

# **Group 9 OSC Project Report**

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**Abstract:**

BharatKaSparsh is an ecommerce web application made with the help of MERN stack. MERN stands for MongoDB (a NoSQL database for modern applications), Express (web application framework used for server side logic), React(frontend framework to create Single Page Applications) and Node(javascript runtime to help us run javascript on the server). The MERN stack uses the REST API, which acts as a 'middleware' and is reusable for any other application. For an e-commerce site, this type of fluid and optimized experience is quite essential. This project is a small effort made by us to encourage products manufactured in India. We have made an ecommerce website where local vendors, artists, sculptors and clothes' manufacturers can register with us and sell their products online. Through this application we intend to boost our Indian economy and protect and lift the uniqueness and variety in our Indian culture.

**Acknowledgements:**

I am highly indebted to Prof. S. Shrawane for their guidance and constant supervision as well as for providing necessary information regarding the project & also for their support in completing the project.

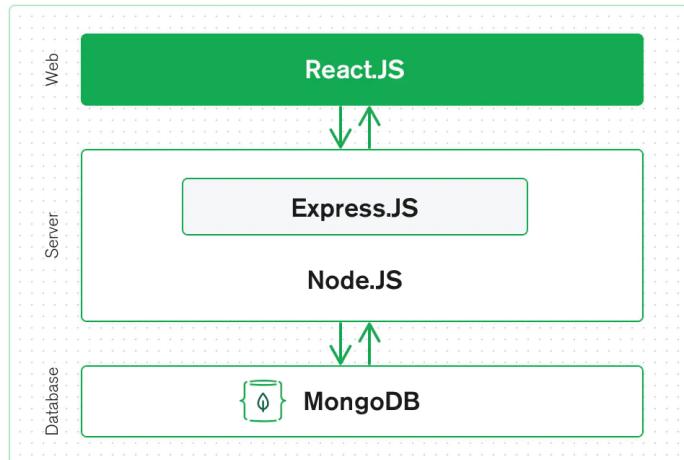
My thanks and appreciations also go to my friends in developing the project and people who have willingly helped us out with their abilities.

**Introduction:**

The internet is nowadays oversaturated with e-commerce websites full of products made by huge corporations. In such a market, locals making handmade products are overshadowed. Our aim is to bring such products to the attention of potential shoppers via a website.

BharatKaSparsh is a website where Indian handcrafted items, traditionally-made clothes, niche local toys, and delicious homemade sweets can be easily sold to shoppers from all over the world.

## Tech Stack:



## MERN

- MongoDB
- ExpressJS
- React
- NodeJS

All are open source!

### Why MongoDB?

1. Flexible schema - makes it easy to evolve and store data.
2. Built to scale up quickly.
3. Supports all the main features of modern databases such as transactions.
4. Open-source NoSQL database.

### Why ExpressJS?

1. Used for designing and building web applications quickly and easily.
2. Simplicity, minimalism, flexibility, scalability are some of its characteristics and since it is made in NodeJS itself, it inherited its performance as well.

### Why React?

1. Allows us to create reusable UI components.
2. Allows developers to create large web applications that can change data, without reloading the page.
3. Fast, scalable, and simple.

### Why NodeJS?

1. Easily employed as a server-side proxy where it can handle a large amount of simultaneous connections in a non-blocking manner.
2. Especially useful for proxying different services with different response times, or collecting data from multiple source points.

## Why MERN?

1. MongoDB was designed to store JSON data natively, and everything from its command line interface to its query language (MQL, or MongoDB Query Language) is built on JSON and JavaScript.
2. MongoDB works extremely well with Node.js, and makes storing, manipulating, and representing JSON data at every tier of your application incredibly easy. For cloud-native applications, MongoDB Atlas makes it even easier, by giving you an auto-scaling MongoDB cluster on the cloud provider of your choice, as easy as a few button clicks.
3. Express.js (running on Node.js) and React.js make the JavaScript/JSON application MERN full stack, well, full. Express.js is a server-side application framework that wraps HTTP requests and responses, and makes it easy to map URLs to server-side functions. React.js is a frontend JavaScript framework for building interactive user interfaces in HTML, and communicating with a remote server.
4. The combination means that JSON data flows naturally from front to back, making it fast to build on and reasonably simple to debug. Plus, you only have to know one programming language, and the JSON document structure, to understand the whole system!
5. MERN is the stack of choice for today's web developers looking to move quickly, particularly for those with React.js experience.

## Challenges:

1. Using the redux store for storing cart items was emptying the cart everytime we reloaded the page. So we used the browser's local storage for persisting the cart data between different requests.
2. The database we have used is a Flipkart database downloaded from Kaggle. The database had many products with image links which returned a 404 status code. The database required cleaning for which we wrote a python script and removed all such products reducing our product count from 807 to 705.

## Screenshots:

Here are some screenshots of the website:

### 1. Register Page:

BharatKaSparsh

Create your Account

Username  
Enter your username

Email  
Enter your email

Password  
Enter your password

Role  
Customer

Register

Already have an Account? [Log In](#)

### 2. Login Page:

BharatKaSparsh

Login

Email  
Enter your email

Password  
Enter your password

[Forgot Password?](#)

Log In

Don't have an Account? [Register](#)

### 3. Home page:

The screenshot shows the homepage of the Bharat Ka Sparsh website. At the top, there is a search bar with placeholder text "Search..." and a magnifying glass icon. To the right of the search bar are icons for user profile, cart, and account. Below the header, there are two input fields labeled "Min" and "Max". A "Sort By:" dropdown menu is located in the top right corner. The main content area displays a grid of product cards. The first row contains five products: 1) "Alisha Solid Women's Cycling Shorts" (Rs 999, 5 stars), 2) "FabHomeDecor Fabric Double Sofa Bed" (Rs 32157, 5 stars), 3) "AW Bellies" (Rs 999, 5 stars), 4) "Alisha Solid Women's Cycling Shorts" (Rs 699, 5 stars), and 5) "Sicons All Purpose Arnica Dog Shampoo" (Rs 220, 5 stars). The second row contains three partially visible products: 6) "Eternal Gandhi Super Series Crystal Paper Weights with Silver Finish" (Rs 430, 5 stars), 7) a small image of a sofa, and 8) a small image of a person. The third row contains three partially visible products: 9) a small image of a sofa, 10) a small image of a shoe, and 11) a small image of a person.

### 4. Product details page:

The screenshot shows the product details page for "Alisha Solid Women's Cycling Shorts". The page features a large image of the shorts in navy blue and red. The product title "Alisha Solid Women's Cycling Shorts" is displayed prominently, along with the seller information "Seller : Alisha". The price is listed as "Rs. 999". A "Add to Cart" button is visible. The "Description" section includes a detailed description of the product, mentioning key features like "Cotton Lycra Navy, Red, Navy", "Specifications of Alisha Solid Women's Cycling Shorts", and care instructions such as "Machine Wash in Lukewarm Water, Do Not Bleach". It also notes the "Style Code ALTHT\_3P\_21 In the Box 3 shorts".

5. Feature of filtering products based on minimum and maximum price:

6. Feature of sorting products based on price from highest to lowest:  
(Similarly we can sort from Low to High as well)

7. Feature of sorting products based on name in ascending order. (Similarly we can sort in descending order also)

The screenshot shows a product listing page from 'BHARAT KA SPARSH'. At the top right, there is a search bar and a 'Sort By: Name: Ascending' button. The products are displayed in a grid format:

- Bento Musical Teddy Bear**: Rs 199, ★★★★★
- HRS ULTIMATE BOY Elbow Pads**: Rs 250, ★★★★★
- Kennel Rubber Dumbbell With Bell - Small**: Rs 190, ★★★★★
- Rubber Rubber Toy For Dog**
- Sicons All Purpose Arnica Dog Shampoo**: Rs 220, ★★★★★
- Sicons Conditioning Conditioner Dog Shampoo**: Rs 110, ★★★★★
- Wise Guys Pouch for Lenovo S880**: Rs 249, ★★★★★

Below the products are navigation buttons: 'Previous', a blue '1', and 'Next →'.

8. Search bar functionality:

The screenshot shows a product listing page from 'BHARAT KA SPARSH' with a search bar containing 'Ali'. The products shown are all 'Alisha Solid Women's Cycling Shorts' in various colors (black, white, red, blue). Below this section are other product cards:

- Alisha Solid Women's Cycling Shorts**: Rs 999, ★★★★★
- Alisha Solid Women's Cycling Shorts**: Rs 699, ★★★★★
- Alisha Solid Women's Cycling Shorts**: Rs 1199, ★★★★★
- Alisha Solid Women's Cycling Shorts**: Rs 1199, ★★★★★
- Alisha Solid Women's Cycling Shorts**: Rs 999, ★★★★★
- Alisha Solid Women's Cycling Shorts**: Rs 999, ★★★★★

Below these are additional product cards:

- Three pairs of cycling shorts (black, white, red).
- A yellow handbag.
- A woman in a patterned dress.
- A woman in a floral dress.
- A golden statue of a multi-armed deity.
- A black leather watch.

9. Account page: (functionality of updating the email address and password has been provided).

The screenshot shows the account settings page for 'Bharat Ka Sparsh'. At the top, there's a logo, the site name 'BHARAT KA SPARSH', a search bar, and a shopping cart icon. Below the header, there are fields for 'Username' (Prerna) and 'Email' (pkjagesia@gmail.com), with a blue button labeled 'Update Email Address'. A section titled 'Change Password' contains three input fields: 'Old Password', 'New Password', and 'Confirm New Password', followed by a blue 'Change Password' button. Another field labeled 'Role' shows 'customer'. The background is white with light gray borders around the input fields.

10. My Orders page:

The screenshot shows the 'My Orders' page for 'Bharat Ka Sparsh'. At the top, there's a logo, the site name 'BHARAT KA SPARSH', a search bar, and a shopping cart icon. The main content area is titled 'My Orders' and lists two purchases. The first purchase is for 'Alisha Solid Women's Cycling Shorts' (Rs 1578.2, Status: Delivered). It shows two images of the shorts: one black and one red. The second purchase is for 'AW Bellies' (Rs 999, Status: Delivered). It shows a pair of red and black patterned flats. Below these items, another set of cycling shorts is listed: 'Alisha Solid Women's Cycling Shorts' (Rs 3399.8, Status: Delivered), with three images of the shorts in black, red, and blue. The background is white with light gray borders around the product cards.

11. Cart page:

The screenshot shows the 'MY CART (3)' section of the Bharat Ka Sparsh website. It lists three items with their details, quantity (2 for the first two), and a remove button.

Item	Seller	Price
Alisha Solid Women's Cycling Shorts	Alisha	₹1998
AW Bellies	AW	₹1998
Ladela Bellies	Ladela	₹1724

On the right, the 'ORDER DETAILS' section shows the total amount, discount, delivery charges, and a 'TOTAL AMOUNT' of ₹5198 with a 'Checkout' button.

Amount	₹5720
Discount	₹572
Delivery Charges	₹ 50
<b>TOTAL AMOUNT:</b>	<b>₹5198</b>

**Checkout**

12. Stripe payment gateway integration:

The screenshot shows a payment interface for a total amount of ₹5,720.00. The left side displays the payment summary and item details, while the right side contains the payment form fields.

**Pay with card**

Email:

Card information:  1234 1234 1234 1234   
MM / YY  CVC

Name on card:

Country or region:  India

**Pay ₹5,720.00**

Powered by stripe | Terms | Privacy

**Future work:**

1. Adding User roles (Normal user, Prime user, admin)
2. Rating System
3. Customer Feedback and comments
4. Recommendation system

**Conclusion:**

We have implemented the ECommerce website themed to be used for the trade of homemade products, using MERN stack.