

Experiment 05: Create a registration or contact form using Bootstrap form components and style it.

Learning Objective: Student should be able to integrate the Bootstrap front-end framework into a project and utilize its pre-built form components and grid system to rapidly create a professional, responsive checkout form.

Tools: Notepad, Google Chrome

Theory:

Bootstrap is a powerful, free, and open-source front-end framework for developing responsive, mobile-first websites. As M.E. students, think of it as a comprehensive library or toolkit for UI development. Instead of writing all the CSS from scratch for common components like buttons, navigation bars, or forms, Bootstrap provides pre-styled, ready-to-use classes.

Key advantages of using Bootstrap:

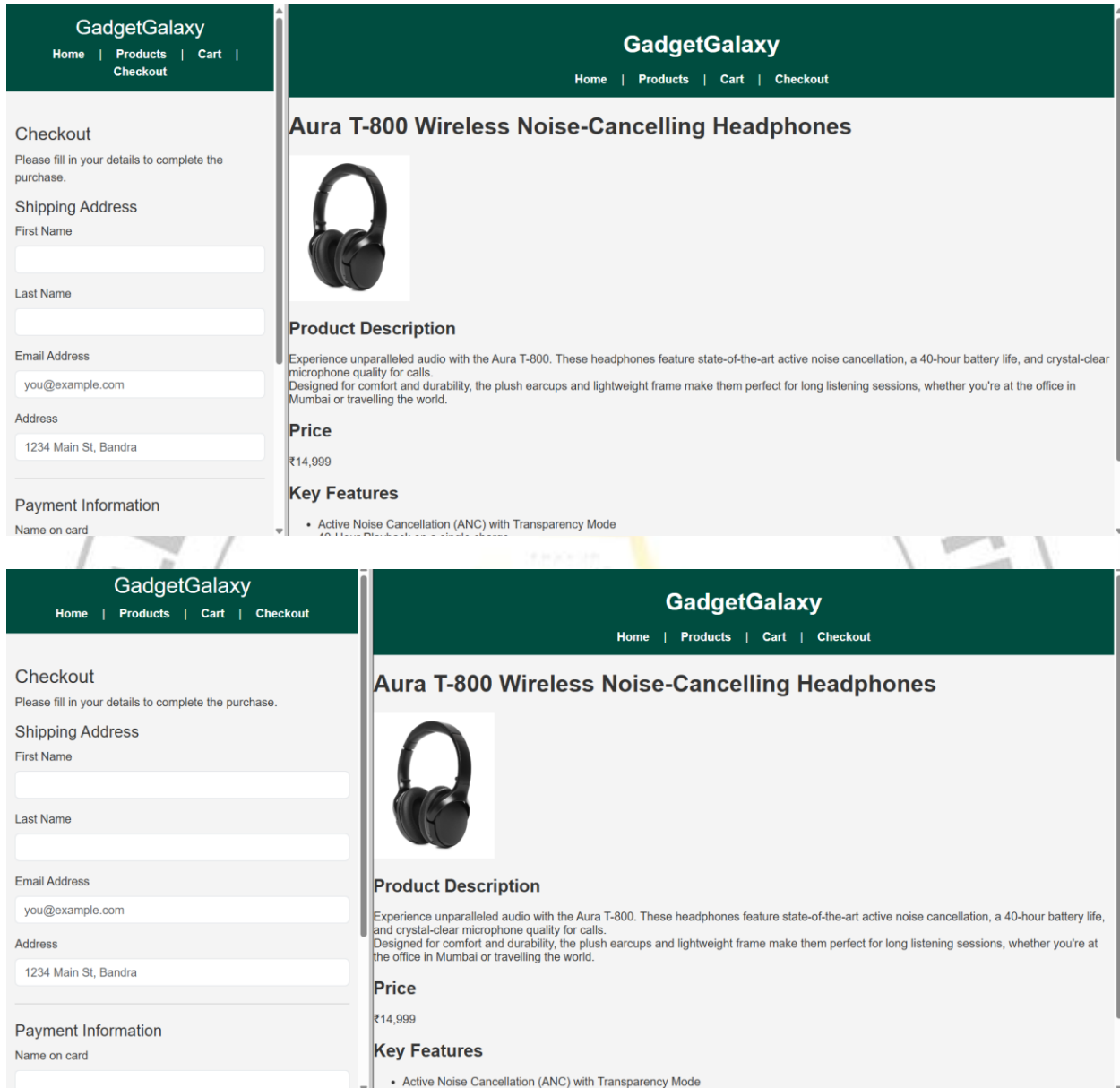
- **Speed:** Drastically reduces development time.
- **Responsiveness:** Its built-in grid system allows you to create layouts that automatically adapt to different screen sizes (desktops, tablets, phones).
- **Consistency:** Ensures a consistent design language across your entire website.
- **Cross-browser Compatibility:** Components are tested to work on all modern browsers.

To use Bootstrap, you simply add its CSS and JavaScript files to your HTML, typically via a CDN. A CDN hosts the files on high-speed servers around the world, ensuring fast delivery to your users.

Core Bootstrap Form Classes:

- **.form-control:** Apply this to `<input>`, `<select>`, and `<textarea>` elements to give them a full-width, styled appearance.
- **.form-label:** Styles the `<label>` for proper spacing and font weight.
- **mb-3 (Margin Bottom 3):** A spacing utility class used on a container `<div>` to create vertical space between form fields.
- **.btn & .btn-primary:** Base button style and a modifier class for a primary action button (typically blue).
- **.row & .col-md-6:** Part of the grid system, used to place form elements side-by-side on medium-sized screens and larger.

Result and Discussion:



Webpage displaying a two different pages in frames in a single webpage with responsiveness.

Learning Outcomes: The student should have the ability to integrate a third-party CSS framework like Bootstrap into a web project and use its utility classes to rapidly construct a styled and responsive user interface component, such as a complex form.

Course Outcomes: Upon completion of the course students will be able to design and develop modern, responsive user interfaces by leveraging industry-standard frameworks. Also, students will be able to apply client-side technologies to build interactive web components (as this form is a prerequisite for client-side validation).

Conclusion:

This experiment successfully demonstrates the power and efficiency of using a front-end framework like Bootstrap. We have built a complex, responsive checkout form for “GadgetGalaxy” with minimal effort, allowing us to focus on functionality rather than basic styling. This component is now a fully-styled and professional foundation, ready for the addition of client-side validation in the next stage.

For Faculty Use

Correction Parameters	Formative Assessment [40%]	Timely completion of Practical [40%]	Attendance / Learning Attitude [20%]	
Marks Obtained				