GenAI Shop – Project Report – CS23I1044 PRAVEEN CHOUTHRI

➤ Introduction

This report documents the transformation of a broken/incomplete e-commerce web app into a fully functional, modern, and visually rich single-page application. The process involved extensive bug fixing, feature completion, design enhancements, and the creative use of AI tools.

➤ Comparison with Original Codebase

Major Bugs Fixed :

- Cart persistence and localStorage sync issues resolved.

- Product detail modal and cart modal animation/overlay bugs fixed.

- Price calculation bugs (handling prices as strings with commas) fixed.

- Modal overlay blur now applies to actual page content, not just an overlay.

- Product image display logic fixed for aspect ratio and per-product overrides.

- Cart modal layout and grid alignment issues resolved.

- Trust badge/secure payment icon logic fixed and made customizable.

- Modal animation centering and entry/exit transitions corrected.

- UI alignment and spacing bugs fixed throughout.

Incomplete Features Completed :

- Persistent cart with localStorage.

- Advanced product search.

- Dynamic modals for product details and cart.

- Responsive product grid with tags and floating cart icon/modal.

- Product detail modal with scrollable/expanding description and fixed Add to Cart button.

- Cart modal with dynamic quantity controls and checkout summary (subtotal, tax, shipping, grand total, free shipping message).

- GPay/Canva-style animated order success popup (green tick, 3D rotation, confetti, auto-close, cart reset).

Design Issues Solved :

- Modern, visually rich, and responsive UI using Bootstrap, Tailwind, and Animate.css.

- Product and cart modals with fast, modern entry/exit animations.

- Cart modal layout refined for professional look and usability.

- All UI elements visually aligned and professional.

- Floating cart icon with custom image and notification badge.

- Close (X) buttons now have a circular, subtle hover effect.

- Checkout button features animated green hover effect.

New Features & Enhancements :

- Smart object-fit switching for product images, with per-product overrides.

- Dedicated image area in cart modal for branding/decoration.

- Animated, circular cart notification badge.

- Animated, visually impressive checkout experience.

- Improved accessibility (ARIA labels, focus outlines).

- Enhanced mobile responsiveness and touch support.

➢ AI Tools Used

- **ChatGPT**: For finding the right tools and approaches for each development task, debugging, and UI/UX suggestions.

- **Gemini**: For generating product and UI images.

- **Blackbox.ai**: For generating code snippets from design images and UI requirements.

- **Cursor**: For combining, integrating, and debugging all code, ensuring a seamless and functional final product.

➢ Deliverables

- Fully functional and clean codebase (see project files).

- README.md with setup/run instructions, list of bugs fixed, enhancements made, and AI tools used.

- Project report PDF.

➢ Conclusion

The GenAI Shop project demonstrates the power of combining AI tools with modern web development practices to rapidly fix, enhance, and complete a complex application. The result is a robust, user-friendly, and visually impressive e-commerce experience.