

# Final Report

## Group 1

### Team Member Contributions:

Tyler Burkhart - Database Management

Caitlin Jones - Database Management

Logan Shelby - Web Application Development

Bryan Willis - Web Application Development

We worked in modules for this project. The first module is the database itself and the second module is the website. Tyler and Caitlin took charge of creating, populating, and modifying the database as necessary. Logan and Bryan were proactive in creating the various PHP documents for the website and uploading them to WebHost. If the website module team encountered an error that could only be solved by modifying the database, the database team would evaluate and make the change. Anytime a change was needed in the database, the website development team was informed in case they needed to make changes in the website or would prefer the change not be made.

### Database Design & Assumptions:

Our database consists of 6 tables: Keywords, Books, Orders, Reviews, Users, and Authors. We used [000WebHost](#) to host our website and database. Our primary keys are ISBN and UserID. As you can see from the database schema section, the ISBN and UserID are also foreign keys in several tables. We assumed that all data that would be inserted fits in each corresponding column, for instance a name is not longer than 256 characters. We also assumed that author names would only be referenced by last name and wouldn't be multivalued. Shipping address and billing addresses are commonly the same, but we assume that they could be different.

### Schema

Table: Author		
Column	Type	Key
Author	varchar	No
ISBN	varchar	Foreign

Table: Review		
Column	Type	Key
Comment	text	no
Score	int	no
ISBN	varchar	foreign
UserID	int	foreign

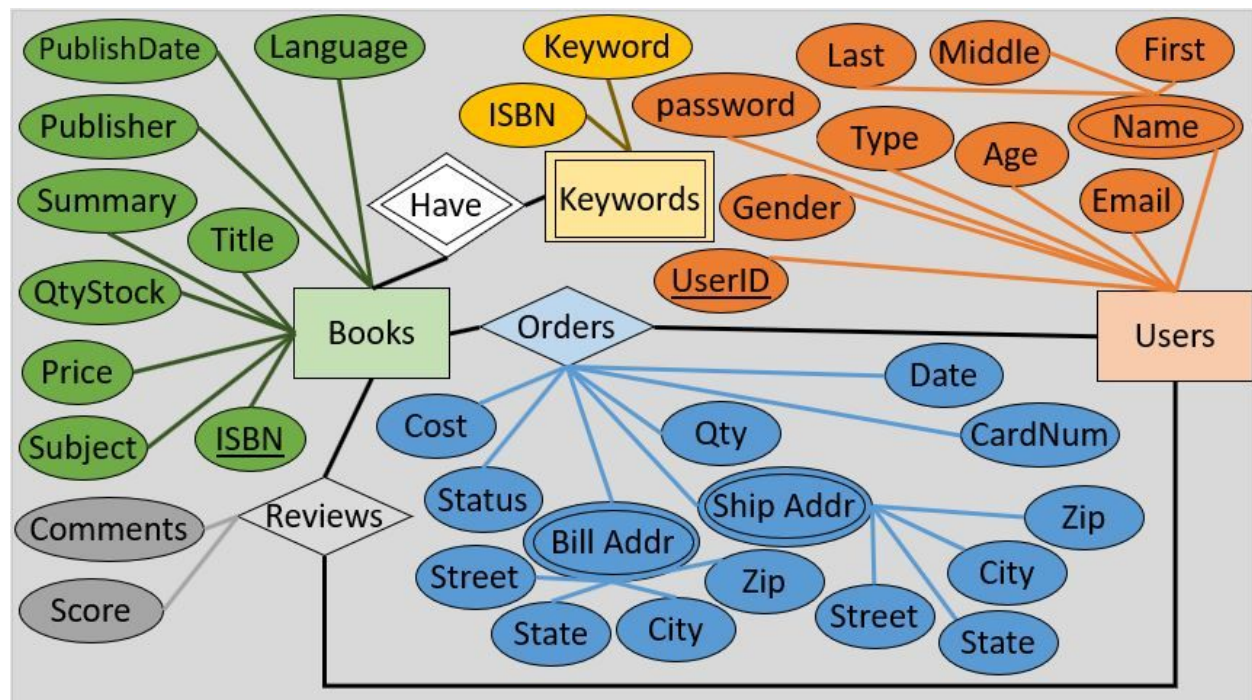
Table: Books		
Column	Type	Key
PublishDate	Year	No
Publisher	varchar	No
Language	varchar	No
QtyStock	int	No
Price	decimal	No
Subject	varchar	No
ISBN	varchar	Primary
Title	varchar	No
Summary	varchar	No

Table: Keywords		
Column	Type	Key
Keyword	varchar	No
ISBN	varchar	Foreign

Table: User		
Column	Type	Key
Type	varchar	no
Gender	char	no
Password	varchar	no
FirstName	varchar	no
MiddleName	varchar	no
LastName	varchar	no
Email	varchar	no
Age	int	no
UserID	int	primary

Table: Orders		
Column	Type	Key
Date	datetime	no
Qty	int	no
Cost	decimal	no
Status	varchar	no
CardNum	bigint	no
BillStr	varchar	no
BillCity	varchar	no
BillState	varchar	no
BillZIP	int	no
ShipStr	varchar	no
ShipCity	varchar	no
ShipState	varchar	no
ShipZIP	int	no
Email	varchar	no
ISBN	varchar	foreign
UserID	int	foreign

## ER Diagram



## Normal Forms

All relations are in 3NF because they meet the qualifications of 2NF and all the attributes are determined only by the candidate key.

## Testing

In order to test our website, we did repetition testing. We would code a feature, then test whether it performed the way we expected. If it didn't we tweaked it until it did, then move on to the next feature.

## Experiences and Challenges

We faced a few challenges while using WebHost. We found that it wasn't very reliable, but for being both free to use and everyone had access to it, it was a decent resource. In the future, if we had to do this project over again, we would have still used an online resource like WebHost, but perhaps a more reliable one. The phpMyAdmin resource it contained made making and modifying the database quick and easy. We were able to modify the database through text boxes and drop down menus, as well as being able to write queries. It also has a convenient import and export button in case we had to restore the database from a SQL dump.

Since none of us knew PHP, learning about what we needed to implement a full website was difficult. When you have to load all of the PHP files to WebHost in order to test them, time becomes an issue that has to be strictly paired with patience.

## Website Functionalities

All of the minimal functionalities have been met for this project. A report with screenshots is provided below showing completion of each required functionality. We have also managed to get 2 bonus functionalities completed, one being the wish list (same function as a shopping cart) and being hosted on a server for public use (host is 000webhost). A clickable link is [here](https://dabestdb.000webhostapp.com/405G/indexdb.php) Or copy this into your web browser: <https://dabestdb.000webhostapp.com/405G/indexdb.php>

### 1. Allowing a user to register



Website side of showing successful registry

Options

	Type	Gender	Password	FirstName	MiddleName	LastName	Email	Age	UserID
	Manager	F	password	Caitlin	NULL	Jones	crgo224@uky.edu	22	1
	Manager	F	password	Dani	NULL	Masters	dani.masters@gmail.com	8	2
	Customer	M	password	Danny	NULL	Fenton	danny.fenton@gmail.com	15	3
	Customer	M	password	Artha	NULL	Penn	dragon.boosters@gmail.com	20	4
	Customer	M	password	Ed	NULL	Culdesac	ed.culdesac@yahoo.com	14	5
	Customer	M	password	Word	NULL	Pain	Evil.Dude@gmail.com	50	6
	Customer	M	password	Joe	NULL	Smith	joe.smith@yahoo.com	51	7
	Customer	M	password	John	NULL	Masters	john.mastor@gmail.com	42	8
	Customer	M	password	Naruto	NULL	Uzumaki	naruto.uzumaki@gmail.com	22	9
	Customer	F	password	Sakura	NULL	Haruno	sakura.haruno@gmail.com	22	10
	Customer	F	password	Sam	NULL	Lock	Sam.Lock@gmail.com	32	11
	Customer	F	password	Sarah	NULL	Yoni	sarah.yoni@gmail.com	19	12
	Customer	M	password	Sasuke	NULL	Uchiha	sasuke.uchiha@gmail.com	22	13
	Customer	M	password	Timmy	NULL	Turner	timmy.turner@gmail.com	10	14
	Customer	F	password	Trixy	NULL	Tang	trixy.tang@gmail.com	11	15
	Manager	M	1234	Bryan	A	Willis	bryanwillis@gmail.com	23	20
	Customer	M	1234	Charlie	M	Flaugh	Charlie@gmail	23	24
	Manager	m	1234	bryan	a	willis	bryan@gmail.com	22	25
	Manager	m	1234	bryan	a	willis	bryan@gmail.com	22	26
	Manager	m	1234	bryan	a	will	bryan@email	33	27

Check all
 With selected
 Edit
 Copy
 Delete
 Export

Before registering user logan shelby (database end)

	Type	Gender	Password	FirstName	MiddleName	LastName	Email	Age	UserID
	Manager	F	password	Caitlin	NULL	Jones	crgo224@uky.edu	22	1
	Manager	F	password	Dani	NULL	Masters	dani.masters@gmail.com	8	2
	Customer	M	password	Danny	NULL	Fenton	danny.fenton@gmail.com	15	3
	Customer	M	password	Artha	NULL	Penn	dragon.boosters@gmail.com	20	4
	Customer	M	password	Ed	NULL	Culdesac	ed.culdesac@yahoo.com	14	5
	Customer	M	password	Word	NULL	Pain	Evil.Dude@gmail.com	50	6
	Customer	M	password	Joe	NULL	Smith	joe.smith@yahoo.com	51	7
	Customer	M	password	John	NULL	Masters	john.mastor@gmail.com	42	8
	Customer	M	password	Naruto	NULL	Uzumaki	naruto.uzumaki@gmail.com	22	9
	Customer	F	password	Sakura	NULL	Haruno	sakura.haruno@gmail.com	22	10
	Customer	F	password	Sam	NULL	Lock	Sam.Lock@gmail.com	32	11
	Customer	F	password	Sarah	NULL	Yoni	sarah.yoni@gmail.com	19	12
	Customer	M	password	Sasuke	NULL	Uchiha	sasuke.uchiha@gmail.com	22	13
	Customer	M	password	Timmy	NULL	Turner	timmy.turner@gmail.com	10	14
	Customer	F	password	Trixy	NULL	Tang	trixy.tang@gmail.com	11	15
	Manager	M	1234	Bryan	A	Willis	bryanwillis@gmail.com	23	20
	Customer	M	1234	Charlie	M	Flaugh	Charlie@gmail	23	24
	Manager	m	1234	bryan	a	willis	bryan@gmail.com	22	25
	Manager	m	1234	bryan	a	willis	bryan@gmail.com	22	26
	Manager	m	1234	bryan	a	will	bryan@email	33	27
	Customer	M	cs405g	Logan	G	Shelby	logan.shelby@uky.edu	21	28

After registering user logan shelby (database end)

## 2. Allowing the assignment of users to managers on the website

1379484cuff

Manager Database

database-auth/DBAuth

DBAuthView File Manager

TallerSoftAssign Manager

Secure

https://dabends300webhostpage.com/1075G/AssignMan.php

First name: Caitlin	Middle name:	Last name: Jones	Type: Manager
First name: Dani	Middle name:	Last name: Masters	Type: Manager
First name: Danny	Middle name:	Last name: Fenton	Type: Customer
First name: Artha	Middle name:	Last name: Penn	Type: Customer
First name: Ed	Middle name:	Last name: Culdesac	Type: Customer
First name: Word	Middle name:	Last name: Pain	Type: Customer
First name: Joe	Middle name:	Last name: Smith	Type: Customer
First name: John	Middle name:	Last name: Masters	Type: Customer
First name: Naruto	Middle name:	Last name: Uzumaki	Type: Customer
First name: Sakura	Middle name:	Last name: Haruno	Type: Customer
First name: Sam	Middle name:	Last name: Lock	Type: Customer
First name: Sarah	Middle name:	Last name: Yoni	Type: Customer
First name: Sasuke	Middle name:	Last name: Uchiha	Type: Customer
First name: Timmy	Middle name:	Last name: Turner	Type: Customer
First name: Trixy	Middle name:	Last name: Tang	Type: Customer
First name: Bryan	Middle name: A	Last name: Willis	Type: Manager
First name: Charlie	Middle name: M	Last name: Flaugh	Type: Customer
First name: bryan	Middle name: a	Last name: willis	Type: Manager
First name: bryan	Middle name: a	Last name: willis	Type: Manager
First name: bryan	Middle name: a	Last name: will	Type: Manager
First name: Logan	Middle name: G	Last name: Shelby	Type: Customer

Customer | Manager

Return Home!

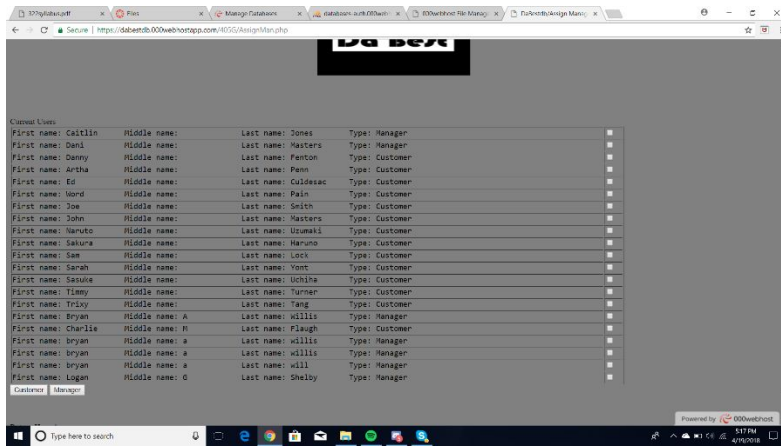
Type here to search

Powered by 999Webhost

5:17 PM 4/26/2018

Before assigning Logan Shelby as a manager (website end)





After assigning Logan Shelby as a manager (website end)

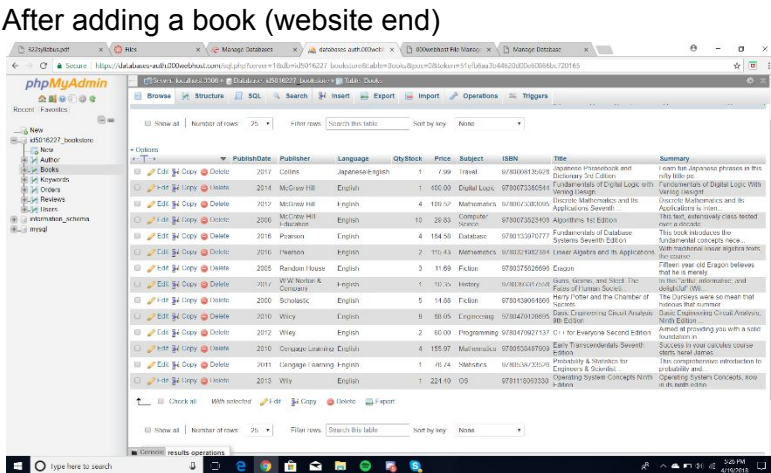
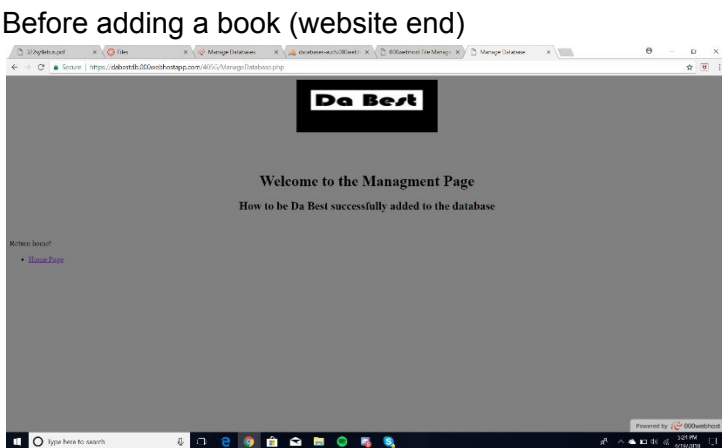
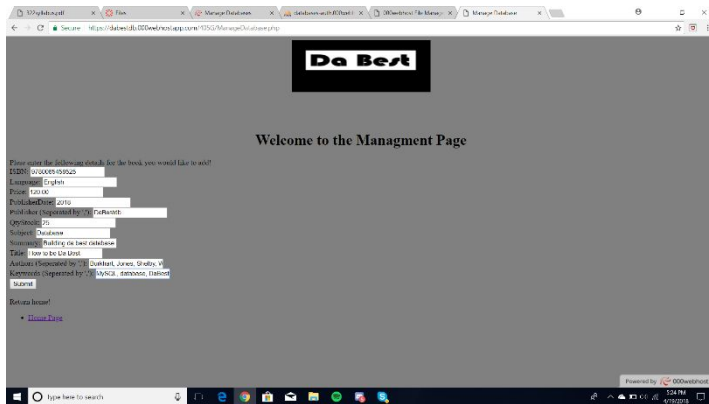
Type	Gender	Password	FirstName	MiddleName	LastName	Email	Age	UserID
Manager	F	password	Caitlin	NULL	Jones	cnoj224@uky.edu	22	1
Manager	F	password	Dani	NULL	Masters	dani.masters@gmail.com	8	2
Customer	M	password	Danny	NULL	Fenton	danny.fenton@gmail.com	15	3
Customer	M	password	Artha	NULL	Penn	dragon.booster@gmail.com	20	4
Customer	M	password	Ed	NULL	Cuidesac	ed.cuidesac@yahoo.com	14	5
Customer	M	password	Word	NULL	Pain	Evil.Dude@gmail.com	50	6
Customer	M	password	Joe	NULL	Smith	joe.smith@yahoo.com	51	7
Customer	M	password	John	NULL	Masters	john.master@gmail.com	42	8
Customer	M	password	Naruto	NULL	Uzumaki	naruto.uzumaki@gmail.com	22	9
Customer	F	password	Sakura	NULL	Haruno	sakura.haruno@gmail.com	22	10
Customer	F	password	Sam	NULL	Lock	Sam.Lock@gmail.com	32	11
Customer	F	password	Sarah	NULL	Yont	sarah.yont@gmail.com	19	12
Customer	M	password	Sasuke	NULL	Uchiha	sasuke.uchiha@gmail.com	22	13
Customer	M	password	Timmy	NULL	Turner	timmy.turner@gmail.com	10	14
Customer	F	password	Trixy	NULL	Tang	trixy.fang@gmail.com	11	15
Manager	M	1234	Bryan	A	Willis	bryanwillis@gmail.com	23	20
Manager	M	1234	Charlie	M	Flaugh	Charlie@gmail.com	23	24
Manager	m	1234	bryan	a	willis	bryan@gmail.com	22	25
Manager	m	1234	bryan	a	willis	bryan@gmail.com	22	26
Manager	m	1234	bryan	a	will	bryan@gmail.com	33	27
Customer	M	cs405g	Logan	G	Shelby	logan.shelby@uky.edu	21	28

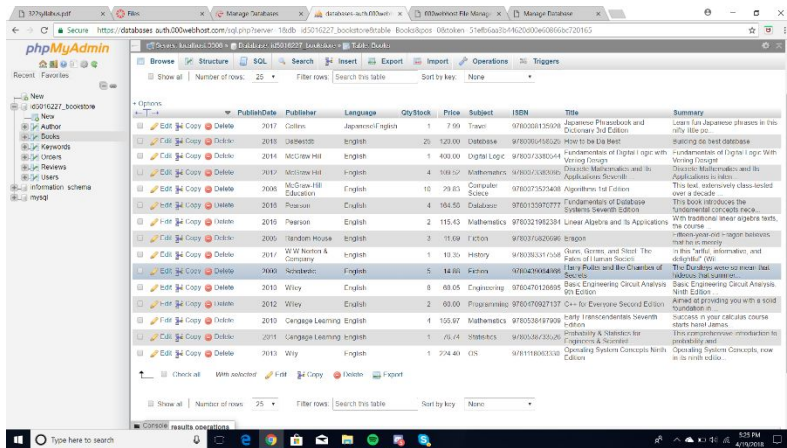
Before the assignment of Logan Shelby as a manager (database end)

Type	Gender	Password	FirstName	MiddleName	LastName	Email	Age	UserID
Manager	F	password	Caitlin	NULL	Jones	cnoj224@uky.edu	22	1
Manager	F	password	Dani	NULL	Masters	dani.masters@gmail.com	8	2
Customer	M	password	Danny	NULL	Fenton	danny.fenton@gmail.com	15	3
Customer	M	password	Artha	NULL	Penn	dragon.booster@gmail.com	20	4
Customer	M	password	Ed	NULL	Cuidesac	ed.cuidesac@yahoo.com	14	5
Customer	M	password	Word	NULL	Pain	Evil.Dude@gmail.com	50	6
Customer	M	password	Joe	NULL	Smith	joe.smith@yahoo.com	51	7
Customer	M	password	John	NULL	Masters	john.master@gmail.com	42	8
Customer	M	password	Naruto	NULL	Uzumaki	naruto.uzumaki@gmail.com	22	9
Customer	F	password	Sakura	NULL	Haruno	sakura.haruno@gmail.com	22	10
Customer	F	password	Sam	NULL	Lock	Sam.Lock@gmail.com	32	11
Customer	F	password	Sarah	NULL	Yont	sarah.yont@gmail.com	19	12
Customer	M	password	Sasuke	NULL	Uchiha	sasuke.uchiha@gmail.com	22	13
Customer	M	password	Timmy	NULL	Turner	timmy.turner@gmail.com	10	14
Customer	F	password	Trixy	NULL	Tang	trixy.fang@gmail.com	11	15
Manager	M	1234	Bryan	A	Willis	bryanwillis@gmail.com	23	20
Manager	M	1234	Charlie	M	Flaugh	Charlie@gmail.com	23	24
Manager	m	1234	bryan	a	willis	bryan@gmail.com	22	25
Manager	m	1234	bryan	a	willis	bryan@gmail.com	22	26
Manager	m	1234	bryan	a	will	bryan@gmail.com	33	27
Customer	M	cs405g	Logan	G	Shelby	logan.shelby@uky.edu	21	28

After the assignment of Logan Shelby as a manager (database end)

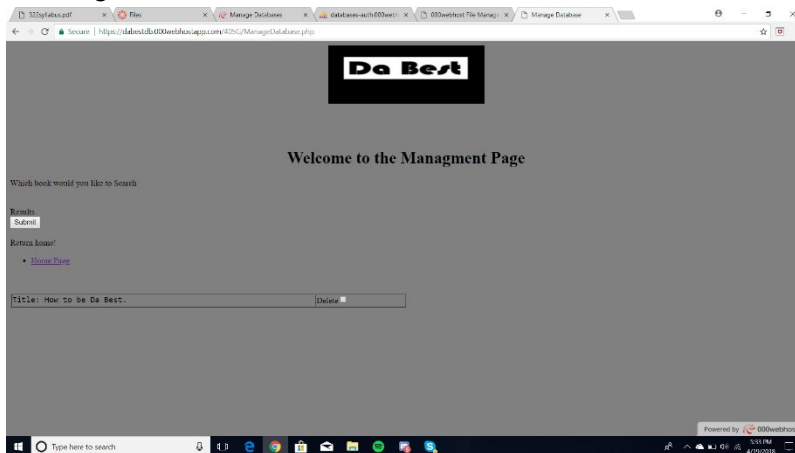
3. Allowing a manager to add, update, and delete books; categorize books into one or more subjects; and add, update, and delete book keywords.



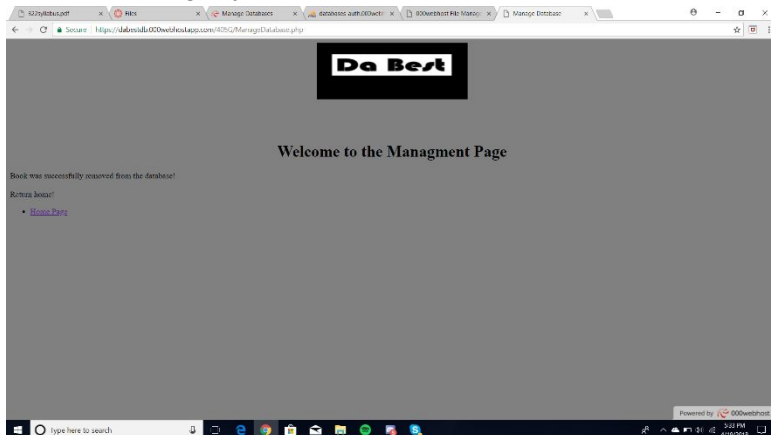


After adding a book (database end)

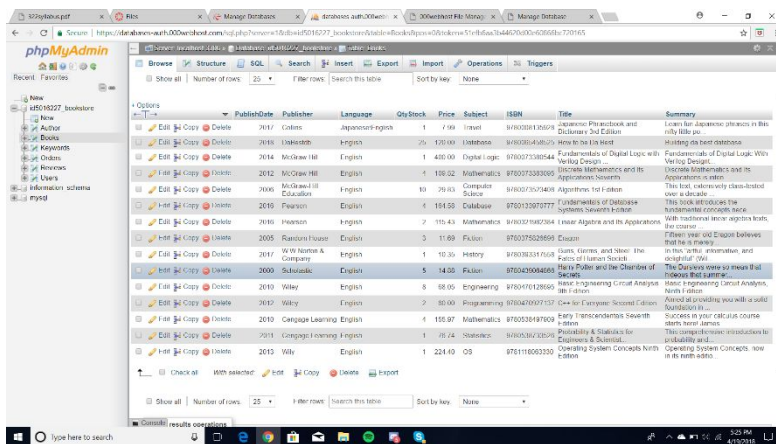
Deleting a book:



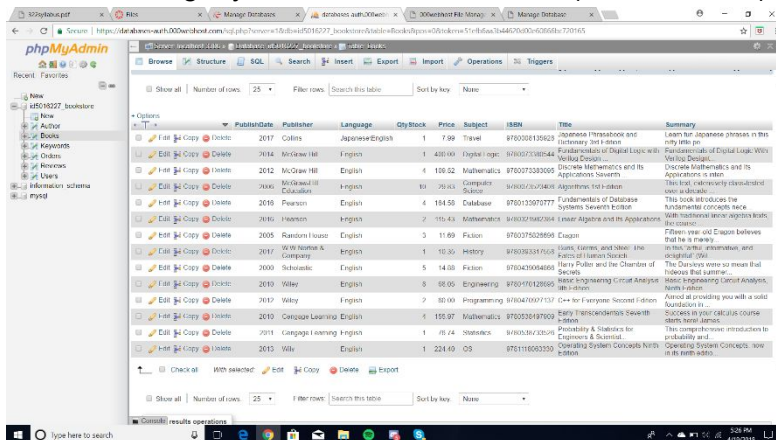
Before deleting my added book from above (website end)



After deleting my added book from above (website end)

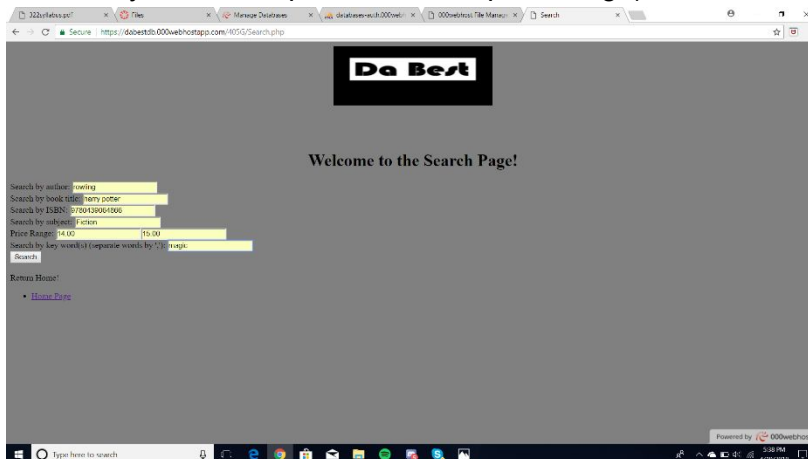


Before deleting my added book from above (database end)



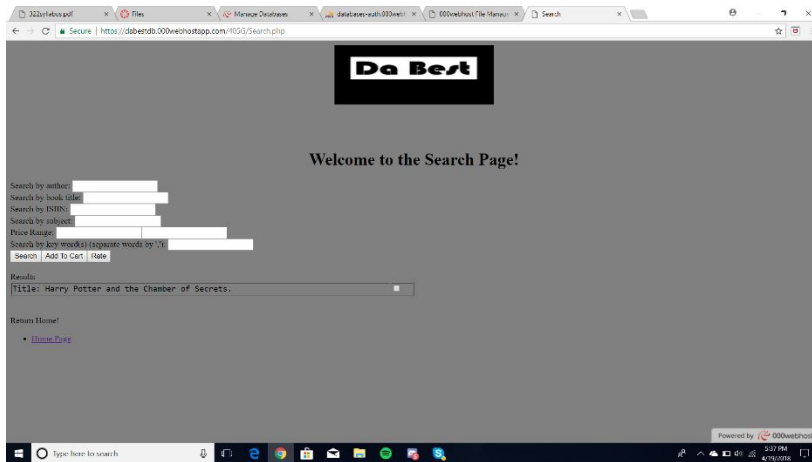
After deleting my added book from above (database end)

4. Allowing a user to find books using faceted search (search by title, author, subject, keyword, date published, and price range)



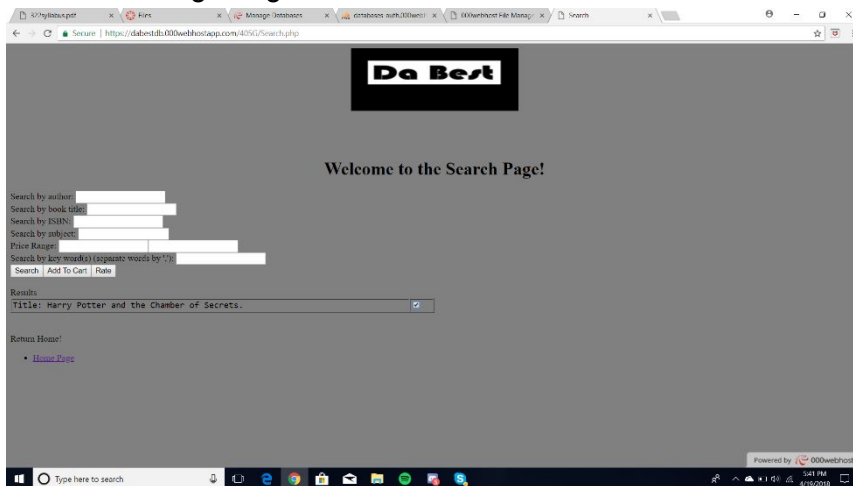
Before search for the book Harry Potter



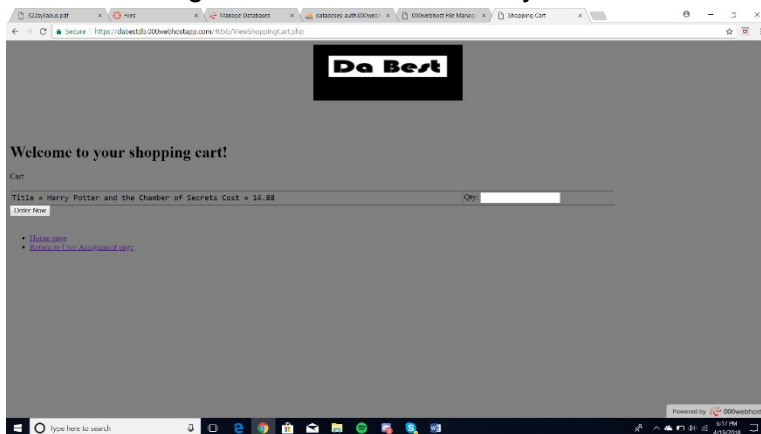


After search for the book Harry Potter

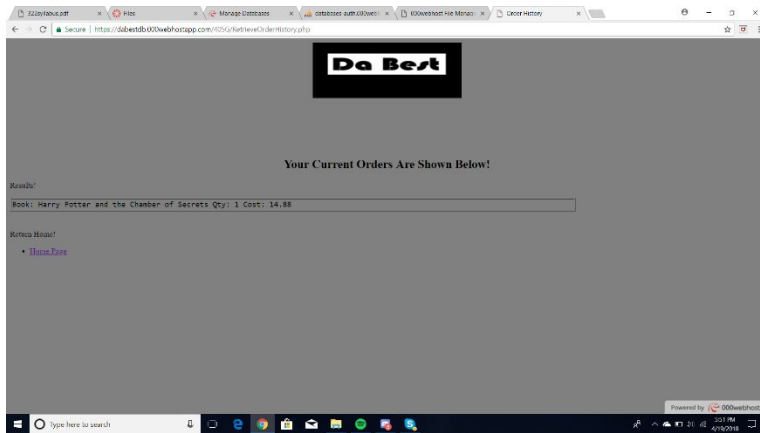
## 5. Allowing a registered user to order books



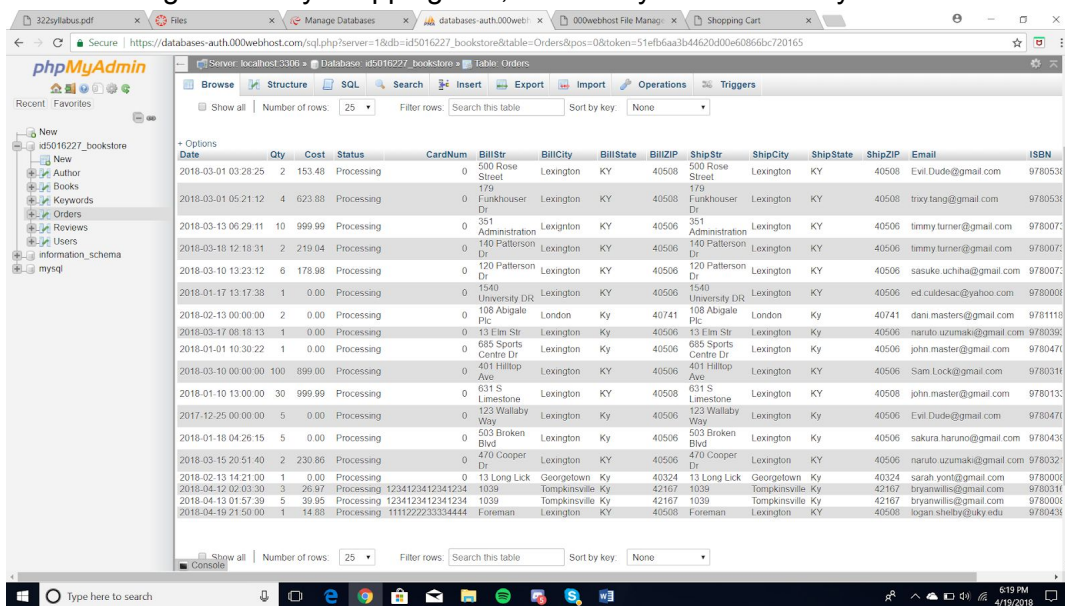
Before ordering, I had to search for Harry Potter



Before ordering the book, it was put in my shopping cart (BONUS: Also a wish-list functionality)

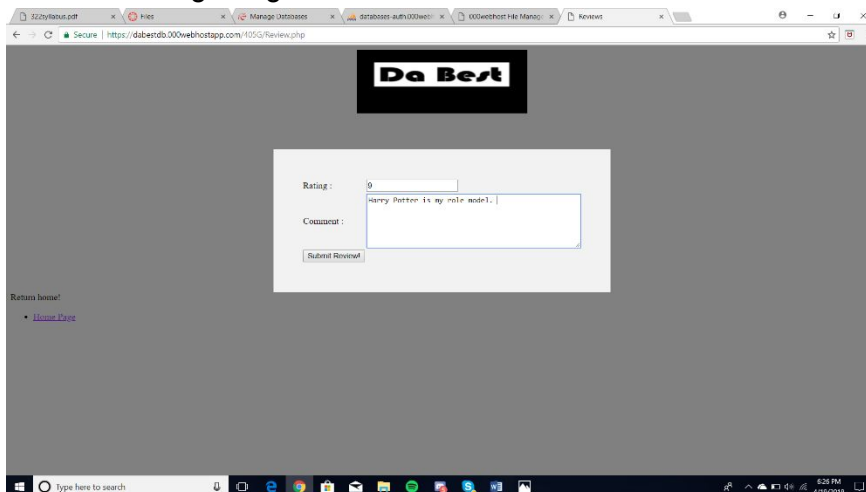


After ordering it from my shopping cart, here is my order for Harry Potter

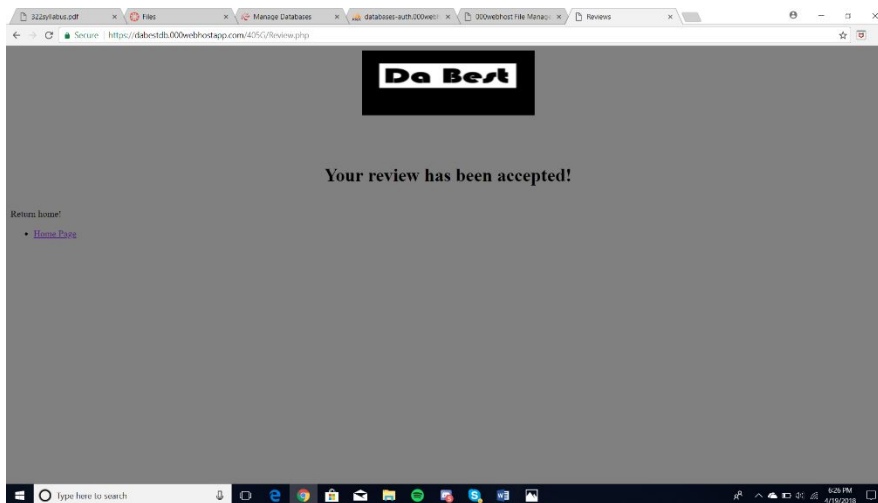


In the database, we see that the order is successfully shown in the back-end!

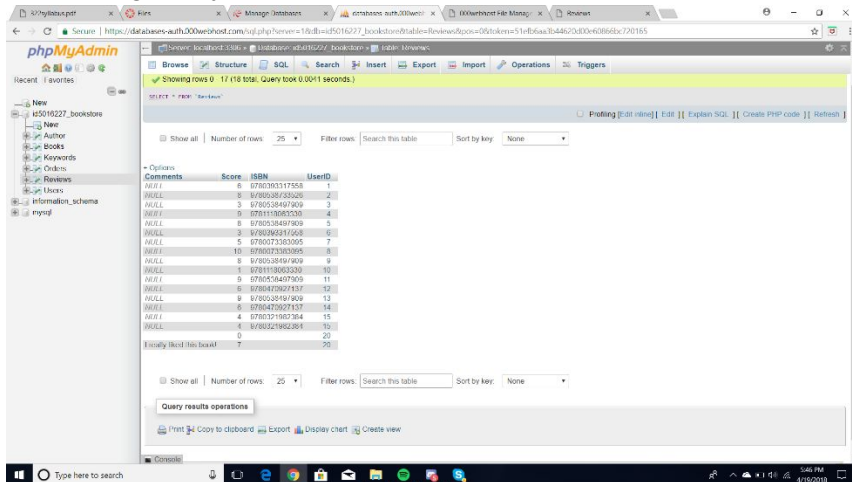
## 6. Allowing a registered user to rate and comment on books



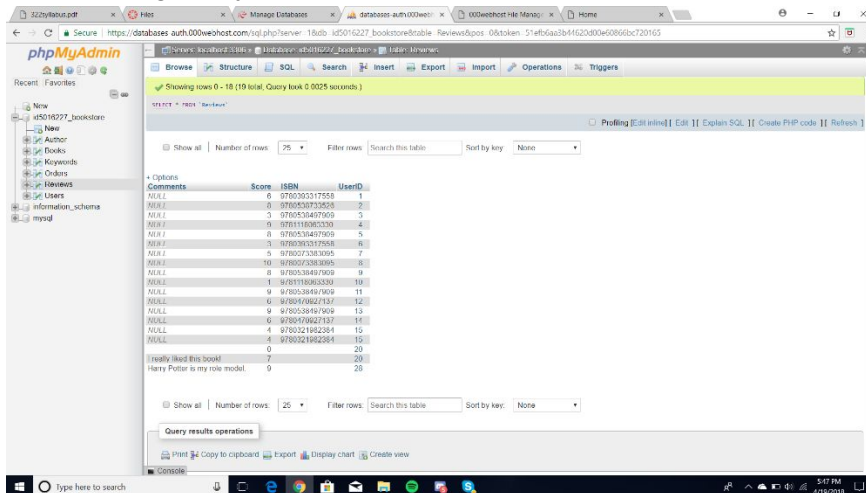
Before rating Harry Potter (website end)



After rating Harry Potter (website end)

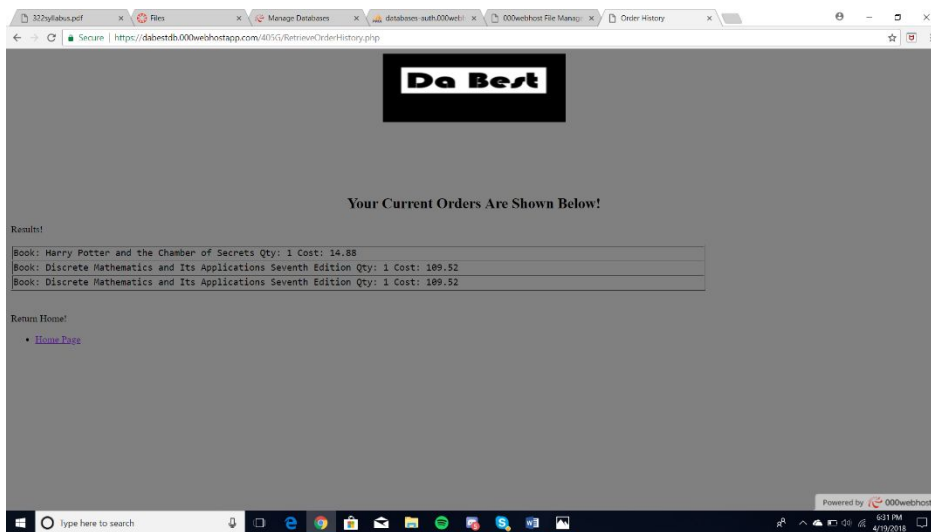


Before rating Harry Potter (database end)



After rating Harry Potter (database end)

7. Allowing a registered user to view their order history (this is mainly shown in 5)



Ordered a few more books (website end)

32zybilus.pdf | Files | Manage Databases | databases-a00wevt... | 00webhost File Manager | Order History

phpMyAdmin

Server: localhost:3306 | Database: a5016227\_bookstore | Table: Orders

Browse | Structure | SQL | Search | Insert | Export | Import | Operations | Triggers

Recent Favorites

New

- a5016227\_bookstore
  - New
  - Author
  - Books
  - Keywords
  - Orders
  - Reviews
  - Users
  - information\_schema
  - mysql

Options

Date	Qty	Cost	Status	CardNum	BillStr	BillCity	BillState	BillZIP	ShipStr	ShipCity	ShipState	ShipZIP	Email	ISBN
2018-03-01 03:28:25	2	153.48	Processing	0	500 Rose Street	Lexington	KY	40508	500 Rose Street	Lexington	KY	40508	Evil.Dude@gmail.com	9780305
2018-03-01 05:21:12	4	623.88	Processing	0	Funkhouser Dr	Lexington	KY	40508	Funkhouser Dr	Lexington	KY	40508	trov.tang@gmail.com	9780305
2018-03-13 06:29:11	10	969.99	Processing	351	Administration	Lexington	KY	40506	Administration	Lexington	KY	40506	timmy.turner@gmail.com	9780807
2018-03-16 12:18:31	2	219.04	Processing	0	140 Patterson Dr	Lexington	KY	40506	140 Patterson Dr	Lexington	KY	40506	timmy.turner@gmail.com	9780807
2018-03-18 10:13:12	6	178.98	Processing	0	120 Patterson Dr	Lexington	KY	40506	120 Patterson Dr	Lexington	KY	40506	sasuke.uchiha@gmail.com	9780807
2018-03-17 13:17:38	1	0.00	Processing	0	1540 University Dr	Lexington	KY	40506	1540 University Dr	Lexington	KY	40506	ed.culshaw@yahoo.com	9780800
2018-02-13 00:00:00	2	0.00	Processing	0	108 Abigale Pl	London	KY	40741	108 Abigale Pl	London	KY	40741	dani.masters@gmail.com	97811111
2018-03-17 08:18:13	1	0.00	Processing	0	13 Elm Str	Lexington	KY	40506	13 Elm Str	Lexington	KY	40506	naruto.usazaki@gmail.com	9780305
2018-01-01 10:30:22	1	0.00	Processing	0	685 Sports Centre Dr	Lexington	KY	40506	685 Sports Centre Dr	Lexington	KY	40506	johm.made@gmail.com	9780474
2018-03-10 00:00:00	100	899.00	Processing	0	401 Hilltop Ave	Lexington	KY	40506	401 Hilltop Ave	Lexington	KY	40506	Sam Lockie@gmail.com	9780218
2018-01-10 13:00:00	30	999.99	Processing	0	611 S Limestone	Lexington	KY	40508	611 S Limestone	Lexington	KY	40508	johm.master@gmail.com	9780103
2017-12-25 00:00:00	5	0.00	Processing	0	123 Wallaby Way	Lexington	KY	40506	123 Wallaby Way	Lexington	KY	40506	Evil.Dude@gmail.com	9780474
2018-01-18 04:26:15	5	0.00	Processing	0	503 Broken Blvd	Lexington	KY	40506	503 Broken Blvd	Lexington	KY	40506	sakura.hananoi@gmail.com	9780434
2018-03-15 20:51:40	2	230.86	Processing	0	470 Cooper Dr	Lexington	KY	40506	470 Cooper Dr	Lexington	KY	40506	naruto.usazaki@gmail.com	9780322
2018-02-13 14:21:00	1	0.00	Processing	0	13 Long Lock	Georgetown	KY	40324	13 Long Lock	Georgetown	KY	40324	sarah.vontell@gmail.com	9780005
2018-04-12 02:30:33	3	26.97	Processing	1234123412341234	1039 Tompkinsville	Ky	42167	1039 Tompkinsville	1039 Tompkinsville	Ky	42167	biyanneles@gmail.com	9780330	
2018-04-10 01:57:39	5	39.65	Processing	1234123412341234	1039 Tompkinsville	Ky	42167	1039 Tompkinsville	1039 Tompkinsville	Ky	42167	biyanneles@gmail.com	9780330	
2018-04-19 21:50:00	1	14.88	Processing	1111122223333444	Foreman Lexington	KY	40508	Foreman Lexington	Foreman Lexington	KY	40508	logan.shelby@uky.edu	9780807	
2018-04-19 22:30:26	1	109.52	Processing	1111122223333444	Foreman Lexington	KY	40508	Foreman Lexington	Foreman Lexington	KY	40508	logan.shelby@uky.edu	9780807	
2018-04-19 22:30:59	1	109.52	Processing	1111122223333444	Foreman Lexington	KY	40508	Foreman Lexington	Foreman Lexington	KY	40508	logan.shelby@uky.edu	9780807	

Console | all | Number of rows: 25 | Filter rows: Search this table | Sort by key: None