

CSP – 584 Enterprise Web Application

Assignment – 1

1. localhost/BestDeal is the home page of the Best Deal Web Application

The screenshot shows the homepage of the BestDeal web application. The header features a logo with a shopping cart icon and the text "Best Deal". A search bar is located at the top right with placeholder text "Search Product: Eg: Sony 70 Inch 4K". Below the header, there is a navigation menu with links: Home, TV, Speakers, Phones, Laptops, Voice-Assistant, Wearables, ViewOrder, Login, and Cart(0). On the left side, there is a sidebar with category menus: TV (Sony, LG, Samsung), Sound Systems (Sony, Bose, Logitech), Phones (Apple, Samsung, Nexus), Laptops (Apple, HP, Dell), Voice Assistants (Amazon, Google), and Wearables (Fitness Watches, Smart Watches, Headphones, Virtual Reality, Pet Tracker). The main content area has a "Welcome to BestDeal" banner with the tagline "Your one stop smart shopping resource!" and an image of various electronic devices. Below the banner is a statement: "We beat our competitors in all aspects. Price-Match Guaranteed". The "Best Sellers" section displays four products: iPhone 11 (699.99\$), HP Spectre X360 (1199.99\$), Samsung 8 Series (2299.99\$), and Bose Acoustics 5 Series (499.99\$). Each product card includes an image, price, a "Buy Now" button, and a "Write Review" button.

Search Product:
Eg: Sony 70 Inch 4K

Home TV Speakers Phones Laptops Voice-Assistant Wearables ViewOrder Login Cart(0)

TV

- Sony
- LG
- Samsung

Sound Systems

- Sony
- Bose
- Logitech

Phones

- Apple
- Samsung
- Nexus

Laptops

- Apple
- HP
- Dell

Voice Assistants

- Amazon
- Google

Wearables

- Fitness Watches
- Smart Watches
- Headphones
- Virtual Reality
- Pet Tracker

Welcome to BestDeal
Your one stop smart shopping resource!

We beat our competitors in all aspects. Price-Match Guaranteed

Best Sellers

Iphone 11 699.99\$

Buy Now Write Review

HP Spectre X360 1199.99\$

Buy Now Write Review

Samsung 8 Series 2299.99\$

Buy Now Write Review

Bose Acoustics 5 Series 499.99\$

Buy Now Write Review

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2. User Registration Page for new Users

The screenshot shows the Best Deal website's registration page. At the top, there is a navigation bar with links for Home, TV, Speakers, Phones, Laptops, Voice-Assistant, Wearables, ViewOrder, Login, and Cart(0). A search bar is also present. The main content area features a heading "Register Here" and a registration form. The form includes fields for Username, Password, Re-Password, and User Type (with "Customer" selected). A "Create User" button is located below the form. At the bottom of the page, a footer bar contains the text "Prices and offers are subject to change. © BestDeal 2020. All rights reserved. Developed by Vaishnavi Manjunath".

3. Login Page where users enter their credentials to login

The screenshot shows the Best Deal website's login page. The layout is similar to the registration page, featuring a navigation bar at the top and a registration form in the center. The form includes fields for Username, Password, and User Type (with "Customer" selected). A "Login" button is located below the form. A link "New User? Register here!" is provided at the bottom of the form. At the bottom of the page, a footer bar contains the text "Prices and offers are subject to change. © BestDeal 2020. All rights reserved. Developed by Vaishnavi Manjunath".

4. Valid Login Page



Search Product:
Eg: Sony 70 Inch 4K

Home TV Speakers Phones Laptops Voice-Assistant Wearables ViewOrder Hello,Vaishnavi Account Logout Cart(0)

TV

- Sony
- LG
- Samsung

Sound Systems

- Sony
- Bose
- Logitech

Phones

- Apple
- Samsung
- Nexus

Laptops

- Apple
- HP
- Dell

Voice Assistants

- Amazon
- Google

Wearables

- Fitness Watches
- Smart Watches
- Headphones
- Virtual Reality
- Pet Tracker

Welcome to BestDeal
Your one stop smart shopping resource!



We beat our competitors in all aspects. Price-Match Guaranteed

Best Sellers

Iphone 11
699.99\$



[Buy Now](#)
[Write Review](#)

HP Spectre X360
1199.99\$



[Buy Now](#)
[Write Review](#)

Samsung 8 Series
2299.99\$



[Buy Now](#)
[Write Review](#)

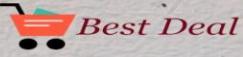
Bose Acoustics 5 Series
499.99\$



[Buy Now](#)
[Write Review](#)

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5. TV List Product Page

 Best Deal

Home TV Speakers Phones Laptops Voice-Assistant Wearables ViewOrder Hello,Vaishnavi Account Logout Cart(0)

Search Product:
Eg: Sony 70 Inch 4K

TV

- Sony
- LG
- Samsung

Sound Systems

- Sony
- Bose
- Logitech

Phones

- Apple
- Samsung
- Nexus

Laptops

- Apple
- HP
- Dell

Voice Assistants

- Amazon
- Google

Wearables

- Fitness Watches
- Smart Watches
- Headphones
- Virtual Reality
- Pet Tracker

TV Lists

Samsung 7 Series



\$1999.99

[Buy Now](#)

[Write Review](#)

[View Review](#)

LG b9 Series



\$1399.99

[Buy Now](#)

[Write Review](#)

[View Review](#)

Samsung QLED



\$2099.99

[Buy Now](#)

[Write Review](#)

[View Review](#)

Sony 70 Inch 4K



\$2199.99

[Buy Now](#)

[Write Review](#)

[View Review](#)

Sony 75 Inch 4K



\$2599.99

[Buy Now](#)

[Write Review](#)

[View Review](#)

Sony 55 Inch 4K



\$1899.99

[Buy Now](#)

[Write Review](#)

[View Review](#)

Samsung 8 Series



\$2299.99

[Buy Now](#)

[Write Review](#)

[View Review](#)

LG Nano 8 Series



\$1799.99

[Buy Now](#)

[Write Review](#)

[View Review](#)

LG C9 Series



\$1599.99

[Buy Now](#)

[Write Review](#)

[View Review](#)

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6. TV Page for specific Manufacturer - Sony

 Best Deal

Search Product:
Eg: Sony 70 Inch 4K

Home TV Speakers Phones Laptops Voice-Assistant Wearables ViewOrder Hello,Vaishnavi Account Logout Cart(0)

TV

- Sony
- LG
- Samsung

Sound Systems

- Sony
- Bose
- Logitech

Phones

- Apple
- Samsung
- Nexus

Laptops

- Apple
- HP
- Dell

Voice Assistants

- Amazon
- Google

Wearables

- Fitness Watches
- Smart Watches
- Headphones
- Virtual Reality
- Pet Tracker

Sony TV Lists

Sony 70 Inch 4K



\$2199.99

[Buy Now](#)

[Write Review](#)

[View Review](#)

Sony 75 Inch 4K



\$2599.99

[Buy Now](#)

[Write Review](#)

[View Review](#)

Sony 55 Inch 4K



\$1899.99

[Buy Now](#)

[Write Review](#)

[View Review](#)

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7. Shopping cart with products added into it and carousel feature

 Best Deal

Search Product:
Eg: Sony 70 Inch 4K

Home TV Speakers Phones Laptops Voice-Assistant Wearables ViewOrder Hello,Vaishnavi Account Logout Cart(1)

TV

- Sony
- LG
- Samsung

Sound Systems

- Sony
- Bose
- Logitech

Phones

- Apple
- Samsung
- Nexus

Laptops

- Apple
- HP
- Dell

Voice Assistants

- Amazon
- Google

Wearables

- Fitness Watches
- Smart Watches
- Headphones
- Virtual Reality
- Pet Tracker

Cart(1)

1.	Sony 70 Inch 4K	\$2199.99
Total		2199.99
Checkout		

Sony 70 Inch 4K Accessories

Full Motion TV Wall Mount
\$89.99^s



[Buy Now](#)
[WriteReview](#)
[ViewReview](#)

Remote control holder
\$29.99^s



[Buy Now](#)
[WriteReview](#)
[ViewReview](#)

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8. Checkout page with option to Buy Warranty

The screenshot shows the Best Deal website's checkout process. On the left, there's a sidebar with categories: TV, Sound Systems, Phones, Laptops, Voice Assistants, and Wearables. Each category has a list of brands. The main area is titled 'Order' and contains fields for customer name, product details, and checkout information. A 'Buy Warranty' button is visible next to the total cost. At the bottom, delivery options and a 'Checkout' button are shown.

Customer Name: Vaishnavi

Product Name	Price
Sony 70 Inch 4K	\$2199.99
Total Cost	\$2199.99

Enter Checkout Details

FirstName*:
LastName*:
Address*:
City*:
State*:
ZIP/Postal*:
Phone Number*:

Enter Card Details

Credit/Name on Card*:
Credit/Debit Card Number*:
Expiration Date*: /
CVV*:

Delivery Options

Store Pick-up
 Home Delivery

Checkout

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9. Warranty Page to buy warranty for the required product

The screenshot shows the 'Warranty' page of the Best Deal website. At the top, there is a search bar with placeholder text 'Search Product: Eg: Sony 70 Inch 4K'. Below the search bar, a navigation menu includes Home, TV, Speakers, Phones, Laptops, Voice-Assistant, Wearables, ViewOrder, Hello,Vaishnavi, Account, Logout, and Cart(1). The main heading 'Warranty' is centered above the text 'Protect It Today. Use it for years!'. Below this, the slogan 'Drops..Spills..Accidents..Covered' is displayed. A note states 'Covers drops & spills | No deductables and hidden fees |'. The text '24/7 Customer Support' follows. A question 'Do you want to buy Warranty?' is followed by a red 'Buy Now' button. At the bottom of the page, a footer bar contains the text 'Prices and offers are subject to change. © BestDeal 2020. All rights reserved. Developed by Vaishnavi Manjunath'.

The screenshot shows the 'Cart' page of the Best Deal website. The cart summary table shows two items: 'Sony 70 Inch 4K' at \$2199.99 and 'Warranty' at \$100.0, with a total of \$2299.99. A 'Checkout' button is located at the bottom right of the table. To the left of the cart, there is a sidebar with category links: TV, Sound Systems, Phones, Laptops, Voice Assistants, and Wearables. Each category has a list of sub-brands. On the right side of the cart, there are two product cards: 'Sony Bravia Remote Case' priced at \$89.998 and 'Universal TV Stand Base' also priced at \$89.998. Each card features an image of the product, a 'Buy Now' button, and 'WriteReview' and 'ViewReview' buttons. A red arrow points from the right side of the 'Universal TV Stand Base' card towards the right edge of the screen.

10. Entering Checkout Details with all details – Personal information, Payment details, Delivery options

The screenshot shows the Best Deal website interface. At the top, there is a navigation bar with links for Home, TV, Speakers, Phones, Laptops, Voice-Assistant, Wearables, ViewOrder, Account, Logout, and Cart(2). A search bar is also present. On the left side, there are several categories listed in pink boxes: TV (Sony, LG, Samsung), Sound Systems (Sony, Bose, Logitech), Phones (Apple, Samsung, Nexus), Laptops (Apple, HP, Dell), Voice Assistants (Amazon, Google), and Wearables (Fitness Watches, Smart Watches, Headphones, Virtual Reality, Pet Tracker). The main content area is titled "Order". It displays a table for the customer "Vaishnavi" with the following data:

Product Name	Price	Action
Sony 70 Inch 4K	\$2199.99	Buy Warranty
Warranty	\$100.0	Buy Warranty
Total Cost	\$2299.99	

Below this, there is a section titled "Enter Checkout Details" with input fields for FirstName*, LastName*, Address*, City*, State*, ZIP/Postal*, and Phone Number*. The values entered are: FirstName: Vaishnavi, LastName: Manjunath, Address: 2901 S King Dr, City: Chicago, State: IL, ZIP/Postal: 60616, and Phone Number: 3127213039. There is also a section titled "Enter Card Details" with fields for Credit/Name on Card*, Credit/Debit Card Number*, Expiration Date*, and CVV*. The values entered are: Credit/Name on Card: va, Credit/Debit Card Number: 1234, Expiration Date: 12/2023, and CVV: 123. Finally, there is a "Delivery Options" section with radio buttons for "Store Pick-up" (selected) and "Home Delivery". A "Checkout" button is located at the bottom of the form.

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11. Delivery details based on selected option

Store Pick-up:

The screenshot shows the Best Deal website interface. At the top, there is a navigation bar with links for Home, TV, Speakers, Phones, Laptops, Voice-Assistant, Wearables, ViewOrder, Hello,Vaishnavi, Account, Logout, and Cart(0). A search bar is also present. On the left side, there is a sidebar with categories: TV (Sony, LG, Samsung), Sound Systems (Sony, Bose, Logitech), Phones (Apple, Samsung, Nexus), Laptops (Apple, HP, Dell), Voice Assistants (Amazon, Google), and Wearables (Fitness Watches, Smart Watches, Headphones, Virtual Reality, Pet Tracker). The main content area is titled "Order" and displays the customer name "Vaishnavi". It indicates that the selected delivery type is "Store Pick-up". Below this, it says "Select a store to pick-up your order:" and lists several BestDeal store locations with radio buttons for selection. A "Checkout" button is located at the bottom of this section. At the very bottom of the page, there is a footer note: "Prices and offers are subject to change. © BestDeal 2020. All rights reserved. Developed by Vaishnavi Manjunath".

Best Deal

Search Product:
Eg: Sony 70 Inch 4K

Home TV Speakers Phones Laptops Voice-Assistant Wearables ViewOrder Hello,Vaishnavi Account Logout Cart(0)

TV

- Sony
- LG
- Samsung

Sound Systems

- Sony
- Bose
- Logitech

Phones

- Apple
- Samsung
- Nexus

Laptops

- Apple
- HP
- Dell

Voice Assistants

- Amazon
- Google

Wearables

- Fitness Watches
- Smart Watches
- Headphones
- Virtual Reality
- Pet Tracker

Order

Customer Name: Vaishnavi

Selected Delivery Type: Store Pick-up

Select a store to pick-up your order:

BestDeal
555 W Roosevelt Rd,
Chicago, IL 60607

BestDeal
2100 N Elston Ave,
Chicago, IL 60614

BestDeal
7602 S Cicero Ave,
Burbank, IL 60459

BestDeal
1334 Winston Plaza,
Mehro Park, IL 60160

BestDeal
5425 Touhy Ave,
Skokie, IL 60077

BestDeal
1000 W North Ave,
Chicago, IL 60642

BestDeal
2358 S Harlem Ave,
North Riverside, IL 60546

BestDeal
4100 N Harlem Ave,
Norridge, IL 60706

BestDeal
2301 Howard St,
Evanston, IL 60202

BestDeal
11 Countryside Plaza,
Countryside, IL 60525

Checkout

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Home Delivery:

The image shows a user interface for an e-commerce website named "Best Deal".

Header: The top navigation bar includes a logo with a shopping cart icon, the text "Best Deal", and a search bar with placeholder text "Search Product: Eg: Sony 70 Inch 4K". Other menu items in the header are Home, TV, Speakers, Phones, Laptops, Voice-Assistant, Wearables, ViewOrder, Hello,Vaishnavi, Account, Logout, and Cart(0).

Sidebar Categories: On the left side, there are six expandable categories:

- TV**: Options include Sony, LG, and Samsung.
- Sound Systems**: Options include Sony, Bose, and Logitech.
- Phones**: Options include Apple, Samsung, and Nexus.
- Laptops**: Options include Apple, HP, and Dell.
- Voice Assistants**: Options include Amazon and Google.
- Wearables**: Options include Fitness Watches, Smart Watches, Headphones, Virtual Reality, and Pet Tracker.

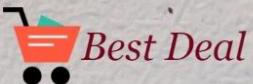
Order Form: The main content area is titled "Order". It displays the following information:

- Customer Name:** Vaishnavi
- Selected Delivery Type:** Home Delivery
- Please confirm your delivery address:** 2901 S King Dr, Chicago, IL, 60616
- Delivery Address:** 2901 S King Dr, Chicago, IL, 60616
- Confirmation:** A radio button group with "Yes" checked and "No" uncheckable.
- Checkout:** A large blue button at the bottom of the form.

Footer: At the bottom of the page, a dark footer bar contains the text "Prices and offers are subject to change. © BestDeal 2020. All rights reserved. Developed by Vaishnavi Manjunath".

12. Order Confirmation Page

Store Pick-up:



Best Deal

Search Product:
Eg: Sony 70 Inch 4K

Home TV Speakers Phones Laptops Voice-Assistant Wearables ViewOrder Hello,Vaishnavi Account Logout Cart(0)

TV

- Sony
- LG
- Samsung

Sound Systems

- Sony
- Bose
- Logitech

Phones

- Apple
- Samsung
- Nexus

Laptops

- Apple
- HP
- Dell

Voice Assistants

- Amazon
- Google

Wearables

- Fitness Watches
- Smart Watches
- Headphones
- Virtual Reality
- Pet Tracker

Order Confirmation

Thank You for shopping with us!!!
Your Order Id#: 2
Your Order Delivery Confirmation#: 3

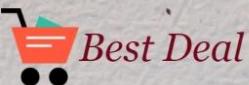


Your order will be ready to be picked up within two hours from your selected address.
Address: BestDeal, 1334 Winston Plaza, Melrose Park, IL 60160
We will hold your order upto two weeks from today.

You can cancel your order within 5 days only if at all you change your mind.

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Home Delivery:



Search Product:
Eg: Sony 70 Inch 4K

Home TV Speakers Phones Laptops Voice-Assistant Wearables ViewOrder Hello,Vaishnavi Account Logout Cart(0)

TV

- Sony
- LG
- Samsung

Sound Systems

- Sony
- Bose
- Logitech

Phones

- Apple
- Samsung
- Nexus

Laptops

- Apple
- HP
- Dell

Voice Assistants

- Amazon
- Google

Wearables

- Fitness Watches
- Smart Watches
- Headphones
- Virtual Reality
- Pet Tracker

Order Confirmation

Thank You for shopping with us!!!

Your Order Id#: 2

Your Order Delivery Confirmation#: 25



Your estimated delivery date is **2020-10-12**

You can cancel your order within 5 days only if at all you change your mind.

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13. Page to enter order number and view previous orders

OrderId:	UserName:	productOrdered:	productPrice:	
1.	Vaishnavi	Sony 70 Inch 4K	Price: 2199.99	CancelOrder
1.	Vaishnavi	Warranty	Price: 100.0	CancelOrder

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14. After selecting product and canceling the order

Search Product:
Eg: Sony 70 Inch 4K

Order

	OrderId:	UserName:	productOrdered:	productPrice:	
<input checked="" type="radio"/>	1.	Vaishnavi	Sony 70 Inch 4K	Price: 2199.99	cancelOrder
<input type="radio"/>	1.	Vaishnavi	Warranty	Price: 100.0	cancelOrder

Search Product:
Eg: Sony 70 Inch 4K

Your Order is Cancelled

Search Product:
Eg: Sony 70 Inch 4K

Order

	OrderId:	UserName:	productOrdered:	productPrice:	
<input type="radio"/>	1.	Vaishnavi	Warranty	Price: 100.0	cancelOrder

15. Account information and all orders information page

The screenshot shows the Best Deal website interface. At the top, there is a navigation bar with links for Home, TV, Speakers, Phones, Laptops, Voice-Assistant, Wearables, ViewOrder, Hello,Vaishnavi, Account, Logout, and Cart(0). On the left, there are two sidebar menus: 'TV' (listing Sony, LG, Samsung) and 'Sound Systems' (listing Sony, Bose, Logitech). The main content area is titled 'Account' and displays user information: User Name: Vaishnavi and User Type: customer. Below this, a table shows an order entry: OrderId: 1, UserName: Vaishnavi, Product Name: Warranty, Product Price: 100.0. A red 'cancelOrder' button is visible next to the table.

16. Login as Salesman

The screenshot shows the Best Deal website with a focus on the login process. The top navigation bar includes Home, TV, Speakers, Phones, Laptops, Voice-Assistant, Wearables, ViewOrder, Login, and Cart(0). A large 'LOGIN' button is centered below the navigation. The main content area contains a login form with fields for Username (sale1), Password (.....), and User Type (Salesman). A 'Login' button is at the bottom of the form. Below the form, a link says 'New User? Register here!'

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17. Salesman login page with Add user and Manage products (Add/Update/Delete) page

 Best Deal

Search Product:
Eg: Sony 70 Inch 4K

Home TV Speakers Phones Laptops Voice-Assistant Wearables Account AddUser ManageProducts Logout Cart(0)

TV

- Sony
- LG
- Samsung

Sound Systems

- Sony
- Bose
- Logitech

Phones

- Apple
- Samsung
- Nexus

Laptops

- Apple
- HP
- Dell

Voice Assistants

- Amazon
- Google

Wearables

- Fitness Watches
- Smart Watches
- Headphones
- Virtual Reality
- Pet Tracker

Welcome to BestDeal
Your one stop smart shopping resource!



We beat our competitors in all aspects. Price-Match Guaranteed

Best Sellers

Iphone 11 **699.99\$**



Buy Now Write Review

HP Spectre X360 **1199.99\$**



Buy Now Write Review

Samsung 8 Series **2299.99\$**



Buy Now Write Review

Bose Acoustics 5 Series **499.99\$**



Buy Now Write Review

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18. Add user navigates to registration page

The screenshot shows the Best Deal website's homepage. At the top, there is a navigation bar with links for Home, TV, Speakers, Phones, Laptops, Voice-Assistant, Wearables, Account, AddUser, ManageProducts, Logout, and Cart(0). A search bar is also present. Below the navigation bar, a large button labeled "Register Here" is visible. The main content area contains a registration form enclosed in a black border. The form fields include "Username" (text input), "Password" (text input), "Re-Password" (text input), and "User Type" (dropdown menu set to "Customer"). A "Create User" button is located at the bottom right of the form.

19. Manage Products when logged as salesman

The screenshot shows the Best Deal website's homepage. The navigation bar and search bar are identical to the previous screenshot. Below the navigation bar, a large button labeled "Manage Products" is visible. Underneath this button, there are three blue links: "Add Product", "Update Product", and "Delete Product". The main content area is currently empty, showing a light beige background. A footer bar at the bottom contains the text "Prices and offers are subject to change. © BestDeal 2020. All rights reserved. Developed by Vaishnavi Manjunath".

20. Login as Store manager



Register Here

Username	<input type="text" value="store"/>
Password	<input type="password" value="....."/>
Re-Password	<input type="password" value="....."/>
User Type	<input type="text" value="Store Manager"/>

Create User

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LOGIN

Congratulations, Your account has been created. Please
login

Username	<input type="text" value="store"/>
Password	<input type="password" value="....."/>
User Type	<input type="text" value="Store Manager"/>

Login

New User? [Register here!](#)

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21. Home page for Store manager with Manage Products page



Search Product:
Eg: Sony 70 Inch 4K

Home TV Speakers Phones Laptops Voice-Assistant Wearables ViewOrder Account ManageProducts Logout

TV

- Sony
- LG
- Samsung

Sound Systems

- Sony
- Bose
- Logitech

Phones

- Apple
- Samsung
- Nexus

Laptops

- Apple
- HP
- Dell

Voice Assistants

- Amazon
- Google

Wearables

- Fitness Watches
- Smart Watches
- Headphones
- Virtual Reality
- Pet Tracker

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Iphone 11
699.99\$



Buy Now
Write Review

HP Spectre X360
1199.99\$



Buy Now
Write Review

Samsung 8 Series
2299.99\$



Buy Now
Write Review

Bose Acoustics 5 Series
499.99\$



Buy Now
Write Review

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22. Options to add, update and delete products

The screenshot shows the 'Manage Products' section of the Best Deal website. At the top, there is a navigation bar with links for Home, TV, Speakers, Phones, Laptops, Voice-Assistant, Wearables, Account, AddUser, ManageProducts, Logout, and Cart(0). A search bar at the top right contains the placeholder text 'Search Product: Eg: Sony 70 Inch 4K'. Below the navigation, the title 'Manage Products' is centered. Underneath it are three buttons: 'Add Product', 'Update Product', and 'Delete Product'. At the bottom of the page, a dark footer bar displays the text 'Prices and offers are subject to change. © BestDeal 2020. All rights reserved. Developed by Vaishnavi Manjunath'.

23. Page to provide details to add new product

The screenshot shows the 'Add Product' page of the Best Deal website. The layout is similar to the previous page, with a navigation bar at the top and a search bar. The main title 'Add Product' is centered above a form titled 'Enter Product Details'. The form includes fields for ProductID*, Product Name*, Product Description*, Price*, Category* (with a dropdown menu showing '---- Please Select ----'), and Discount*. A 'Submit' button is located at the bottom of the form. The background features a large, faint image of a landscape.

24. Page to provide details to update product

The screenshot shows the Best Deal website's interface. At the top left is the logo 'Best Deal' with a shopping cart icon. A search bar at the top right contains the placeholder 'Eg: Sony 70 Inch 4K'. Below the header, there is a navigation menu with links: Home, TV, Speakers, Phones, Laptops, Voice-Assistant, Wearables, ViewOrder, Account, ManageProducts, and Logout. The main content area has a title 'Update Product' and a sub-section 'Enter Product Details'. This section contains several input fields: 'ProductID*', 'Product Name*', 'Product Description*', 'Price*', 'Category* (Please Select)', and 'Discount*'. A 'submit' button is located below these fields.

25. Page to provide details to delete product

The screenshot shows the Best Deal website's interface, similar to the previous one but with a different title. The 'Delete Product' page features a 'Enter Product Details' form with input fields for 'ProductID*', 'Product Name*', and 'Category* (Please Select)'. A 'submit' button is present. At the bottom of the page, a dark footer bar displays the text 'Prices and offers are subject to change. © BestDeal 2020. All rights reserved. Developed by Vaishnavi Manjunath'.

CSP – 584 Enterprise Web Application

Assignment – 2

1. User Registration Page

The screenshot shows the homepage of the Best Deal website. At the top, there is a navigation bar with links for Home, TV, Speakers, Phones, Laptops, Voice-Assistant, Wearables, ViewOrder, Login, and Cart(0). A search bar is located at the top right with placeholder text "Eg: Sony 70 Inch 4K". Below the navigation, there is a banner with the text "Register Here". A registration form is displayed, containing fields for Username, Password, Re-Password, and User Type (with a dropdown menu showing "Customer"). A "Create User" button is at the bottom of the form. The footer of the page contains a copyright notice: "Prices and offers are subject to change. © BestDeal 2020. All rights reserved. Developed by Vaishnavi Manjunath".

2. New user record created in the MySQL database in the 'Registration' table

The screenshot shows the MySQL Workbench interface. In the top-left, the Navigator pane shows the schema "bestdealdatabase" with tables like customerorders, productdetails, registration, and storedetails. The main area displays a SQL editor with the following code:

```
1 • use bestdealdatabase;
2
3 • select * from registration order by usertype;
4 • select * from productdetails;
5 • select * from customerorders order by username;
6 • select * from storedetails;
7
8
```

Below the SQL editor, a Result Grid shows the data from the "registration" table:

username	password	repassword	usertype
customer16	customer16	customer16	customer
customer17	customer17	customer17	customer
customer18	customer18	customer18	customer
customer19	customer19	customer19	customer
customer20	customer20	customer20	customer
sales1	sales1	sales1	manager
sales2	sales2	sales2	manager
sales3	sales3	sales3	manager
sales4	sales4	sales4	manager
sales5	sales5	sales5	manager

3. The customer details entered in the 'CheckOut' page

The screenshot shows the Best Deal website's checkout page. On the left, there is a sidebar with categories: Features (Trending), TV, Sound Systems, Phones, Laptops, Voice Assistants, and Wearables. The TV section is expanded, showing TV Brands. The Phones section is expanded, showing Phone Brands. The Laptops section is expanded, showing Laptop Brands. The Wearables section is expanded, showing Fitness Watches, Smart Watches, Headphones, Virtual Reality, and Pet Tracker. The main content area is titled "Order". It displays the User Id: customer20 and Customer Name: customer20. A table shows the product details: Insignia 70 4K UHD TV at \$649.99, with a "Buy Warranty" button. The total cost is listed as \$649.99. Below this, "Enter Checkout Details" form fields include FirstName*, LastName*, Address*, City*, State*, ZIP/Postal*, and Phone Number*. To the right, "Enter Card Details" form fields include Credit/Name on Card*, Credit/Debit Card Number*, Expiration Date*, and CVV*. At the bottom, "Delivery Options" show Store Pick-up (selected) and Home Delivery (Shipping Cost: \$5.99). A "checkout" button is at the bottom.

Search Product:
Eg: Sony 70 Inch 4K

Home TV Speakers Phones Laptops Voice-Assistant Wearables ViewOrder Hello,Customer20 Account Logout Cart(1)

Features

- Trending

TV

- TV Brands

Sound Systems

- Sound System Brands

Phones

- Phone Brands

Laptops

- Laptop Brands

Voice Assistants

- Voice Assistant Brands

Wearables

- Fitness Watches
- Smart Watches
- Headphones
- Virtual Reality
- Pet Tracker

Order

User Id: customer20

Customer Name: customer20

Product Name	Price
Insignia 70 4K UHD TV	\$649.99
Total Cost	\$649.99

Buy Warranty

Enter Checkout Details

FirstName*: customer20
LastName*: customer20
Address*: 2901 S King Dr
City*: Chicago
State*: IL
ZIP/Postal*: 60616
Phone Number*: 3127213221

Enter Card Details

Credit/Name on Card*: customer20
Credit/Debit Card Number*: 123433545
Expiration Date*: 07 / 2024
CVV*: 345

Delivery Options

Store Pick-up
 Home Delivery (Shipping Cost: \$5.99)

checkout

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4. The order transaction is scored in the ‘customerorders’ table of MySQL database

The screenshot shows the MySQL Workbench interface. In the top-left pane, the 'schemas' tree is visible, showing the 'bestdealdatabase' schema with tables like 'customerorders', 'productdetails', and 'registration'. The central area contains a SQL editor with the following code:

```
1 • use bestdealdatabase;
2
3 • select * from registration order by usertype;
4 • select * from productdetails;
5 • select * from customerorders where username="customer20";
6 • select * from storedetails;
7
8
```

Below the SQL editor is a 'Result Grid' showing the results of the last query. The data includes:

OrderId	userName	orderName	orderPrice	userAddress	creditCardNo	Firstname	Lastname	City	State	zip	PhoneNumber	CardName
1	customer20	Insignia 55 4K UHD TV	349.99	2000 Michigan avenue street	983946293	customer20	customer20	Chicago	IL	60616	312733611	customer6
2	customer20	Insignia 70 4K UHD TV	649.99	2901 S King Dr	123433545	customer20	customer20	Chicago	IL	60616	312713221	customer20
*	HULL	HULL	HULL	HULL	HULL	HULL	HULL	HULL	HULL	HULL	HULL	HULL

5. Deleting the item ‘LG C9 Series’ from the orders

The screenshot shows the 'Best Deal' website's account page. On the left, there is a sidebar with categories: Features, TV, Sound Systems, Phones, Laptops, Voice Assistants, and Wearables. The main content area shows a table of orders for user 'Customer20'.

Search Product: Eg: Sony 70 Inch 4K

OrderId	UserName	Product Name	Product Price	Purchase Date	Action
1.	customer20	Insignia 55 4K UHD TV	349.99	10/11/2020	<button>cancelOrder</button>
1.	customer20	LG C9 Series	1599.99	10/11/2020	<button>cancelOrder</button>
2.	customer20	Insignia 70 4K UHD TV	649.99	10/11/2020	<button>cancelOrder</button>

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6. The item 'LG C9 Series' is removed from 'customerorders' table of MySQL database

The screenshot shows the MySQL Workbench interface. In the top-left, the Navigator pane displays the schema structure of the 'bestdealdatabase'. The 'Tables' section lists 'customerorders', 'productdetails', 'registration', and 'storedetails'. Below this, other schemas like 'exampledatabase', 'sakila', 'sys', and 'world' are shown. The main area contains a query editor with the following SQL code:

```

1 • use bestdealdatabase;
2
3 • select * from registration order by usertype;
4 • select * from productdetails;
5 • select * from customerorders where username="customer20";
6 • select * from storedetails;
7
8

```

Below the query editor is a results grid titled 'Result Grid' showing data from the 'registration' table. The columns are OrderId, userName, orderName, orderPrice, userAddress, creditCardNo, FirstName, LastName, City, State, zip, PhoneNumber, CardName, and CardType. There are two rows of data:

OrderId	userName	orderName	orderPrice	userAddress	creditCardNo	FirstName	LastName	City	State	zip	PhoneNumber	CardName	CardType
1	customer20	Insignia 55 4K UHD TV	349.99	2000 Michigan avenue street	983946293	customer20	customer20	Chicago	IL	60616	312733611	customer6	0
2	customer20	Insignia 70 4K UHD TV	649.99	2901 S King Dr	123433545	customer20	customer20	Chicago	IL	60616	3127213221	customer20	0

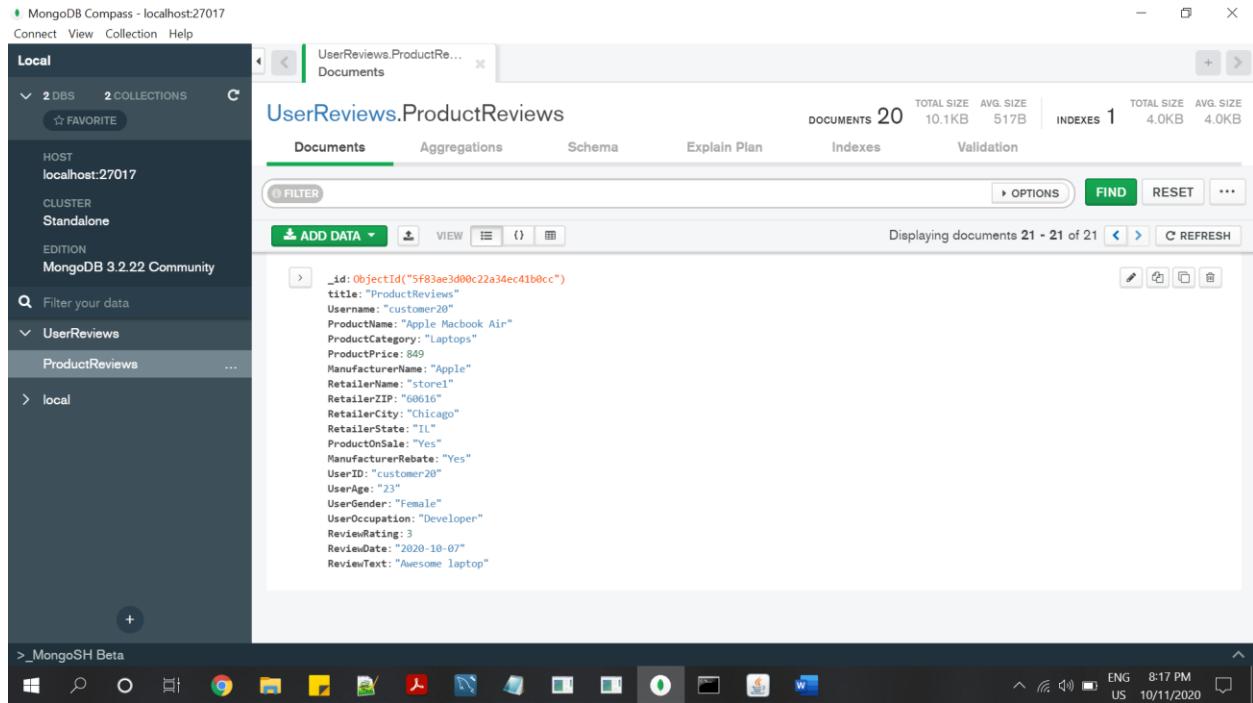
7. Add Review form

The screenshot shows a web page for 'Best Deal' featuring a navigation bar with links for Home, TV, Speakers, Phones, Laptops, Voice-Assistant, Wearables, ViewOrder, Hello.Customer20, Account, Logout, and Cart(0). On the left, there are five categories: Features (Trending), TV (TV Brands), Sound Systems (Sound System Brands), Phones (Phone Brands), and Laptops (Laptop Brands). The main content area is titled 'Review this Product' and contains a form with the following fields:

Product Name	:Apple Macbook Air
Product Category	:Laptops
Product Price	:\$849.99
Manufacturer Name	:Apple
Retailer Name*: store1	
Retailer Zip*: 60616	
Retailer City*: Chicago	
Retailer State*: IL	
Product On Sale*: Yes	
Manufacturer Rebate*: Yes	
User ID*: customer20	
User Age*: 23	
User Gender*: Female	
User Occupation*: Developer	
Review Rating*: 3	
Review Date*: 10/07/2020	
Awesome laptop	
Review Text*:	

At the bottom right of the form is a 'SubmitReview' button.

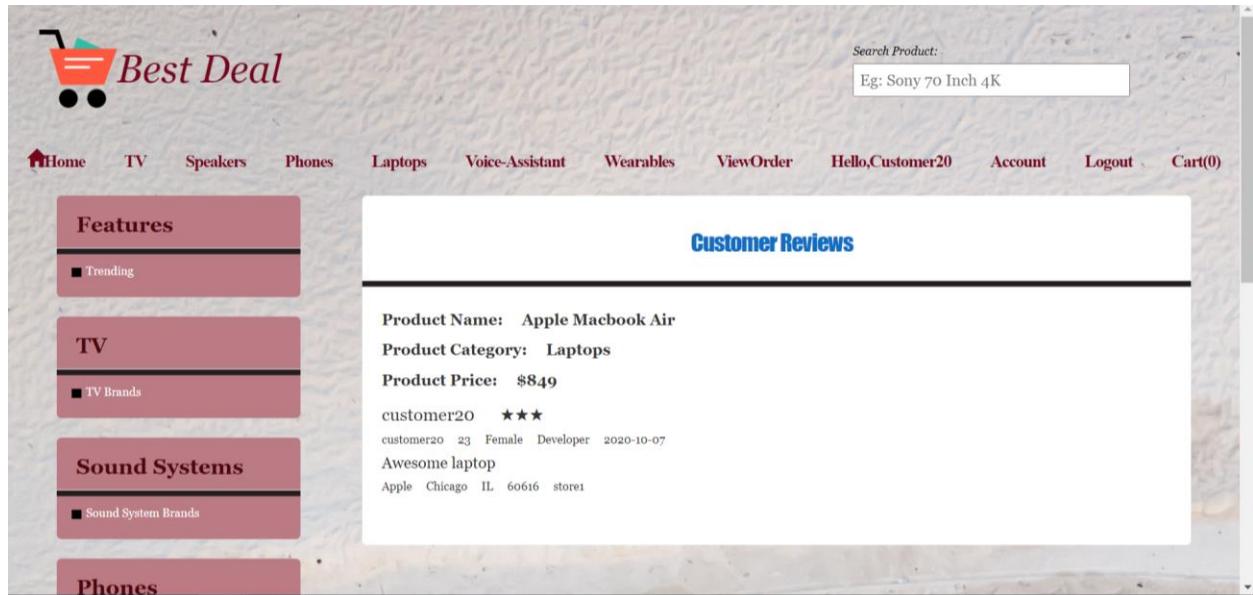
8. Review for the product 'Apple Macbook Air' being stored in MongoDB database



The screenshot shows the MongoDB Compass interface. On the left, the sidebar displays 'Local' with 'HOST localhost:27017', 'CLUSTER Standalone', and 'EDITION MongoDB 3.2.22 Community'. Under 'UserReviews', 'ProductReviews' is selected. The main pane shows the 'UserReviews.ProductReviews' collection with 20 documents. A specific document is expanded, showing the following data:

```
_id: ObjectId("5f83ae3d00c22a34ec41b0cc")
title: "ProductReviews"
Username: "customer20"
ProductName: "Apple Macbook Air"
ProductCategory: "Laptops"
ProductPrice: 849
ManufactureName: "Apple"
RetailerName: "store1"
RetailerZIP: "60616"
RetailerCity: "Chicago"
RetailerState: "IL"
ProductOnSale: "Yes"
ManufacturerRebate: "Yes"
UserID: "customer20"
UserAge: "23"
UserGender: "Female"
UserOccupation: "Developer"
ReviewRating: 3
ReviewDate: "2020-10-07"
ReviewText: "Awesome laptop"
```

9. Viewing the review for the product 'Apple Macbook Air' on the webpage



The screenshot shows a web page titled 'Best Deal' with a shopping cart icon. The top navigation bar includes links for Home, TV, Speakers, Phones, Laptops, Voice-Assistant, Wearables, ViewOrder, Hello,Customer20, Account, Logout, and Cart(0). The main content area features a sidebar with categories: Features (Trending), TV (TV Brands), Sound Systems (Sound System Brands), and Phones. The right side displays a 'Customer Reviews' section for the product 'Apple Macbook Air'. The review details are as follows:

Product Name: Apple Macbook Air
Product Category: Laptops
Product Price: \$849
customer20 ★★★
customer20 23 Female Developer 2020-10-07
Awesome laptop
Apple Chicago IL 60616 store1

10. Trending page based on the 20 reviews stored previously

MongoDB Compass - localhost:27017
Connect View Collection Help

Local
2 DBS 2 COLLECTIONS
HOST localhost:27017
CLUSTER Standalone
EDITION MongoDB 3.2.22 Community

UserReviews.ProductReviews
Documents

Documents Aggregations Schema Explain Plan Indexes Validation

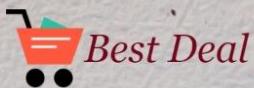
FILTER ADD DATA VIEW FILTER FIND RESET ...

Displaying documents 1 - 20 of 21

_id: ObjectId("5f7f90b6b2663422d41f6d0a")
title: "ProductReviews"
Username: "vaish2"
ProductName: "Insignia 70 4K UHD TV"
ProductCategory: "TV"
ProductPrice: 649
ManufacturerName: ""
RetailerName: "Vaishnavi"
RetailerZIP: "60616"
RetailerCity: "Chicago"
RetailerState: "IL"
ProductOnSale: "no"
ManufacturerRebate: "no"
UserID: "vaish123"
UserAge: "22"
UserGender: "female"
UserOccupation: "student"
ReviewRating: 4
ReviewDate: "2020-10-08"
ReviewText: "it was good product"

_id: ObjectId("5f838ff1a00c22a0db88a51a2")
title: "ProductReviews"

```
C:\Program Files\MongoDB\Server\3.2\bin\mongo.exe
> db.createCollection("ProductReviews")
{
  "ok" : 1
}
> db.ProductReviews.find()
{
  "_id" : ObjectId("5f7f90b6b2663422d41f6d0a"),
  "title" : "ProductReviews",
  "Username" : "vaish2",
  "ProductName" : "Insignia 70 4K UHD TV",
  "ProductCategory" : "TV",
  "ProductPrice" : 649,
  "ManufacturerName" : "",
  "RetailerName" : "Vaishnavi",
  "RetailerZIP" : "60616",
  "RetailerCity" : "Chicago",
  "RetailerState" : "IL",
  "ProductOnSale" : "no",
  "ManufacturerRebate" : "no",
  "UserID" : "vaish123",
  "UserAge" : "22",
  "UserGender" : "female",
  "UserOccupation" : "student",
  "ReviewRating" : 4,
  "ReviewDate" : "2020-10-08",
  "ReviewText" : "it was good product"
}
{
  "_id" : ObjectId("5f838ff1a00c22a0db88a51a2"),
  "title" : "ProductReviews",
  "Username" : "customer1",
  "ProductName" : "Echo Plus",
  "ProductCategory" : "Voice Assistant",
  "ProductPrice" : 149,
  "ManufacturerName" : "Amazon",
  "RetailerName" : "store1",
  "RetailerZIP" : "60616",
  "RetailerCity" : "Chicago",
  "RetailerState" : "Illinois",
  "ProductOnSale" : "No",
  "ManufacturerRebate" : "Yes",
  "UserID" : "customer1",
  "UserAge" : "24",
  "UserGender" : "Female",
  "UserOccupation" : "manager",
  "ReviewRating" : 4,
  "ReviewDate" : "2020-10-11",
  "ReviewText" : "It has excellent video/audio clarity."
}
{
  "_id" : ObjectId("5f838ff5500c22a0db88a51a5"),
  "title" : "ProductReviews",
  "Username" : "customer1",
  "ProductName" : "HTC VIVE Cosmos",
  "ProductCategory" : "Virtual Reality",
  "ProductPrice" : 699,
  "ManufacturerName" : "HTC",
  "RetailerName" : "store1",
  "RetailerZIP" : "60616",
  "RetailerCity" : "Chicago",
  "RetailerState" : "Illinois",
  "ProductOnSale" : "No",
  "ManufacturerRebate" : "Yes",
  "UserID" : "customer1",
  "UserAge" : "24",
  "UserGender" : "Female",
  "UserOccupation" : "manager",
  "ReviewRating" : 3,
  "ReviewDate" : "2020-10-11",
  "ReviewText" : "It has excellent video/audio clarity, however, it overheats after 5 hours of use"
}
{
  "_id" : ObjectId("5f838ffab00c22a0db88a51ac"),
  "title" : "ProductReviews",
  "Username" : "customer2",
  "ProductName" : "Samsung Galaxy Watch Active",
  "ProductCategory" : "Smart Watches",
  "ProductPrice" : 249,
  "ManufacturerName" : "",
  "RetailerName" : "store2",
  "RetailerZIP" : "60612",
  "RetailerCity" : "Chicago",
  "RetailerState" : "Illinois",
  "ProductOnSale" : "Yes",
  "ManufacturerRebate" : "Yes",
  "UserID" : "customer2",
  "UserAge" : "22",
  "UserGender" : "Male",
  "UserOccupation" : "Teacher",
  "ReviewRating" : 5,
  "ReviewDate" : "2020-10-11",
  "ReviewText" : "Awesome product"
}
{
  "_id" : ObjectId("5f838ff800c22a0db88a51af"),
  "title" : "ProductReviews",
  "Username" : "customer3",
  "ProductName" : "Homido V2 Virtual reality",
  "ProductCategory" : "Virtual Reality",
  "ProductPrice" : 63,
  "ManufacturerName" : "Homido",
  "RetailerName" : "store2",
  "RetailerZIP" : "60612",
  "RetailerCity" : "Chicago",
  "RetailerState" : "Illinois",
  "ProductOnSale" : "No",
  "ManufacturerRebate" : "Yes",
  "UserID" : "customer3",
  "UserAge" : "23",
  "UserGender" : "Male",
  "UserOccupation" : "student",
  "ReviewRating" : 4,
  "ReviewDate" : "2020-10-11",
  "ReviewText" : "Best VR experience"
}
{
  "_id" : ObjectId("5f83904100c22a0db88a51b2"),
  "title" : "ProductReviews",
  "Username" : "customer4",
  "ProductName" : "HP Spectre X360",
  "ProductCategory" : "Laptops",
  "ProductPrice" : 1199,
  "ManufacturerName" : "HP",
  "RetailerName" : "store3",
  "RetailerZIP" : "60656",
  "RetailerCity" : "Naperville",
  "RetailerState" : "Illinois",
  "ProductOnSale" : "Yes",
  "ManufacturerRebate" : "No",
  "UserID" : "customer4",
  "UserAge" : "28",
  "UserGender" : "Female",
  "UserOccupation" : "Doctor",
  "ReviewRating" : 5,
  "ReviewDate" : "2020-10-02",
  "ReviewText" : "Best laptop for best price"
}
{
  "_id" : ObjectId("5f83909100c22a0db88a51b5"),
  "title" : "ProductReviews",
  "Username" : "customer5",
  "ProductName" : "Sennheiser HD Pro",
  "ProductCategory" : "Head Phones",
  "ProductPrice" : 139,
  "ManufacturerName" : "Sennheiser",
  "RetailerName" : "store3",
  "RetailerZIP" : "60656",
  "RetailerCity" : "Naperville",
  "RetailerState" : "Illinois",
  "ProductOnSale" : "No",
  "ManufacturerRebate" : "Yes",
  "UserID" : "customer5",
  "UserAge" : "29",
  "UserGender" : "Male",
  "UserOccupation" : "Receptionist",
  "ReviewRating" : 5,
  "ReviewDate" : "2020-10-04",
  "ReviewText" : "Best headphones ever"
}
{
  "_id" : ObjectId("5f83919700c22a0db88a51be"),
  "title" : "ProductReviews",
  "Username" : "customer6",
  "ProductName" : "Apple Macbook Pro",
  "ProductCategory" : "Laptops",
  "ProductPrice" : 1599,
  "ManufacturerName" : "Apple",
  "RetailerName" : "store3",
  "RetailerZIP" : "60656",
  "RetailerCity" : "Naperville",
  "RetailerState" : "Illinois",
  "ProductOnSale" : "No",
  "ManufacturerRebate" : "No",
  "UserID" : "customer6",
  "UserAge" : "33",
  "UserGender" : "Female",
  "UserOccupation" : "Home worker",
  "ReviewRating" : 5,
  "ReviewDate" : "2020-09-30",
  "ReviewText" : "Best laptop ever if u like apple products"
}
{
  "_id" : ObjectId("5f8393c500c22a0db88a51d3"),
  "title" : "ProductReviews",
  "Username" : "customer7",
  "ProductName" : "HP Spectre X360",
  "ProductCategory" : "Laptops",
  "ProductPrice" : 1199,
  "ManufacturerName" : "HP",
  "RetailerName" : "store5",
  "RetailerZIP" : "60656",
  "RetailerCity" : "Naperville",
  "RetailerState" : "Illinois",
  "ProductOnSale" : "No",
  "ManufacturerRebate" : "Yes",
  "UserID" : "customer7",
  "UserAge" : "45",
  "UserGender" : "Male",
  "UserOccupation" : "CTO",
  "ReviewRating" : 5,
  "ReviewDate" : "2020-10-12",
  "ReviewText" : "Best laptop ever"
}
{
  "_id" : ObjectId("5f83950c00c22a0db88a51d3"),
  "title" : "ProductReviews",
  "Username" : "customer8",
  "ProductName" : "HTC VIVE Cosmos",
  "ProductCategory" : "Virtual Reality",
  "ProductPrice" : 699,
  "ManufacturerName" : "HTC",
  "RetailerName" : "store1",
  "RetailerZIP" : "60616",
  "RetailerCity" : "Chicago",
  "RetailerState" : "Illinois",
  "ProductOnSale" : "Yes",
  "ManufacturerRebate" : "Yes",
  "UserID" : "customer8",
  "UserAge" : "22",
  "UserGender" : "Female",
  "UserOccupation" : "Student",
  "ReviewRating" : 4,
  "ReviewDate" : "2020-10-08",
  "ReviewText" : "It has excellent video/audio clarity, however, it overheats after 5 hours of use"
}
```



Search Product:

Eg: Sony 70 Inch 4K

[Home](#) [TV](#) [Speakers](#) [Phones](#) [Laptops](#) [Voice-Assistant](#) [Wearables](#) [ViewOrder](#) [Hello,Customer20](#) [Account](#) [Logout](#) [Cart\(0\)](#)

Features

■ Trending

TV

■ TV Brands

Sound Systems

■ Sound System Brands

Phones

■ Phone Brands

Laptops

■ Laptop Brands

Voice Assistants

■ Voice Assistant Brands

Wearables

■ Fitness Watches

■ Smart Watches

■ Headphones

■ Virtual Reality

■ Pet Tracker

Trending

Best Products

Sennheiser HD Pro	5.0
LG C9 Series	5.0
iPhone11 Pro	5.0
Samsung 7 Series	5.0
Apple Macbook Pro	5.0

Most Sold Products by Zipcode

60656	9
60616	8
60612	4

Most Sold Products

HTC VIVE Cosmos	3
Oculus Quest 2	2
HP Spectre X360	2
Sennheiser HD Pro	2
LG C9 Series	1

11. Store details stored in MySQL database

The screenshot shows the MySQL Workbench interface with the 'bestdealdatabase' schema selected. The 'Tables' section lists 'customerorders', 'productdetails', 'registration', and 'storedetails'. The 'storedetails' table is selected, and its data is displayed in the result grid:

	id	storeId	street	city	state	zipCode
1	BestDeal	555 W Roosevelt Rd	Chicago	IL	60607	
2	BestDeal	1000 W North Ave	Chicago	IL	60642	
3	BestDeal	2100 N Elston Ave	Chicago	IL	60614	
4	BestDeal	2358 S Harlem Ave	North Riverside	IL	60546	
5	BestDeal	7602 S Cicero Ave	Burbank	IL	60459	
6	BestDeal	4100A N Harlem Ave	Norridge	IL	60706	
7	BestDeal	1334 Winston Plaza	Melrose Park	IL	60160	
8	BestDeal	2301 Howard St	Evanston	IL	60202	
9	BestDeal	5425 Touhy Ave	Skokie	IL	60077	
10	BestDeal	11 Countryside Plaza	Countryside	IL	60525	

12. All product details stored in MySQL database

The screenshot shows the MySQL Workbench interface with the 'bestdealdatabase' schema selected. The 'Tables' section lists 'customerorders', 'productdetails', 'registration', and 'storedetails'. The 'productdetails' table is selected, and its data is displayed in the result grid:

ProductType	Id	productName	productPrice	productImage	productManufacturer	productCondition	productDiscount
Phone	Apple iPhone SE	Apple Phone SE	399.99	apple4.jpg	Apple	New	0
Laptop	Apple MacBook Air	Apple MacBook Air	849.99	apple4.jpg	Apple	New	25
Laptop	Apple MacBook Pro	Apple MacBook Pro	1599.99	apple3.jpg	Apple	New	100
Smart Watch	Apple Watch Series 3	Apple Watch Series 3	199	apple5.jpg	Apple	New	0
Smart Watch	Apple Watch Series 4	Apple Watch Series 4	349	apple6.jpg	Apple	New	0
Laptop	ASUS 15.6 Touch-Screen	ASUS 15.6 Touch-Screen	1249.99	asus1.jpg	Asus	New	50
Laptop	ASUS VivoBook S15	ASUS VivoBook S15	999.99	asus2.jpg	Asus	New	50
Sound System	Bose Acoustics 5 Series	Bose Acoustics 5 Series	499.99	bose2.jpg	Bose	New	50
HeadPhone	Bose Quiet Comfort	Bose Quiet Comfort	229.99	bose4.jpg	Bose	New	0
HeadPhone	Bose Sound Link	Bose Sound Link	189.99	bose3.jpg	Bose	New	0
Sound System	Bose Wave System IV	Bose Wave System IV	669.99	bose1.jpg	Bose	New	50
Laptop	Dell XPS 13	Dell XPS 13	1090.99	dell1.jpg	Dell	New	50
Laptop	Dell XPS 15	Dell XPS 15	1399.99	dell2.jpg	Dell	New	50
Voice Assistant	Echo Plus	Echo Plus 2nd Gen	149.99	amazon2.jpg	Amazon	New	0
Voice Assistant	Echo Studio	Echo Studio	199.99	amazon3.jpg	Amazon	New	0
Voice Assistant	Echodot	Echodot 3rd Gen	49.99	amazon1.jpg	Amazon	New	0
Pet Tracker	FitBark GPS	FitBark GPS	69.95	fitbit1.jpg	FitBit	New	0

13. All accounts information are stored in MySQL database

The screenshot shows the MySQL Workbench interface with the 'registration' table selected. The results grid displays data from the 'registration' table, which includes columns: username, password, repassword, and usertype. The data shows various user entries, such as customer14 through customer20, sales1 through sales5, and store1 through store5, each assigned a specific usertype (customer, manager, or retailer).

username	password	repassword	usertype
customer14	customer14	customer14	customer
customer15	customer15	customer15	customer
customer16	customer16	customer16	customer
customer17	customer17	customer17	customer
customer18	customer18	customer18	customer
customer19	customer19	customer19	customer
customer20	customer20	customer20	customer
sales1	sales1	sales1	manager
sales2	sales2	sales2	manager
sales3	sales3	sales3	manager
sales4	sales4	sales4	manager
sales5	sales5	sales5	manager
store1	store1	store1	retailer
store2	store2	store2	retailer
store3	store3	store3	retailer
store4	store4	store4	retailer
store5	store5	store5	retailer

14. All transactions are stored in MySQL database

The screenshot shows the MySQL Workbench interface with the 'customerorders' table selected. The results grid displays data from the 'customerorders' table, which includes columns: OrderId, userName, orderName, orderPrice, userAddress, creditCardNo, FirstName, LastName, City, State, zip, PhoneNumber, and CardName. The data lists various purchases made by different customers, such as customer1 through customer20, each with a unique order ID and specific purchase details.

OrderId	userName	orderName	orderPrice	userAddress	creditCardNo	FirstName	LastName	City	State	zip	PhoneNumber	CardName
1	customer15	Samsung 7 Series	1999.99	2951 s king street	983946293	customer15	customer15	Chicago	IL	60616	3122216611	customer6
1	customer16	Sennheiser HD Pro	139.99	2800 S king dr	1234566	customer16	customer16	Chicago	Illinois	60616	3127778888	Customer1
1	customer17	Sony Bravia Remote Case	89.99	2000 Michigan avenue street	983946293	customer17	customer17	Chicago	IL	60616	3127336611	customer6
1	customer18	Plantronics BackBeat Go ...	45.99	2951 s king street	983946293	customer18	customer18	Chicago	IL	60616	3122216611	customer6
1	customer2	Samsung Galaxy Watch ...	249	2901 S King Dr	123456678	Customer2	Customer2	Chicago	IL	60616	3127899999	Customer2
1	customer20	Insignia 55 4K UHD TV	349.99	2000 Michigan avenue street	983946293	customer20	customer20	Chicago	IL	60616	3127336611	customer6
1	customer3	Homido V2 Virtual reality	63.99	3001 S King dr	998764753	Customer3	Customer3	Chicago	Illinois	60612	3127778888	Customer3
1	customer4	HP Spectre X360	1199.99	300 N Fulton st	998764753	Customer4	Customer4	Naperville	Illinois	60565	3127778899	Customer4
1	customer5	Sennheiser HD Pro	139.99	1344 w eve street	983946293	customer5	customer5	Aurora	IL	60616	3127213011	customer5
1	customer6	Apple Macbook Pro	1599.99	1344 w eve street	983946293	customer6	customer6	Aurora	IL	60616	3127216611	customer6
1	customer7	HP Spectre X360	1199.99	1344 w eve street	983946293	customer7	customer7	Aurora	IL	60616	3127216611	customer6
1	customer8	HTC VIVE Cosmos	699	2000 Michigan avenue street	983946293	customer8	customer8	Chicago	IL	60616	3127336611	customer6
1	customer9	Lintelek Activity Tracker HR	27.99	2901 s king street	983946293	customer9	customer9	Chicago	IL	60616	3122216611	customer6
2	customer1	HTC VIVE Cosmos	699	2800 S king dr	1234566	Customer1	Customer1	Chicago	Illinois	60616	3127778888	Customer1
2	customer20	Insignia 70 4K UHD TV	649.99	2901 S King Dr	123433545	customer20	customer20	Chicago	IL	60616	3127213221	customer20

CSP – 584 Enterprise Web Application

Assignment – 5

1. Python script to get Tweets from ‘BestBuy_Deals’ matching the product available on BestDeal

```
In [34]: import re
import pymysql

cnx = pymysql.connect(user='root', password='root',
                      host='127.0.0.1',
                      database='BestDealdatabase')

cursor = cnx.cursor()

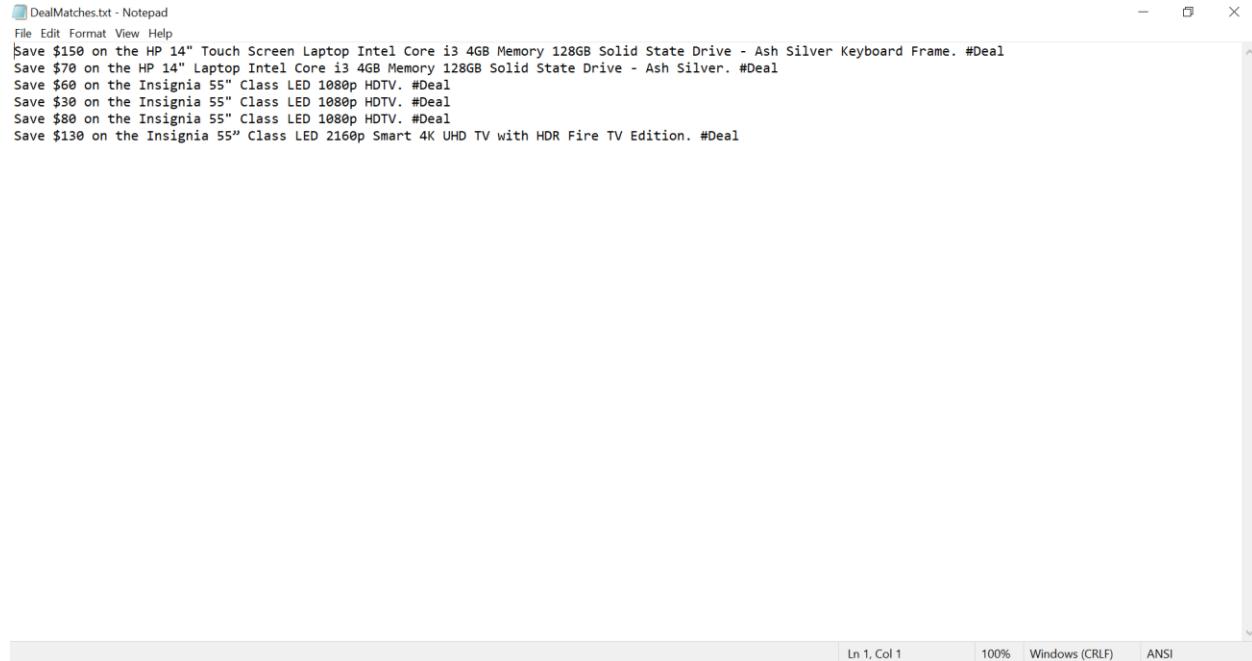
query = ("SELECT id FROM ProductDetails")
cursor.execute(query)

dealMatchGauranteed1=[]
for product in cursor:
    for tweet in timeline:
        deal = (tweet['text'])
        if re.search(product[0], deal):
            dealMatchGauranteed1 = dealMatchGauranteed1 + [deal]

In [35]: dealMatchGauranteed1[:5]

Out[35]: ['Save $150 on the HP 14" Touch Screen Laptop Intel Core i3 4GB Memory 128GB Solid State Drive - Ash Silver Keyboard Frame. #Deal',
          'Save $70 on the HP 14" Laptop Intel Core i3 4GB Memory 128GB Solid State Drive - Ash Silver. #Deal',
          'Save $60 on the Insignia 55" Class LED 1080p HDTV. #Deal',
          'Save $30 on the Insignia 55" Class LED 1080p HDTV. #Deal',
          'Save $80 on the Insignia 55" Class LED 1080p HDTV. #Deal']
```

2. Best Matches file (DealMatches.txt) being updated after running the python script



The screenshot shows a Notepad window titled "DealMatches.txt - Notepad". The window contains the following text:

```
Save $150 on the HP 14" Touch Screen Laptop Intel Core i3 4GB Memory 128GB Solid State Drive - Ash Silver Keyboard Frame. #Deal
Save $70 on the HP 14" Laptop Intel Core i3 4GB Memory 128GB Solid State Drive - Ash Silver. #Deal
Save $60 on the Insignia 55" Class LED 1080p HDTV. #Deal
Save $30 on the Insignia 55" Class LED 1080p HDTV. #Deal
Save $80 on the Insignia 55" Class LED 1080p HDTV. #Deal
Save $130 on the Insignia 55" Class LED 2160p Smart 4K UHD TV with HDR Fire TV Edition. #Deal
```

3. Tweets and the corresponding products on BestDeal website



Search Product:
Search Here...

Home TV Speakers Phones Laptops Voice-Assistant Wearables ViewOrder Login Cart(0)

Features

- Trending

TV

- TV Brands

Sound Systems

- Sound System Brands

Phones

- Phone Brands

Laptops

- Laptop Brands

Voice Assistants

- Voice Assistant Brands

Wearables

- Fitness Watches
- Smart Watches
- Headphones
- Virtual Reality
- Pet Tracker

Welcome to BestDeal

Your one stop smart shopping resource!



We beat our competitors in all aspects. Price-Match Guaranteed

Save \$70 on the HP 14" Laptop Intel Core i3 4GB Memory 128GB Solid State Drive - Ash Silver. #Deal

Save \$60 on the Insignia 55" Class LED 1080p HDTV. #Deal

Deal Matches

HP 14
1199.99\$



Buy Now
writeReview
ViewReview

Insignia 55 4K UHD TV
349.99\$



Buy Now
writeReview
ViewReview

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4. When there are no deals in the main page 'No Offers Found' will be displayed



Search Product:
Search Here...

Home TV Speakers Phones Laptops Voice-Assistant Wearables ViewOrder Hello,Customer1 Account Logout Cart(2)

Features

- Trending

TV

- TV Brands

Sound Systems

- Sound System Brands

Phones

- Phone Brands

Laptops

- Laptop Brands

Voice Assistants

- Voice Assistant Brands

Wearables

- Fitness Watches
- Smart Watches
- Headphones
- Virtual Reality
- Pet Tracker

Welcome to BestDeal
Your one stop smart shopping resource!



We beat our competitors in all aspects. Price-Match Guaranteed

No Offers Found

Deal Matches

No Deals Found

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5. Output after executing ProductRecommender.ipynb before checking Disputed or Returned check from transactions table

jupyter ProductRecommender Last Checkpoint: an hour ago (autosaved)

```

File Edit View Insert Cell Kernel Widgets Help
Logout Trusted Python 3 O

output=csv.writer(out)
for uid, user_ratings in top_n.items():
    output.writerow([uid, [iid for (iid, _) in user_ratings]])
out.close()

vaish2 ['iPhone11 Pro', 'Sennheiser HD Pro', 'Apple Macbook Pro']
customer1 ['Samsung Galaxy Watch Active', 'Sennheiser HD Pro', 'Samsung 7 Series']
customer2 ['iPhone11 Pro', 'Apple Macbook Pro', 'Homido V2 Virtual reality']
customer3 ['Apple Macbook Pro', 'Samsung 7 Series', 'Sennheiser HD Pro']
customer4 ['iPhone11 Pro', 'Samsung 7 Series', 'LG C9 Series']
customer5 ['HP Spectre X360', 'Echo Plus', 'Samsung 7 Series']
customer6 ['Samsung Galaxy Watch Active', 'HP Spectre X360', 'Sennheiser HD Pro']
customer7 ['Samsung Galaxy Watch Active', 'Sennheiser HD Pro', 'Homido V2 Virtual reality']
customer8 ['iPhone11 Pro', 'Samsung Galaxy Watch Active', 'Insignia 70 4K UHD TV']
customer9 ['Apple Macbook Pro', 'iPhone11 Pro', 'LG C9 Series']
customer10 ['Apple Macbook Pro', 'Insignia 70 4K UHD TV', 'HP Spectre X360']
customer11 ['Apple Macbook Pro', 'Insignia 70 4K UHD TV', 'HP Spectre X360']
customer12 ['Apple Macbook Pro', 'LG C9 Series', 'HTC VIVE Cosmos']
customer13 ['HP Spectre X360', 'LG C9 Series', 'Oculus Quest 2']
customer14 ['HP Spectre X360', 'Samsung Galaxy Watch Active', 'iPhone11 Pro']
customer15 ['Insignia 70 4K UHD TV', 'Polk Audio - Blackstone TL1600', 'Samsung Galaxy Watch Active']
customer16 ['iPhone11 Pro', 'Samsung Galaxy Watch Active', 'Apple Macbook Pro']
customer18 ['Samsung 7 Series', 'LG C9 Series', 'Sennheiser HD Pro']
customer19 ['Apple Macbook Pro', 'Sennheiser HD Pro', 'iPhone11 Pro']
customer20 ['LG C9 Series', 'HP Spectre X360', 'Samsung Galaxy Watch Active']

```

6. Output after executing ProductRecommender.ipynb after checking Disputed or Returned check from transactions table

jupyter ProductRecommender Last Checkpoint: an hour ago (autosaved)

```

File Edit View Insert Cell Kernel Widgets Help
Logout Trusted Python 3 O

In [4]: cnx = pymysql.connect(user='root', password='root',
                           host='127.0.0.1',
                           database='BestDealdatabase')

cursor = cnx.cursor()
query = ("SELECT loginID, Product_ID, Transaction_Status, Order_Returned FROM transactions")
cursor.execute(query)

for transaction in cursor:
    for row in items:
        if row[0] in transaction and row[0] == transaction[0]:
            for pid in row[1]:
                if pid in transaction[1]:
                    if transaction[2] == 'Disputed' or transaction[3] == 'Yes':
                        row[1].remove(pid)

out = open(pr_file_path+'/output.csv', 'w', newline='')
output=csv.writer(out)

for item in items:
    print(item)
    output.writerow(item)

out.close()

vaish2 ['iPhone11 Pro', 'Sennheiser HD Pro', 'Apple Macbook Pro']
['customer1', ['Samsung Galaxy Watch Active', 'Sennheiser HD Pro', 'Samsung 7 Series']]
['customer2', ['iPhone11 Pro', 'Apple Macbook Pro', 'Homido V2 Virtual reality']]
['customer3', ['Apple Macbook Pro', 'Samsung 7 Series', 'Sennheiser HD Pro']]
['customer4', ['iPhone11 Pro', 'Samsung 7 Series', 'LG C9 Series']]
['customer5', ['HP Spectre X360', 'Echo Plus', 'Samsung 7 Series']]

['customer6', ['Samsung Galaxy Watch Active', 'HP Spectre X360', 'Sennheiser HD Pro']]
['customer7', ['Samsung Galaxy Watch Active', 'Sennheiser HD Pro', 'Homido V2 Virtual reality']]
['customer8', ['iPhone11 Pro', 'Samsung Galaxy Watch Active', 'Insignia 70 4K UHD TV']]
['customer9', ['Apple Macbook Pro', 'iPhone11 Pro', 'LG C9 Series']]
['customer10', ['Apple Macbook Pro', 'Insignia 70 4K UHD TV', 'HP Spectre X360']]
['customer11', ['Apple Macbook Pro', 'Insignia 70 4K UHD TV', 'HP Spectre X360']]
['customer12', ['Apple Macbook Pro', 'LG C9 Series', 'HTC VIVE Cosmos']]
['customer13', ['HP Spectre X360', 'LG C9 Series', 'Oculus Quest 2']]
['customer14', ['HP Spectre X360', 'Samsung Galaxy Watch Active', 'iPhone11 Pro']]
['customer15', ['Insignia 70 4K UHD TV', 'Polk Audio - Blackstone TL1600', 'Samsung Galaxy Watch Active']]
['customer16', ['iPhone11 Pro', 'Apple Macbook Pro']]
['customer18', ['Samsung 7 Series', 'LG C9 Series', 'Sennheiser HD Pro']]
['customer19', ['Apple Macbook Pro', 'Sennheiser HD Pro', 'iPhone11 Pro']]
['customer20', ['LG C9 Series', 'HP Spectre X360', 'Samsung Galaxy Watch Active']]

```

In the above two screenshot Customer16 had a Returned/Disputed transaction which has been removed the item list

7. ‘mongodata_train.csv’ file

8. ‘mongodata_test.csv’ file

9. ‘output.csv’ file – transactions without disputed or returned items

10. 'output1.csv' file – with disputed or returned transactions

11. Same transaction in transactions table highlighting as returned item

The screenshot shows the MySQL Workbench interface with a query window containing the following SQL code:

```
7 • select loginID, Product_ID, Transaction_Status, Order_Returned from transactions where loginid = 'customer16';
```

The result grid shows one row of data:

loginID	Product_ID	Transaction_Status	Order_Returned
customer 16	Samsung Galaxy Watch	Active	Approved

12. Product Recommendation feature for customer 16

The screenshot shows the Best Deal e-commerce website. The top navigation bar includes links for Home, TV, Speakers, Phones, Laptops, Voice-Assistant, Wearables, ViewOrder, Hello,Customer16, Account, Logout, and Cart(1). The sidebar on the left lists categories: Features (Trending), TV (TV Brands), Sound Systems (Sound System Brands), Phones (Phone Brands), Laptops (Laptop Brands), Voice Assistants (Voice Assistant Brands), and Wearables (Fitness Watches, Smart Watches, Headphones, Virtual Reality, Pet Tracker). The main content area displays a cart summary for 1 item: Moto G Power (\$249.99) with a Total of \$249.99 and a Checkout button. Below the cart, two recommended products are shown: Apple Macbook Pro (1599.99\$) and Apple iPhone 11 Pro (999.99\$). Each product card includes a Buy Now button and options to WriteReview or ViewReview.

13. Product Recommendation for customer 1 with different products

The screenshot shows a user interface for an e-commerce platform named "Best Deal". At the top left is a logo with a shopping cart icon and the text "Best Deal". To the right is a search bar with placeholder text "Search Here...". The top navigation bar includes links for Home, TV, Speakers, Phones, Laptops, Voice-Assistant, Wearables, ViewOrder, Hello,Customer1, Account, Logout, and Cart(1). On the left side, there is a sidebar with categories: Features (Trending), TV (TV Brands), Sound Systems (Sound System Brands), Phones (Phone Brands), Laptops (Laptop Brands), Voice Assistants (Voice Assistant Brands), and Wearables (Fitness Watches, Smart Watches, Headphones, Virtual Reality, Pet Tracker). The main content area features a "Cart(1)" section showing a single item: "ASUS VivoBook S15" at \$999.99 with a "Cancel" button. Below this is a "Recommended Products" section displaying two items: "Sennheiser HD Pro" headphones at \$139.99 and a "Samsung 7 Series" UHD TV at \$1999.99. Each product card includes "Buy Now", "WriteReview", and "ViewReview" buttons.

Search Product:
Search Here...

Home TV Speakers Phones Laptops Voice-Assistant Wearables ViewOrder Hello,Customer1 Account Logout Cart(1)

Features

Trending

TV

TV Brands

Sound Systems

Sound System Brands

Phones

Phone Brands

Laptops

Laptop Brands

Voice Assistants

Voice Assistant Brands

Wearables

Fitness Watches
Smart Watches
Headphones
Virtual Reality
Pet Tracker

Cart(1)

1. ASUS VivoBook S15	\$999.99	Cancel
Total	999.99	
		Checkout

Recommended Products

Sennheiser HD Pro
\$139.99

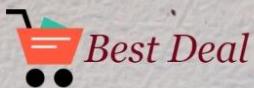
Buy Now
WriteReview
ViewReview

Samsung 7 Series
\$1999.99

Buy Now
WriteReview
ViewReview

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14. Recommended product can be directly added to cart for purchase



Search Product:

Search Here...

[Home](#) [TV](#) [Speakers](#) [Phones](#) [Laptops](#) [Voice-Assistant](#) [Wearables](#) [ViewOrder](#) [Hello,Customer!](#) [Account](#) [Logout](#) [Cart\(2\)](#)

Features

■ Trending

TV

■ TV Brands

Sound Systems

■ Sound System Brands

Phones

■ Phone Brands

Laptops

■ Laptop Brands

Voice Assistants

■ Voice Assistant Brands

Wearables

■ Fitness Watches

■ Smart Watches

■ Headphones

■ Virtual Reality

■ Pet Tracker

Cart (2)

1.	ASUS VivoBook S15	\$999.99	Cancel
2.	Samsung 7 Series	\$1999.99	Cancel
Total		2999.98	
			CheckOut

Recommended Products

Samsung 7 Series
1999.99\$



[Buy Now](#)
[WriteReview](#)
[ViewReview](#)

Samsung Galaxy Watch Active
249.0\$



[Buy Now](#)
[WriteReview](#)
[ViewReview](#)

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15. Reviews can be given to Recommended product directly

The screenshot shows a website interface for "Best Deal". The top navigation bar includes links for Home, TV, Speakers, Phones, Laptops, Voice-Assistant, Wearables, ViewOrder, Hello,Customer1, Account, Logout, and Cart(2). A search bar at the top right contains the placeholder "Search Here...". On the left side, there is a sidebar with categories: Features (Trending), TV (TV Brands), Sound Systems (Sound System Brands), Phones (Phone Brands), Laptops (Laptop Brands), Voice Assistants (Voice Assistant Brands), and Wearables (Fitness Watches, Smart Watches, Headphones, Virtual Reality, Pet Tracker). The main content area displays a "Review this Product" form for a Samsung 7 Series TV. The product details shown are: Product Name :Samsung 7 Series, Product Category :TV, Product Price :1999.99, and Manufacturer Name :Samsung. The review form includes fields for Retailer Name*, Retailer Zip*, Retailer City*, Retailer State*, Product On Sale*, Manufacturer Rebate*, User ID*, User Age*, User Gender*, User Occupation*, Review Rating (set to 1), Review Date (mm/dd/yyyy), and Review Text*. A "Submit Review" button is located at the bottom of the form.

Search Product:
Search Here...

Home TV Speakers Phones Laptops Voice-Assistant Wearables ViewOrder Hello,Customer1 Account Logout Cart(2)

Features
■ Trending

TV
■ TV Brands

Sound Systems
■ Sound System Brands

Phones
■ Phone Brands

Laptops
■ Laptop Brands

Voice Assistants
■ Voice Assistant Brands

Wearables
■ Fitness Watches
■ Smart Watches
■ Headphones
■ Virtual Reality
■ Pet Tracker

Review this Product

Product Name	:Samsung 7 Series
Product Category	:TV
Product Price	:1999.99
Manufacturer Name	:Samsung

Retailer Name*:
Retailer Zip*:
Retailer City*:
Retailer State*:
Product On Sale*:
Manufacturer Rebate*:
User ID*:
User Age*:
User Gender*:
User Occupation*:
Review Rating*: 1
Review Date*: mm / dd / yyyy
Review Text*:

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16. Reviews can be viewed directly for recommended products

The screenshot shows a website interface for "Best Deal". The header features a logo with a shopping cart icon and the text "Best Deal". A search bar is located in the top right corner. Below the header, there is a navigation menu with links: Home, TV, Speakers, Phones, Laptops, Voice-Assistant, Wearables, ViewOrder, Hello,Customer1, Account, Logout, and Cart(2). On the left side, there is a sidebar with several categories: Features (Trending), TV (TV Brands), Sound Systems (Sound System Brands), Phones (Phone Brands), Laptops (Laptop Brands), Voice Assistants (Voice Assistant Brands), and Wearables (Fitness Watches, Smart Watches, Headphones, Virtual Reality, Pet Tracker). The main content area displays a product review for a "Samsung 7 Series" TV. The product details are: Product Name: Samsung 7 Series, Product Category: TV, Product Price: \$1999. A review by "customer15" is shown, rated 5 stars, with the comment "Best TV experience ever". The review also includes the user's profile information: customer15, 34, Male, Shop Owner, 2020-10-11, and the location: Samsung Chicago Illinois 60616 store1. At the bottom of the page, a footer note states: "Prices and offers are subject to change. © BestDeal 2020. All rights reserved. Developed by Vaishnavi Manjunath".

CSP – 584 Enterprise Web Application

Assignment – 4

1. Autocomplete feature for Search

The screenshot displays the homepage of the Best Deal website. The header features a logo with a shopping cart icon and the text "Best Deal". The top navigation bar includes links for Home, TV, Speakers, Phones, Laptops, Voice-Assistant, Wearables, View Order, Login, and Cart(0). A search bar labeled "Search Product:" is present, with the letter "a" typed in, triggering an autocomplete dropdown menu. The dropdown lists various product names starting with "a", such as ASUS 15.6 Touch Screen, Apple Watch Series 3, Apple Watch Series 4, Apple Macbook Air, Apple iPhone 11 Pro, Apple iPhone SE, ASUS VivoBook S15, Apple iPhone 11, and Apple Macbook Pro. The main content area has a banner with the text "Welcome to Best Deal" and "Your one stop smart shop". It features a collage of electronic devices like a monitor, laptop, smartphone, and camera. Below the banner is a promotional message: "We beat our competitors in all aspects. Price-Match Guaranteed". To the left, a sidebar titled "Features" contains sections for TV, Sound Systems, Phones, Laptops, Voice Assistants, and Wearables, each with a "Brands" link. The right side of the page is titled "Best Sellers" and displays four product cards: iPhone 11 (699.99\$), HP Spectre X360 (1199.99\$), Samsung 8 Series (2299.99\$), and Bose Acoustics 5 Series (499.99\$). Each card includes an image of the product, its price, a "Buy Now" button, and a "Write Review" button.

Search Product:

- a
- ASUS 15.6 Touch Screen
- Apple Watch Series 3
- Apple Watch Series 4
- Apple Macbook Air
- Apple iPhone 11 Pro
- Apple iPhone SE
- ASUS VivoBook S15
- Apple iPhone 11
- Apple Macbook Pro

Welcome to Best Deal
Your one stop smart shop

We beat our competitors in all aspects. Price-Match Guaranteed

Best Sellers

- Iphone 11** 699.99\$

Buy Now | Write Review
- HP Spectre X360** 1199.99\$

Buy Now | Write Review
- Samsung 8 Series** 2299.99\$

Buy Now | Write Review
- Bose Acoustics 5 Series** 499.99\$

Buy Now | Write Review

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2. Selecting 'Apple Iphone SE' from the Search bar

The screenshot shows the Best Deal website interface. At the top, there is a navigation bar with links for Home, TV, Speakers, Phones, Laptops, Voice-Assistant, Wearables, ViewOrder, Login, and Cart(0). A search bar is located at the top right. On the left, there is a sidebar with categories: Features (Trending), TV (TV Brands), Sound Systems (Sound System Brands), Phones (Phone Brands), and Laptops (Laptop Brands). The main content area displays a product card for the Apple iPhone SE, featuring an image of three phones (black, white, and red), the price \$399.99, and buttons for 'Buy Now', 'WriteReview', and 'ViewReview'.

3. Add Product in Store Manager

The screenshot shows the Best Deal website interface, specifically the 'Add Product' page. The top navigation bar includes Home, TV, Speakers, Phones, Laptops, Voice-Assistant, Wearables, ViewOrder, ManageProducts, DataAnalytics, and Logout. A search bar is at the top right. The main title is 'Add Product'. Below it, a section titled 'Enter Product Details' contains various input fields: Product Type (Phone), ProductID (Apple iPhone 12), Product Name (Apple iPhone 12), Product Price (1200.00), Product Image (apple6.jpg), Product Manufacturer (Apple), Product Condition (New), Product Discount (0.0), Rebate Amount (0.0), and Product Count (12). A 'Add Product' button is at the bottom of the form. The footer states: 'Prices and offers are subject to change. © BestDeal 2020. All rights reserved. Developed by Vaishnavi Manjunath'.

4. Added product is reflected in MySQL

The screenshot shows the MySQL Workbench interface with a query editor and a results grid. The query is:

```

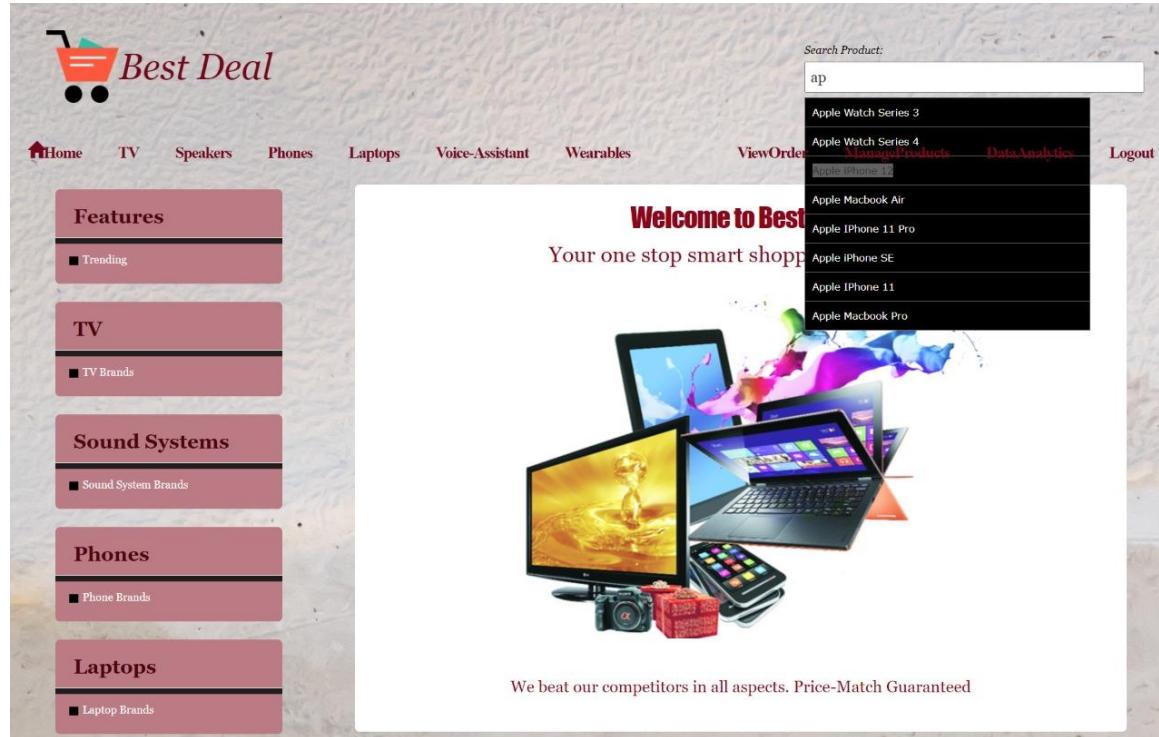
1 • use bestdealdatabase;
2
3 • select * from storedetails;
4 • select * from registration order by usertype;
5 • select * from productdetails;
6
7
8
9
10 • select * from customerorders;
11 • select * from transactions;

```

The results grid displays a table named 'productdetails' with 12 columns: Actual_Delivery_Date, Product_ID, Product_Name, Category, Manufacturer, Review_Rating, Delivery_Tracking_ID, Delivery_Zip_Code, Transaction_Status, Order_Returned, Order_Delivered_on_Time, and count. The data includes various products like Apple iPhone 12, Apple iPhone SE, Apple Macbook Air, etc., with their respective details.

Actual_Delivery_Date	Product_ID	Product Name	Category	Manufacturer	Review_Rating	Delivery_Tracking_ID	Delivery_Zip_Code	Transaction_Status	Order_Returned	Order_Delivered_on_Time	Count
	Phone	Apple iPhone 12	Apple iPhone 12	1200	apple6.jpg	Apple	New	0	0	0	12
	Phone	Apple iPhone SE	Apple iPhone SE	399.99	apple4.jpg	Apple	New	0	0	0	32
	Laptop	Apple Macbook Air	Apple Macbook Air	849.99	apple4.jpg	Apple	New	25	12	50	
	Laptop	Apple Macbook Pro	Apple Macbook Pro	1599.99	apple3.jpg	Apple	New	100	100	50	
	Smart Watch	Apple Watch Series 3	Apple Watch Series 3	199	apple5.jpg	Apple	New	0	1.2	50	
	Smart Watch	Apple Watch Series 4	Apple Watch Series 4	349	apple6.jpg	Apple	New	0	0	50	
	Laptop	ASUS 15.6 Touch-Screen	ASUS 15.6 Touch-Screen	1249.99	asus1.jpg	Asus	New	50	70	50	
	Laptop	ASUS VivoBook S15	ASUS VivoBook S15	999.99	asus2.jpg	Asus	New	50	32	50	
	Sound System	Bose Acoustics 5 Series	Bose Acoustics 5 Series	499.99	bose2.jpg	Bose	New	50	0	50	
	HeadPhone	Bose Quick Comfort	Bose Quick Comfort	229.99	bose4.jpg	Bose	New	0	0	50	
	HeadPhone	Bose Sound Link	Bose Sound Link	189.99	bose3.jpg	Bose	New	0	0	50	
	Sound System	Bose Wave System IV	Bose Wave System IV	669.99	bose1.jpg	Bose	New	50	0	50	

5. Newly added product in autocomplete



6. Newly added product as seen by the customer



Best Deal

[Home](#) [TV](#) [Speakers](#) [Phones](#) [Laptops](#) [Voice-Assistant](#) [Wearables](#) [ViewOrder](#) [Hello,Customer2](#) [Account](#) [Logout](#) [Cart\(0\)](#)

Features

[■ Trending](#)

TV

[■ TV Brands](#)

Sound Systems

[■ Sound System Brands](#)

Phones

[■ Phone Brands](#)

Laptops

[■ Laptop Brands](#)

Voice Assistants

[■ Voice Assistant Brands](#)

Wearables

[■ Fitness Watches](#)
[■ Smart Watches](#)
[■ Headphones](#)
[■ Virtual Reality](#)
[■ Pet Tracker](#)

Apple Phone Lists



Apple iPhone 11

\$699.99

[Buy Now](#)

[Write Review](#)

[View Review](#)



Apple iPhone 11 Pro

\$999.99

[Buy Now](#)

[Write Review](#)

[View Review](#)



Apple iPhone SE

\$399.99

[Buy Now](#)

[Write Review](#)

[View Review](#)



Apple iPhone 12

\$1200.0

[Buy Now](#)

[Write Review](#)

[View Review](#)

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7. Same product fetched through auto search option when selected

The screenshot shows a website interface for "Best Deal". At the top, there's a navigation bar with links for Home, TV, Speakers, Phones, Laptops, Voice-Assistant, Wearables, ViewOrder, Hello,Customer2, Account, Logout, and Cart(0). A search bar at the top right contains the placeholder "Search Here...". On the left, a sidebar titled "Features" lists categories: Trending, TV, Sound Systems, Phones, and Laptops, each with a "Brands" link. The main content area displays a product detail for an "Apple iPhone 12". It features a large image of the phone, the price "\$1200.0", and three buttons: "Buy Now", "WriteReview", and "ViewReview". Below the main content, a footer note states: "Prices and offers are subject to change. © BestDeal 2020. All rights reserved. Developed by Vaishnavi Manjunath".

8. Order details (31 txns) in Transactions table in MySQL

The screenshot shows the MySQL Workbench interface with a query editor and a result grid. The query editor contains the SQL command: "select * from transactions;". The result grid displays 31 rows of data from the Transactions table. The columns include Customer_Name, Customer_Occupation, CreditCardNumber, Order, Order_Date, Expected_Deliv, Actual_Deliv, Product_ID, Product_Name, Category, Manufacturer, Review_, Delivery_, and Delivery_Type. The data includes various products like Polk Audio - Blackstone, Plantronics BackBeat Go, Oculus Quest 2, and Insignia 70" 4K UHD TV, along with their respective details such as manufacturer names, review counts, and delivery types.

Customer_Name	Customer_Occupation	CreditCardNumber	Order	Order_Date	Expected_Deliv	Actual_Deliv	Product_ID	Product_Name	Category	Manufacturer	Review_	Delivery_	Delivery_Type
customer1	19	Software Engineer	3456-123-7279-0004	4	10/28/2020	11/5/2020	11/4/2020	Polk Audio - Blackstone	Sound System	Polk	2	xyz4	Home Delivery
customer15	25	Electrical Engineer	3456-123-7279-0010	10	11/3/2020	11/11/2020	11/10/2020	Plantronics BackBeat Go	Headphone	Plantronics	2	xyz10	Home Delivery
Louis, Mike	32	Electrical Engineer	3456-123-7279-0003	3	10/27/2020	11/4/2020	11/3/2020	Oculus Quest 2	Virtual Reality	Oculus	4	xyz3	Store pickup
customer11	21	Professor	3456-123-7279-0006	6	10/30/2020	11/7/2020	11/6/2020	Oculus Quest 2	Virtual Reality	Oculus	3	xyz6	Home Delivery
customer6	19	Student	3456-123-7279-0019	19	11/12/2020	11/20/2020	11/19/2020	Lintelek Activity Tracker	HR	Lintelek	5	xyz19	Store pickup
customer10	20	Doctor	3456-123-7279-0005	5	10/29/2020	11/6/2020	11/5/2020	iPhone 11 Pro	Phone	Apple	5	xyz5	Store pickup
customer7	20	Librarian	3456-123-7279-0020	20	11/13/2020	11/21/2020	11/20/2020	Insignia 70" 4K UHD TV	Tv	Insignia	4	xyz20	Home Delivery
customer17	27	Doctor	3456-123-7279-0012	12	11/5/2020	11/13/2020	11/12/2020	Insignia 55" 4K UHD TV	Tv	Insignia	3	xyz12	Home Delivery

9. Same 31 txns exported into CSV File to load into Neo4j database

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1	loginID	Customer	Customer	Customer	CreditCardNumber	Order_ID	Order_Date	Expected_Delivery_Date	Actual_Delivery_Date	Product_ID	Product_Name	Category	Manufacturer	Review_Rate	Delivery_Type	Delivery_Zip_Code	
2	customer1	Ajith G	26	Student	9.84E+08	11	11/8/2020	11/22/2020	11/23/2020	Sony Com	Sony Com	Sound Sys	Sony	3	480	Store Pickup	9
3	ju123	Rinkin, Joh	19	Student	3456-123-	1	10/25/2020	11/2/2020	11/2/2020	Echo Plus	Echo Plus	Voice Assi	Amazon	5	xyz1	Store pickup	6
4	rs234	Smith, Ret	21	Salespers	3456-123-	2	10/26/2020	11/3/2020	11/5/2020	HTC VIVE	(HTC VIVE	(Virtual Re	HTC	4	xyz2	Home Del	6
5	ml267	Louis, Milk	32	Electrical	3456-123-	3	10/27/2020	11/4/2020	11/3/2020	Oculus Qu	Oculus Qu	Virtual Re	Oculus	4	xyz3	Store pickup	6
6	customer1	customer1	19	Software	3456-123-	4	10/28/2020	11/5/2020	11/4/2020	Polk Audi	Polk Audi	Sound Sys	Polk	2	xyz4	Home Del	6
7	customer1	customer1	20	Doctor	3456-123-	5	10/29/2020	11/6/2020	11/5/2020	iPhone11	iPhone11	Phone	Apple	5	xyz5	Store pickup	6
8	customer1	customer1	21	Professor	3456-123-	6	10/30/2020	11/7/2020	11/6/2020	Oculus Qu	Oculus Qu	Virtual Re	Oculus	3	xyz6	Home Del	6
9	customer1	customer1	22	Student	3456-123-	7	10/31/2020	11/8/2020	11/7/2020	Samsung	Samsung	'Phone	Samsung	5	xyz7	Store pickup	6
10	customer1	customer1	23	Librarian	3456-123-	8	11/1/2020	11/9/2020	11/8/2020	Sennheise	Sennheise	Headphor	Sennheise	4	xyz8	Home Del	6
11	customer1	customer1	24	Salespers	3456-123-	9	11/2/2020	11/10/2020	11/9/2020	Sony Brav	Sony Brav	Accessory	Sony	4	xyz9	Store pickup	6
12	customer1	customer1	25	Electrical	3456-123-	10	11/3/2020	11/11/2020	11/10/2020	Plantronics	Plantronics	Headphor	Plantronics	2	xyz10	Home Del	6
13	customer1	customer1	26	Software	3456-123-	11	11/4/2020	11/12/2020	11/11/2020	Samsung	Samsung	(Smartwatch	Samsung	5	xyz11	Store pickup	6
14	customer1	customer1	27	Doctor	3456-123-	12	11/5/2020	11/13/2020	11/12/2020	Insignia 55"	Insignia 55"	Tv	Insignia	1	xyz12	Home Del	6
15	customer1	customer1	28	Student	3456-123-	13	11/6/2020	11/14/2020	11/13/2020	Homido V	Homido V	Virtual Re	Homido	5	xyz13	Store pickup	6
16	customer1	customer1	29	Salespers	3456-123-	14	11/7/2020	11/15/2020	11/14/2020	HP Spectr	HP Spectr	Laptop	HP	4	xyz14	Home Del	6
17	customer1	customer1	44	Electrical	3456-123-	15	11/8/2020	11/16/2020	11/15/2020	Sennheise	Sennheise	Headphor	Sennheise	4	xyz15	Store pickup	6
18	customer1	customer1	45	Software	3456-123-	16	11/9/2020	11/17/2020	11/16/2020	Apple Mac	Apple Mac	Laptop	Apple	2	xyz16	Home Del	6
19	customer1	customer1	46	Doctor	3456-123-	17	11/10/2020	11/18/2020	11/17/2020	HP Spectr	HP Spectr	Laptop	HP	5	xyz17	Store pickup	6
20	customer1	customer1	47	Professor	3456-123-	18	11/11/2020	11/19/2020	11/18/2020	HTC VIVE	(HTC VIVE	(Virtual Re	HTC	1	xyz18	Home Del	6
21	customer1	customer1	19	Student	3456-123-	19	11/12/2020	11/20/2020	11/19/2020	Lintelek A	Lintelek A	Petracker	Lintelek	5	xyz19	Store pickup	6
22	customer1	customer1	20	Librarian	3456-123-	20	11/13/2020	11/21/2020	11/20/2020	Insignia 70"	Insignia 70"	Insignia	Insignia	4	xyz20	Home Del	6

10. After loading into Neo4j database

```

neo4j$ LOAD CSV WITH HEADERS FROM "file:///transactions.csv" AS line WITH line MERGE (c:Customer {loginID: line.loginID}) 
Started streaming 31 records after 1 ms and completed after 29 ms.
  
```

Using older version of Neo4j due to installation errors

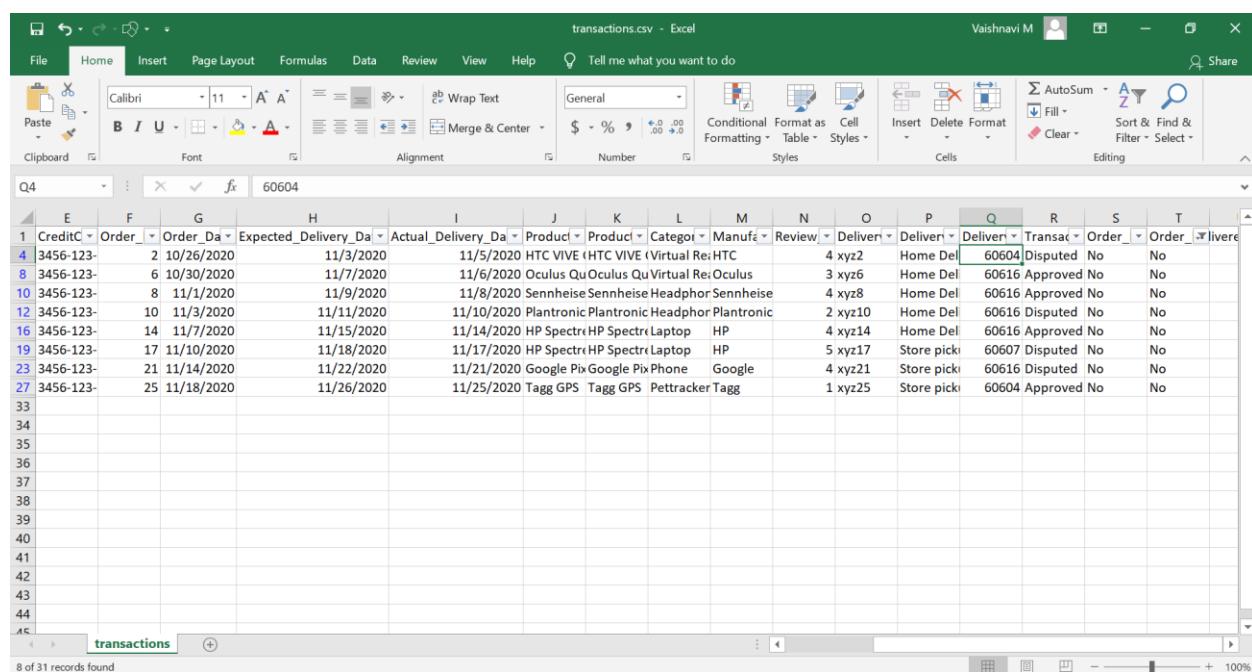
11. Number of transactions that were NOT delivered on time for every Delivery Zip Code



The screenshot shows the Neo4j Browser interface with a query results table. The table has two columns: 'z.Zip_Code' and 'count(o.id)'. The data is as follows:

z.Zip_Code	count(o.id)
60607	1
60616	5
60604	2

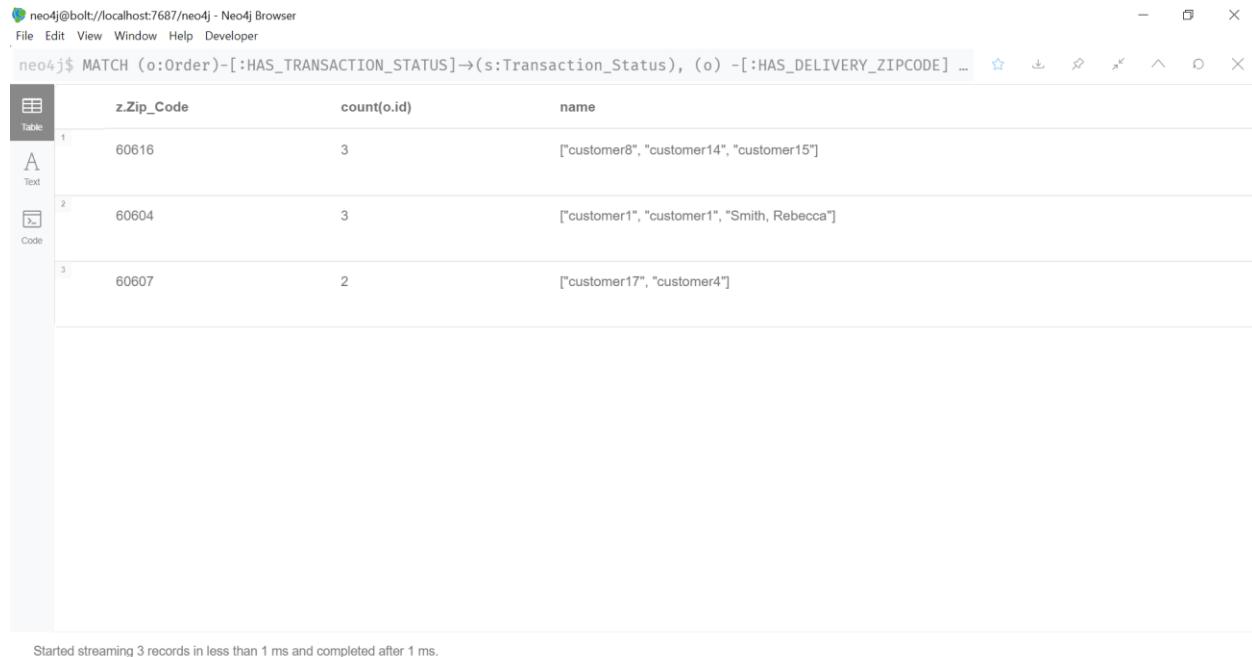
Started streaming 3 records after 1 ms and completed after 2 ms.



The screenshot shows a Microsoft Excel spreadsheet titled 'transactions.csv - Excel'. The table has 15 columns and approximately 30 rows of data. The columns are labeled from E to T. The data includes various product details, delivery information, and status indicators like 'Disputed' and 'Approved'.

	CreditC	Order_	Order_Da	Expected_Delivery_Da	Actual_Delivery_Da	Product	Product	Category	Manufa	Review	Deliver	Deliver	Transac	Order_	Order_
1															
4	3456-123-	2	10/26/2020	11/3/2020	11/5/2020	HTC VIVE	HTC VIVE	Virtual Re	HTC	4	xyz2	Home Del	60604	Disputed	No
8	3456-123-	6	10/30/2020	11/7/2020	11/6/2020	Oculus Qu	Oculus Qu	Virtual Re	Oculus	3	xyz6	Home Del	60616	Approved	No
10	3456-123-	8	11/1/2020	11/9/2020	11/8/2020	Sennheise	Sennheise	Headphor	Sennheise	4	xyz8	Home Del	60616	Approved	No
12	3456-123-	10	11/3/2020	11/11/2020	11/10/2020	Plantronics	Plantronics	Headphor	Plantronics	2	xyz10	Home Del	60616	Disputed	No
16	3456-123-	14	11/7/2020	11/15/2020	11/14/2020	HP Spectr	HP Spectr	Laptop	HP	4	xyz14	Home Del	60616	Approved	No
19	3456-123-	17	11/10/2020	11/18/2020	11/17/2020	HP Spectr	HP Spectr	Laptop	HP	5	xyz17	Store picki	60607	Disputed	No
23	3456-123-	21	11/14/2020	11/22/2020	11/21/2020	Google Pix	Google Pix	Phone	Google	4	xyz21	Store picki	60616	Disputed	No
27	3456-123-	25	11/18/2020	11/26/2020	11/25/2020	Tagg GPS	Tagg GPS	Petracker	Tagg	1	xyz25	Store picki	60604	Approved	No

12. Number of disputed transactions and the list of customer names for these disputed transactions for Delivery Zip Code



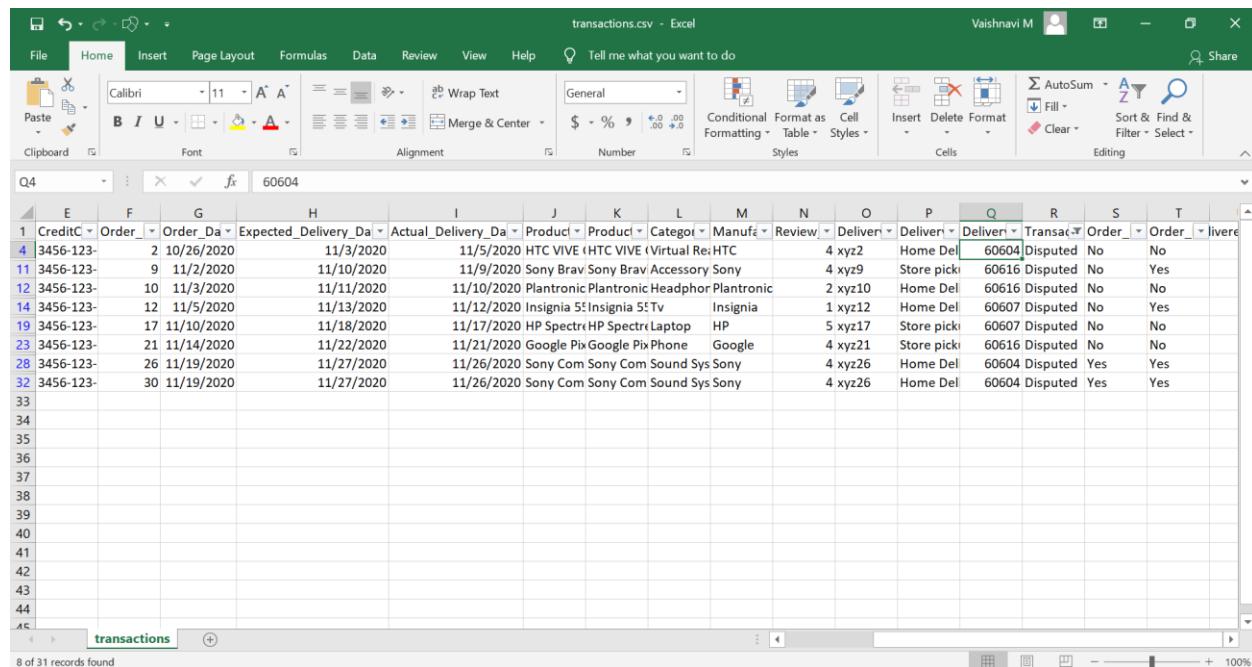
neo4j@bolt://localhost:7687 neo4j - Neo4j Browser

File Edit View Window Help Developer

```
neo4j$ MATCH (o:Order)-[:HAS_TRANSACTION_STATUS]-(s:Transaction_Status), (o) -[:HAS_DELIVERY_ZIPCODE] ...
```

z.Zip_Code	count(o.id)	name
60616	3	["customer8", "customer14", "customer15"]
60604	3	["customer1", "customer1", "Smith, Rebecca"]
60607	2	["customer17", "customer4"]

Started streaming 3 records in less than 1 ms and completed after 1 ms.



transactions.csv - Excel

File Home Insert Page Layout Formulas Data Review View Help Tell me what you want to do

Clipboard Font Alignment Number Styles Cells Editing

Q4

	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
1	CreditC	Order_	Order_Da	Expected_Delivery_Da	Actual_Delivery_Da	Product	Product	Category	Manufa	Review	Delivery	Delivery	Delivery	Transac	Order_	Order_
4	3456-123-	2	10/26/2020	11/3/2020	11/5/2020	HTC VIVE (HTC VIVE (Virtual Re:HTC	4 xyz2	Home Del	60604	Disputed	No	No				
11	3456-123-	9	11/2/2020	11/10/2020	11/9/2020	Sony Brav Sony Brav Accessory Sony	4 xyz9	Store picki	60616	Disputed	No	Yes				
12	3456-123-	10	11/3/2020	11/11/2020	11/10/2020	Plantronics Plantronics Headphor Plantronics	2 xyz10	Home Del	60616	Disputed	No	No				
14	3456-123-	12	11/5/2020	11/13/2020	11/12/2020	Insignia 55"TV Insignia	1 xyz12	Home Del	60607	Disputed	No	Yes				
19	3456-123-	17	11/10/2020	11/18/2020	11/17/2020	HP Spectr HP Spectr Laptop HP	5 xyz17	Store picki	60607	Disputed	No	No				
23	3456-123-	21	11/14/2020	11/22/2020	11/21/2020	Google Pix Google Pix Phone	4 xyz21	Store picki	60616	Disputed	No	No				
28	3456-123-	26	11/19/2020	11/27/2020	11/26/2020	Sony Com Sony Com Sound Sys Sony	4 xyz26	Home Del	60604	Disputed	Yes	Yes				
32	3456-123-	30	11/19/2020	11/27/2020	11/26/2020	Sony Com Sony Com Sound Sys Sony	4 xyz26	Home Del	60604	Disputed	Yes	Yes				
33																
34																
35																
36																
37																
38																
39																
40																
41																
42																
43																
44																
45																

transactions

8 of 31 records found

13. Number of disputed transactions for EVERY CUSTOMER that has more than one disputed transaction

The screenshot shows the Neo4j Browser interface with the following details:

- Header:** neo4j@bolt://localhost:7687/neo4j - Neo4j Browser
- Toolbar:** File Edit View Window Help Developer
- Query Result:** A table showing the results of the query: `MATCH (o:Order)-[:HAS_TRANSACTION_STATUS]→(s:Transaction_Status),(c:Customer)-[:ORDERED]→(o) ...`

	cust_name	cnt
1	"customer1"	2

- Sidebar:** Includes icons for Table, Text, and Code.

Started streaming 1 records in less than 1 ms and completed after 1 ms.

14. Top 3 customers that reported the maximum number of returned orders

The screenshot shows the Neo4j Browser interface with a query results table. The table has two columns: 'c.name' and 'cnt'. The data is as follows:

c.name	cnt
"customer1"	2
"customer5"	1
"customer2"	1

Started streaming 3 records after 1 ms and completed after 3 ms.

The screenshot shows a Microsoft Excel spreadsheet titled "transactions.csv - Excel". The data is organized into columns labeled from A to S. The first few rows of data are as follows:

loginID	Customer_Nam	Custom	CreditC	Order_	Order_Da	Ex	Actu	Produc	Product	Categor	Manufa	Re	Deliver	Deliver	Deliver	Transactio	Order_	Order_	
customer5	customer5	47	Professor	3456-123-	18	11/11/2020	###	#####	HTC VIVE	(HTC VIVE)	Virtual Re	HTC	1	xyz18	Home Del	60616	Approved	Yes	Yes
customer1	customer1	26	Doctor	3456-123-	26	11/19/2020	###	#####	Sony Com	Sony Com	Sound Sys	Sony	4	xyz26	Home Del	60604	Disputed	Yes	Yes
customer2	customer2	29	Librarian	3456-123-	29	11/22/2020	###	#####	Google Pix	Google Pix	Phone	Google	5	xyz29	Home Del	60616	Approved	Yes	Yes
customer1	customer1	32	Doctor	3456-123-	30	11/19/2020	###	#####	Sony Com	Sony Com	Sound Sys	Sony	4	xyz26	Home Del	60604	Disputed	Yes	Yes

4 of 31 records found

15. Number of returned orders and got review rating 1 for every product category in every Delivery Zip Code

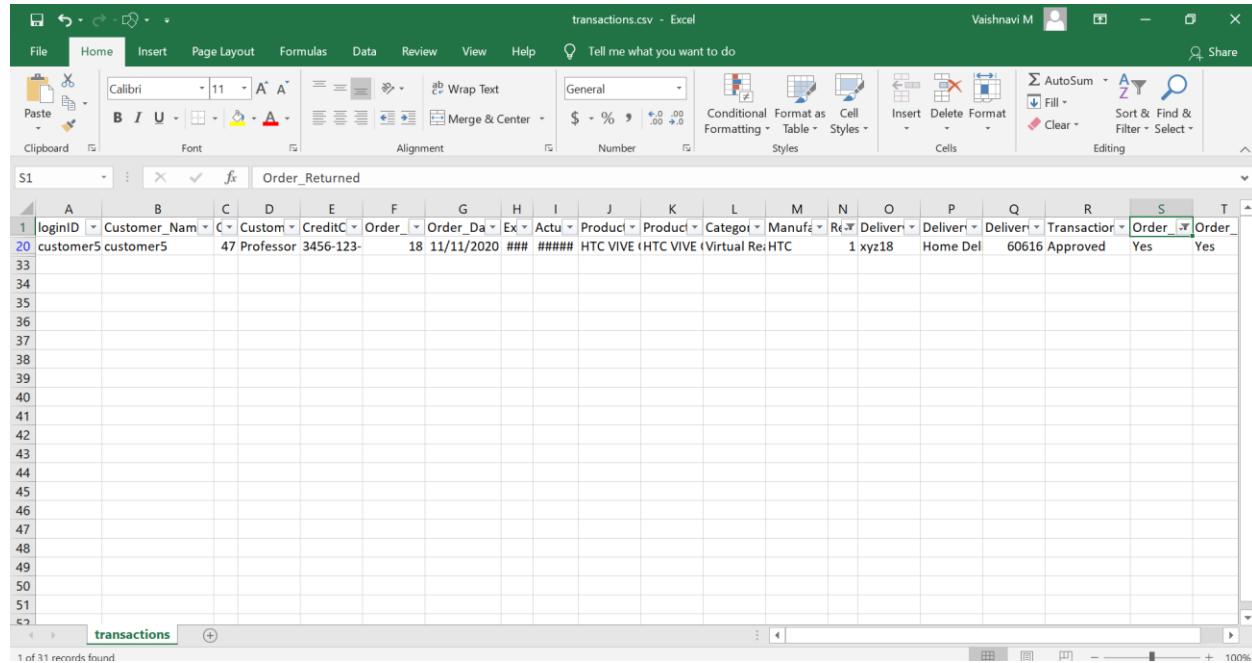


neo4j@bolt://localhost:7687 neo4j - Neo4j Browser

```
neo4j$ MATCH (o:Order)-[:HAS_RETURNED]→(r:order_returned), (o)-[:HAS_DELIVERY_ZIPCODE]→(z:zip_code), ...
```

z.Zip_Code	cat.Category	cnt
60616	"Virtual Reality"	1

Started streaming 1 records after 1 ms and completed after 2 ms.



transactions.csv - Excel

Clipboard

Font

Alignment

Number

Styles

Cells

Editing

S1 Order_Returned

loginID	Customer_Nam	Custom	CreditC	Order_	Order_Da	Ex	Actu	Produci	Product	Categori	Manufa	Re	Deliveri	Deliveri	Transactor	Order	Order
customer5	customer5	47 Professor	3456-123-	18	11/11/2020	###	####	HTC VIVE	HTC VIVE	(Virtual Re	HTC	1	xyz18	Home Del	60616	Approved	Yes
33																	
34																	
35																	
36																	
37																	
38																	
39																	
40																	
41																	
42																	
43																	
44																	
45																	
46																	
47																	
48																	
49																	
50																	
51																	

transactions

1 of 31 records found

CSP – 584 Enterprise Web Application

Assignment – 3

1. Login as Store Manager

Search Product:
Eg: Sony 70 Inch 4K

Home TV Speakers Phones Laptops Voice-Assistant Wearables ViewOrder Login Cart(0)

LOGIN

Username: store1
Password: *****
User Type: Store Manager

New User? Register here!

Prices and offers are subject to change. © BestDeal 2020. All rights reserved. Developed by Vaishnavi Manjunath

2. Store Manager page with Inventory and Store Report options

Search Product:
Eg: Sony 70 Inch 4K

Home TV Speakers Phones Laptops Voice-Assistant Wearables ViewOrder ManageProducts DataAnalytics Logout

Features
■ Trending

TV
■ TV Brands

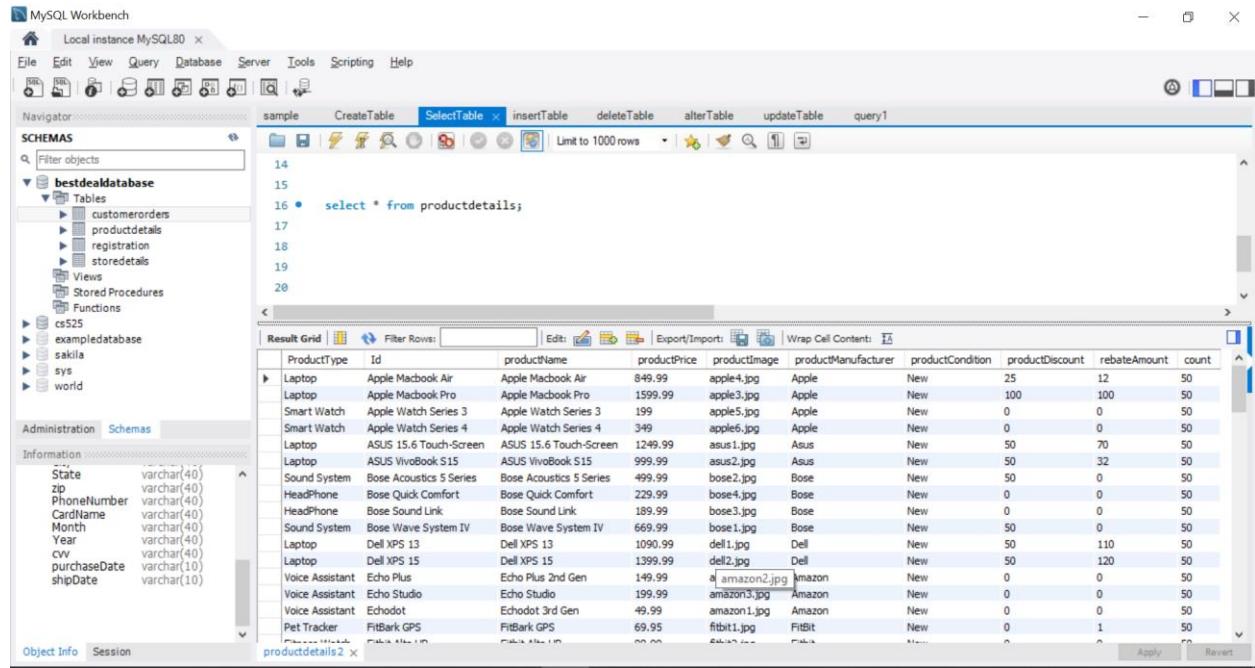
Sound Systems
■ Sound System Brands

Phones

Inventory Information
List of all Products
Inventory Graph Report
Products On Sale
Products having Manufacturer Rebate

Sales Report
Product List with Sold Quantity
Sales Graph Report
Total Sales by Date

3. ProductDetails table in MySQL



The screenshot shows the MySQL Workbench interface. The left sidebar displays the 'bestdealdatabase' schema, which contains tables like customerorders, productdetails, registration, and storedetails. The main area shows a query editor with the following SQL code:

```
14
15
16 •  select * from productdetails;
17
18
19
20
```

The result grid displays the data from the 'productdetails' table:

ProductType	Id	productName	productPrice	productImage	productManufacturer	productCondition	productDiscount	rebateAmount	count
Laptop	Apple Macbook Air	Apple Macbook Air	849.99	apple4.jpg	Apple	New	25	12	50
Laptop	Apple Macbook Pro	Apple Macbook Pro	1599.99	apple3.jpg	Apple	New	100	100	50
Smart Watch	Apple Watch Series 3	Apple Watch Series 3	199	apple5.jpg	Apple	New	0	0	50
Smart Watch	Apple Watch Series 4	Apple Watch Series 4	349	apple6.jpg	Apple	New	0	0	50
Laptop	ASUS 15.6 Touch-Screen	ASUS 15.6 Touch-Screen	1249.99	asus1.jpg	Asus	New	50	70	50
Laptop	ASUS VivoBook S15	ASUS VivoBook S15	999.99	asus2.jpg	Asus	New	50	32	50
Sound System	Bose Acoustics 5 Series	Bose Acoustics 5 Series	499.99	bose2.jpg	Bose	New	50	0	50
HeadPhone	Bose Quiet Comfort	Bose Quiet Comfort	229.99	bose4.jpg	Bose	New	0	0	50
HeadPhone	Bose Sound Link	Bose Sound Link	189.99	bose3.jpg	Bose	New	0	0	50
Sound System	Bose Wave System IV	Bose Wave System IV	669.99	bose1.jpg	Bose	New	50	0	50
Laptop	Dell XPS 13	Dell XPS 13	1090.99	dell1.jpg	Dell	New	50	110	50
Laptop	Dell XPS 15	Dell XPS 15	1399.99	dell2.jpg	Dell	New	50	120	50
Voice Assistant	Echo Plus	Echo Plus 2nd Gen	149.99	amazon2.jpg	Amazon	New	0	0	50
Voice Assistant	Echo Studio	Echo Studio	199.99	amazon3.jpg	Amazon	New	0	0	50
Voice Assistant	Echodot	Echodot 3rd Gen	49.99	amazon1.jpg	Amazon	New	0	0	50
Pet Tracker	FitBark GPS	FitBark GPS	69.95	fitbit1.jpg	FitBit	New	0	1	50

4. Inventory Report showing list of all products and how many items of every product currently available in store

**Features**

■ Trending

TV

■ TV Brands

Sound Systems

■ Sound System Brands

Phones

■ Phone Brands

Laptops

■ Laptop Brands

Voice Assistants

■ Voice Assistant Brands

Wearables

■ Fitness Watchess

■ Smart Watchess

■ Headphones

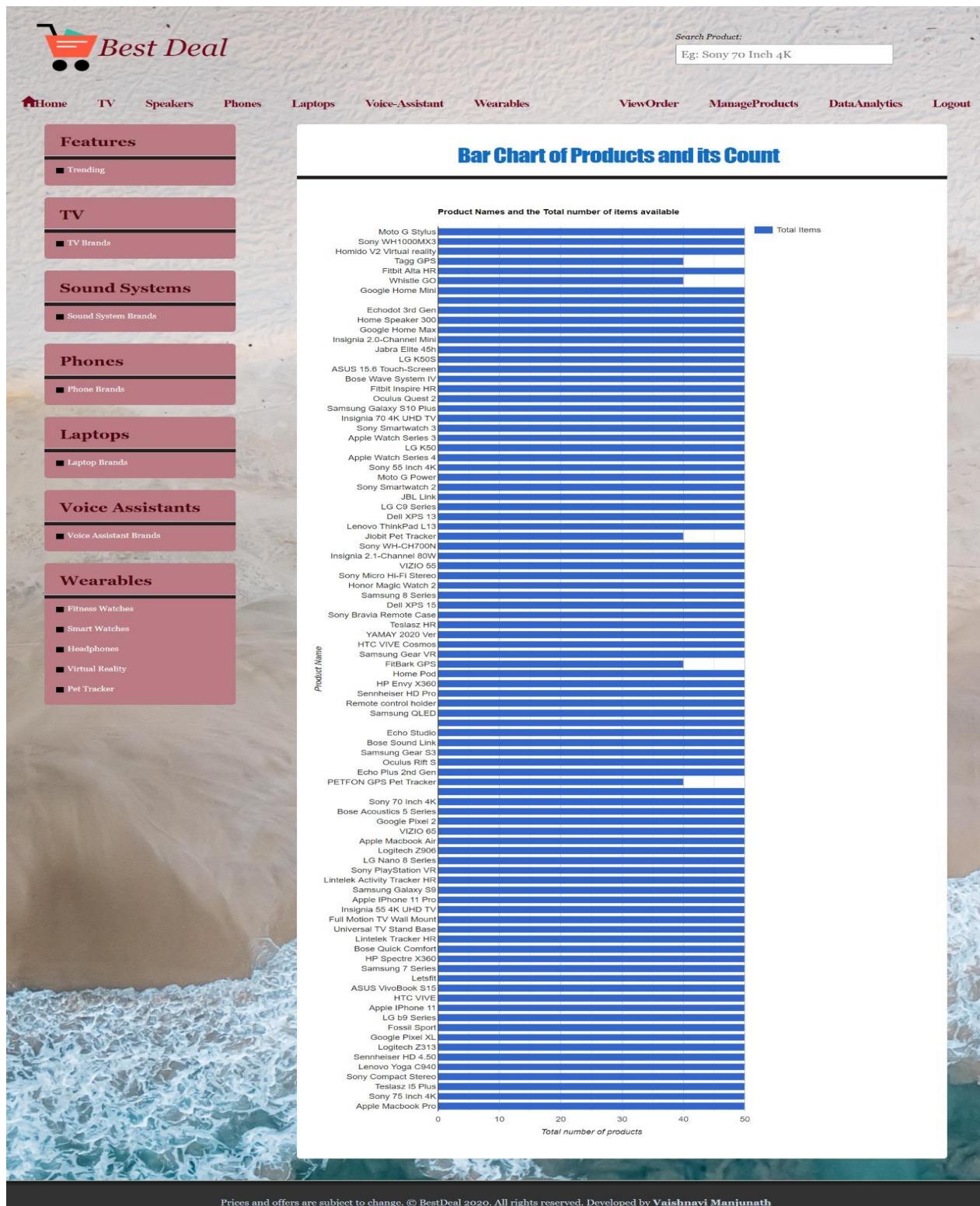
■ Virtual Reality

■ Pet Tracker

List of all Products

Product Name	Price	Count
Moto G Stylus.	\$299.99.	50
Sony WH1000MX3.	\$279.99.	50
Homido V2 Virtual reality.	\$63.99.	50
Tagg GPS.	\$56.99.	50
Fitbit Alta HR.	\$88.99.	50
Whistle GO.	\$99.95.	50
Google Home Mini.	\$49.99.	50
Samsung Galaxy Watch Active.	\$249.0.	50
Echolot 3rd Gen.	\$49.99.	50
Home Speaker 300.	\$199.0.	50
Google Home Max.	\$129.99.	50
Insignia 2.0-Channel Mini.	\$49.99.	50
Jabra Elite 4Sh.	\$79.99.	50
LG K50S.	\$149.99.	50
ASUS 15.6 Touch-Screen.	\$1249.99.	50
Bose Wave System IV.	\$669.99.	50
Fitbit Inspire HR.	\$99.99.	50
Oculus Quest 2.	\$299.0.	50
Samsung Galaxy S10 Plus.	\$599.0.	50
Insignia 70 4K UHD TV.	\$649.99.	50
Sony Smartwatch 3.	\$199.0.	50
Apple Watch Series 3.	\$199.0.	50
LG K50.	\$144.99.	50
Apple Watch Series 4.	\$349.0.	50
Sony 55 Inch 4K.	\$1899.99.	50
Moto G Power.	\$249.99.	50
Sony Smartwatch 2.	\$129.0.	50
JBL Link.	\$179.99.	50
LG C9 Series.	\$1599.99.	50
Dell XPS 13.	\$1090.99.	50
Lenovo ThinkPad L13.	\$799.99.	50
Jibbit Pet Tracker.	\$129.99.	50
Sony WH-CH700N.	\$149.99.	50
Insignia 2.1-Channel 80W.	\$89.99.	50
VIZIO 55.	\$1199.99.	50
Sony Micro Hi-Fi Stereo.	\$899.99.	50
Honor Magic Watch 2.	\$149.99.	50
Samsung B Series.	\$2299.99.	50
Dell XPS 15.	\$1399.99.	50
Sony Bravia Remote Case.	\$89.99.	50
Teslasz HR.	\$28.89.	50
YAMAY 2020 Ver.	\$37.31.	50
HTC VIVE Cosmos.	\$699.0.	50
Samsung Gear VR.	\$124.99.	50
FitBark GPS.	\$69.95.	50
Home Pod.	\$299.0.	50
HP Envy X360.	\$643.99.	50
Sennheiser HD Pro.	\$139.99.	50
Remote control holder.	\$29.99.	50
Samsung QLED.	\$2099.99.	50
Plantronics BackBeat Go 810.	\$45.99.	50
Echo Studio.	\$199.99.	50
Bose Sound Link.	\$189.99.	50
Samsung Gear S3.	\$349.0.	50
Oculus Rift S.	\$399.0.	50
Echo Plus 2nd Gen.	\$149.99.	50
PETFON GPS Pet Tracker.	\$179.99.	50
Polk Audio - Blackstone TL1600.	\$399.99.	50
Sony 70 Inch 4K.	\$2199.99.	50
Bose Acoustics 5 Series.	\$499.99.	50
Google Pixel 2.	\$217.0.	50
VIZIO 65.	\$1899.99.	50
Apple Macbook Air.	\$849.99.	50
Logitech Z906.	\$349.99.	50
LG Nano 8 Series.	\$1799.99.	50
Sony PlayStation VR.	\$349.99.	50
Lintelek Activity Tracker HR.	\$27.99.	50
Samsung Galaxy S9.	\$499.0.	50
Apple iPhone 11 Pro.	\$999.99.	50
Insignia 55 4K UHD TV.	\$349.99.	50
Full Motion TV Wall Mount.	\$89.99.	50
Universal TV Stand Base.	\$89.99.	50
Lintelek Tracker HR.	\$27.99.	50
Bose Quick Comfort.	\$229.99.	50
HP Spectre X360.	\$1199.99.	50
Samsung 7 Series.	\$1999.99.	50
Letsfit.	\$35.99.	50
ASUS VivoBook S15.	\$999.99.	50
HTC VIVE.	\$899.0.	50
Apple iPhone 11.	\$699.99.	50
LG b9 Series.	\$1399.99.	50
Fossil Sport.	\$200.0.	50
Google Pixel XL.	\$209.0.	50
Logitech Z313.	\$449.99.	50
Sennheiser HD 4.50.	\$139.99.	50
Lenovo Yoga C940.	\$1699.99.	50
Sony Compact Stereo.	\$999.99.	50
Teslasz IS Plus.	\$11.99.	50
Sony 75 Inch 4K.	\$2599.99.	50
Apple Macbook Pro.	\$1599.99.	50

5. Bar Chart showing the Product names and total number of items available for every product



6. All products currently on sale

The screenshot shows a website interface for "Best Deal". At the top right is a search bar with placeholder text "Search Product: E.g: Sony 70 Inch 4K". Below the search bar is a navigation menu with links: Home, TV, Speakers, Phones, Laptops, Voice-Assistant, Wearables, ViewOrder, ManageProducts, DataAnalytics, and Logout.

The main content area features a sidebar on the left with a red header titled "Features" containing categories like TV, Sound Systems, Phones, Laptops, Voice Assistants, and Wearables, each with a "Frending" link. The main content area has a blue header "Products On Sale". Below the header is a table listing various products with their names and prices.

Product Name	Price
Moto G Stylus.	\$299.99.
Sony WH1000MX3.	\$279.99.
Homido V2 Virtual reality.	\$63.99.
Tagg GPS.	\$56.99.
Fitbit Alta HR.	\$88.99.
Whistle GO.	\$99.95.
Google Home Mini.	\$49.99.
Samsung Galaxy Watch Active.	\$249.0.
Echidot 3rd Gen.	\$49.99.
Home Speaker 300.	\$199.0.
Google Home Max.	\$129.99.
Insignia 2.0-Channel Mini.	\$49.99.
Jabra Elite 45h.	\$79.99.
LG K50S.	\$149.99.
ASUS 15.6 Touch-Screen.	\$1249.99.
Bose Wave System IV.	\$669.99.
Fitbit Inspire HR.	\$99.99.
Oculus Quest 2.	\$299.0.
Samsung Galaxy S10 Plus.	\$599.0.
Insignia 70 4K UHD TV.	\$649.99.
Sony Smartwatch 3.	\$199.0.
Apple Watch Series 3.	\$199.0.
LG K50.	\$144.99.
Apple Watch Series 4.	\$349.0.
Sony 55 Inch 4K.	\$1899.99.
Moto G Power.	\$249.99.
Sony Smartwatch 2.	\$129.0.
JBL Link.	\$179.99.
LG C9 Series.	\$1599.99.
Dell XPS 13.	\$1090.99.
Lenovo ThinkPad L13.	\$799.99.
JioBolt Pet Tracker.	\$129.99.
Sony WH-CH700N.	\$149.99.
Insignia 2.1-Channel 80W.	\$89.99.
VIZIO 55.	\$1199.99.
Sony Micro Hi-Fi Stereo.	\$899.99.
Honor Magic Watch 2.	\$149.99.
Samsung 8 Series.	\$2299.99.
Dell XPS 15.	\$1399.99.
Sony Bravia Remote Case.	\$89.99.
Teslasz HR.	\$28.89.
YAMAY 2020 Ver.	\$37.31.
HTC VIVE Cosmos.	\$699.0.
Samsung Gear VR.	\$124.99.
FitBark GPS.	\$69.95.
Home Pod.	\$299.0.
HP Envy X360.	\$643.99.
Sennheiser HD Pro.	\$139.99.
Remote control holder.	\$29.99.
Samsung QLED.	\$2099.99.
Plantronics BackBeat Go 810.	\$45.99.
Echo Studio.	\$199.99.
Bose Sound Link.	\$189.99.
Samsung Gear S3.	\$349.0.
Oculus Rift S.	\$399.0.
Echo Plus 2nd Gen.	\$149.99.
PETFON GPS Pet Tracker.	\$179.99.
Polk Audio - Blackstone TL1600.	\$399.99.
Sony 70 Inch 4K.	\$2199.99.
Bose Acoustics 5 Series.	\$499.99.
Google Pixel 2.	\$217.0.
VIZIO 65.	\$1899.99.
Apple Macbook Air.	\$849.99.
Logitech Z906.	\$349.99.
LG Nano 8 Series.	\$1799.99.
Sony PlayStation VR.	\$349.99.
Lintelek Activity Tracker HR.	\$27.99.
Samsung Galaxy S9.	\$499.0.
Apple iPhone 11 Pro.	\$999.99.
Insignia 55 4K UHD TV.	\$349.99.
Full Motion TV Wall Mount.	\$89.99.
Universal TV Stand Base.	\$89.99.
Lintelek Tracker HR.	\$27.99.
Bose Quick Comfort.	\$229.99.
HP Spectre X360.	\$1199.99.
Samsung 7 Series.	\$1999.99.
Letsfit.	\$35.99.
ASUS VivoBook S15.	\$999.99.
HTC VIVE.	\$899.0.
Apple iPhone 11.	\$699.99.
LG b9 Series.	\$1399.99.
Fossil Sport.	\$200.0.
Google Pixel XL.	\$209.0.
Logitech Z313.	\$449.99.
Sennheiser HD 4.50.	\$139.99.
Lenovo Yoga C940.	\$1699.99.
Sony Compact Stereo.	\$999.99.
Teslasz 15 Plus.	\$11.99.
Sony 75 Inch 4K.	\$2599.99.
Apple Macbook Pro.	\$1599.99.

7. All products currently that have manufacturer rebates

The screenshot shows a website with a header "Best Deal" featuring a shopping cart icon. The header includes navigation links for Home, TV, Speakers, Phones, Laptops, Voice-Assistant, Wearables, ViewOrder, ManageProducts, DataAnalytics, and Logout. A search bar at the top right contains the placeholder text "Search Product: Eg: Sony 70 Inch 4K". On the left, there is a sidebar with a "Features" section and categories for TV, Sound Systems, Phones, Laptops, Voice Assistants, and Wearables, each with a "Brands" link. The main content area displays a table titled "Products having Manufacturer Rebate" with columns for Product Name, Price, and Rebate Amount. The table lists numerous products, including various models from brands like Sony, YAMAY, HTC, Samsung, FitBark, HP, Tagg, Whistle, Google, Samsung, Oculus, ASUS, Google Pixel, VIZIO, Apple, Oculus Quest, LG, Sony PlayStation, Insignia, Apple iPhone, Sony 55 Inch 4K, Moto G Power, Full Motion TV Wall Mount, LG C9 Series, Dell XPS 13, Lintelek Tracker HR, HP Spectre X360, Samsung 7 Series, ASUS VivoBook S15, Lenovo ThinkPad L13, HTC VIVE, Apple iPhone 11, LG b9 Series, Insignia 2.1-Channel 80W, Sony 75 Inch 4K, VIZIO 55, Sony Micro Hi-Fi Stereo, Samsung 8 Series, Apple Macbook Pro, and Dell XPS 15.

Product Name	Price	Rebate Amount
Sony WH1000MX3.	\$279.99.	\$1.2
YAMAY 2020 Ver.	\$37.31.	\$1.2
HTC VIVE Cosmos.	\$699.0.	\$15.0
Samsung Gear VR.	\$124.99.	\$1.0
FitBark GPS.	\$69.95.	\$1.0
Home Pod.	\$299.0.	\$1.2
HP Envy X360.	\$643.99.	\$15.0
Samsung QLED.	\$2099.99.	\$120.0
Tagg GPS.	\$56.99.	\$1.0
Whistle GO.	\$99.95.	\$1.0
Google Home Mini.	\$49.99.	\$0.5
Samsung Galaxy Watch Active.	\$249.0.	\$12.0
Samsung Gear S3.	\$349.0.	\$1.0
Oculus Rift S.	\$399.0.	\$20.0
Sony 70 Inch 4K.	\$2199.99.	\$120.0
ASUS 15.6 Touch-Screen.	\$1249.99.	\$70.0
Google Pixel 2.	\$217.0.	\$2.0
VIZIO 65.	\$1899.99.	\$120.0
Apple Macbook Air.	\$849.99.	\$12.0
Oculus Quest 2.	\$299.0.	\$15.0
LG Nano 8 Series.	\$1799.99.	\$100.0
Sony PlayStation VR.	\$349.99.	\$12.0
Insignia 70 4K UHD TV.	\$649.99.	\$10.0
Apple iPhone 11 Pro.	\$999.99.	\$12.0
Sony 55 Inch 4K.	\$1899.99.	\$100.0
Moto G Power.	\$249.99.	\$1.1
Full Motion TV Wall Mount.	\$89.99.	\$1.0
LG C9 Series.	\$1599.99.	\$90.0
Dell XPS 13.	\$1090.99.	\$110.0
Lintelek Tracker HR.	\$27.99.	\$0.7
HP Spectre X360.	\$1199.99.	\$110.0
Samsung 7 Series.	\$1999.99.	\$120.0
ASUS VivoBook S15.	\$999.99.	\$32.0
Lenovo ThinkPad L13.	\$799.99.	\$42.0
HTC VIVE.	\$899.0.	\$12.0
Apple iPhone 11.	\$699.99.	\$2.0
LG b9 Series.	\$1399.99.	\$50.0
Insignia 2.1-Channel 80W.	\$89.99.	\$1.0
Sony 75 Inch 4K.	\$2599.99.	\$120.0
VIZIO 55.	\$1199.99.	\$60.0
Sony Micro Hi-Fi Stereo.	\$899.99.	\$10.0
Samsung 8 Series.	\$2299.99.	\$120.0
Apple Macbook Pro.	\$1599.99.	\$100.0
Dell XPS 15.	\$1399.99.	\$120.0

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8. Customer Orders table in MySQL

The screenshot shows the MySQL Workbench interface with the 'bestdealdatabase' schema selected. The 'customerorders' table is open, displaying 20 rows of data. The columns include OrderId, username, orderName, orderPrice, userAddress, creditCardNo, FirstName, LastName, City, State, zip, PhoneNumber, and Ca. A specific row for customer 15 from Chicago is highlighted.

OrderId	username	orderName	orderPrice	userAddress	creditCardNo	FirstName	LastName	City	State	zip	PhoneNumber	Ca
1	customer1	Echo Plus 2nd Gen	149.99	2800 S king dr	1234566	Customer1	Customer1	Chicago	Illinois	60616	3127778888	Cus
1	customer 10	HTC VIVE Cosmos	699	2800 S king dr	1234566	Customer10	Customer10	Chicago	Illinois	60616	3127778888	Cus
1	customer 11	Oculus Quest 2	299	2000 Michigan avenue street	983946293	customer11	customer11	Chicago	IL	60616	3127336611	cus
1	customer12	Polk Audio - Blackstone T...	399.99	2951 s king street	983946293	customer12	customer12	Chicago	IL	60616	3122216611	cus
1	customer13	iPhone 11 Pro	999.99	2800 S king dr	1234566	customer13	customer13	Chicago	Illinois	60616	3127778888	Cus
1	customer14	Oculus Quest 2	35.99	2000 Michigan avenue street	983946293	customer14	customer14	Chicago	IL	60616	3127336611	cus
1	customer15	Samsung 7 Series	1999.99	2951 s king street	983946293	customer15	customer15	Chicago	IL	60616	3122216611	cus
1	customer16	Sennheiser HD Pro	139.99	2800 S king dr	1234566	customer16	customer16	Chicago	Illinois	60616	3127778888	Cus
1	customer17	Sony Bravia Remote Case	89.99	2000 Michigan avenue street	983946293	customer17	customer17	Chicago	IL	60616	3127336611	cus
1	customer18	Plantronics BackBeat Go ...	45.99	2951 s king street	983946293	customer18	customer18	Chicago	IL	60616	3122216611	cus
1	customer2	Samsung Galaxy Watch ...	249	2901 S King Dr	123456678	Customer2	Customer2	Chicago	IL	60616	3127899999	Cus
1	customer20	Insignia 55 4K UHD TV	349.99	2000 Michigan avenue street	983946293	customer20	customer20	Chicago	IL	60616	3127336611	cus
1	customer3	Homido V2 Virtual reality	63.99	3001 S King dr	998764753	Customer3	Customer3	Chicago	Illinois	60612	3127778888	Cus
1	customer4	HP Spectre X360	1199.99	300 N Fulton st	998764753	Customer4	Customer4	Naperville	Illinois	60556	3127778899	Cus
1	customer5	Sennheiser HD Pro	139.99	983946293	customer5	customer5	Aurora	IL	60616	3127213011	cus	
1	customer6	Apple Macbook Pro	1599.99	1344 w eve street	983946293	customer6	customer6	Aurora	IL	60616	3127213011	cus

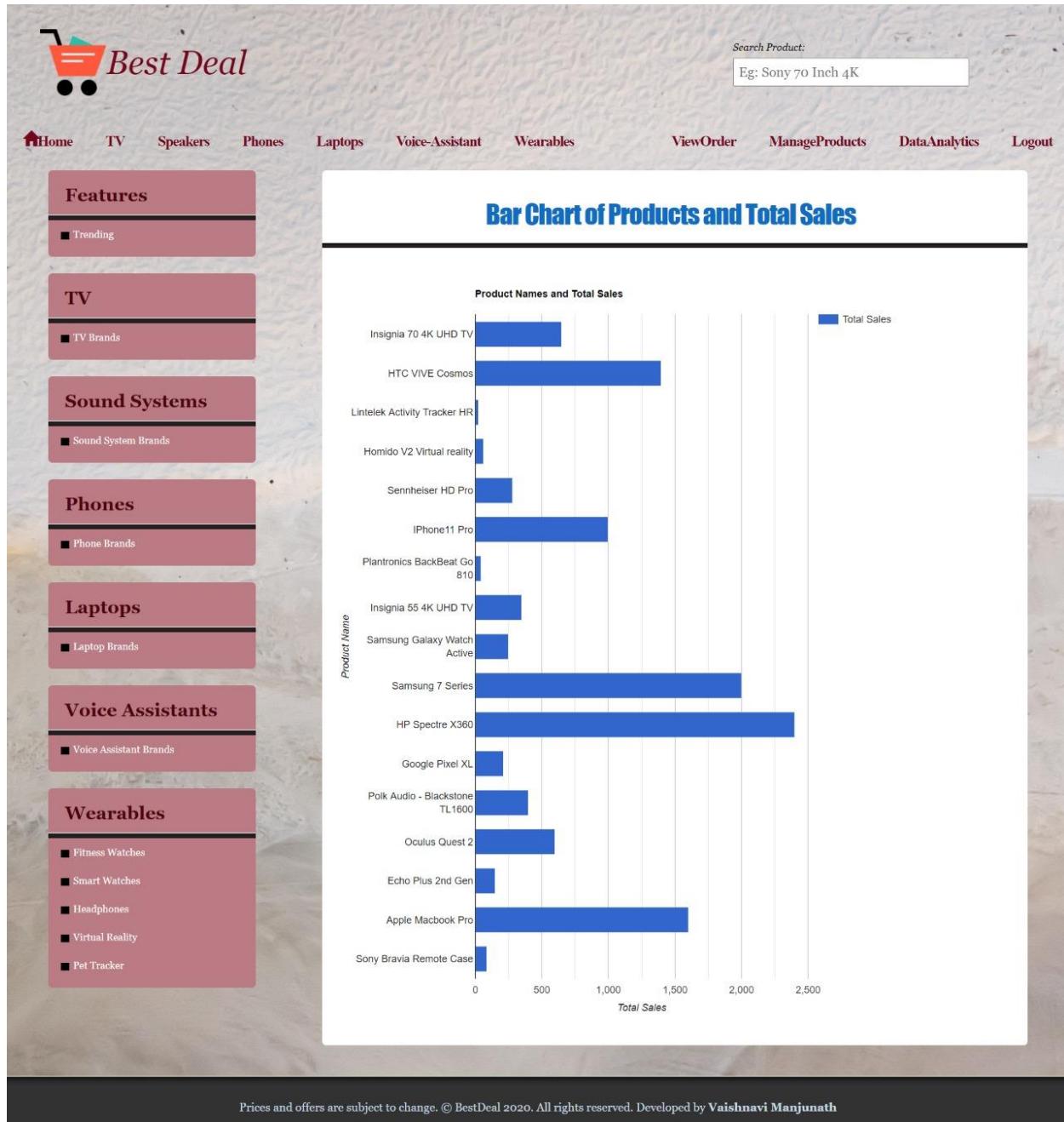
9. Sales Report with Product, price, quantity sold and total sales

The screenshot shows a website for 'Best Deal' with a navigation bar and a sidebar on the left containing links for Home, TV, Speakers, Phones, Laptops, Voice-Assistant, Wearables, ViewOrder, ManageProducts, DataAnalytics, and Logout. The main content area displays a 'Product List with Sold Quantity' table.

Product Name	Price	Count	Total Sales
Insignia 70 4K UHD TV.	\$649.99.	1	\$649.99
HTC VIVE Cosmos.	\$699.0.	2	\$1398.0
Lintelek Activity Tracker HR.	\$27.99.	1	\$27.99
Homido V2 Virtual reality.	\$63.99.	1	\$63.99
Sennheiser HD Pro.	\$139.99.	2	\$279.98
iPhone11 Pro.	\$999.99.	1	\$999.99
Plantronics BackBeat Go 810.	\$45.99.	1	\$45.99
Insignia 55 4K UHD TV.	\$349.99.	1	\$349.99
Samsung Galaxy Watch Active.	\$249.0.	1	\$249.0
Samsung 7 Series.	\$1999.99.	1	\$1999.99
HP Spectre X360.	\$1199.99.	2	\$2399.98
Google Pixel XL.	\$209.0.	1	\$209.0
Polk Audio - Blackstone TL1600.	\$399.99.	1	\$399.99
Oculus Quest 2.	\$299.0.	2	\$598.0
Echo Plus 2nd Gen.	\$149.99.	1	\$149.99
Apple Macbook Pro.	\$1599.99.	1	\$1599.99
Sony Bravia Remote Case.	\$89.99.	1	\$89.99

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10. Bar chart showing Product names and total sales for every product



11. Total daily sales transactions

The screenshot shows a web application interface for a shopping platform named "Best Deal". The top navigation bar includes links for Home, TV, Speakers, Phones, Laptops, Voice-Assistant, Wearables, ViewOrder, Hello,Customer1, Account, Logout, and Cart(0). A search bar at the top right allows users to search for products. On the left side, there is a sidebar with categories: Features (Trending), TV (TV Brands), Sound Systems (Sound System Brands), Phones (Phone Brands), Laptops (Laptop Brands), Voice Assistants (Voice Assistant Brands), and Wearables (Fitness Watches, Smart Watches, Headphones, Virtual Reality, Pet Tracker). The main content area displays a table titled "Total Sales by Date" with the following data:

Date	Total Sales
10/11/2020	\$11248.84
10/23/2020	\$2199.99

At the bottom of the page, a footer note states: "Prices and offers are subject to change. © BestDeal 2020. All rights reserved. Developed by Vaishnavi Manjunath".

Date	Total Sales
10/11/2020	\$11248.84
10/23/2020	\$2199.99