

FULL STACK DEVELOPMENTMINI-PROJECT

Topic-E-commerce website Clo. An Apparel Brand

Project Members

Khilee Singhal	PF-46
Daksha Agrawal	PF-49
Hrushikesh Pandit	PF-63
Yashowardhan Pachorkar	PF-64

Under the Guidance of

Dr. Aniket Ingawale

School of Computer Engineering and Technology MIT World Peace University, Kothrud, Pune 411 038, Maharashtra - India 2023-2024

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Overview of technologies used

Canva - UI Design:

Canva is a valuable tool for creating basic UI designs and prototypes, especially for those without extensive design experience or for quick iterations during the design process. However, for more complex and sophisticated UI design projects, dedicated UI design tools like Figma or Sketch offer greater flexibility and control. Key Features:

- Easy to Use.
- Vast Template Library.
- Rich Design Elements.
- Collaborate with Ease.
- Publish and Share.

React - Frontend Framework:

React is a popular JavaScript library for building user interfaces, developed and maintained by Facebook. It allows developers to build reusable UI components, making it efficient for creating interactive and dynamic web applications. React follows a declarative approach, making it easier to understand and debug code. It is widely used in the development of single-page applications (SPAs) where the user experience is highly interactive.

Key Features:

- Component-based architecture.
- Virtual DOM for optimized rendering.
- Declarative syntax for defining UI components.
- Efficient state management.
- React ecosystem with a vast collection of libraries and tools.
- 1. **JavaScript**: JavaScript is a dynamic, interpreted programming language that is primarily used for client-side scripting on web pages. It is also commonly used for server-side scripting, game development, and mobile app development. JavaScript is a versatile language that is easy to learn and use, making it a popular choice for web development.
- 2. **react-router-dom**: React Router DOM is a popular routing library for React applications. It allows you to manage the navigation between different pages or components in your React app. It provides components for defining routes, linking to routes, and handling route changes.
- 3. **lodash**: Lodash is a utility library for JavaScript that provides a wide range of functions for working with arrays, objects, strings, and more. It is a popular choice for simplifying common tasks in JavaScript development.
- 4. **react (for hooks):** React is a JavaScript library for building user interfaces (UIs). It is one of the most popular front-end development libraries in the world. React hooks are a new feature in React that allows you to use state and other React features without writing a class.

- 5. **express**: Express is a popular web application framework for Node.js. It provides a simple and flexible API for building web applications and APIs.
- 6. **fs**: The fs module in Node.js provides APIs for interacting with the file system. It allows you to read, write, and delete files and directories.
- 7. **cors:** CORS (Cross-Origin Resource Sharing) is a security feature that allows websites to request resources from other domains. The cors module in Node.js allows you to configure CORS headers for your Express applications.
- 8. **sklearn.metrics.pairwise**: sklearn.metrics.pairwise is a submodule of the scikit-learn library in Python. It provides functions for calculating pairwise distances and similarities between data points. These functions are commonly used for machine learning tasks, such as clustering and recommendation systems.
- 9. **numpy**: NumPy is a fundamental library for scientific computing in Python. It provides efficient data structures and algorithms for working with multidimensional arrays and matrices. NumPy is widely used in machine learning, data science, and scientific computing applications.
- 10. **flask_cors**: flask_cors is an extension for the Flask web framework in Python. It allows you to configure CORS headers for your Flask applications, enabling cross-origin requests from other domains. This is essential for web applications that communicate with APIs from different domains.
- 11. **flask**: Flask is a popular web framework for Python. It provides a simple and flexible API for building web applications and APIs. Flask is known for its lightweight and easy-to-learn design, making it a popular choice for beginners and experienced developers alike.
- 12. **pandas**: Pandas is a library for data analysis and manipulation in Python. It provides powerful data structures and functions for working with tabular data, such as DataFrames and Series. Pandas is widely used in data science, financial analysis, and other fields that involve working with large datasets.

Workflow

1. Design Phase:

User Flow and Journey: Identify user actions and interactions within the application and define the flow of actions from selecting report type to booking products and working of AI.

Sketch Layout Ideas: Rough sketches of UI layouts for each page, considering user interactions and information architecture.

Design System: Define a small-scale design system with basic tokens (colors, typography, spacing). Create reusable components like buttons, forms, and cards.

UI Design: Design the UI for each page, incorporating the finalized layout ideas and design system. Used Canva for collaborative design and keep a record of components created.

2. Development Phase:

Frontend:

Create a basic working web app with minimal UI. Implement finalized designs using React and CSS. Develop components based on the design system.

Backend:

Working on Libraries like Node.js and Python.

3. Integration Phase:

Frontend and Backend Integration Connect the frontend and backend. Ensure seamless data flow between UI components and the Jason(database).

4. Testing Phase:

Random Checking Technique:

In this randomly testing the website ensuring no bugs in it.

5. Deployment Phase:

Platform Selection: Choose a deployment platform.

URL Selection: Select a URL for hosting the web application deployment:

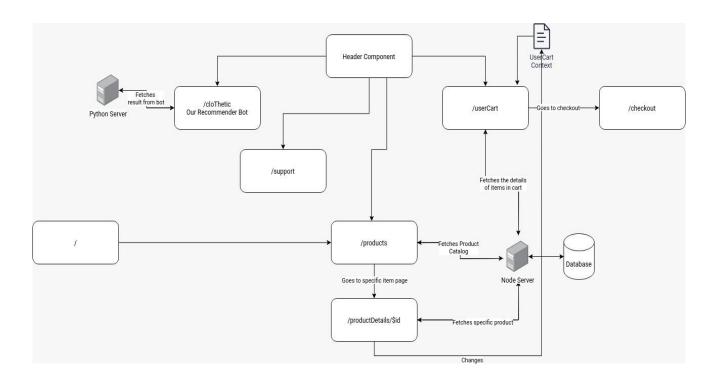
Deploy both frontend and backend to the selected platform.

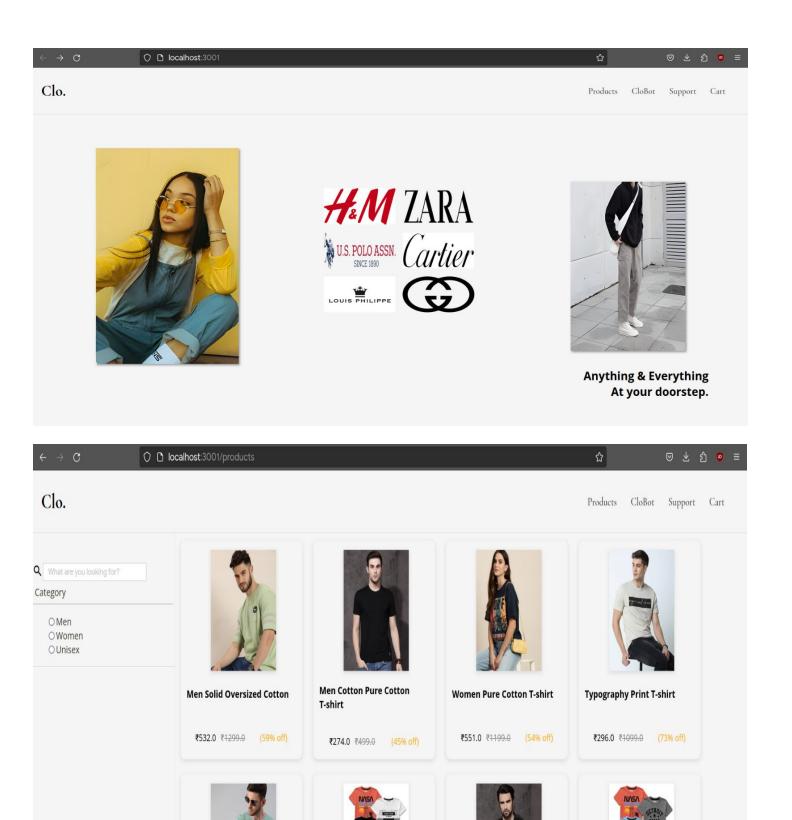
Verify that the deployed application functions correctly in the live environment.

6. Post-Deployment:

Monitoring and Maintenance: Implement monitoring tools for tracking application performance. Establish a plan for regular maintenance and updates.

Architecture diagram:





Polo Collar Cotton Pure Cotton

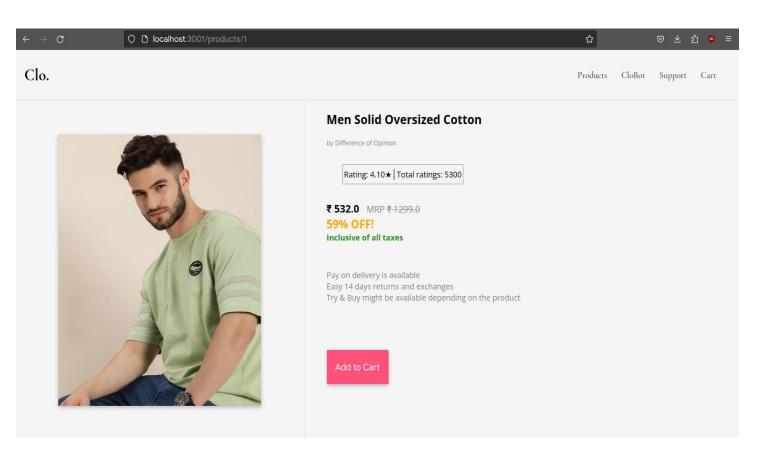
T-shirt

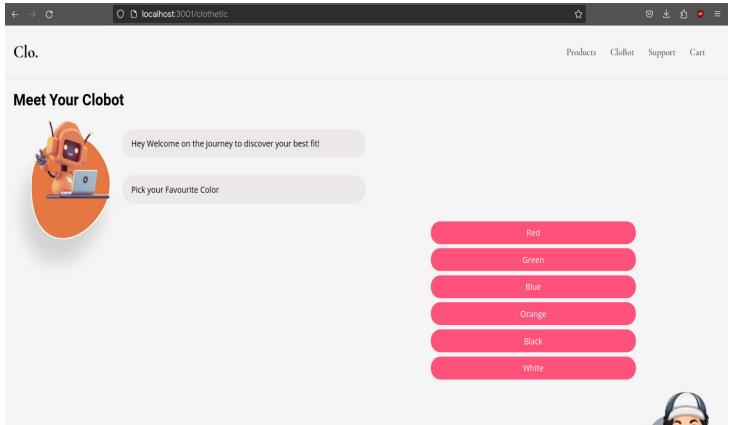
Boys Pack Of 5 Printed T-shirt

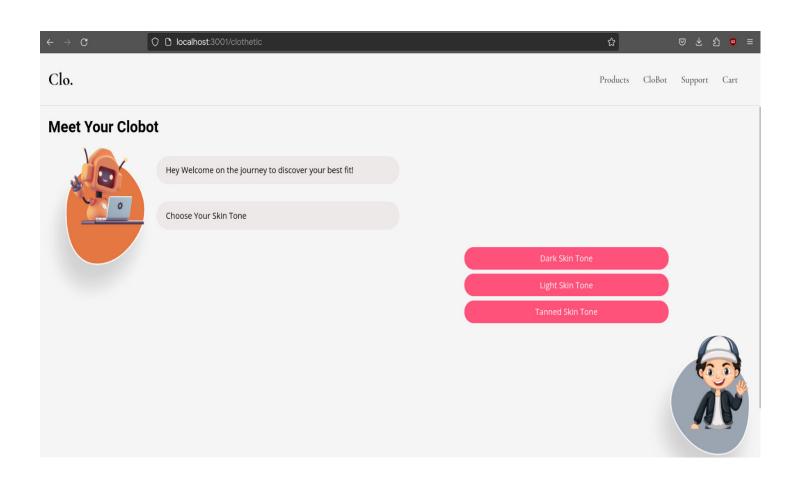
Printed Round Neck Pure

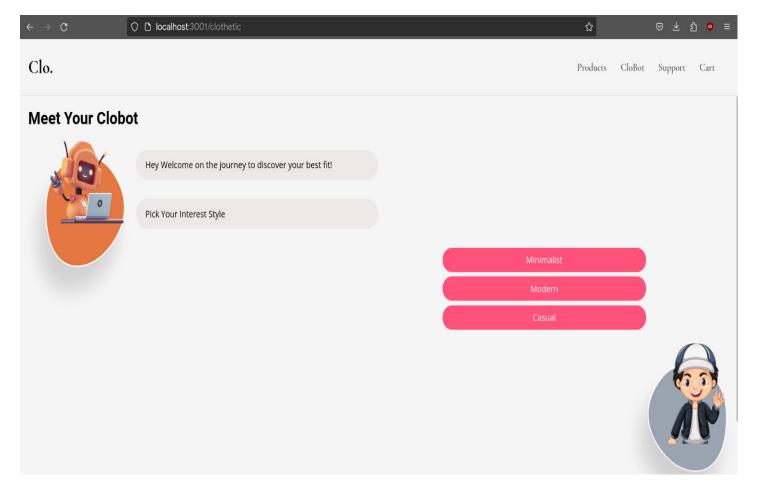
Cotton T-shirt

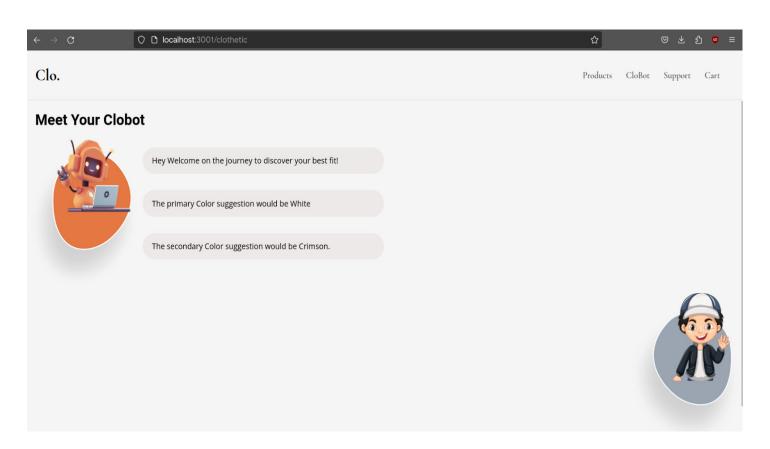
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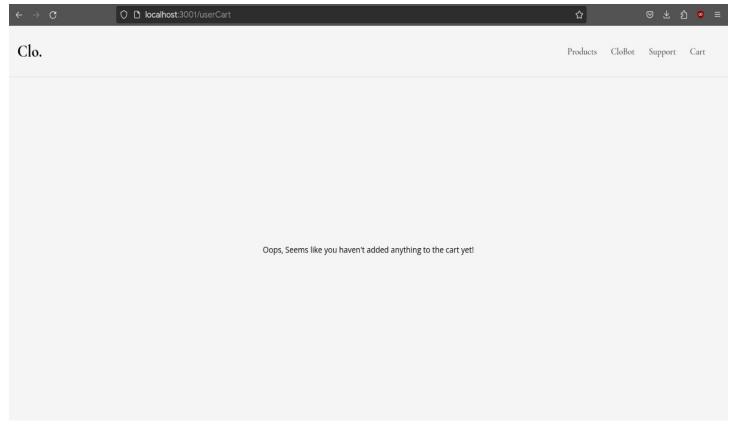


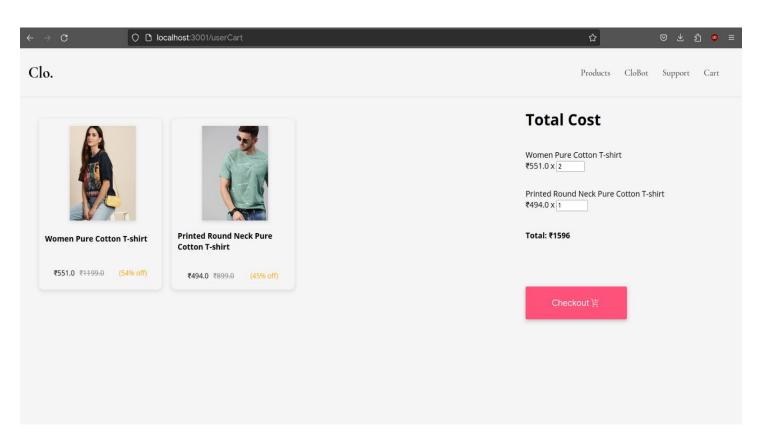


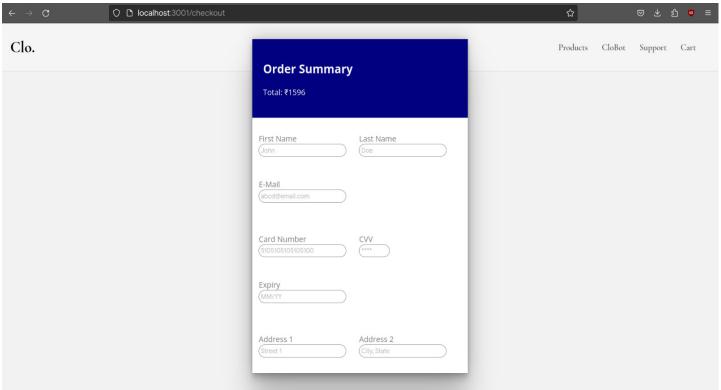


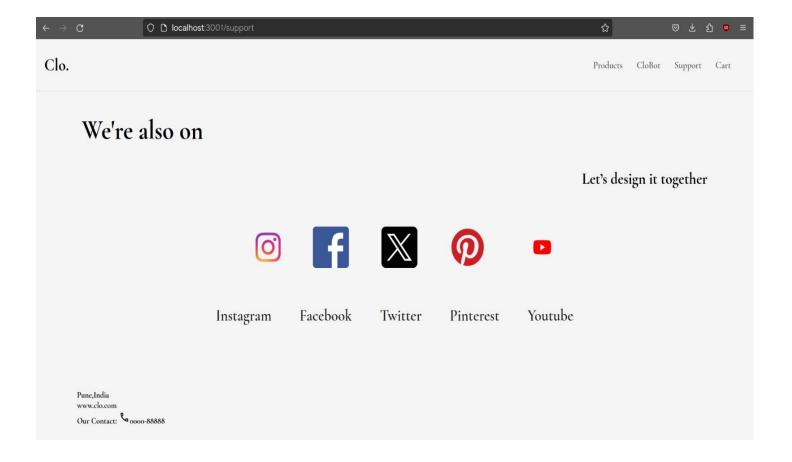












Future Scope:

- Add more stability: More stability can be added at the backend.
- Handle heavy processing: Handling heavy processing can be challenging, especially in situations
 where resources are limited or real-time responses are required. Here are five areas to consider for
 improving heavy processing.
- **Brush up the website and add new features:** Adding more features such as more filtering options can make the website even better.

Conclusion:

Clo stands out in the competitive landscape of online shopping for clothing apparel due to its innovative features that prioritize style, convenience, and personalization. Clo's curated collection of clothing items reflects the latest trends and timeless styles, while its personalized recommendations and virtual try-on feature ensure that shoppers find clothing items that suit their individual taste and preferences. Clo's user-friendly interface, streamlined shopping process, and fast and reliable delivery provide a smooth and hassle-free shopping experience. Additionally, Clo's AI-powered style assistant, trend insights and predictions, and interactive style community further enhance the online shopping experience for clothing apparel.