

# **Terna Engineering College**

## **Computer Engineering Department**

**Program: Sem VI**

**Course: Software Engineering Lab**

**LAB Manual**

### **PART A**

(PART A: TO BE REFERRED BY STUDENTS)

#### **Experiment No.10**

##### **A.1 Aim:**

Design User Interface for the selected mini-project.

##### **A.2 Prerequisite:**

knowledge of Software Design and different types of Design.

##### **A.3 Outcome:**

After the successful completion of this experiment students, Student will be able to Design User Interfaces for selected mini-project by selecting appropriate tools.

##### **A.4 Theory:**

**Design:** Translating requirements into blueprints for the construction of software.

- **Different types of Design:**

- **Data Design**
- **Architecture Design**
- **Interface Design**
- **Network Design**
- **Database Design**
- **Procedural Design**
- **Presentation Design**

**User Interface:** Collection of different techniques and tools to interact with something. Or it is a communication medium through which user can communicate with the system.

#### **□ Types of Interfaces:**

Command-line Interface: Interaction with the help of commands

Graphical User Interface (GUI): Interaction with the help of Graphics like;

- o Audio
- o Video
- o Icons
- o Menus
- o Windows

#### **□ Steps of User Interface Design**

Functional requirement gathering

User Analysis

Mapping of the requirement into interfaces

Design User Interfaces

Implement user Interface

Perform Usability Testing

#### **□ Characteristics of User Interfaces**

Aesthetically Pleasant

Consistent

Responsiveness

Efficient

Task-Oriented

Control

Etc.

## **□ User Interface Design Process:**

The user interface design process is divided into various phases.

1. **Functionality Requirement gathering:** identify functional requirements expected by the users. After analyzing the requirements a decision is made on how to incorporate these requirements into the interface and what functionality to include i.e. requirements are mapped into interfaces
2. **User Analysis:** This refers to analyzing potential users of the system either through discussions with people who work with the users or with potential users themselves. Ask questions regarding;
  - ✓ What does the user want?
  - ✓ How the user is going to use the system
  - ✓ What are the technical abilities of the user?
3. **Information Architecture:** identify information architecture of the system i.e. how the information flow from one page to another page, that is to show the hierarchy of pages.
4. **Design User Interface:**
5. **Usability Testing:** Perform usability testing of the user interfaces for any usability defects.

## PART B

(PART B: TO BE COMPLETED BY STUDENTS)

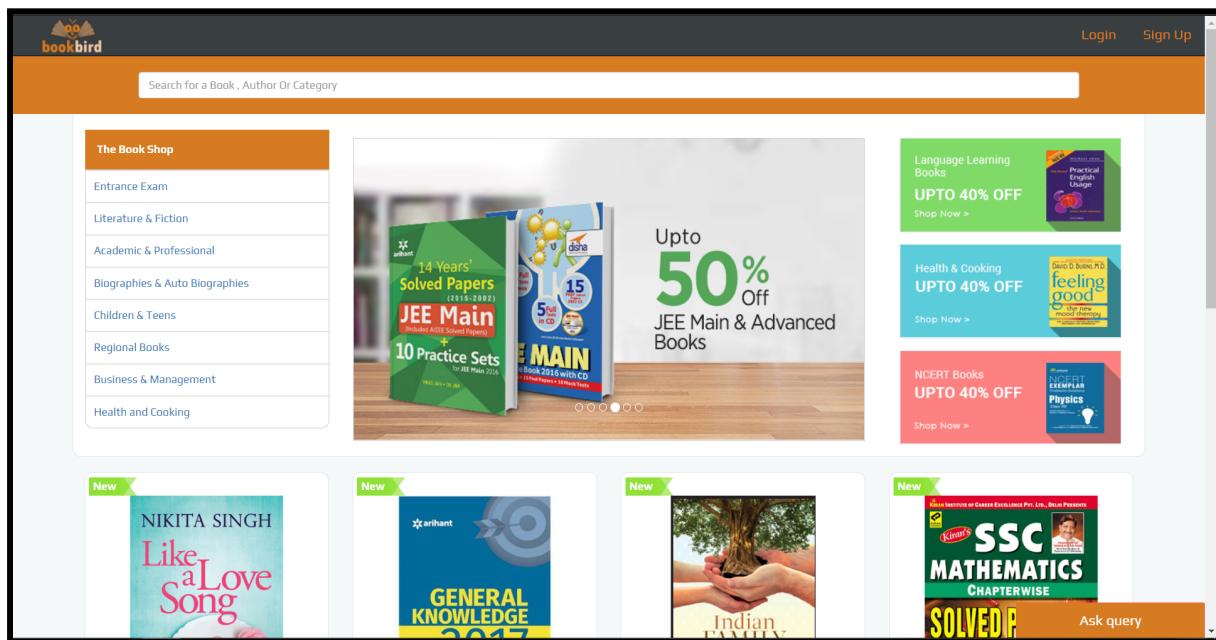
*(Students must submit the soft copy as per the following segments within two hours of the practical. The soft copy must be uploaded on the Blackboard or emailed to the concerned lab in charge faculties at the end of the practical in case there is no Blackboard access available)*

<b>Roll No.</b> 50	<b>Name:</b> AMEY THAKUR
<b>Class:</b> Comps TE B	<b>Batch:</b> B3
<b>Date of Experiment:</b> 31/03/2021	<b>Date of Submission:</b> 31/03/2021
<b>Grade:</b>	

### B.1 Add the Snapshots of User Interfaces and Database Design of your selected mini project

#### Front-end

- Index Page



bookbird

Like A Love Song  
Rs 113 175 35%

General Knowledge 2017  
Rs 68 120 43%

Indian Family Business Mantras  
Rs 400 595 33%

Kiran's SSC Mathematics Chapterwise Solutions  
Rs 289 435 33%

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Let's Get In Touch!

Still Confused? Give us a call or send us an email and we will get back to you as soon as possible!

123-456-7890

DigiBookStore@gmail.com

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Ask query

- Member Registration Form

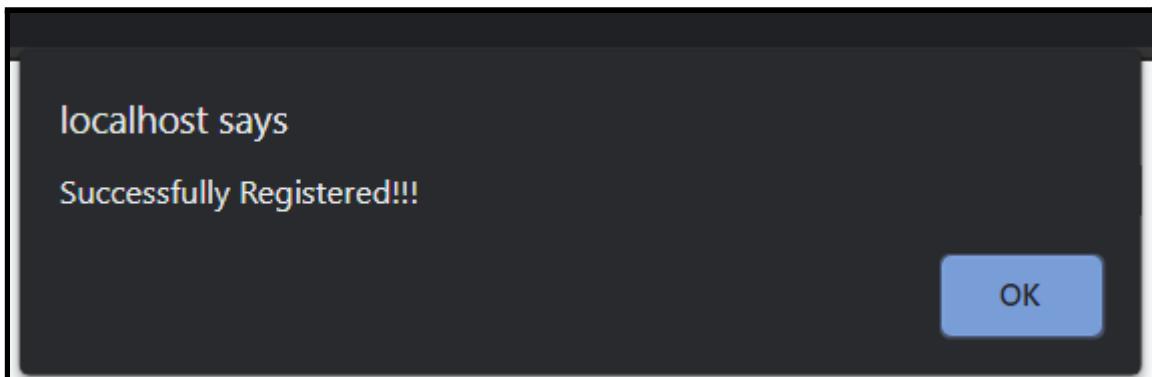
### Member Registration Form

Username

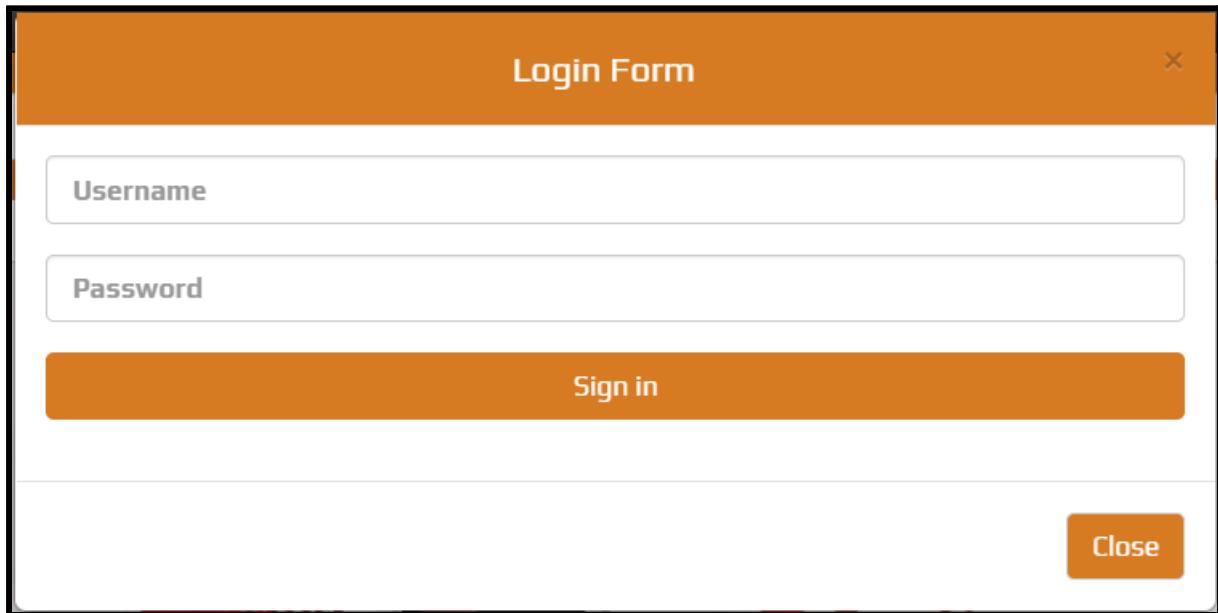
Password

**Sign Up**

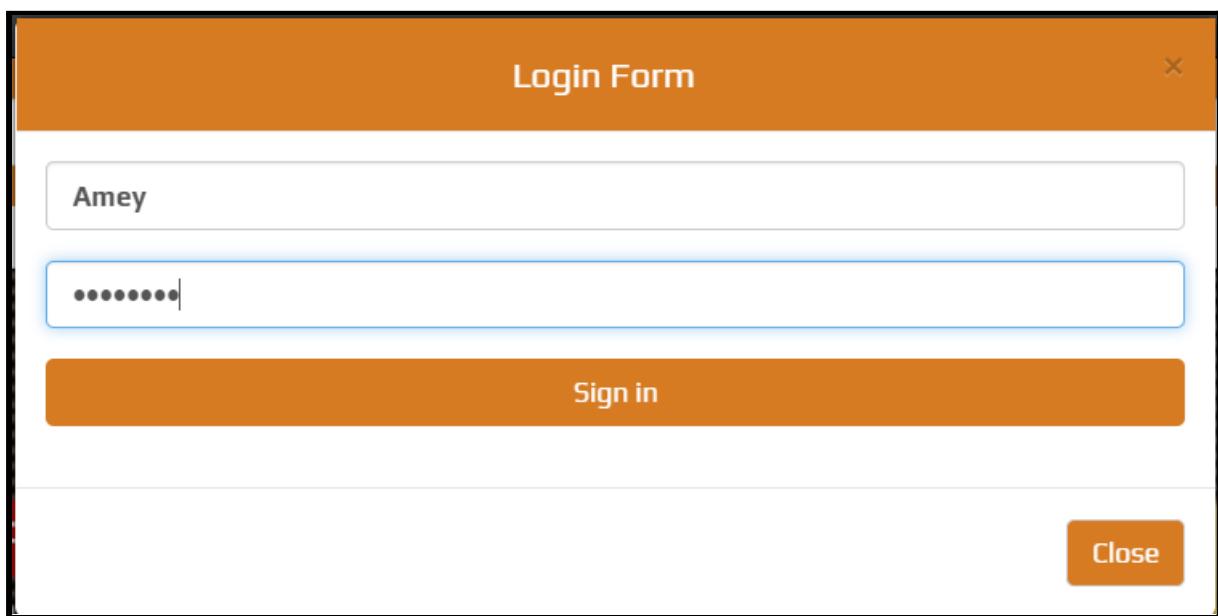
**Close**



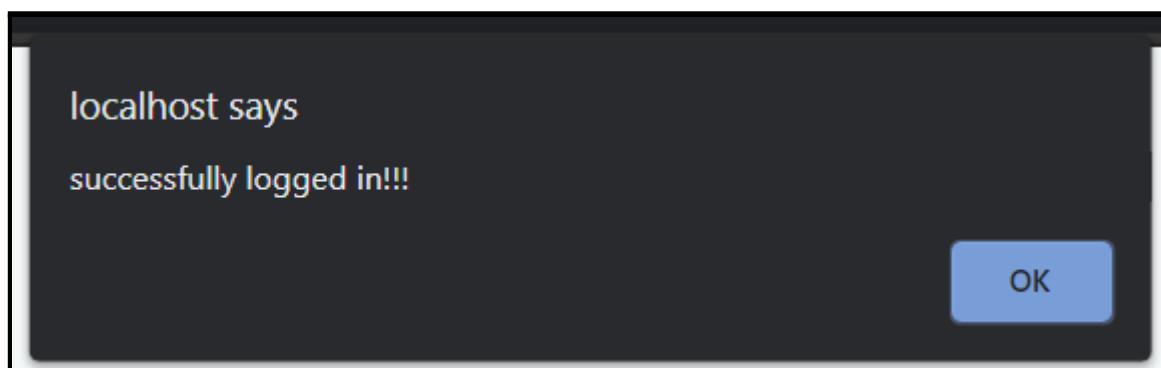
- **Login Form**



A screenshot of a "Login Form" window. The title bar is orange with the text "Login Form" and a close button. The main area contains two input fields: "Username" and "Password". Below them is a large orange "Sign in" button. In the bottom right corner is an orange "Close" button.



A screenshot of the same "Login Form" window, but now the "Username" field contains the text "Amey" and the "Password" field contains "\*\*\*\*\*". The "Sign in" button is still present below the fields, and the "Close" button is in the bottom right corner.



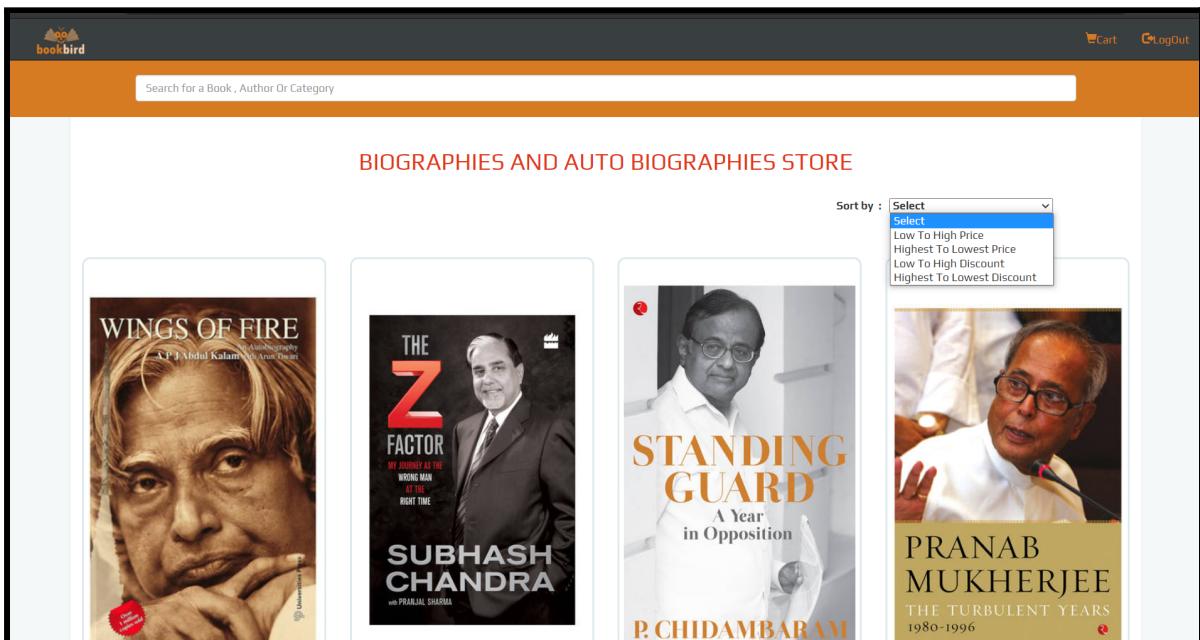
- **Home Page**

The screenshot shows the Bookbird website's homepage. At the top right, it says "Hello Amey," "Cart," and "LogOut". Below that is a search bar with the placeholder "Search for a Book , Author Or Category". On the left, there's a sidebar titled "The Book Shop" with categories: Entrance Exam, Literature & Fiction, Academic & Professional, Biographies & Auto Biographies, Children & Teens, Regional Books, Business & Management, and Health and Cooking. The main content area features a large banner for "JEE Main & Advanced Books" with a 50% off offer. To the right of the banner are three promotional boxes: "Language Learning Books UPTO 40% OFF", "Health & Cooking UPTO 40% OFF", and "NCERT Books UPTO 40% OFF". Each box includes a small image of a book.

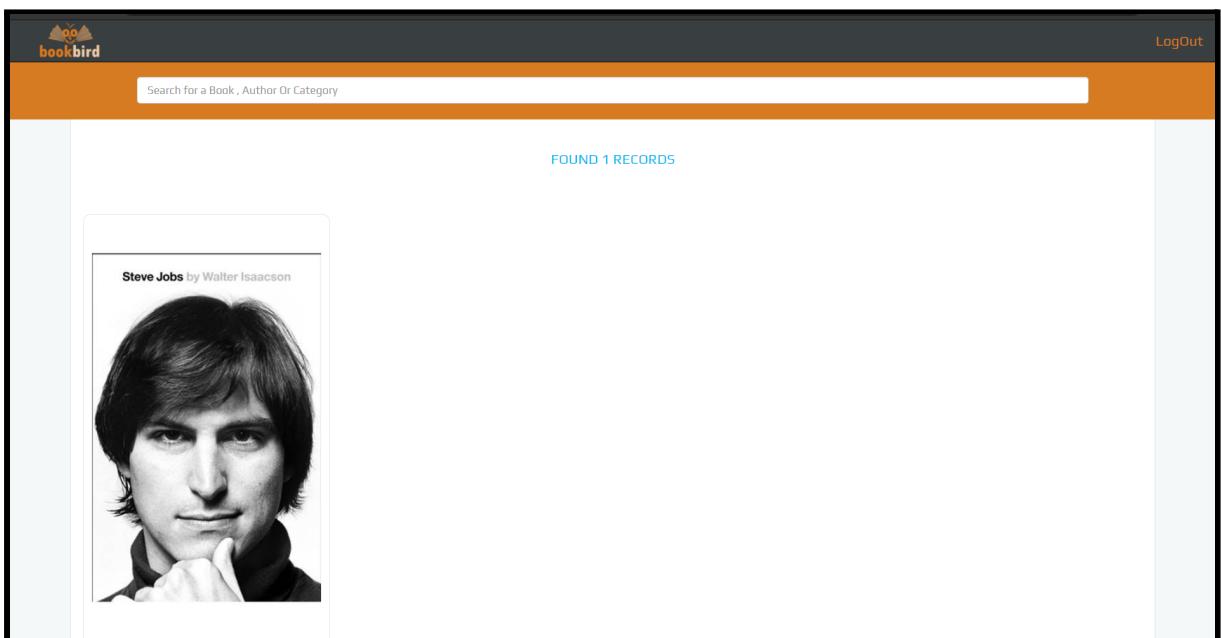
- **The Book Shop (Book Genres)**

This screenshot shows the "The Book Shop" section of the website. It has a header "The Book Shop" and a list of book genres: Entrance Exam, Literature & Fiction, Academic & Professional, Biographies & Auto Biographies, Children & Teens, Regional Books, Business & Management, and Health and Cooking.

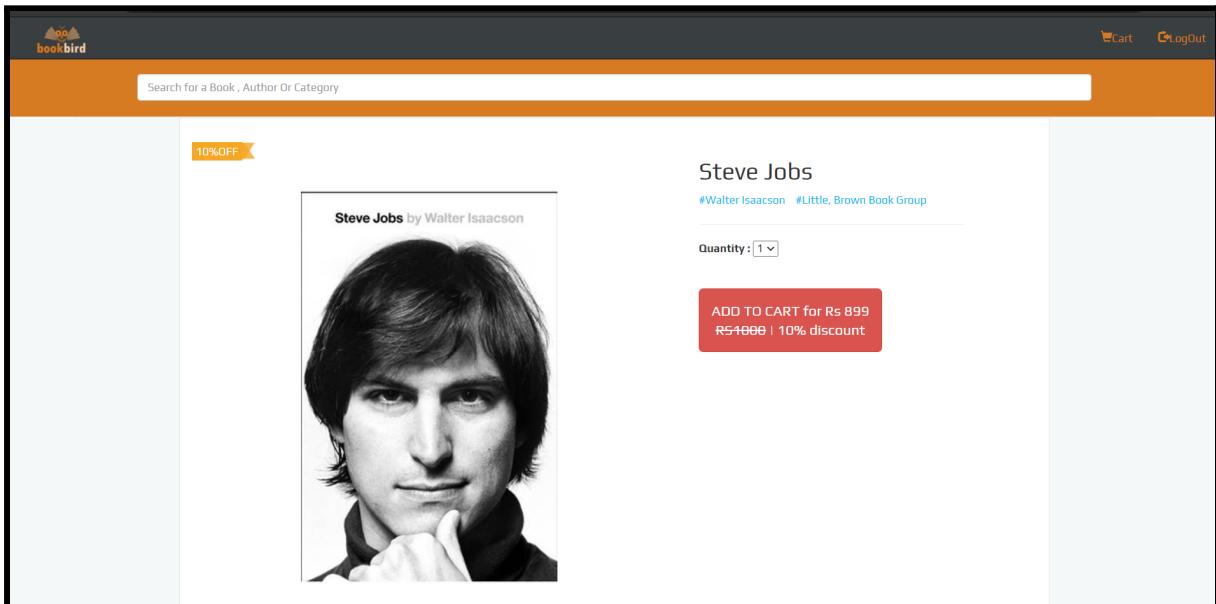
- **Sort By**



- **Search Bar**



- **Add to Cart**



- **Book Description**

**Description**

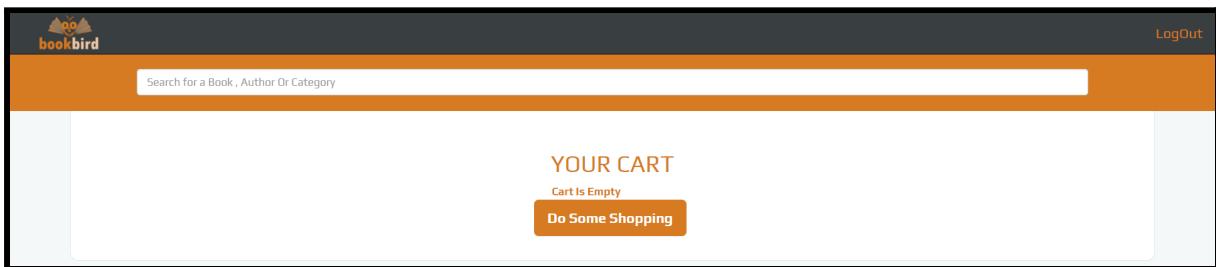
Based on more than forty interviews with Steve Jobs conducted over two years - as well as interviews with more than a hundred family members, friends, adversaries, competitors, and colleagues - this is the acclaimed, internationally bestselling biography of the ultimate icon of inventiveness. Walter Isaacson tells the story of the rollercoaster life and searingly intense personality of creative entrepreneur whose passion for perfection and ferocious drive revolutionized six industries: personal computers, animated movies, music, phones, tablet computing, and digital publishing. Although Jobs cooperated with this book, he asked for no control over what was written, nor even the right to read it before it was published. He put nothing off limits. He encouraged the people he knew to speak honestly. And Jobs speaks candidly, sometimes brutally so, about the people he worked with and competed against. His friends, foes, and colleagues provide an unvarnished view of the passions, perfectionism, obsessions, artistry, devility, and compulsion for control that shaped his approach to business and the innovative products that resulted.

PRODUCT CODE	BIO-9
TITLE	Steve Jobs
AUTHOR	Walter Isaacson
AVAILABLE	1
PUBLISHER	Little, Brown Book Group
EDITION	1
LANGUAGE	English
PAGES	592
WEIGHT	500

- **Database Connection**

```
dbconnect.php
1 <?php
2 define('DB_HOST', 'localhost');
3 define('DB_NAME', 'digital_bookstore');
4 define('DB_USER', 'root');
5 define('DB_PASSWORD', '');
6
7 $con=mysqli_connect(DB_HOST,DB_USER,DB_PASSWORD) or die("Failed to connect to MySQL: " . mysql_error());
8 $db=mysqli_select_db($con,DB_NAME) or die("Failed to connect to MySQL: " . mysql_error());
9 ?>
```

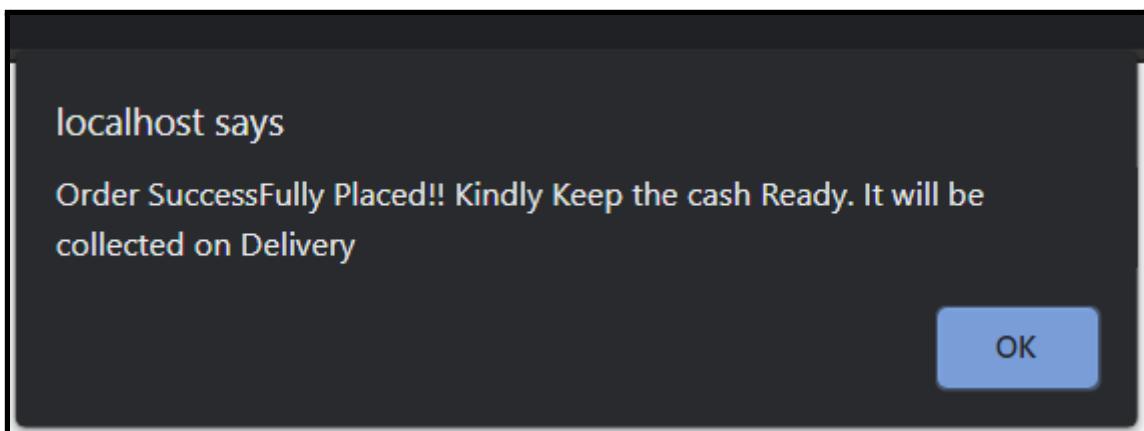
- **Cart (Empty)**



- **Cart**

The screenshot shows the bookbird website's cart page with two items. On the left, under "Order 1", is a book titled "Wings Of Fire: An Autobiography" by Arun Tiwari, Abul Kalam, with a price of 170. On the right, under "Order 2", is a book titled "Steve Jobs" by Walter Isaacson, with a price of 899. Both items have a "Remove" button. Below the orders is a "TOTAL" section showing 1069. At the bottom are "Continue Shopping" and "Place Order" buttons. The top features a search bar and a "LogOut" link.

- **Place Order**



- Ask Query

Ask your query here ×

Your Name

abc@gmail.com

Your Query

**Send Query**

**Close**



Ask your query here ×

Amey

ameythakur@ternaengg.ac.in

I would like to know any discount on bulk order.

G

**Send Query**

**Close**



localhost says

Your Message has been successfully sent! Our customer executive would respond shortly.

OK

- **Logout**

localhost says

successfully logged out!!

OK

## Back-end

digital_bookstore							
cart							
Column	Type	Null	Default	Links to	Comments	Media type	
Customer (Primary)	varchar(40)	No					
Product (Primary)	varchar(40)	No					
Quantity	int(5)	No					

**Indexes**

Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
PRIMARY	BTREE	Yes	No	Customer		A	No	
				Product	11	A	No	
Product	BTREE	No	No	Product		A	No	

**products**

Column	Type	Null	Default	Links to	Comments	Media type	
PID (Primary)	varchar(25)	No					
Title	varchar(255)	No					
Author	varchar(255)	No					
MRP	float	No					
Price	float	No					
Discount	int(11)	Yes	NULL				
Available	int(11)	No					
Publisher	varchar(255)	Yes	NULL				
Edition	varchar(20)	Yes	NULL				
Category	varchar(255)	Yes	NULL				
Description	text	Yes	NULL				
Language	varchar(255)	Yes	NULL				
page	int(5)	Yes	NULL				
weight	int(4)	Yes	500				

**Indexes**

Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
PRIMARY	BTREE	Yes	No	PID	125	A	No	

**users**

Column	Type	Null	Default	Links to	Comments	Media type	
UserName (Primary)	varchar(40)	No					
Password	varchar(40)	No					

**Indexes**

Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
PRIMARY	BTREE	Yes	No	UserName	12	A	No	

1. Server: 127.0.0.1
2. Database: digital\_bookstore

Table	Action	Rows	Type	Collation	Size	Overhead
cart	Browse  Structure  Search  Insert  Empty  Drop	11	MyISAM	utf8_unicode_ci	5.4 KiB	96 B
products	Browse  Structure  Search  Insert  Empty  Drop	125	MyISAM	utf8_unicode_ci	117.4 KiB	-
users	Browse  Structure  Search  Insert  Empty  Drop	14	MyISAM	utf8_unicode_ci	2.3 KiB	-
3 tables	Sum					150 InnoDB utf8mb4_general_ci 125.0 KiB 96 B

1. Server: 127.0.0.1
2. Database: digital\_bookstore
3. Table: cart

Showing rows 0 - 3 (4 total, Query took 0.0010 seconds.)		
<code>SELECT * FROM `cart`</code>		
Customer	Product	Quantity
Mega	HEA-4	4
Mega	ENT-6	2
Amey	BIO-1	1
Amey	BIO-9	1

1. Server: 127.0.0.1
2. Database: digital\_bookstore
3. Table: products

Showing rows 0 - 24 (125 total, Query took 0.0014 seconds.)														
<code>SELECT * FROM `products`</code>														
PID	Title	Author	MRP	Price	Discount	Available	Publisher	Edition	Category	Description	Language	page	weight	
ENT-1	The Indian Economy : For UPSC And State Civil Serv...	Sanjiv Verma	235	148	37	5	Unique Publishers	2	Entrance Exam	Sanjiv Verma& s The Indian Economy : For UPSC and...	Others	256	500	
ENT-2	General Knowledge 2017	Manohar Pandey	120	68	43	15	Arihant Publication	9	Entrance Exam	In-depth Knowledge About The Varied Sections Cover...	English	320	500	
ENT-3	Kiran	Kiran Prakashan,Pratiyogita Kiran & KICX	475	332	30	10	Kiran Prakashan	2	Entrance Exam		English	936	500	
ENT-4	Previous Years Solved Papers & 10 Practice Sets CMC...	Arihant Experts	400	300	25	15	Arihant Publication	4	Entrance Exam	The Christian Medical College Entrance Exam is con...	English	590	500	
ENT-5	IIM Indore IPM Full Length Test Series (Fully Solv...	North Academics; Nishit Sinha	740	599	19	2	North Academics	1	Entrance Exam	IIM Indore IPM Full Lenth Test Series. 7 Full Leng...	English	272	560	

PID	Title	Author	MRP	Price	Discount	Available	Publisher	Edition	Category	Description	Language	page	weight
ENT-6	Marketing Management	Kevin Lane Keller Philip Kotler	899	802	11	15	Pearson	15	Entrance Exam	Marketing Management By Kevin Lane Keller Philip ...	others	568	500
ENT-7	The Mega Yearbook 2016 - Current Affairs & General...	Disha Experts	350	175	50	13	Disha Publication	1	Entrance Exam	In the age of technology, we are swimming in an oc...	others	848	500
ENT-8	Indian Polity (Civil Services Mains; Csat; Civil S...	M Laxmikanth	425	595	29	10	McGraw Hill Education	4	Entrance Exam	We want you to Stay Ahead why the best of Study M...	others	696	500
ENT-9	Guide To RRB Non Technical Recruitment Exam	Disha Experts	300	150	50	8	Disha Publication	1	Entrance Exam	Guide to RRB Non Technical Recruitment Exam Is an ...	English	336	500

1. Server: 127.0.0.1
2. Database: digital\_bookstore
3. Table: users

```

✓ Showing rows 0 - 1 (2 total, Query took 0.0011 seconds.)

SELECT * FROM `users`
```

UserName	Password
Amey	TU3F1819127
Mega	TU3F1819139

## B.2 Conclusion:

*(Students must write the conclusion)*

We built the User Interface of our Digital Bookstore website with a database on the XAMPP web server. We also learned to design a database for the same.