has to go online to satisfy his or her needs for their entertainment purposes. We have initially wanted an online game store to be used to just play PC games and from there, we wanted to

increase our demographic by selling other console games, such as XBOX, PlayStation and Nintendo. This thought process expanded to us developing a database for gamers that we can sell not only games but also, other products that will help a user play a game; such as, a power wire for the console, a controller, a headset and other accessories.

Below you will see the interface of our database.
HomePage:


HOME
PC
XBOX
360
WII
PS4
PS3
GAMEPORTAL
YOUR GAME ZONE
Main
All Games
New Games
Consoles
Accessories
Search
GO
SIGN IN
CREATE ACCOUNT
Forgot Password?
Editor's Pick
FIFA 17
The Journey will pull you through a true-to-life experience in the Premier League.
OVERWATCH
Overwatch ended the crisis, and helped maintain peace in the decades that followed, inspiring an era of exploration, innovation, and discovery.
Red Dead Redemption 2
"Listen to me. When the time comes, you gotta run and don't look back. This is over."
view all
Coming Soon
PS4 FINAL FANTASY XV
PlayStation 4 Slim 1TB FINAL FANTASY XV Limited Edition
Sniper Ghost Warrior 3
Sniper Ghost Warrior 3 Limited Edition. Pre-order Sniper receive the single player campaign "The Escape of Lydia" and two unique weapons skins.
Dead Rising 4
The ultimate zombie slayer returns home for the holidays! Frank West returns in an all-new chapter of one of the most popular zombie game franchises of all time.
Latest News
Uncharted 4 Co-Op Mode Revealed With New Trailer
November 21, 2016
As part of Naughty Dog's ongoing support for Uncharted 4, the developer today announced the game's next feature: co-op. Uncharted 4: Survival, as it's called, is a new wave-based mode where you and up to two others can fight off waves of increasingly difficult enemies. This can also be played solo.
Resident Evil 7's $180 CE Comes With Creepy Music Box, Severed Finger USB Drive
November 21, 2016
Resident Evil 7 is getting a GameStop-exclusive collector's edition--and it looks pretty cool. The centerpiece of the $180 bundle is a 6-inch tall Mansion Music Box that plays a sample of the game's theme song, "Aunt Rhody." There are LED effects that are synced up with the music.
Sony Confirms Black Friday PSN Sale With a Bizarre Video
November 19, 2016
Deals will start on Thursday, at least in Europe. That Sony will offer Black Friday deals on the PlayStation Store this year should come as no real surprise. The way in which it shared that news, though, is a bit odd.
Xbox Live's Black Friday Sale Begins Tomorrow, Offers 250-Plus Deals
November 17, 2016
The Xbox Store's Black Friday sale kicks off tomorrow, November 18, a full week before the real Black Friday, on November 25. Microsoft still hasn't released a full list of the deals for its Black Friday sale, but the company has now put out a new video that teases what to expect from the sale.
CALL OF DUTY
INFINITE WARFARE
COD INFINITE WARFARE
1,456 VOTES
Arm yourself with key knowledge about the latest Call of Duty experience - advanced campaign modes, multiplayer tips, zombies survival tricks and fresh details on Jackal Assault VR Experience!
New Consoles
view all
Xbox 360 with Kinect
Nintendo 3DS XL
Xbox One S Deep Blue
New Accessory
view all
Charge and Sync Cable
Charge Block for PS4
2TB HHD for Xbox One
PC
XBOX
360
WII
PS4
PS3
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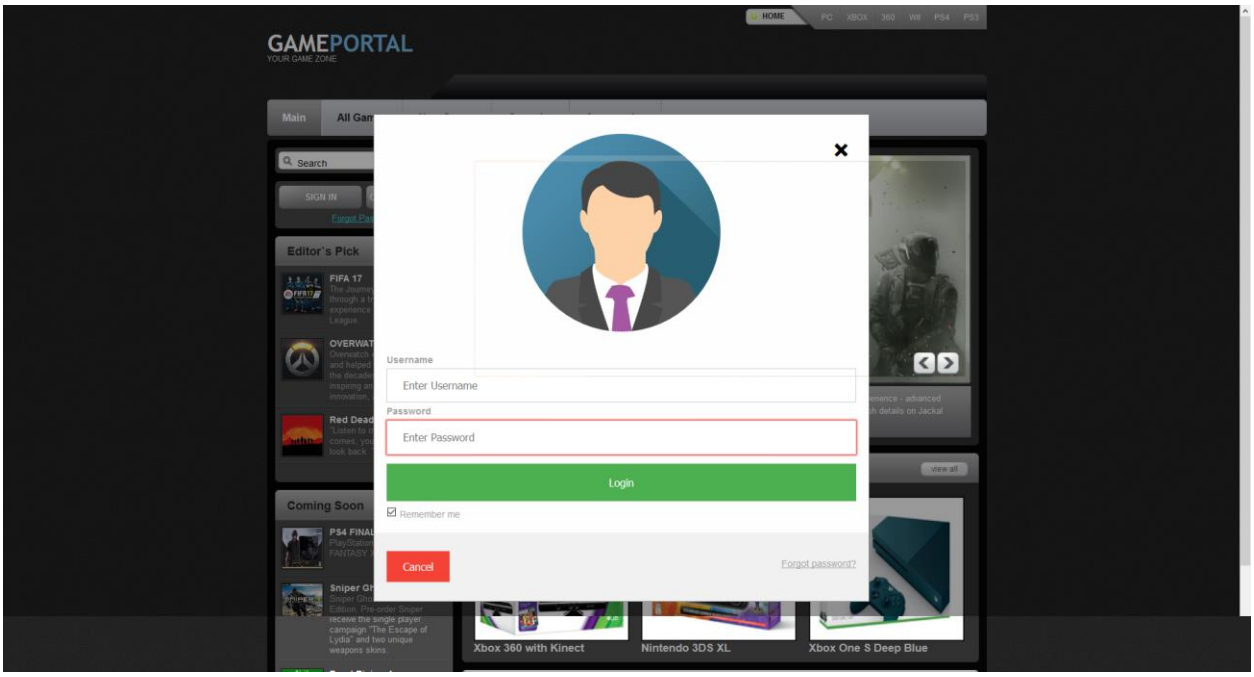
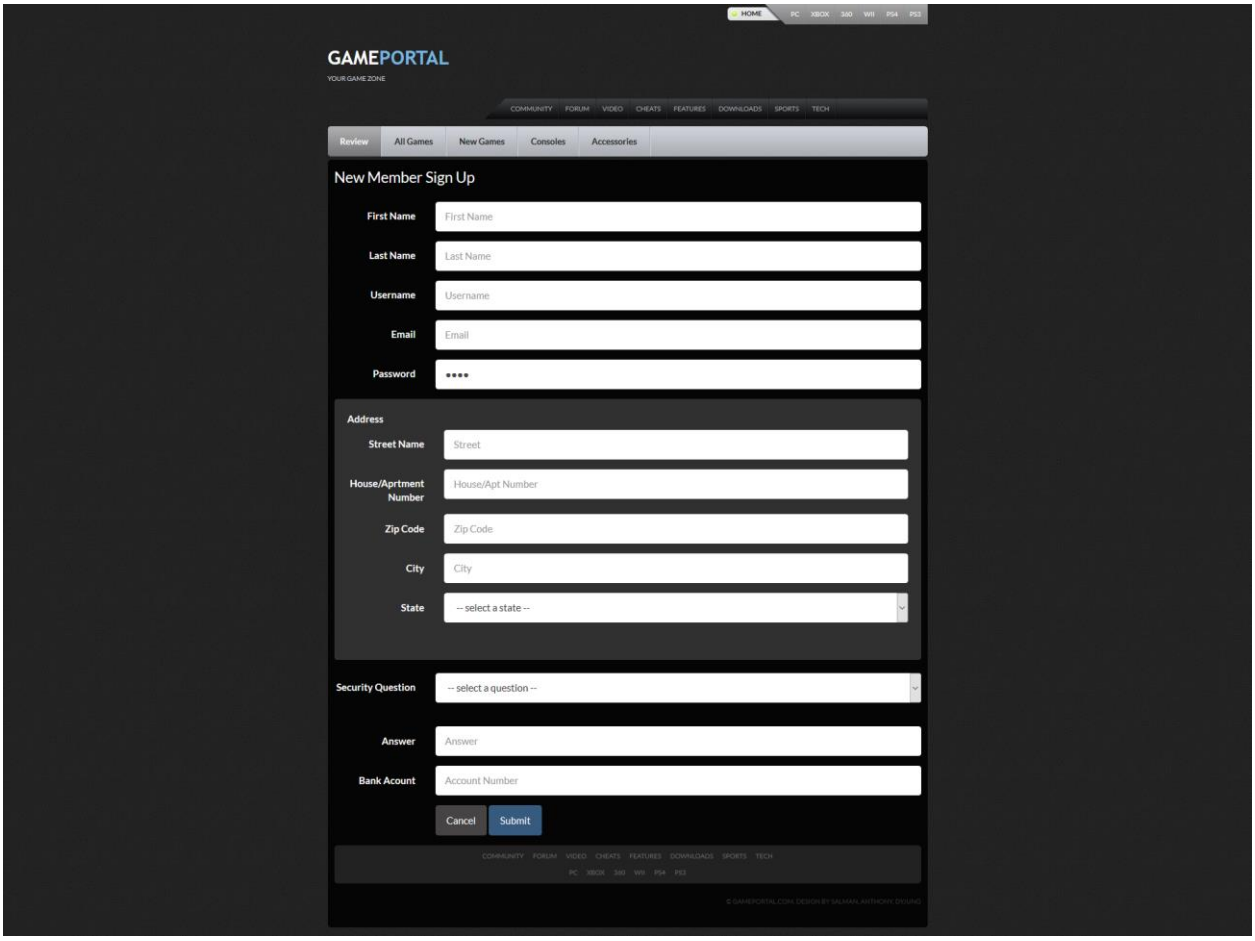
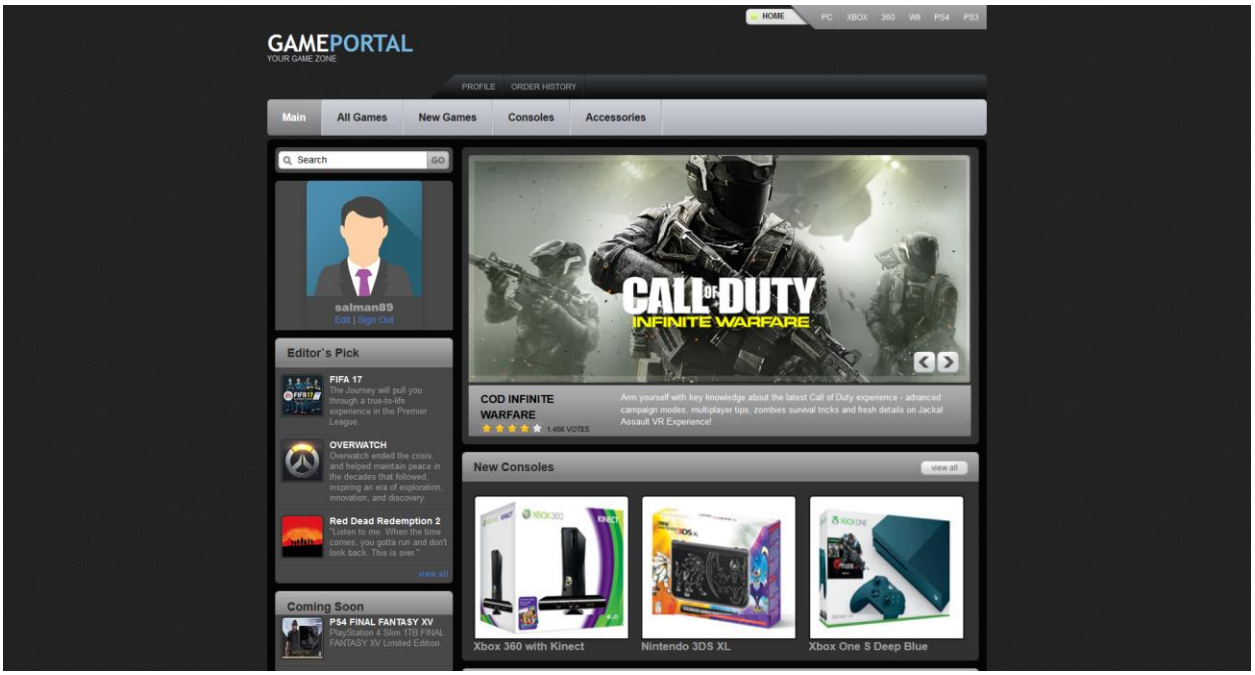
Login form:

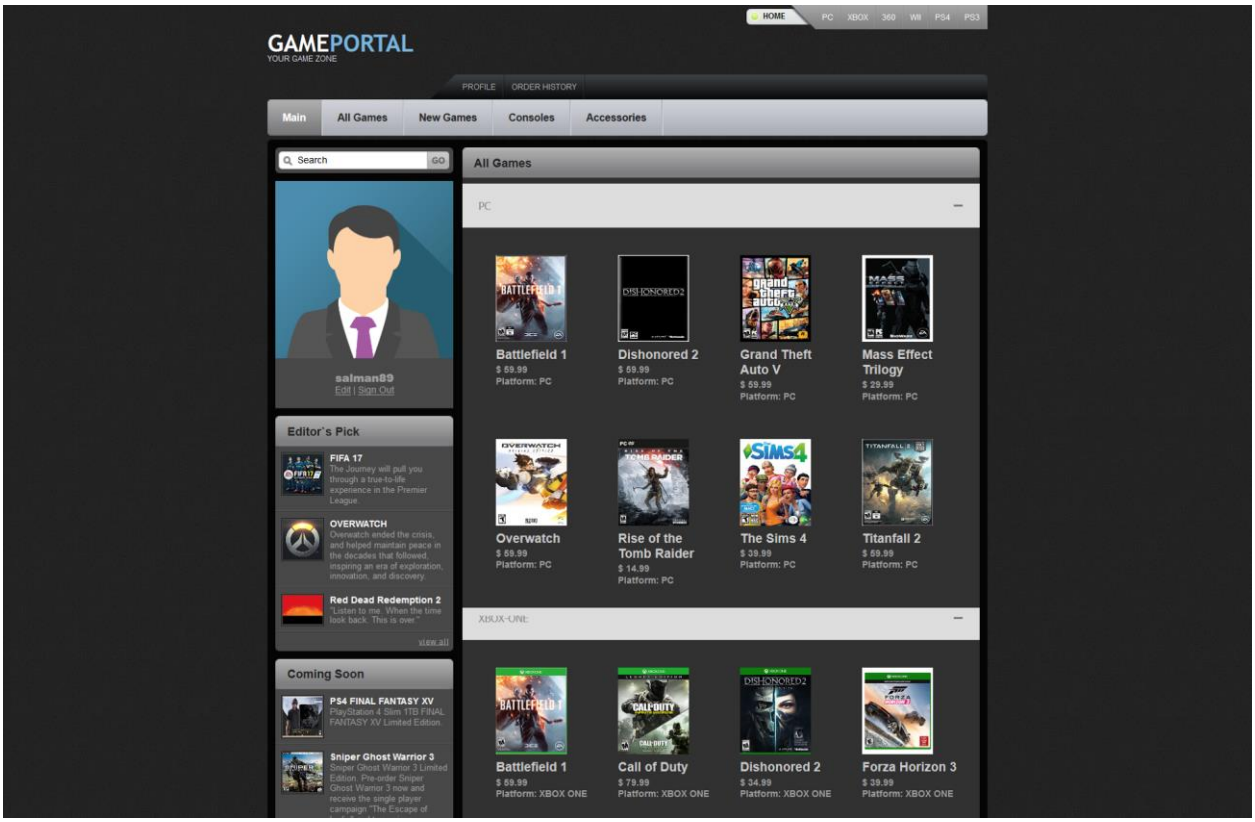

GAMEPORTAL
YOUR GAME ZONE
Main
Search
SIGN IN
Editor's Pick
FIFA 17
Coming Soon
Username
Enter Username
Password
Enter Password
Login
Remember me
Cancel
Forgot password?
Xbox 360 with Kinect
Nintendo 3DS XL
Xbox One S Deep Blue


GAMEPORTAL
YOUR GAME ZONE
Review
All Games
New Games
Consoles
Accessories
New Member Sign Up
First Name
Last Name
Username
Email
Password
Address
Street Name
House/Aprtment Number
Zip Code
City
State
-- select a state --
Security Question
-- select a question --
Answer
Bank Acount
Account Number
Cancel
Submit

Signup form:

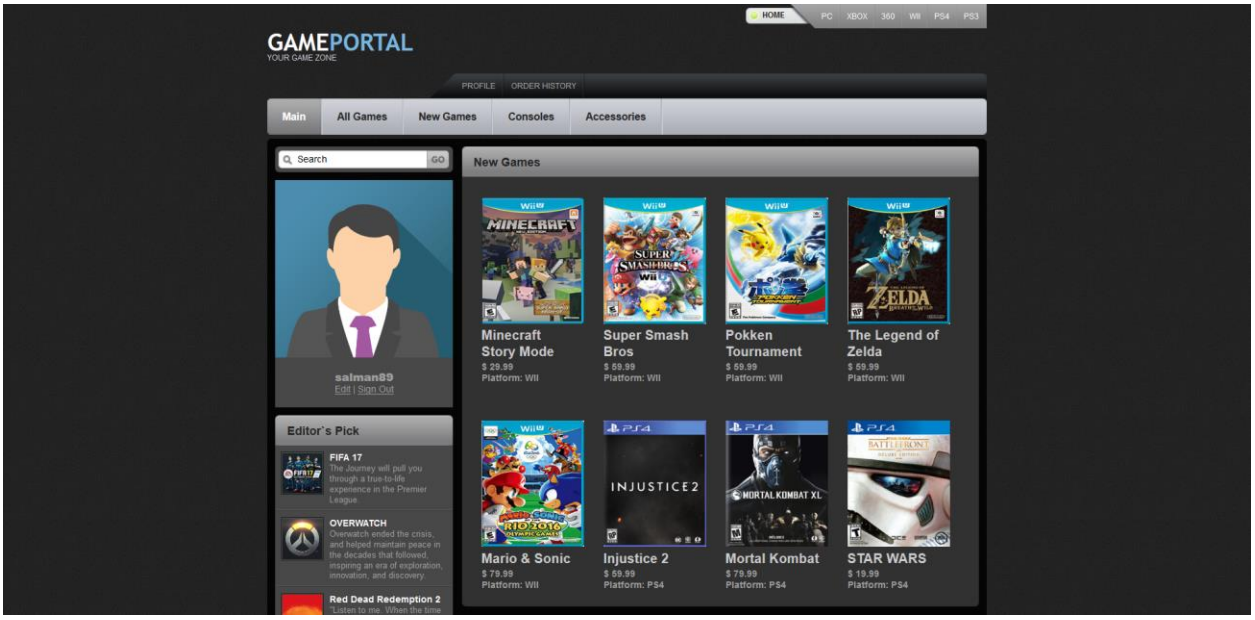
User Logged in page:





Page that shows all games for all types:

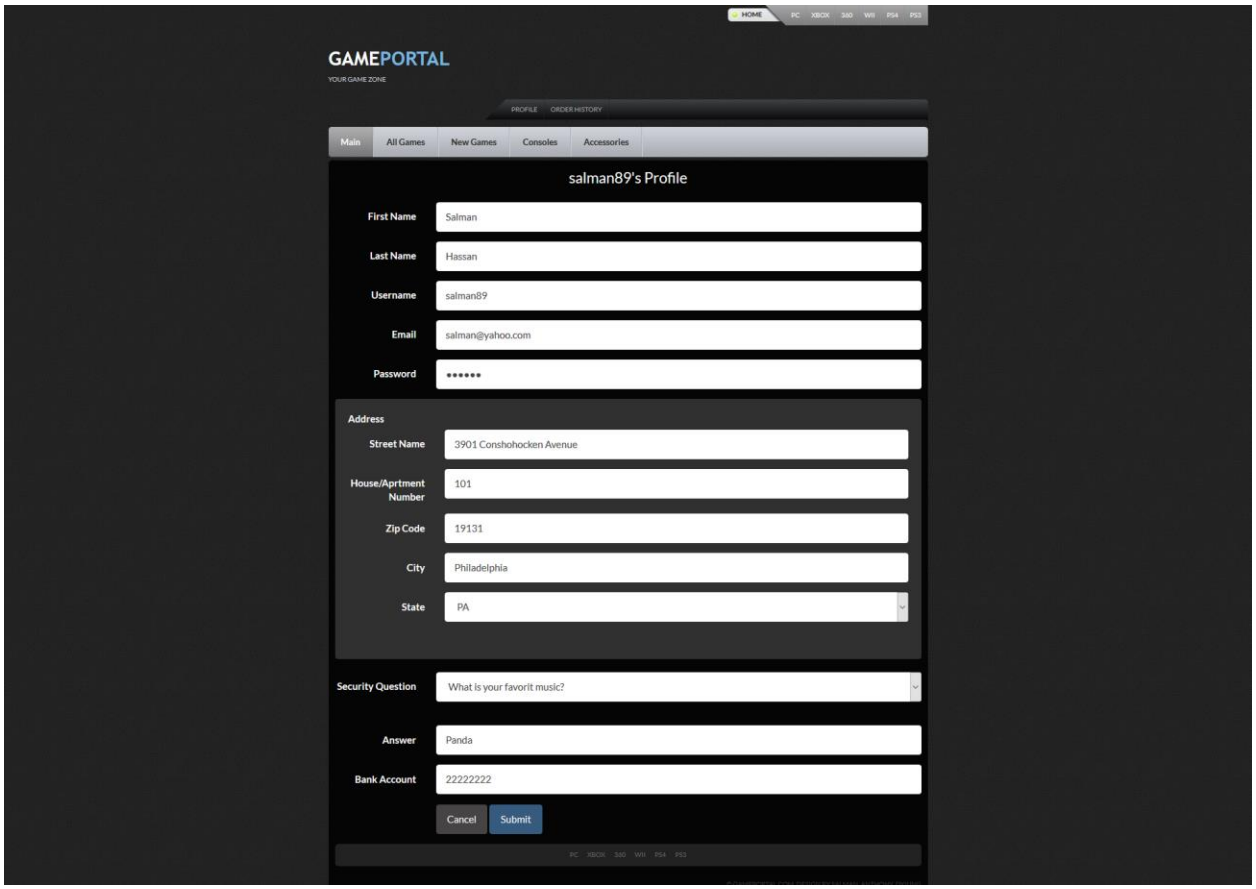
Page that shows new games only:



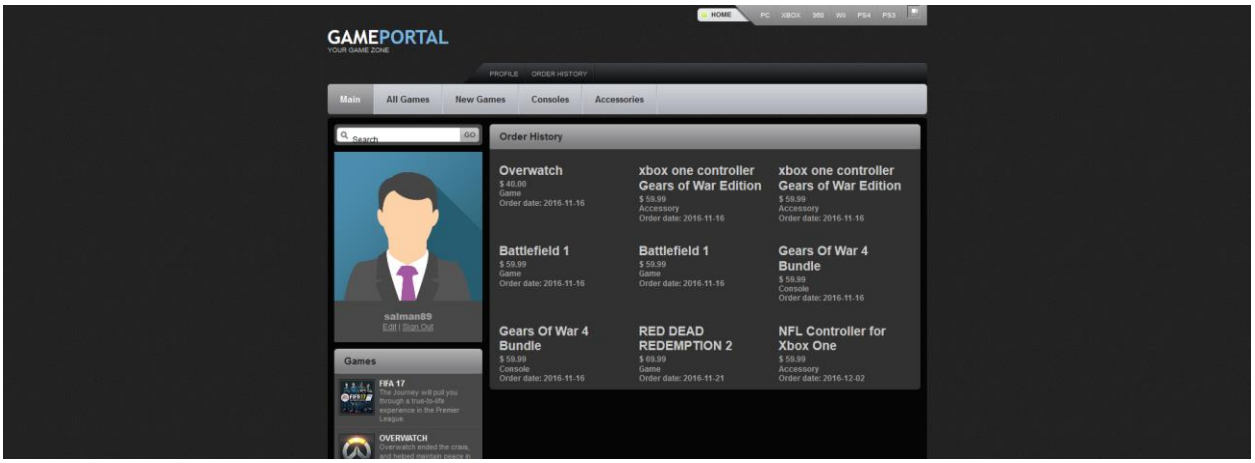
Page that shows all consoles:

Page that shows all accessories:

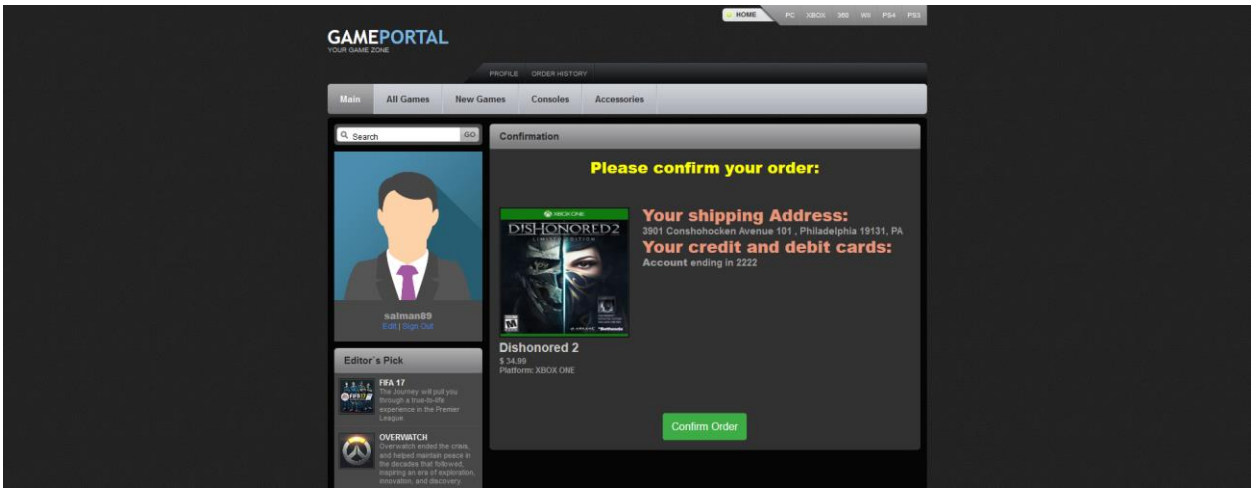
Edit customer profile page:



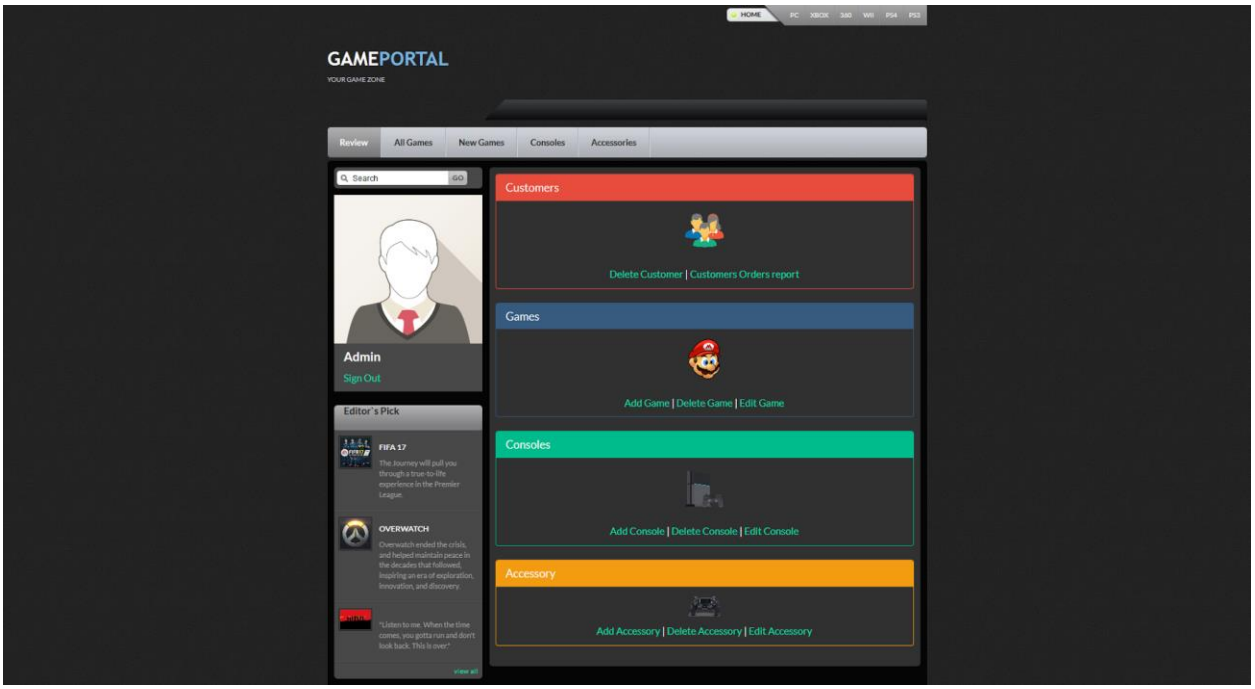
Customer orders history:



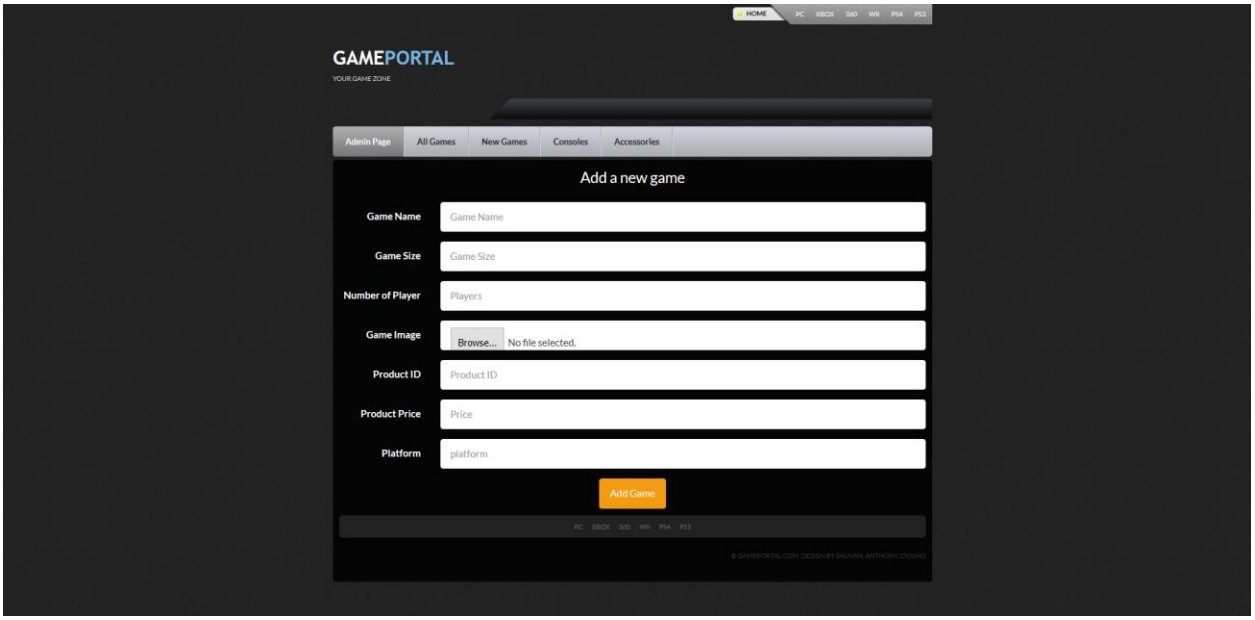
Customer confirm order page:



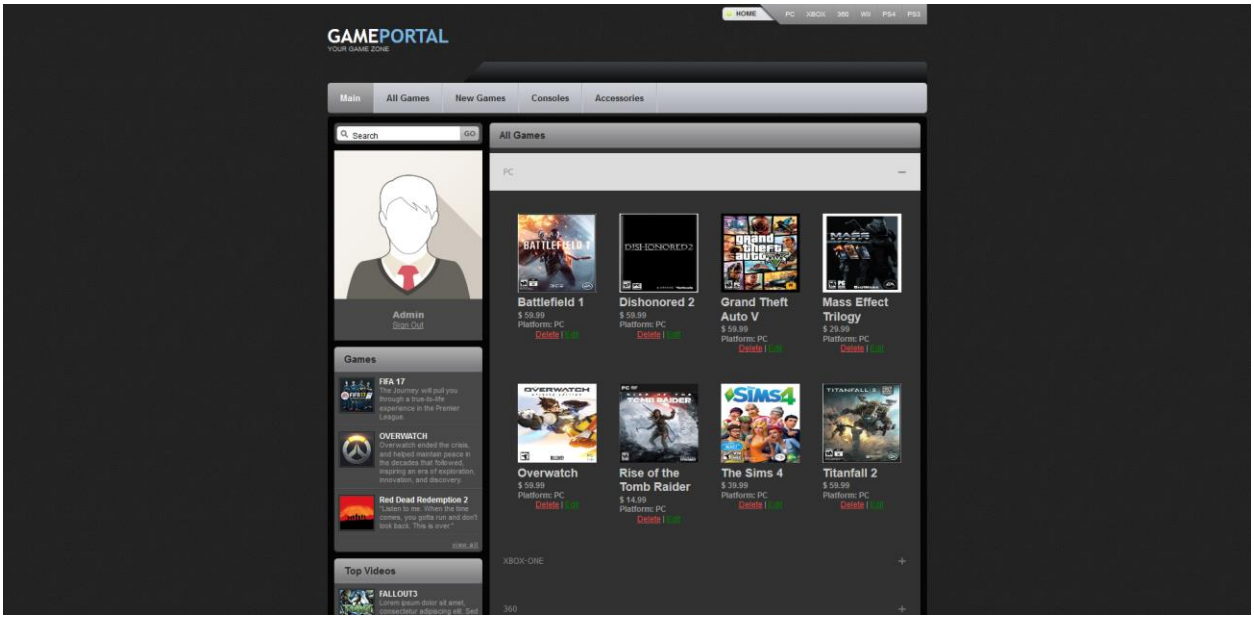
Admin homepage:



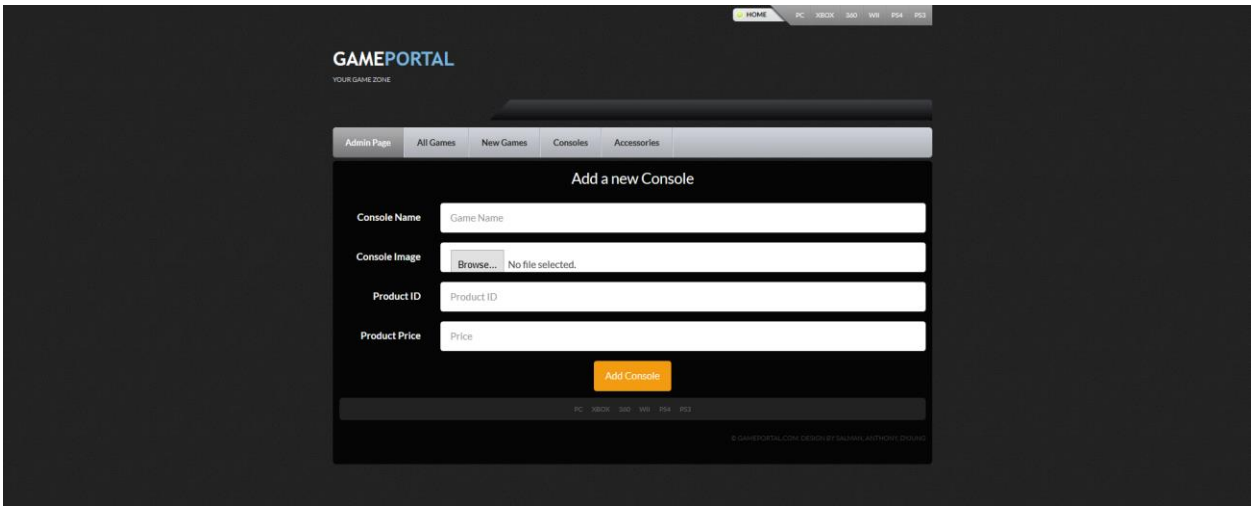
Add game page:



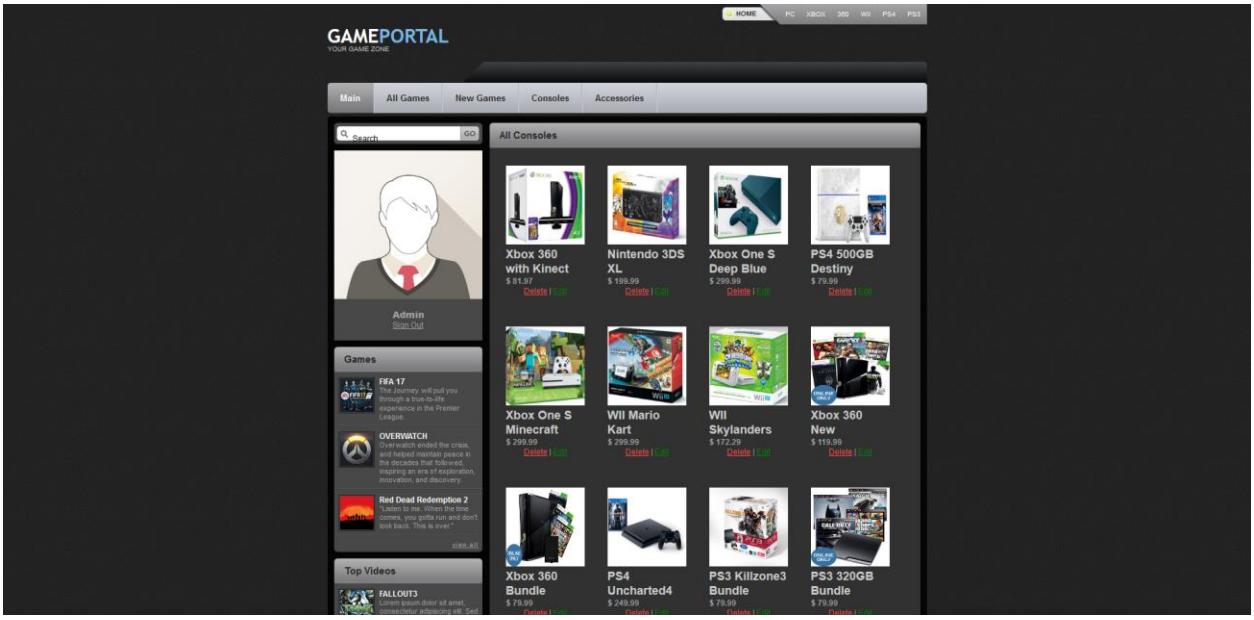
Edit/Delete games page:



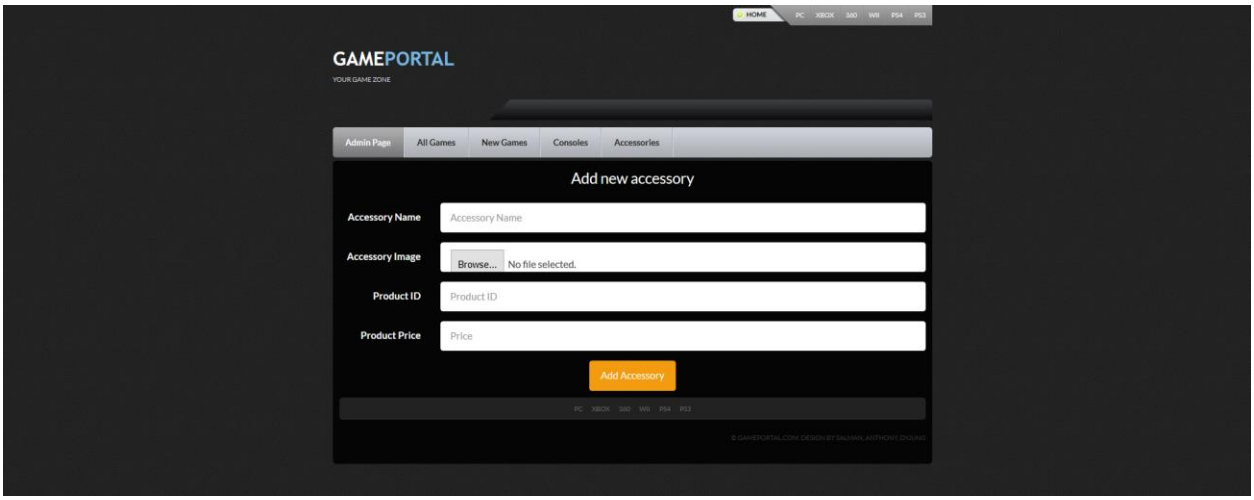
Add Console Page:



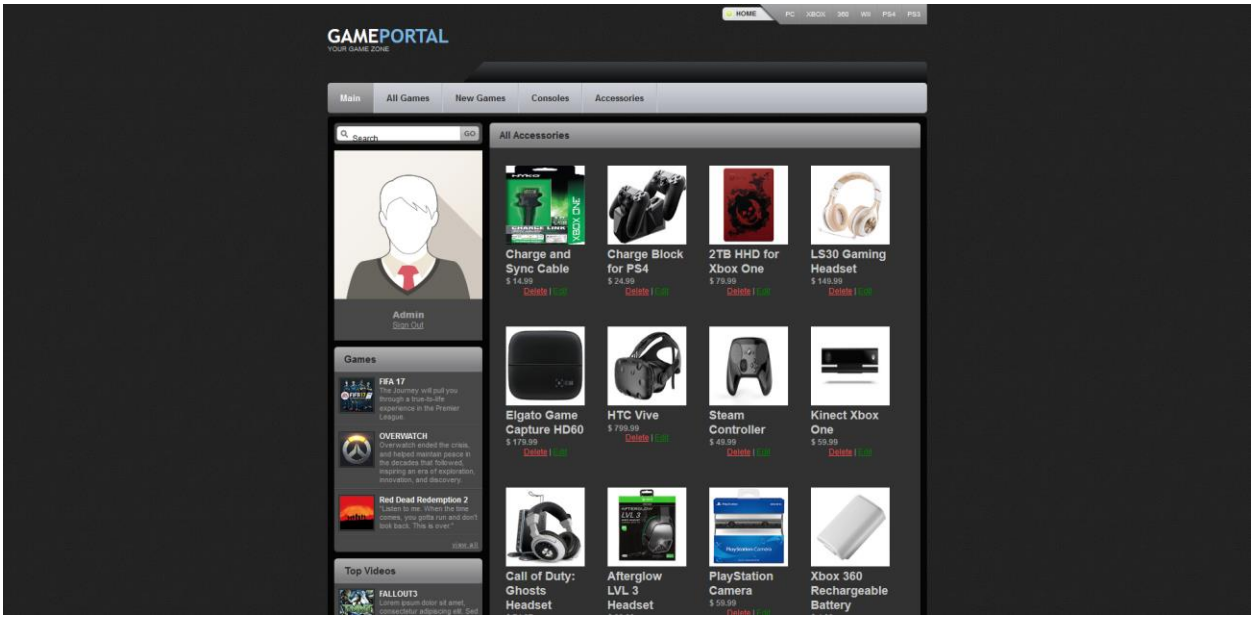
Edit/Delete consoles page:

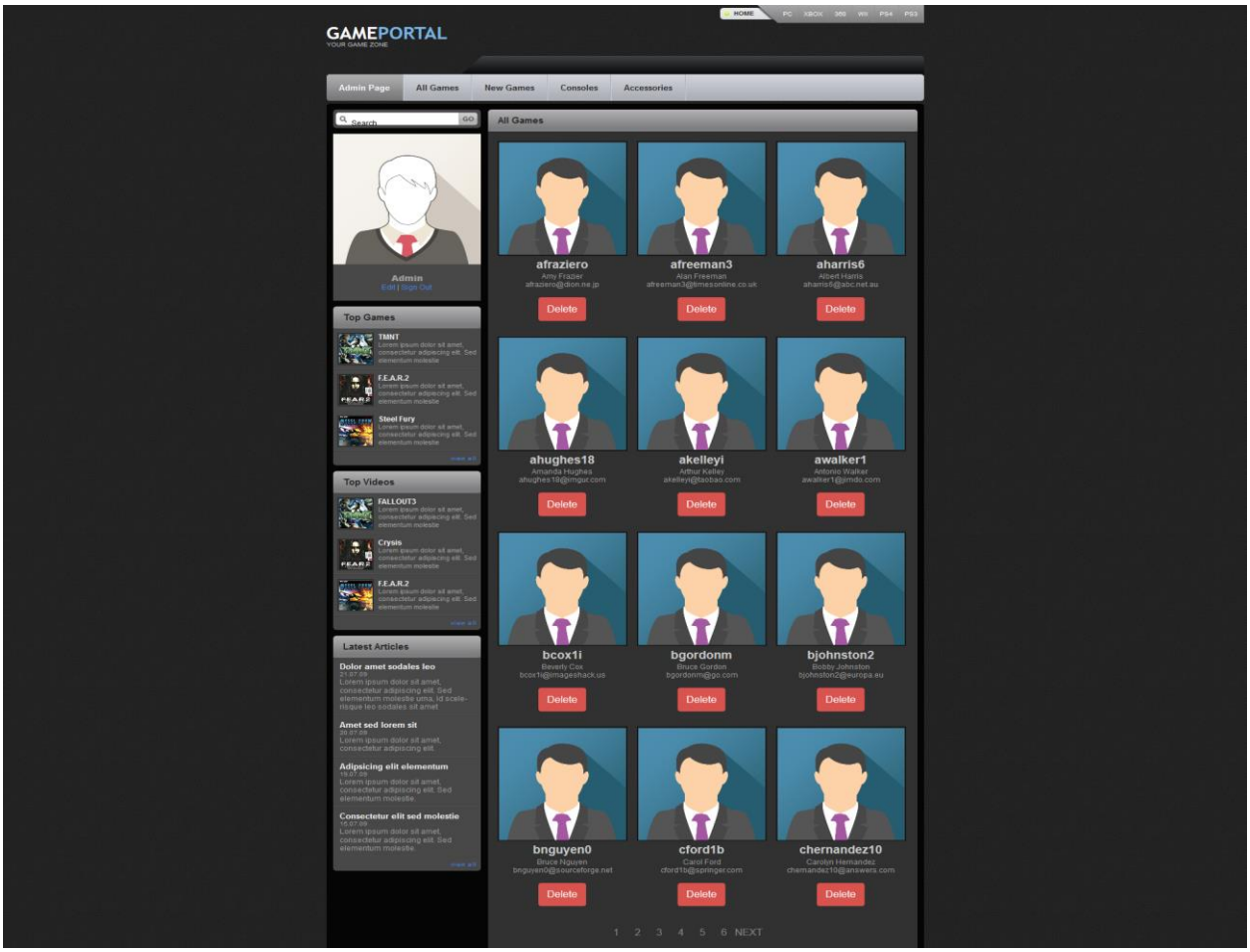


Add accessory page:



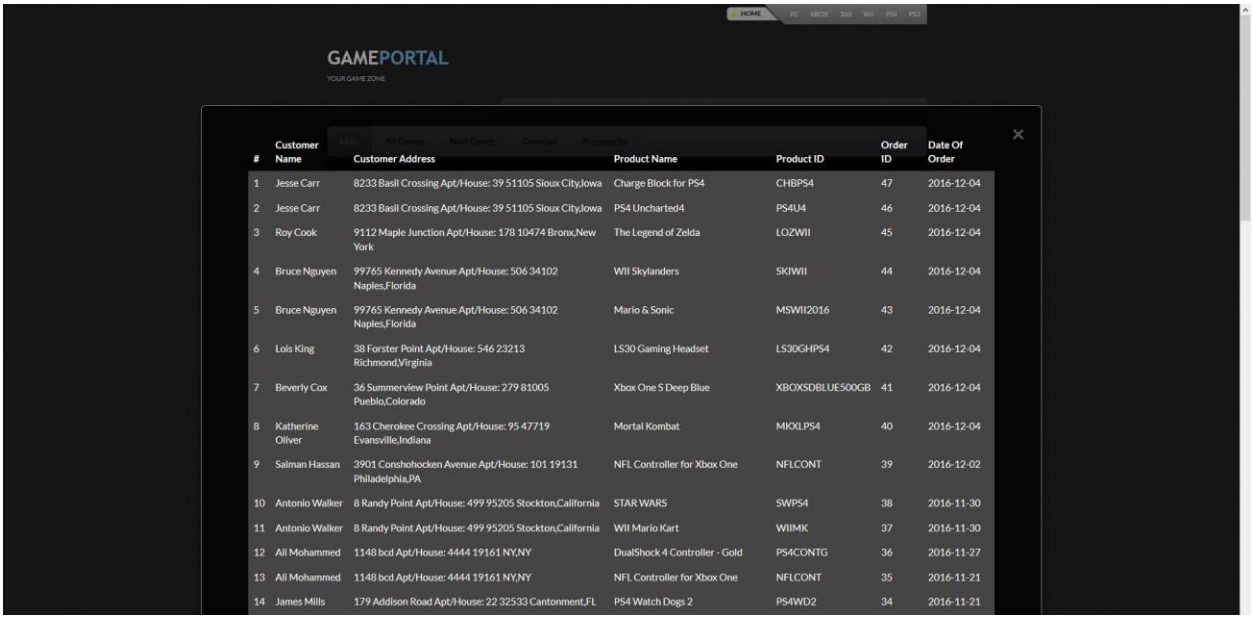
Edit/Delete accessories page:





Delete customers accounts page:

Customers order report for admin user:



#	Customer Name	Customer Address	Product Name	Product ID	Order ID	Date Of Order
1	Jesse Carr	8233 Basil Crossing Apt/House: 39 51105 Sioux City,Iowa	Charge Block for PS4	CHBPS4	47	2016-12-04
2	Jesse Carr	8233 Basil Crossing Apt/House: 39 51105 Sioux City,Iowa	PS4 Uncharted4	PS4U4	46	2016-12-04
3	Roy Cook	9112 Maple Junction Apt/House: 178 10474 Bronx,New York	The Legend of Zelda	LOZWII	45	2016-12-04
4	Bruce Nguyen	99765 Kennedy Avenue Apt/House: 506 34102 Naples,Florida	WII Skylanders	SKIWII	44	2016-12-04
5	Bruce Nguyen	99765 Kennedy Avenue Apt/House: 506 34102 Naples,Florida	Mario & Sonic	MSWII2016	43	2016-12-04
6	Lois King	38 Forster Point Apt/House: 546 23213 Richmond,Virginia	LS30 Gaming Headset	LS30GHPS4	42	2016-12-04
7	Beverly Cox	36 Summerview Point Apt/House: 279 81005 Pueblo,Colorado	Xbox One S Deep Blue	XBOXSDBLUE500GB	41	2016-12-04
8	Katherine Oliver	163 Cherokee Crossing Apt/House: 95 47719 Evansville,Indiana	Mortal Kombat	MKXLPS4	40	2016-12-04
9	Salman Hassan	3901 Conshohocken Avenue Apt/House: 101 19131 Philadelphia,PA	NFL Controller for Xbox One	NFLCONT	39	2016-12-02
10	Antonio Walker	8 Randy Point Apt/House: 499 95205 Stockton,California	STAR WARS	SWPS4	38	2016-11-30
11	Antonio Walker	8 Randy Point Apt/House: 499 95205 Stockton,California	WII Mario Kart	WIIMK	37	2016-11-30
12	Ali Mohammed	1148 bcd Apt/House: 4444 19161 NY,NY	DualShock 4 Controller - Gold	PS4CONTG	36	2016-11-27
13	Ali Mohammed	1148 bcd Apt/House: 4444 19161 NY,NY	NFL Controller for Xbox One	NFLCONT	35	2016-11-21
14	James Mills	179 Addison Road Apt/House: 22 32533 Cantonment,FL	PS4 Watch Dogs 2	PS4WD2	34	2016-11-21

Constraint is used to define rules to allow or restrict what values can be stored in columns. The purpose of inducing constraints is to enforce the integrity of a database. For constraints, we use different constraints to create our tables and foreign keys too.This is an example of how we created the tables:

```
CREATE TABLE `accessory` (
  `accessory_name` varchar(100) NOT NULL,
  `image_name` varchar(100) NOT NULL,
  `image` longblob NOT NULL,
  `product_id` varchar(100) NOT NULL,
  `accessory_id` int(11) NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=latin1;
```

Other constraints we have implemented for foreign keys as the following:

```
--
-- Constraints for table `accessory`
--
ALTER TABLE `accessory`
  ADD CONSTRAINT `accessory_ibfk_1` FOREIGN KEY (`product_id`) REFERENCES `product` (`product_id`) ON DELETE CASCADE ON UPDATE CASCADE;
--
-- Constraints for table `console`
--
ALTER TABLE `console`
  ADD CONSTRAINT `console_ibfk_1` FOREIGN KEY (`product_id`) REFERENCES `product` (`product_id`) ON DELETE CASCADE ON UPDATE CASCADE;
--
```

```
-- Constraints for table `game`
--
ALTER TABLE `game`
  ADD CONSTRAINT `game_ibfk_1` FOREIGN KEY (`product_id`) REFERENCES `product` (`product_id`) ON DELETE CASCADE ON UPDATE CASCADE;
--
-- Constraints for table `items_ordered`
--
ALTER TABLE `items_ordered`
  ADD CONSTRAINT `items_ordered_ibfk_3` FOREIGN KEY (`product_id`) REFERENCES `product` (`product_id`),
  ADD CONSTRAINT `items_ordered_ibfk_4` FOREIGN KEY (`order_id`) REFERENCES `orders` (`order_id`);
--
-- Constraints for table `orders`
--
ALTER TABLE `orders`
  ADD CONSTRAINT `orders_ibfk_1` FOREIGN KEY (`customer_username`) REFERENCES `customer` (`customer_username`);
```

Ensure integrity it has been one of our main priority in our project. Data integrity is a fundamental component of information security. So, we kept the information of our customers private, only the customers have the ability to edit and see their informations. As a part of integrity inside the website for instance, customers cannot submit their information at signup form unless he/she filled up the complete form with a security question. Also, when the customer order a product will be asked to confirm his/her information (shipping address, last four digits of his/her bank account) before confirm the order.

For error checking we use a javascript to check for the data entered from the users when they create a new account. For example, if the user try to enter incorrect information when he/she register for a new account it will show an error message like email not correct, password is invalid or need 16 digits only for bank account, picture below illustrates the error messages type