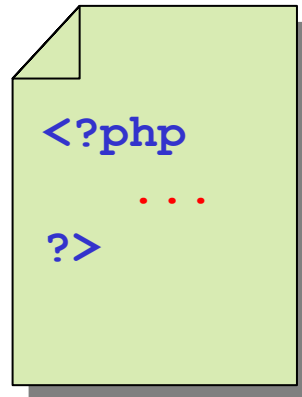




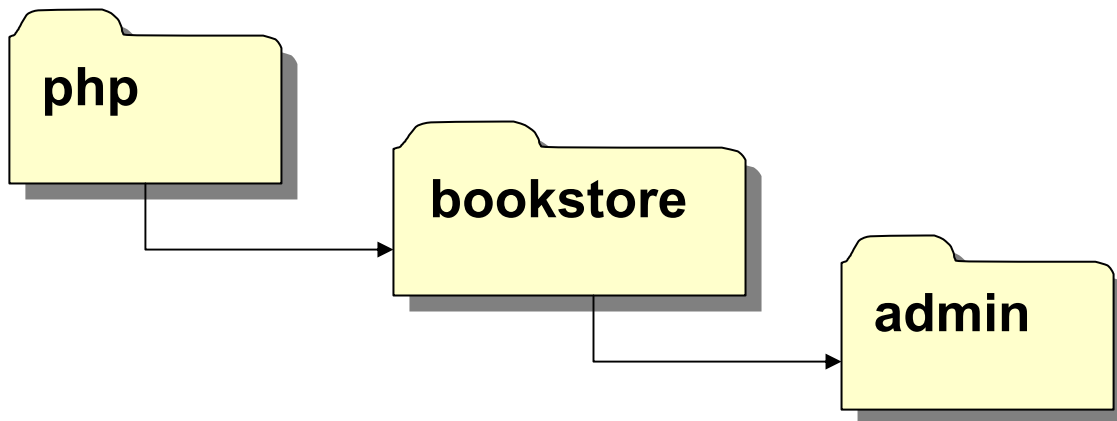
COSC 2206 Internet Tools

Online Bookstore Application



Online Bookstore

- Consists of several php files and database tables
 - <http://localhost/php/bookstore/index.html>
- Also contains an administration component for updating book information





Opening page

Online Bookstore

[Enter Bookstore](#)

[Bookstore Administration](#)

```
<html>
<head><title>Online Bookstore</title></head><body>
<h1>Online Bookstore</h1>
<p><a href="catalog.php">Enter Bookstore</a></p>
<p><a href="admin/index.html">Bookstore
  Administration</a></p>
</body></html>
```



Bookstore files (1)

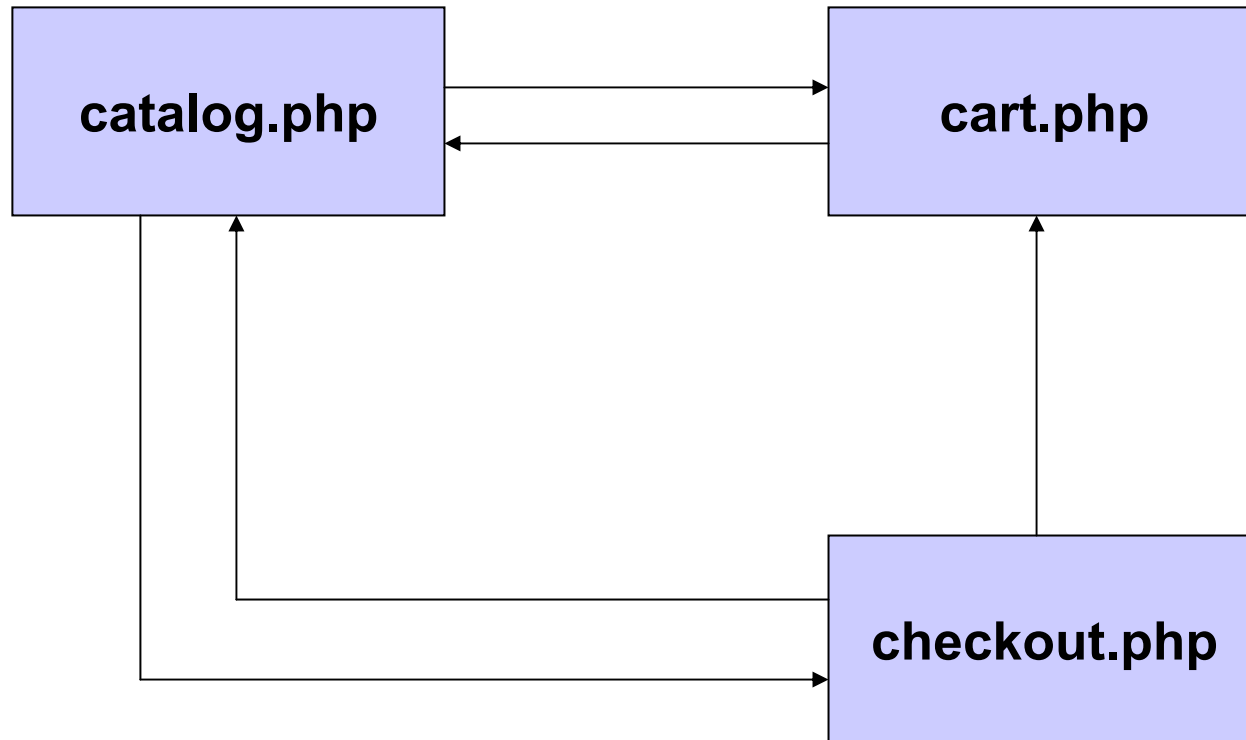
- **catalog.php** and **index.html**
 - displays the user catalog with add buttons next to each book for ordering
- **cart.php**
 - displays shopping cart (books ordered) with remove buttons next to each book
- **checkout.php**
 - checking out (shipping and credit card information)



Bookstore files (2)

- `db_connect.php()`
 - Function to connect to database
- This file is in the includes directory:
 - `c:\Apache\php-includes\db_connect.php();`
- [view source db_connect.php](#)

link structure of bookstore



- view script <bookstore/catalog.php>
- view script <bookstore/cart.php>
- view script <bookstore/checkout.php>



Database tables

- books
 - isbn, title, author, publisher, year, price
- cart
 - session id, isbn and quantity for each book in the cart (multiple shoppers)
- customers
 - customer id, first and last names, etc.
- books_ordered
 - customer id, isbn, quantity

■ view script [bookstore/bookstore.sql](#)



books table

```
CREATE TABLE books
(
    isbn      CHAR(15)          PRIMARY KEY NOT NULL,
    title     VARCHAR(100)     NOT NULL,
    author    VARCHAR(100)     NOT NULL,
    pub       VARCHAR(20)      NOT NULL,
    year      YEAR              NOT NULL,
    price     DECIMAL(9,2)     DEFAULT NULL
);
```




cart table

```
CREATE TABLE cart
(
    session_id  CHAR(32)  NOT NULL,
    isbn        CHAR(15)  PRIMARY KEY NOT NULL,
    quantity    INT
);
```

**The session_id is
automatically generated
by PHP session
management**

**The cart is for multiple
shoppers**



customers table

```
CREATE TABLE customers
(
    customer_id    CHAR(32)        PRIMARY KEY,
    first_name     VARCHAR(50)    NOT NULL,
    last_name      VARCHAR(50)    NOT NULL
);
```

The customer_id is not the same as the session_id because a customer may make multiple orders per session

Many other fields and credit card info in a real application



books_ordered table

```
CREATE TABLE books_ordered
(
    customer_id  CHAR(32)  PRIMARY KEY,
    isbn         CHAR(15)  NOT NULL,
    quantity     INT       NOT NULL
);
```

**The contents of a user's
cart is transferred to this
table at checkout time**

**The customers and
books_ordered tables
can be joined to make
an order**

Catalog display page

Book Catalog

ISBN	TITLE	AUTHOR	PUB	YEAR	PRICE	CART
0-672-31784-2	PHP and MySQL Web Development	Luke Welling, Laura Thomson	Sams	2001	74.95	<input type="text" value="1"/> <input type="button" value="add"/>
0-13-066190-2	Core MySQL	Leon Atkinson	Prentice Hall PTR	2001	68.00	<input type="text" value="1"/> <input type="button" value="add"/>
1-861003-02-1	Professional Apache	Peter Wainwright	Wrox Press Ltd	1999	74.95	<input type="text" value="1"/> <input type="button" value="add"/>
0-13-089793-0	Core WEB Programming, 2nd Ed	Marty Hall, Larry Brown	Prentice Hall PTR	2001	75.00	<input type="text" value="1"/> <input type="button" value="add"/>
0-672-31880-6	CGI in 24 Hours	Rafe Colburn	Sams	2000	37.95	<input type="text" value="1"/> <input type="button" value="add"/>
1-861003-14-5	Beginning Perl	Simon Cozens	Wrox Press Ltd	2000	59.95	<input type="text" value="1"/> <input type="button" value="add"/>
0-596-00027-8	Programming Perl, 3rd Ed	Larry Wall, Tom Christianson, Jon Orwant	O'Reilly	2000	72.95	<input type="text" value="1"/> <input type="button" value="add"/>
1-56592-243-3	Perl Cookbook	Tom Christianson, Nathan Torkington	O'Reilly	1999	56.95	<input type="text" value="1"/> <input type="button" value="add"/>

[[Show cart](#) | [Checkout](#)]

Each of these is form with a hidden field for the ISBN so we know which add button was clicked



Hidden catalog field for ISBN

- The display of each catalog entry uses a table row containing a form in last column:

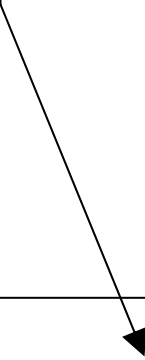
```
<form method="POST">  
<td><input type="hidden" name="isbn"  
value="<?php echo $isbn?>">  
<input type="text" name="quantity" value="1" size="2">  
<input type="submit" name="remove" value="remove">  
</td>  
</form>
```

- When form is submitted the isbn is also be submitted as a hidden field.



catalog script logic

```
Get books from books table for catalog
IF add button was clicked THEN
    add book to cart table
    display catalog page
ELSE
    display catalog page
ENDIF
```

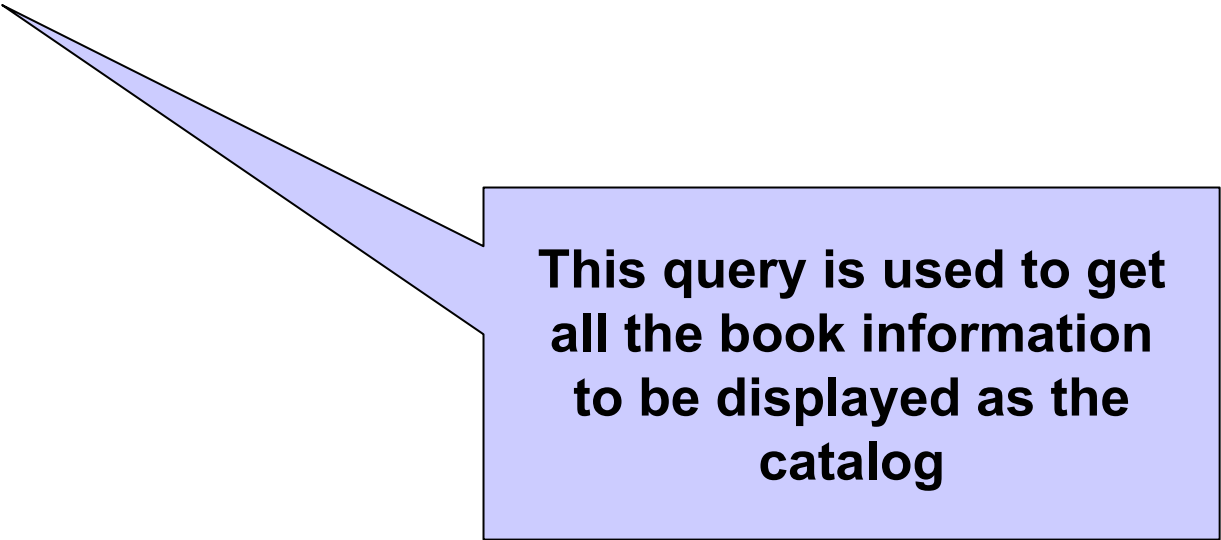


```
Find book
IF book already in cart THEN
    Update book quantity in cart table
ELSE
    Insert new book into cart
ENDIF
```



catalog script display query

```
SELECT * from $book_table
```

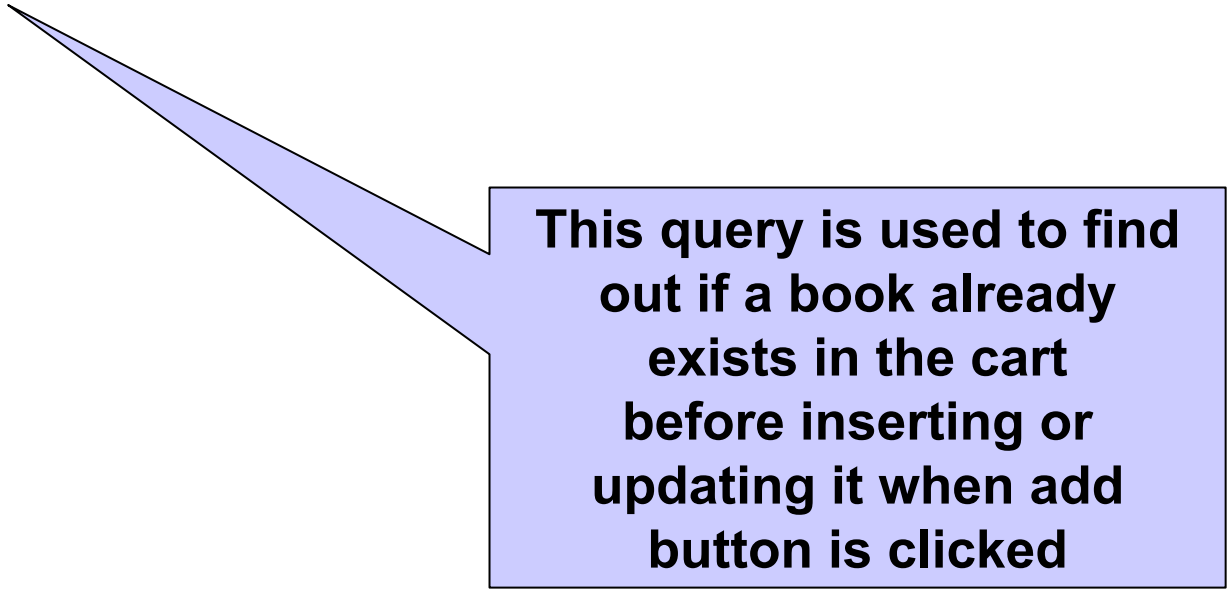


**This query is used to get
all the book information
to be displayed as the
catalog**



catalog script find query

```
SELECT * from $cart_table  
WHERE session_id = '$session_id' AND isbn = '$isbn'
```

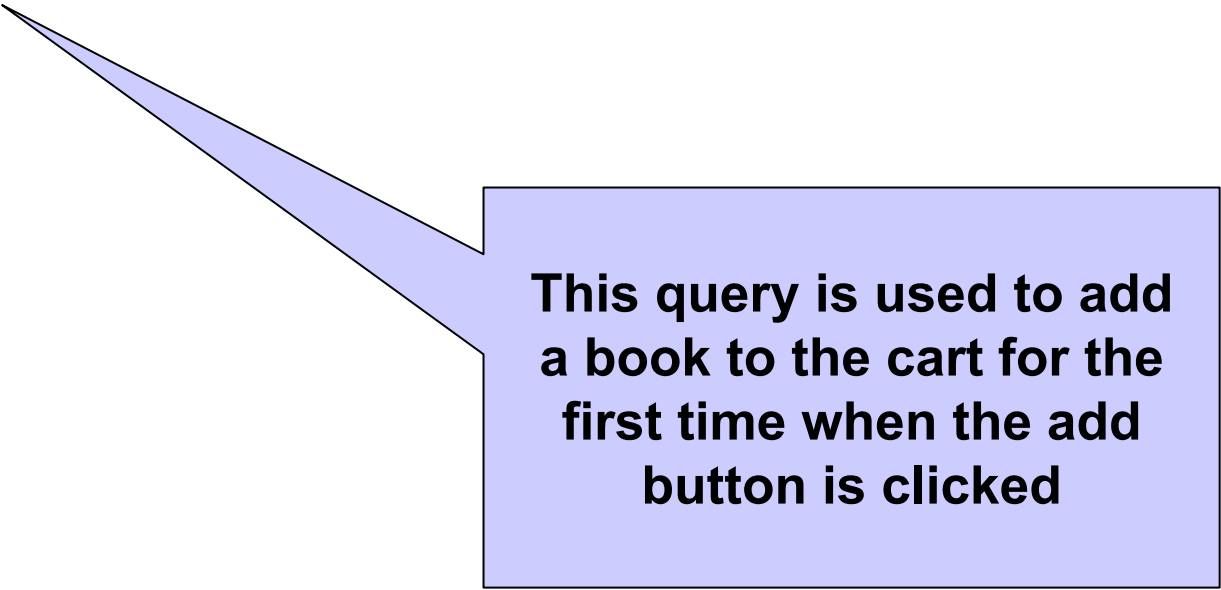


This query is used to find out if a book already exists in the cart before inserting or updating it when add button is clicked



catalog script insert query

```
INSERT INTO $cart_table VALUES  
('$session_id', '$isbn', '$quantity')
```

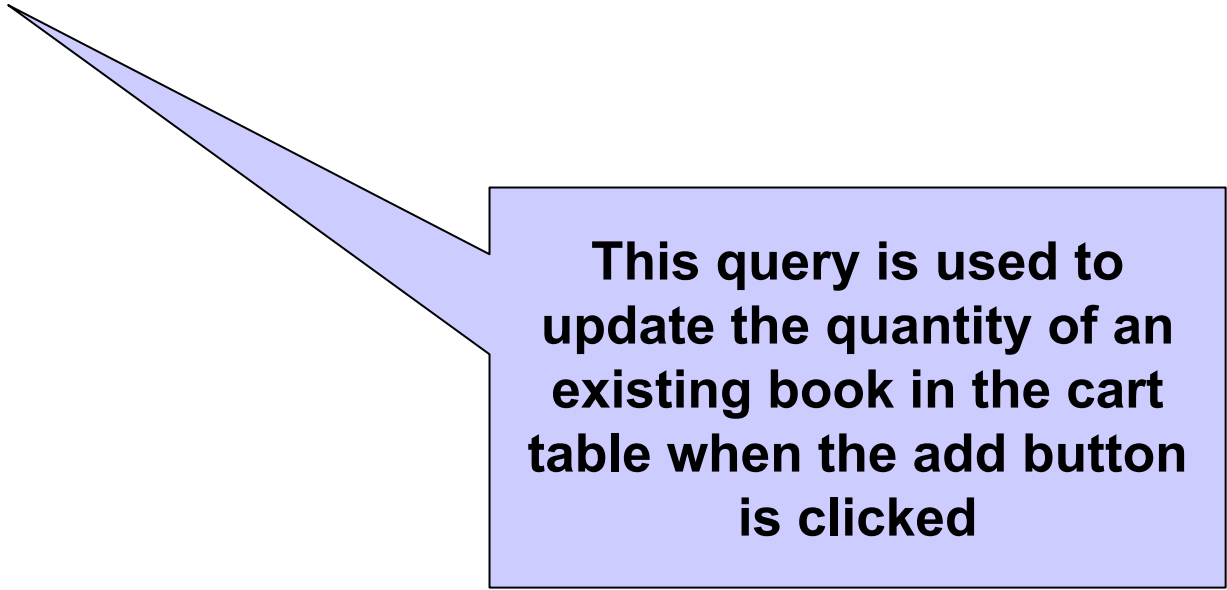


**This query is used to add
a book to the cart for the
first time when the add
button is clicked**



catalog script update query

```
UPDATE $cart_table SET quantity = '$new_quantity'  
WHERE session_id = '$session_id' AND isbn = '$isbn'
```



**This query is used to
update the quantity of an
existing book in the cart
table when the add button
is clicked**



catalog.php

view script bookstore/catalog.php

Cart display page

Contents of Shopping Cart

ISBN	QUANTITY	TITLE	AUTHOR	PUB	YEAR	PRICE	REMOVE
0-672-31784-2	1	PHP and MySQL Web Development	Luke Welling, Laura Thomson	Sams	2001	74.95	<input type="button" value="remove"/>
1-861003-02-1	1	Professional Apache	Peter Wainwright	Wrox Press Ltd	1999	74.95	<input type="button" value="remove"/>
0-672-31880-6	1	CGI in 24 Hours	Rafe Colburn	Sams	2000	37.95	<input type="button" value="remove"/>

[[Return to catalog](#) | [Checkout](#)]

Each of these is form with a hidden field for the ISBN so we know which remove button was clicked



Hidden cart field for ISBN

- The display of each cart entry uses a table row containing a form in last column:

```
<form method="POST">  
<td>  
  <input type="hidden" name="isbn"  
  value="<?php echo $isbn?>">  
  <input type="submit" name="remove" value="remove">  
</td>  
</form>
```

- When form is submitted the isbn is also submitted as a hidden field.



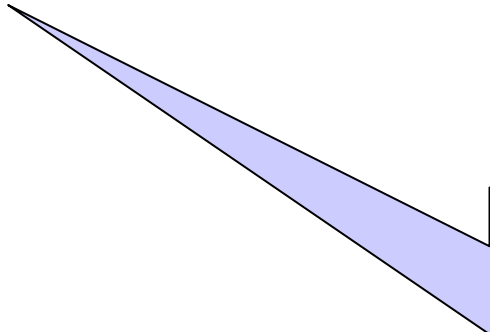
cart script logic

```
IF remove button was clicked THEN
    Remove book from cart
    Get current cart contents
    Display customer's books in cart
ELSE
    Get current cart contents
    Display customer's books in cart
ENDIF
```



cart script delete query

```
DELETE FROM $cart_table WHERE  
    session_id = '$session_id' AND isbn = '$isbn'
```

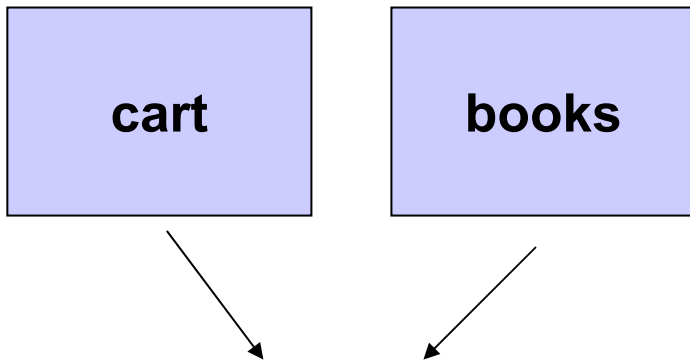


**This query is used to
remove a book from the
cart given the book isbn
and the shopper
session_id**



cart script select query

```
SELECT $cart_table.isbn AS isbn, quantity, title,  
author, pub, year, price  
FROM $cart_table, $book_table  
WHERE $cart_table.session_id = '$session_id'  
AND $cart_table.isbn = $book_table.isbn
```



join on isbn field

This query joins the cart and books tables on the isbn field to get all the information needed to display the shopper's cart



cart.php

view script bookstore/cart.php



Checkout display

Customer Data

First name:	<input type="text"/>
Last name:	<input type="text"/>
<input type="button" value="submit"/>	

[[Return to catalog](#) | [Return to cart](#)]

**Many more fields
would be needed in a
real application such
as credit card and
address information**



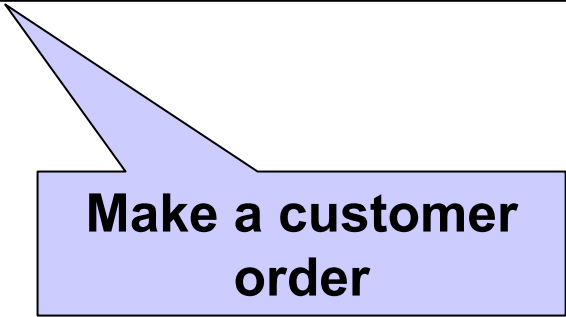
checkout script logic (1)

```
Get customer's books from cart
IF there are no books in cart THEN
    Display empty cart page
ELSEIF submit button clicked THEN
    Validate form
    IF form is valid THEN
        Make a customer order
        Remove customer's books from cart
        Display order complete page
    ELSE
        Display page for corrections
    ENDIF
ELSE
    display customer data page
ENDIF
```



checkout script logic (2)

```
Generate a unique customer ID
WHILE customer has entries left in cart DO
    Insert entry in to order_table
ENDWHILE
Insert customer data into customers table
```

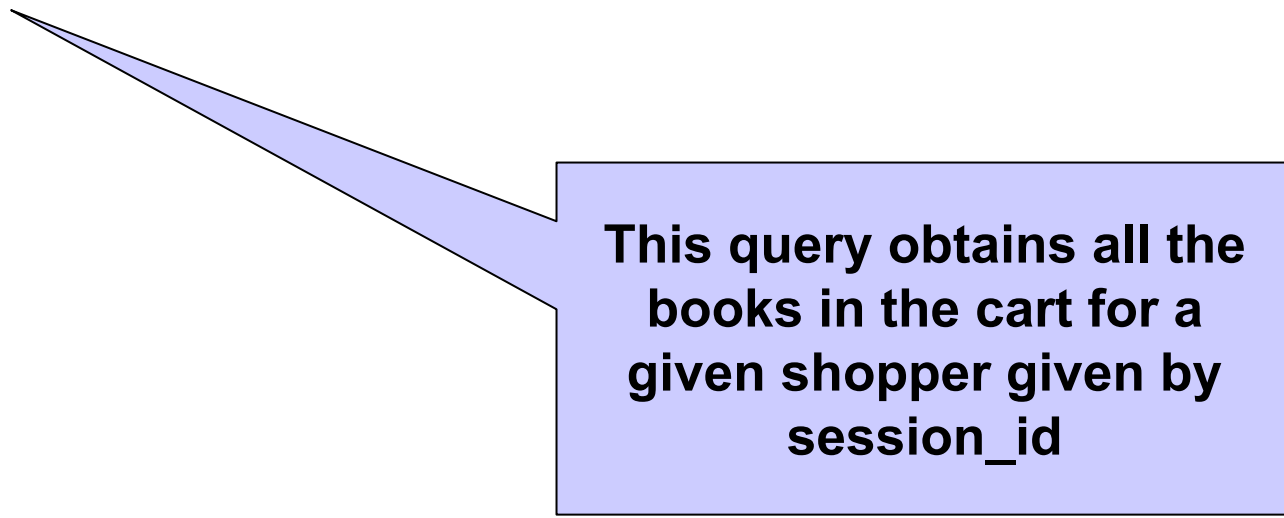


**Make a customer
order**



checkout script select query

```
SELECT isbn, quantity FROM $cart_table  
WHERE session_id = '$session_id'
```



This query obtains all the books in the cart for a given shopper given by session_id



checkout script insert query

```
INSERT INTO $order_table  
VALUES ('$customer_id', '$isbn', '$quantity')
```

cart



transfer entries from
cart table to
books_ordered table

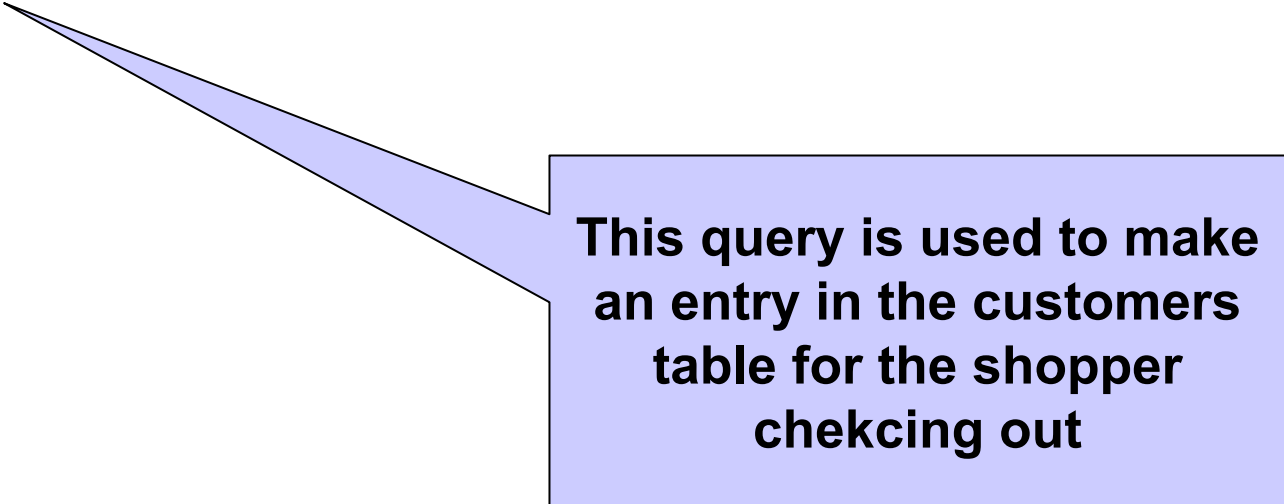
books_ordered

This query is used in a
loop to transfer books
from the shopping cart to
the books_ordered table



checkout script insert query

```
INSERT INTO $customer_table  
VALUES ('$customer_id', '$first_name', '$last_name')
```

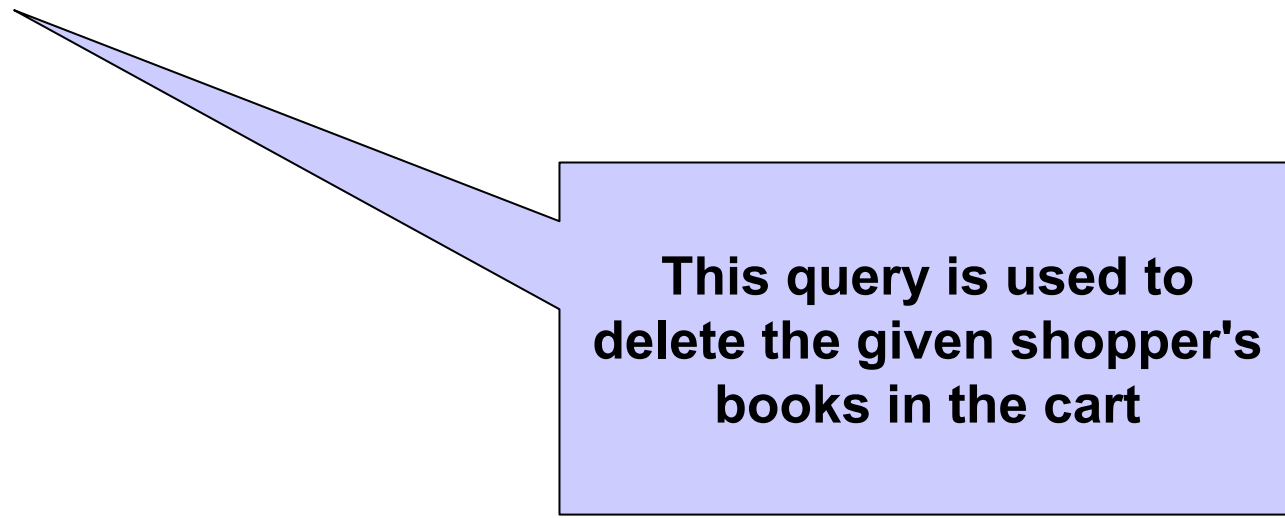


**This query is used to make
an entry in the customers
table for the shopper
checking out**



checkout script delete query

```
DELETE FROM $cart_table  
WHERE session_id = 'session_id'
```



**This query is used to
delete the given shopper's
books in the cart**



checkout.php

view script bookstore/checkout.php



Administration scripts

- **index.html** <http://localhost/php/bookstore/admin/index.html>
 - list of admin operations
- **display.php**
 - view script <bookstore/admin/display.php>
 - display the books in the database
- **delete.php**
 - view script <bookstore/admin/delete.php>
 - delete book given its ISBN
- **insert.php**
 - view script <bookstore/admin/insert.php>
 - insert new book given its ISBN
- **update.php**
 - view script <bookstore/admin/update.php>
 - update book information given its ISBN

book database display

Book database display

ISBN	TITLE	AUTHOR	PUB	YEAR	PRICE
0-672-31784-2	PHP and MySQL Web Development	Luke Welling, Laura Thomson	Sams	2001	74.95
0-13-066190-2	Core MySQL	Leon Atkinson	Prentice Hall PTR	2001	68.00
1-861003-02-1	Professional Apache	Peter Wainwright	Wrox Press Ltd	1999	74.95
0-13-089793-0	Core WEB Programming, 2nd Ed	Marty Hall, Larry Brown	Prentice Hall PTR	2001	75.00
0-672-31880-6	CGI in 24 Hours	Rafe Colburn	Sams	2000	37.95
1-861003-14-5	Beginning Perl	Simon Cozens	Wrox Press Ltd	2000	59.95
0-596-00027-8	Programming Perl, 3rd Ed	Larry Wall, Tom Christianson, Jon Orwant	O'Reilly	2000	72.95
1-56592-243-3	Perl Cookbook	Tom Christianson, Nathan Torkington	O'Reilly	1999	56.95

[[Main](#) | [Display](#) | [Insert](#) | [Update](#) | [Delete](#)]

[links.html](#)

■ view script [bookstore/admin/display.php](#)

Insert new book form

Insert new book

ISBN:	<input type="text"/>
Title:	<input type="text"/>
Author:	<input type="text"/>
Publisher:	<input type="text"/>
Year:	<input type="text"/>
Price:	<input type="text"/>
<input type="button" value="Insert Book"/>	

[[Main](#) | [Display](#) | [Insert](#) | [Update](#) | [Delete](#)]

- view script <bookstore/admin/insert.php>

Update book forms

Find Book

ISBN:

Enter an ISBN and the
update book form
will be shown

Update book information for ISBN 1-56592-243-3

Title:

Author:

Publisher:

Year:

Price:

[[Main](#) | [Display](#) | [Insert](#) | [Update](#) | [Delete](#)]

■ view script <bookstore/admin/update.php>



Delete book form

Delete Book

ISBN:

[[Main](#) | [Display](#) | [Insert](#) | [Update](#) | [Delete](#)]

- view script <bookstore/admin/delete.php>



Things to do

- It would be better to include price information in the cart and books_ordered tables: price may change between order generation and processing.
- Admin scripts should be protected by a user name and password (Done)
- write an order fulfillment script that displays a complete order page using the books, customers, and books_ordered tables